## Mission

To prepare school-leavers and working adults for a future of dynamic change, with relevant knowledge, life-long skills, character, and a thirst for continuous improvement.

## Vision

To be a world-class institution in the global education network, reputed for our programmes, applied research, managerial excellence and innovative corporate culture.

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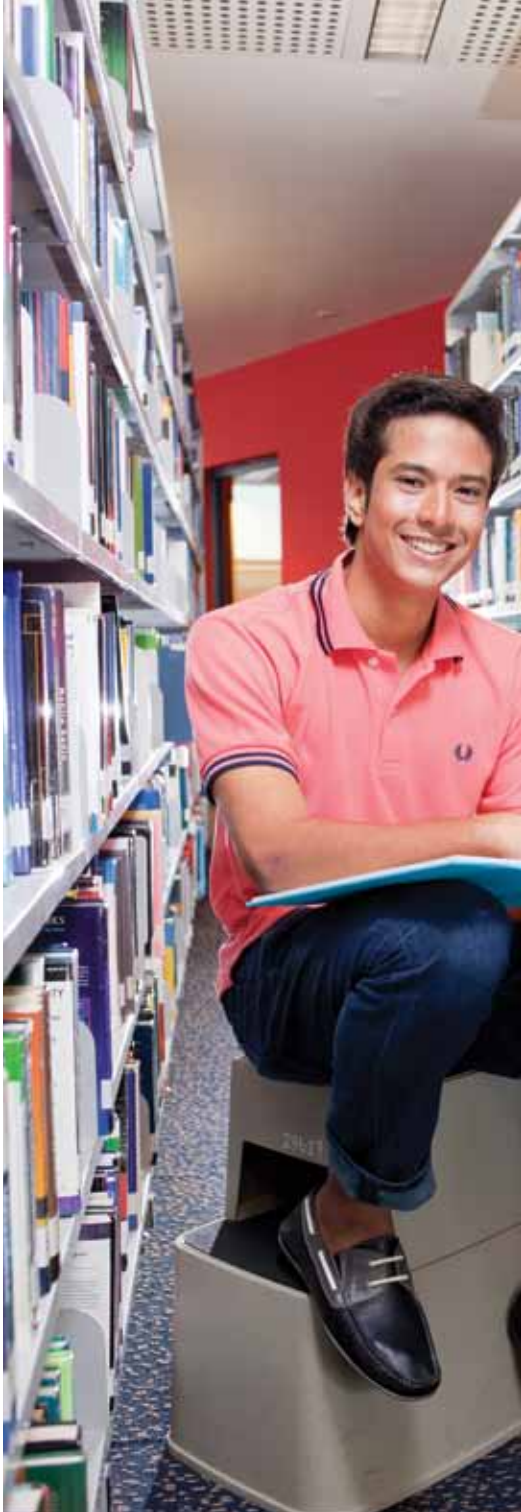

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# welcome to tp

Established in April 1990, Temasek Polytechnic (TP) operates from a 30-hectare campus fronting the scenic Bedok Reservoir. It currently has a student population of about 15,000 and a staff strength of about 1,300.

There are six academic schools at TP – the Applied Science, Business, Design, Engineering, Informatics & IT, as well as the Humanities & Social Sciences Schools. Together, they offer 53 market-driven full-time diploma courses that prepare students to be ready for further studies, future careers and life.

The Polytechnic prides itself as an organisation that embraces excellence. In July 2001, TP achieved the Public Service Award for Organisational Excellence in recognition of its attainment of the ISO 9000 certification for full-time programmes, the People Developer Standard and the Singapore Quality Class. In November 2005, the award was renewed through dedicated and concerted efforts made to maintain TP's reputable standing of quality. TP continued in its quest for excellence and achieved a renewal of the Singapore Quality Class in September 2008 and the People Developer Standard in April 2009. In April 2010, TP underwent a successful conversion to the ISO 9001 : 2008 standard, resulting in a renewal of the ISO certification.

With its continuing quest for organisational excellence and industry relevance, commitment to providing a holistic programme to its students, and its dedication to effective teaching approaches, TP ensures that its students are well-prepared to face the challenges of the future.

# message from principal & CEO

Temasek Polytechnic (TP) offers a wide variety of academic programmes designed to help our students achieve their aspirations meaningfully. Our 53 diploma courses, detailed in this prospectus, are market driven and industry supported. Complemented with a rigorous core curriculum, experienced faculty and cutting-edge facilities, we ensure that your experience at TP will keep your career and further education options wide open.

The TP diploma is your stepping stone to achieving your academic and career success. Our strong links with industry and reputable academic institutions around the world has kept pace with our increasing high standard of teaching. While our graduates are work-ready, the diploma is recognised by over 200 institutions around the world that you can choose to further your education at.

We are delighted that you have chosen or are considering Temasek Polytechnic on your higher education journey. You will find TP a place where learning comes to life, where our students thrive in an environment that is dynamic whilst being under the guidance of caring lecturers.

I look forward to welcoming you to TP in 2012.

*BOO KHENG HUA*
*Principal & Chief Executive Officer*

# learning at tp

Learning at a polytechnic will mean a significant adjustment for many students. At TP, you can be assured of a smooth transition to poly life with our innovative teaching approaches and systems. These are designed to develop your potential by maximising your learning opportunities and honing your talents.

## TEACHING EXCELLENCE

TP lecturers are recruited based on their proven track record in industry and their commitment to enhance student learning. All lecturers go through a professional development programme in pedagogy conducted by the polytechnic's Learning Academy. Lecturers use a wide repertoire of learning-teaching approaches which include the use of new technologies, interactive digital media and state-of-the-art facilities to help you learn as well as ignite your passion for learning.

## PROBLEM-BASED LEARNING

As a TP student, you will gain first-hand experience of the Problem-based Learning (PBL) approach that TP has adopted since 1997. PBL is an innovative learning approach that goes beyond content knowledge and helps you acquire learning, communication, problem-solving and teamwork skills. Through this, you will develop abilities in independent study, self-reflection and creative thinking.

Under PBL, the lecturer functions as a facilitator and an activator of student learning whilst you, the student, become a self-directed and active learner. All this means that PBL will make you a better learner and more adept at handling the challenges that you will encounter in the future. TP was awarded The Enterprise Challenge (Innovation Award) from the Prime Minister's Office in 2001. This award was for developing and implementing a PBL model as an educational innovation for the knowledge-based economy. In 2003, we were awarded The Enterprise Challenge Shield, also from the Prime Minister's Office. This prestigious award recognises the most outstanding project which has created the highest new value to the public service.

## FLEXIBLE ACADEMIC SYSTEM

All courses at TP come under the Flexible Academic System for Temasek (FAST). This system provides you with greater flexibility in matching your interest and aptitude, while adapting your academic workload to suit your pace of learning.

In this academic framework, all diploma course structures have three main categories of subjects:

- TP Core Subjects – compulsory subjects for all TP students
- Diploma Subjects – subjects specific to your diploma course
- Cross-Disciplinary Subjects – subjects beyond your diploma specialisation

Under FAST, each subject is a distinct and self-contained unit of study. As such, you need only re-take subjects that you have failed instead of repeating the entire year or semester of study. To give you a good foundation, some subjects include pre-requisites and co-requisites that must be met before you are allowed to take the subjects. Academic advisors in the six Schools at TP will help you make your choices wisely in order to meet your academic and personal goals. TP has obtained and will continue to seek accreditation, both at course and subject levels, with other institutions. You will be able to gain credits from other institutions and use them towards meeting the minimum graduation requirements at TP. By the same token, you can also use the credits earned at TP to seek credit exemption for furthering your studies.

## LEARNING ACROSS DISCIPLINES

In our effort to provide you with a holistic education at TP, you will be introduced to Cross-Disciplinary Subjects (CDS), ie, subjects beyond your diploma specialisation, as well as those that promote character building and a global perspective. The subjects are intended to ensure our students have a broad-based education when they graduate.

TP's six Schools offer a wide range of interesting CDS for you to choose from, including subjects in the arts, humanities and social sciences. This broad-based education will give you an edge in a world of work that increasingly bridges academic disciplines. For a list of these subjects, please refer to the section on "Cross-Disciplinary Subjects".

## CERTIFICATE PROGRAMME

In today's global economy, jobs are increasingly multi-disciplinary in nature as employers demand more from their employees. To help meet this challenge, TP offers a programme specially designed to help students attain an additional qualification while pursuing their studies in TP. Together with their diploma specialisation, the certificate in a field outside their course of study will give students an edge over the competition when they graduate.

The Certificate Programme comprises a series of subjects, grouped in clusters according to their specific field of study. Each subject cluster consists of four fundamental subjects in that given field. Students who are ranked in the top 10 percent in the first semester of their first year are eligible to sign up for the Certificate Programme. A certificate will be awarded to students who successfully complete the four subjects in the subject cluster.

The subject clusters are:

- Certificate in Business Fundamentals
- Certificate in Cross-Cultural Studies
- Certificate in Design Fundamentals
- Certificate in Digital Literacies
- Certificate in Language & Culture (French & Japanese)
- Certificate in Life Sciences Fundamentals
- Certificate in Management & Enterprise
- Certificate in Psychology Fundamentals

## CHARACTER EDUCATION

The Centre for Character & Leadership Education at TP provides experiential opportunities for you to learn how to lead a more meaningful and effective life by developing character traits that are valued in the workplace and family, traits that become all the more important if you are in a leadership position. Through the Centre's programmes, you will learn about making ethical decisions that are in line with values that can guide your life, increase your personal effectiveness and add value to your future career.

## ENTREPRENEURSHIP

TP believes that entrepreneurship is a mindset and discipline that must be embraced by both students and staff. In line with this, the Entrepreneurship Centre was set up in 2004. Across the polytechnic, entrepreneurial values are recognised, assimilated and developed in students. No matter which course of study or specialisation area you choose, you will be given the opportunity to develop your entrepreneurial talent. At TP, entrepreneurship goes beyond classroom learning. Experience is gained through real life projects and interaction with industry.

## E-LEARNING

In the course of your study in TP, you will have many opportunities to engage in e-learning. You will acquire valuable skills in learning how to learn and how to create knowledge in an online environment. You will have the opportunity to be exposed to both independent and collaborative learning online through TP's platform, OLIVE (Online Learning Interactive Virtual Environment). The flexibility of e-learning means that you will be able to study when and where you like in TP's wireless environment.

You can also look forward to using leading specialised software applications and new technologies, including those related to IDM (Interactive Digital Media), to enhance skills and understanding in your chosen field.

# student life at tp

Life as a TP student is as exciting as you make it to be. The campus is abuzz with student activities all year round. Besides live concerts, numerous arts events and sports competitions, our students have the opportunity to participate in local and overseas community projects, camps, expeditions, student leadership programmes and many other meaningful events that develop students beyond their academic pursuits.

## CO-CURRICULAR ACTIVITIES

From sports to arts to leadership training, you will experience a variety of co-curricular activities (CCAs) that provides you with a well-rounded educational experience and contribute to your personal enrichment. There are more than 50 CCAs to choose from, and we are confident that you will find one that matches your interest, be it in sports, performing arts, interest groups or studies club. As an adopter of the beautiful Bedok Reservoir which is located right next to the campus, we provide abundant opportunities for you to enjoy a wide range of water sports such as dragon boating, kayaking and wakeboarding.

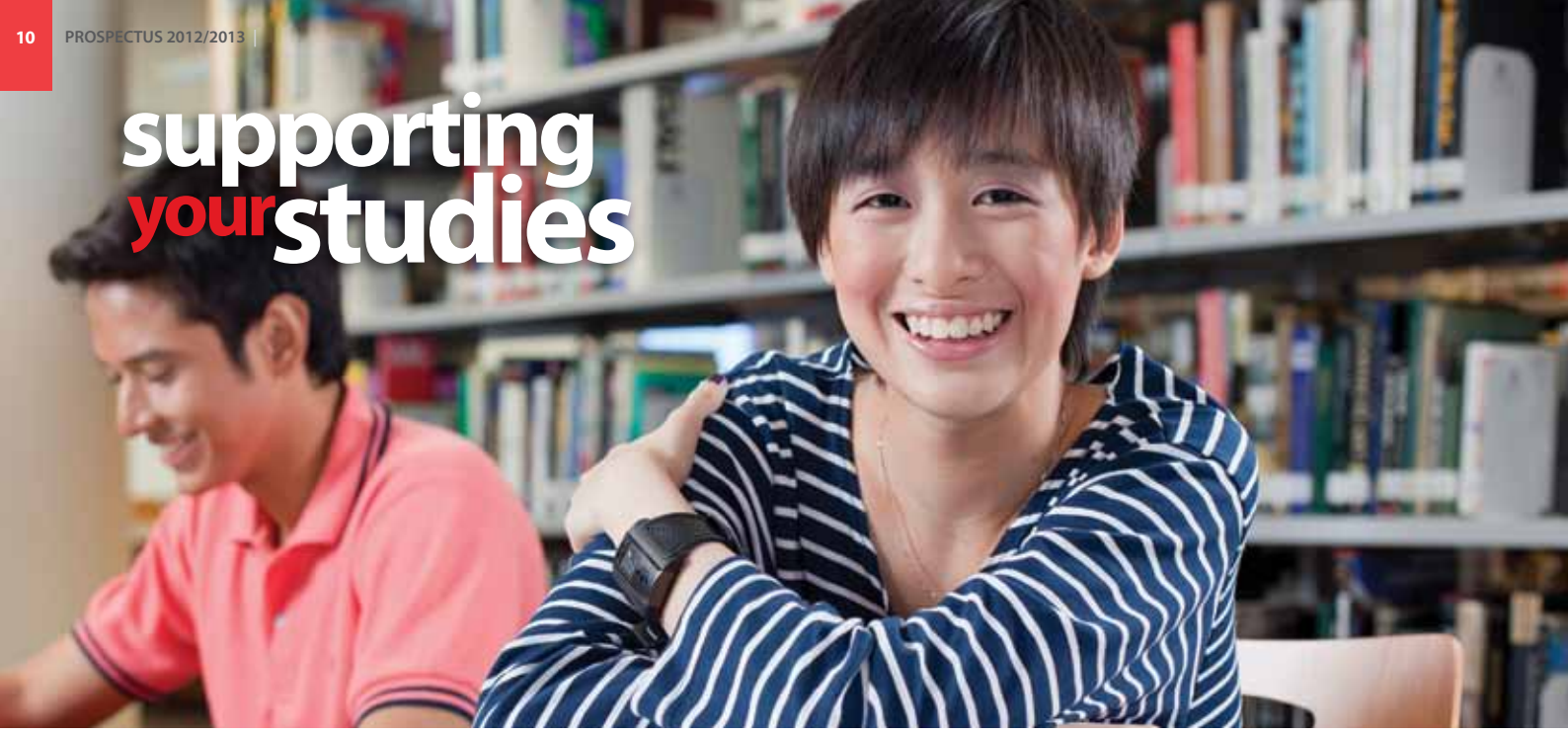
## A CARING CAMPUS

The Campus Care Network (CCN) promotes a caring culture within the TP community. We create a family-like environment which emphasises personal rapport between lecturers and students. You will be assigned to a Care Person, a lecturer dedicated to taking care of you and your group of friends throughout your three years here. In this way, we ensure your personal wellbeing and growth.

Each year, the CCN Day Carnival held on campus brings staff and students together in the spirit of caring and sharing to raise funds for needy students. This poly-wide event aims to cultivate community-spiritedness, while providing an opportunity for staff and student bonding.

## STUDENT WELLNESS AND COUNSELLING

As you pursue an exciting and enriching educational experience at TP, there may be times when the challenges that come your way seem overwhelming, and you need help through these challenges. The Student Wellness & Counselling Centre is staffed by qualified professional counsellors who are here to help you cope with difficulties of the social, emotional, financial, career or any other nature. In addition, our counsellors also conduct wellness workshops which teach you life-skills such as how to manage relationship troubles, how to handle stress, time management and study skills.



# supporting your studies

## LIBRARY AND INFORMATION RESOURCES

TP Library is the tallest building in the campus. Standing tall at 11 storeys, the Library houses a wide-ranging collection and provides a whole host of facilities and services to meet the learning and enrichment needs of students.

Boasting a collection size of 250,000 items, the Library is constantly enhancing its collection of books, AV titles, journals and magazines. Besides academic titles, leisure reading materials are available in the form of fiction, lifestyle magazines and books at the Lifestyle Floor.

The Lifestyle Floor houses facilities such as the Cable TV Room and the Podium where regular performances are held. Other facilities that can be found on this and other floors include Internet PCs equipped with MS applications, scanners, printers and photocopier machines. Project and study rooms, reading carrels and tables are also readily available.

In addition, students can visit the Library & Information Resources website which comprises a large selection of online videos, databases, books, exam papers, archives of corporate memories, and more. The Library is also at the forefront of social media endeavours and has presence in Facebook, wikis and blogs. Not only that, specially-developed mobile applications are available to enable members access resources and information from anywhere, at any time.

Besides the hardware that helps the students in their study here, the Library also provides the heartware that makes learning a positive experience. Lifelong information searching skills are instilled in the students in the form of on-site user education classes and PASS (Project Advisory Services for Students) where librarians are attached to project groups to help students map out research strategies. As such, students are given guidance throughout the research process via various kinds of research assistance.

## E-CAMPUS

TP has embarked on an initiative known as "e-Campus" to establish a strategic technology platform that allows staff and students to be connected anytime, anywhere. The framework enables the realisation of personalised web space where almost every service and learning resource can be accessed from within and outside the campus.

Among the services available is a personalised timetable that can be accessed anywhere. Students can also perform subject selection, update their personal particulars, view their

examination results, view their academic progression, apply for TP Scholarship and enrol for courses online. Our students are also able to read news and announcements, access information resources stored in TP's Library, submit work assignments from home, study online, attend virtual tutorials and group discussions, and chat online with lecturers. These are all part of the growing e-lifestyle for you at TP.

TP has completed its campus network upgrade project in Aug 2011. The campus-wide backbone is now 10 Gigabit Ethernet (10GE) ready. With that, staff and students could enjoy high-speed connectivity that facilitates rich media delivery. This, coupled with enhanced mobility will bring about a fully collaborative e-lifestyle for students and staff campus-wide.

## INTERNATIONAL RELATIONS & INDUSTRY SERVICES DEPARTMENT

The International Relations & Industry Services (IRIS) Department is TP's "eye" that scans, seeks and seizes opportunities for TP to connect to the world, so as to achieve the 4G outcomes of:

- Inculcating a Global Mindset in our staff and students
- Giving them an enriching Global Experience
- Forming Global Partnerships with industry
- Establishing a strong Global Branding for TP

IRIS supports the enhancement of staff capability development, student learning experience and graduate employability through:

- Developing partnerships with industry through consultancy, joint R&D projects, student internships, and job placements.
- Promoting innovation and commercialisation.
- Linking TP with the world through international technical transfer programmes and projects, staff/student exchanges, overseas student internships.
- Recruiting quality international students and helping international students adapt and adjust to life in Singapore by meeting their holistic needs in three key areas, namely, emotional, social and practical needs.
- Advising students on post-diploma education and career options through our Career and Course Advising Office.

# School of Applied Science

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The School offers eight courses in food, chemical and life sciences, aimed at nurturing a passion for science and research in you, and preparing you for a rewarding career in the vibrant food, F&B, healthcare, chemical and life sciences industries, as well as further studies.

Our ability-driven curriculum strives to develop in you competence, character and change-readiness to enable you to stay relevant and competitive in a rapidly changing global world.

Through Problem-based Learning (PBL), the Student Internship Programme, Differential Research Programme, major projects and practicum at our learning enterprises (frozen desserts factory, plantlet production unit and food outlets), you will develop critical thinking as well as interpersonal and problem-solving skills that are vital for success in the dynamic global economy. A strong emphasis on hands-on applications means that you will get the opportunity to integrate and apply your knowledge and skills in a real work environment. In addition, the online delivery mode, in the form of interactive course materials and e-lectures, enables you to access online resources and learn at your own pace and convenience.

The School also keenly encourages participation in competitions and involvement in programmes such as the Overseas Community Projects and the Student Leadership Programme. These, together with subjects such as Applied Principles for Effective Living, Communication Skills, and Cross-Disciplinary Subjects provide a holistic dimension to the curriculum.

To keep abreast of the latest developments, the School has carved out niche areas in applied research that contribute to the professional growth of its staff and enhance students' learning. Some of the areas of research or student projects are in Traditional Chinese Medicine, membrane technology, plant biotechnology, proteomics, microbiology and immunology, nanotechnology, analytical services, environment and water technology, baking science and technology, hydroponics and applied nutrition research. These research projects, often undertaken with industrial involvement, open up a common ground for multi-disciplinary technical teams to collaborate and innovate.

# Centres Of Excellence

## TEMASEK APPLIED SCIENCE RESEARCH CENTRE

This is a 1,400 square-metre centralised location for major research activities in chemical and life sciences within the School. Its state-of-the-art facilities promote inter-disciplinary research among staff and collaborative work with the industry and institutions of higher learning. The centre comprises various laboratory facilities such as Certified Class 10,000 lab, Bio-Safety Labs, Analytical Testing & Services Labs, Nutrition Research Facility and various specialised research labs for Traditional Chinese Medicine, proteomics, fermentation and plant biotechnology.

## TEMASEK ANALYTICAL SERVICES FACILITY

Temasek Polytechnic School of Applied Science is the first tertiary institution in Singapore to be awarded accreditation under the Singapore Laboratory Accreditation Scheme (SINGLAS) by the Singapore Accreditation Council (SAC) for its Chemical and Biological Testing Laboratory in April 2009. This recognition is a stamp of approval for its high quality assurance standard in the testing services provided to its customers in the industry. The analytical testing facility is well equipped with a wide range of state-of-the-art analytical instruments, supported by a team of competent staff with multi-disciplinary experience in laboratory quality management, testing and test methods development. The accreditation is granted in the field of Chemical & Biological Testing for 16 test methods for food products and eight methods for Traditional Chinese Medicine. This accreditation adds value to the School's consultancy and technical services offered to partners and collaborators who require high quality analytical testing services.

## CENTRE FOR TRADITIONAL MEDICINE (CTM)

The CTM is set up within the School of Applied Science to be a one-stop centre supporting the Traditional Medicine (TM) industry in Singapore as well as the region. The objectives of the CTM are to assist in the modernisation of the TM industry, enhance the knowledge of the TM industry and support government agencies and regulating authorities in TM-related matters. With dedicated project teams, the CTM offers Consultancy Services and conducts Applied Research in TM-related industry aspects. The CTM also promotes TM through its Education Programmes and TM publications.

## CHROMATOGRAPHY & MASS SPECTROMETRY RESEARCH FACILITY

This facility serves as a training ground for students conducting project work under the different research schemes offered by the School. It is also used for staff and consultancy projects as well as collaborative projects with other research groups. It is fully equipped with research instruments including High Performance Liquid Chromatography with UV and light scattering detector, Ion-Trapped Liquid Chromatography – Mass Spectrometer (LC-MS) with a nitrogen generator, Flash Chromatography and flow cytometer.

## TEMASEK ANIMAL FACILITY

Comprising two workstations, namely the Laboratory Animal workstation and the Aquaculture workstation, this facility provides a conducive training environment for students to learn essential skills related to both aquaculture and laboratory animal science and technology.

## BISTRO WALK TRAINING CAFÉ

This contemporary café provides part of the training ground for students to apply their knowledge and skills in managing a real café. Students are not only involved in the planning and preparation of various menu items and baked products; they are also involved in the daily operations of the café. The café offers healthier menu options as well as some recipe dishes specially developed by the students. Being a HACCP Certified F&B outlet, students are also trained to maintain and upkeep the food safety standards there.

## CULINARY FACILITY

This specialised facility comprises three culinary laboratories, the Asian kitchen, Bakery/ Pastry kitchen and the Western kitchen. These kitchens are equipped with some of the latest equipment to support training for the culinary as well as scientific/ technological experimentation. Each kitchen is built in its unique style to facilitate learning, and simulate actual commercial kitchen settings, such that students are able to gain extensive hands-on training in fundamental baking and culinary skills.

## DELI DELITE TRAINING FOOD KIOSK

This learning enterprise is a training venue for students as well as graduates to operate and manage a takeaway food kiosk outlet. The kiosk offers a range of quick takeaway food and beverage; among them are some all-time favourites such as deli-styled sandwiches, sausages and mash, smoothies and also the popular teppanyaki ice cream, which is produced specially by the School's KoolWerkz training factory. This set up is also managed and operated to simulate that of other commercially run food kiosks to evaluate its commercial viability and sustainability.

## GLYCEMIC INDEX RESEARCH UNIT

This facility is Singapore's first Glycemic Index Research Unit (GIRU) and is equipped to conduct in-vivo analysis of the glycemic index (GI), insulinemic index (II), and glycemic response of various foods. The facility also offers consultancy services in the area of nutrition research, GI testing and has also the capacity to conduct nutrition intervention studies.

## KOOLWERKZ LEARNING ENTERPRISE

An off-campus training factory for ice cream production, KoolWerkz provides a hands-on training approach for entrepreneurship development. Together with TP's Entrepreneurship Centre, it offers learning opportunities to all TP students in technical or business-related fields. Here, students learn about ice cream processing, inventory management, Hazard Analysis and Critical Control Point (HACCP), quality control and assurance, logistics and marketing functions as in real business scenarios.

## FOOD PRODUCT DEVELOPMENT FACILITY

This facility enables the formulation of both processed and ready-to-eat food products like spreads, drinks, baked products, desserts and sauces. It supports the School's frozen dessert capabilities by developing prototypes for our training factory. It also houses both food science and food processing laboratories that allow scaling up of formulations. The facility also houses a sensory evaluation laboratory to conduct consumer testing of prototypes.

## NUTRITION ASSESSMENT FACILITY

This facility comprises a counselling and observation room equipped with sophisticated facilities for focus group discussions and nutrition counselling sessions. It allows for anthropometric assessments like skinfold measurement and bioelectrical impedance analysis, and dietary assessments to be conducted. The facility thus serves to provide a realistic training ground for students and has the capacity to undertake nutrition research projects.

## ENVIRONMENTAL TECHNOLOGY FACILITY

This facility, housed in the Chemical Pilot Plant in the School, is well equipped to train students in environmental technology and embark on consultancy projects for our industrial partners. Two key areas include water technology and solid waste recycling technology. Students can be involved in interesting projects like development of novel materials for oil spill cleanup, and recycling of plastics, wood and industrial by-products as building materials.

Major equipment includes the NEWater pilot system and the nanofiltration/ reverse osmosis (NF/RO) membrane skid. The facility is also equipped with other conventional water and liquid waste treatment equipment such as jar test units, ion-exchange systems, filter press, activated carbon bed, etc.

## NANOTECHNOLOGY RESEARCH FACILITY

This facility is equipped with the basic equipment for the fabrication of inorganic nanoparticles and their surface modification for a variety of applications. It provides staff and students with the opportunity to be directly involved in the emerging field of nanotechnology, ie, R&D at the atomic, molecular or macromolecular levels. It involves creating and using structures, devices and systems that have novel properties and functions due to their small sizes.

## PHARMACEUTICAL TECHNOLOGY FACILITY

This facility, designed to meet current good manufacturing practices (cGMP), is complete with a class 100k drug formulation and preparation room, and class 10k aseptic dispensing room. It allows students to experience gowning procedures, secondary pharmaceutical manufacturing of various dosage forms such as syrups, tablets and creams as well as aseptic drug dispensing commonly used in the preparation of parenteral nutrition and chemotherapeutic drugs. The facility is equipped with the necessary utilities and documentation according to regulatory requirements simulating a cGMP certified manufacturing facility.

## PROTEOMICS RESEARCH FACILITY

This facility positions the School as a centre for proteomics R&D and training. It is equipped with instruments for protein prefractionation, two-dimensional gel analysis, two-dimensional high performance liquid chromatography, gel spot cutting/processing and protein identification (via MALDI) so as to provide the capability to perform the main steps of a proteomics workflow. It also has the capabilities for molecular and biochemical analysis of the identified proteins.

## PLANT TISSUE CULTURE TRAINING FACILITY

This facility serves as a platform for students to acquire knowledge of operation for the mass propagation of tissue culture plantlets in an actual production environment. Here, students are not only trained in specific tissue culture laboratory skills, they are also exposed to the process and workflow in a real-life production environment. In this way, they can better appreciate the industrial applications of different laboratory techniques taught in class.

## TP HERB GARDENS

With a collection of more than 120 species of medicinal plants, the gardens are part of the School's comprehensive technical competency development in Traditional Chinese Medicine (TCM). It comprises an open concept garden and a specially designed nursery. It is a useful teaching tool for the identification and classification of plants commonly used in TCM.

## TP HYDROPONIC GREENHOUSE

TP Hydroponic Greenhouse is equipped with aeroponics system and different types of hydroponics systems suitable for growing orchids and vegetables. TP is the first to also have developed the chilling technology for growing temperate plants as well as the innovative method of growing orchids using hydroponics. The facility includes amenities for nutrient analysis and preparation of hydroponic nutrient solution, artificial light studies and post-harvesting.

## TP ANIMAL CLINIC

The TP Animal Clinic was licensed by the Agri-Food & Veterinary Authority in May 2011. The clinic serves to provide more realistic training for final-year Veterinary Technology students. Working under close supervision of our staff, the students prepare the animals for sterilisation as well as provide essential veterinary assistance required for pre-and post-surgery and anesthesia procedures. The students are also directly involved in animal monitoring and recovery. Both the Cat Welfare Society and Action for Singapore Dogs work closely with the TP Animal Clinic on stray animal sterilisations.

# Applied Food Science & Nutrition

> ***The practical training in this course prepares TP students well for the food industry, as shown by their ability to perform tasks diligently. The department has benefitted from their highly positive mindset and creativity and they would definitely be an asset to any future employer.***
>
> *Mr Alan Goh*
> *Asst Operation Manager*
> *Product Development*
> *Super Bean International Pte Ltd*

What is in your favourite packet of instant noodles? Why do manufacturers use food additives? Can food be used as medicine?

Choose this course if you find these questions intriguing. Enter the world of food science and nutrition to learn the tricks of the trade – how to create innovative food products and provide healthier food choices.

Indeed, with society's greater demand for tasty yet healthier foods, there are rising concerns about the impact of our diet on our health in later years. Applying the scientific knowledge of both food science and nutrition, and receiving the practice-oriented training, you will gain the necessary competence to embark on a career in the food, nutrition and the healthcare industries. Electives are available from the fourth semester for you to specialise in either food science or nutrition.

The food science and technology subjects will enable you to face the challenging food industry to develop innovative, healthier and safer foods – through the use of the latest processing technology, functional food ingredients and techniques of preservation. The nutrition and health-related subjects will provide you with the knowledge and skills to design and evaluate healthier meals for different population groups, assess their nutritional status, develop nutrition education programmes, and understand the management of diet-related diseases.

The course also hones your entrepreneurial skills to help you embark on your own business ventures or take up challenges in sales and marketing of food and nutrition-related products and services.

## CAREER OPPORTUNITIES

Our graduates can embark on a career in the food, nutrition and healthcare industries. You may be employed as a nutrition executive, dietetic technologist, nutrition educator, food laboratory analyst, R&D executive, QA/QC executive, food microbiologist, or food hygiene officer in food operations.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| One of the following Science subjects: Biology, Chemistry, Combined Science, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry). | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

*Note: Applicants who do not meet the Science requirement but with Food & Nutrition/ Human & Social Biology may apply through Direct Admissions Exercise (DAE).*

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 79 credit units |
| Elective Subjects | : min 22 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 129 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACS1001 | Communication Skills for Applied Science1 | 1 | 2 |
| ACS1002 | Communication Skills for Applied Science2 | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ACS2001 | Communication Skills for Applied Science 3 | 2 | 2 |
| ACS3001 | Communication Skills for Applied Science 4 | 3 | 2 |
| ASI3005 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACH1002 | Organic & Biological Chemistry | 1 | 5 |
| ACH1005 | Principles of Inorganic & Physical Chemistry 1 | 1 | 5 |
| AFS1001 | Food Chemistry | 1 | 5 |
| AMA1003 | Mathematics & Statistics 1 | 1 | 3 |
| AMA1004 | Mathematics & Statistics 2 | 1 | 3 |
| AMB1002 | Human Anatomy & Physiology | 1 | 5 |
| AMB1003 | Basic Microbiology | 1 | 5 |
| ANT1001 | Science in Food Preparation | 1 | 4 |
| ANT1002 | Basic Nutrition & Food | 1 | 4 |
| AFS2001 | Food Ingredients | 2 | 4 |
| AFS2002 | Food Preservation & Quality Assurance | 2 | 5 |
| AFS2003 | Food Preservation & Quality Assurance Project | 2 | 5 |
| AFS2004 | Applied Food Sanitation | 2 | 4 |
| ANT2001 | Nutrition Across the Life Span | 2 | 5 |
| AFS3001 | Food Safety | 3 | 4 |
| AFS3003 | Product Development & Marketing | 3 | 5 |
| AMP3001 | Major Project | 3 | 8 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACE2002 | Environmental Technology | 2 | 4 |
| ACH2004 | Principles of Instrumental Analysis | 2 | 4 |
| ANT2003 | Communitry Nutrition | 2 | 5 |
| ANT2004 | Principles of Biochemistry & Physiology for Nutrition | 2 | 5 |
| ANT2005 | Food Service Management | 2 | 5 |
| ANT2006 | Health & Wellness | 2 | 4 |
| ANT2007 | Catering Technology | 2 | 4 |
| AFS3004 | Advanced Food Science | 3 | 4 |
| AFS3005 | Food Proccessing & Packaging | 3 | 5 |
| AHE3001 | Advanced Food Preparation | 3 | 4 |
| AHE3003 | Consumer Resource Management | 3 | 5 |
| ANT3001 | Nutrition in Disease | 3 | 5 |
| ANT3002 | Applied Nutrition | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Baking & Culinary Science

> ***Skill, knowledge, passion, discipline and love for cooking – great values nurtured by the school and lived by the students - the essence of our industry's future. Well done!***
>
> *Michael Leibl*
> *(Former) Executive Chef*
> *The Sentosa Resort & Spa*

Future Master Chefs, take note. If you dream of creating the perfect dish, stop dreaming and let science help you. Take the guesswork out of baking and culinary work and uncover the science behind the recipes you prepare: from simple sauces to roasting the perfect duck. With your scientific know-how, you'll be able to create innovative dishes for the food and beverage industry.

This course will teach you to scientifically evaluate the sensory and safety aspects of the dishes you prepare. You will undergo comprehensive hands-on training and an intensive and interactive experience. The curriculum encompasses chemistry, microbiology, food safety, product development, as well as baking and culinary technology. Part of the uniqueness of this course is that you will undergo a truly Asian culinary experience.

During the fifth semester, you will undergo a 16-week internship to gain and further develop your career-specific skills in the diverse food and beverage (F&B) industry or food/ ingredients companies. The course also hones your entrepreneurial skills to help you embark on your own business ventures.

## CAREER OPPORTUNITIES

Our graduates are well-positioned to join the F&B industry as baking technologists, junior chefs, or food product R&D executives. They can also choose to work in the baking, food service and food consultancy industries as well as in other supporting industries dealing with food ingredients. Graduates with a strong desire to pursue higher degrees may move on to universities that offer food or culinary science, as well as culinary management courses.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results, as well as directly through the Joint Polytechnic Special Admissions Exercise (JPSAE). Candidates who are shortlisted through the JPSAE will be required to undergo an interview to which they should bring portfolios of their work in culinary as evidence of their passion and creativity. The process seeks to determine the aptitude and attitude such as commitment and enthusiasm of the candidate for the culinary arts.

For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

**Note**

*With the curriculum emphasis on Asian culinary with science to develop innovative recipes and products, students will be required to handle various forms of food ingredients. These include meats of various sources such as pork and beef (and their by-products); stabilisers/ emulsifiers/ gelling agents of animal origin; as well as alcohol-based products such as wines, spirits and flavourings. Students may not necessarily consume their developed recipes/ products but will be required to evaluate and assess their physical/ chemical properties.*

*Students are also required to purchase uniform sets, safety shoes, bakery and knife sets and textbooks. These are not included in the tuition fees.*

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| One of the following Science subjects: Biology, Chemistry, Combined Science, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry). | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Core Subjects | : 97 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 125 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACS1001 | Communication Skills for Applied Science1 | 1 | 2 |
| ACS1002 | Communication Skills for Applied Science2 | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ACS2001 | Communication Skills for Applied Science 3 | 2 | 2 |
| ACS3001 | Communication Skills for Applied Science 4 | 3 | 2 |
| ASI3004 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ABC1001 | Food & Culture | 1 | 3 |
| ABC1006 | Fundamental Culinary Skills | 1 | 5 |
| ACH1002 | Organic & Biological Chemistry | 1 | 5 |
| AFS1001 | Food Chemistry | 1 | 5 |
| AMA1005 | Mathematics & Statistics | 1 | 3 |
| AMB1003 | Basic Microbiology | 1 | 5 |
| ANT1001 | Science in Food Preparation | 1 | 4 |
| ANT1002 | Basic Nutrition & Food | 1 | 4 |
| ABC2005 | Baking Science | 2 | 5 |
| ABC2006 | Baking Practicum | 2 | 7 |
| ABC2007 | Western Culinary Practicum | 2 | 6 |
| ABC2008 | Asian Culinary Practicum | 2 | 12 |
| ABC2010 | Basic Food Safety | 2 | 3 |
| ABC2011 | Applied Food Safety | 2 | 3 |
| ABC2012 | Principles of Food Service Management | 2 | 5 |
| AFS2001 | Food Ingredients | 2 | 4 |
| ABC3004 | Baking & Culinary Technology Application | 3 | 5 |
| ABC3005 | Product Development in Food Service | 3 | 5 |
| AMP3005 | Major Project | 3 | 8 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Biomedical Science

> ***TP students generate creativity, enthusiasm and self-discipline during their laboratory attachments here at KK Women's & Children's Hospital. Their diligent nature and competency as shown through their project assignments stand them in good stead for future employment.***
>
> *Lim Geok Hoon*
> *Senior Manager*
> *Dept of Pathology and Lab Medicine*
> *KK Women's & Children's Hospital*

Play a part in the research and development of new methods for the diagnosis, treatment and prevention of diseases. Study Biomedical Science and you will understand how the human body functions, how diseases occur, and how we can cure and prevent them.

Singapore may well be the next global hub for biomedical sciences. The local biomedical sciences sector is growing rapidly with increasing foreign direct investment that boosts job opportunities in clinical laboratory testing, clinical trials as well as research and development. Singapore's thrust to be the region's medical hub with world-class healthcare services emphasises the need for quality trained technologists in clinical laboratories and clinical research. This course puts you in demand!

You begin by learning the foundational sciences to understand the biology and chemistry of health science. You will study, among other things, the inner workings of living cells, the biological processes involving proteins and enzymes, the structure, parts and functions of the human body, and the world of bacteria, viruses and other microorganisms. You will progress to learn the nature, causes and progression of human diseases, our biological responses and defences, and diagnosis so that appropriate treatment can be provided. You will ultimately build your strength in the testing, diagnosis, management and prevention of diseases.

Our course emphasises learning through established collaborative training with industry/ hospitals, taught by experienced teaching staff and industry practitioners. The compulsory internship in relevant industries carried out concurrently with major projects helps you to experience real working life and allows you to apply theory to practice on actual industry projects.

## CAREER OPPORTUNITIES

Our graduates can work as medical technologists or laboratory technologists in hospital/ clinical laboratories, medical research centres, central testing laboratories and clinical trials units at contract research organisations.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| One of the following Science subjects: | Grades 1 - 6 |

Biology, Chemistry, Combined Science, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).

Any two other subjects, excluding CCA –

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply.*

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 90 credit units |
| Elective Subjects | : min 8 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 126 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACS1001 | Communication Skills for Applied Science1 | 1 | 2 |
| ACS1002 | Communication Skills for Applied Science2 | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ACS2001 | Communication Skills for Applied Science 3 | 2 | 2 |
| ACS3001 | Communication Skills for Applied Science 4 | 3 | 2 |
| ASI3003 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ABM1002 | Human Physiology & Immunology | 1 | 4 |
| ABT1001 | Cell Biology | 1 | 4 |
| ABT1002 | Biomolecules | 1 | 4 |
| ACH1003 | Organic Chemistry 1 | 1 | 5 |
| ACH1005 | Principles of Inorganic & Physical Chemistry 1 | 1 | 5 |
| AMA1003 | Mathematics & Statistics 1 | 1 | 3 |
| AMA1004 | Mathematics & Statistics 2 | 1 | 3 |
| AMB1002 | Human Anatomy & Physiology | 1 | 5 |
| AMB1003 | Basic Microbiology | 1 | 5 |
| ABM2007 | Clinical Chemistry | 2 | 5 |
| ABM2008 | Histological Techniques | 2 | 3 |
| ABM2009 | Fundamentals of Pathology | 2 | 4 |
| ABM2010 | Applied Immunology | 2 | 3 |
| ABM2011 | Haematology | 2 | 4 |
| ABT2007 | Molecular Genetics | 2 | 5 |
| ABT2013 | Molecular Biology | 2 | 4 |
| AMB2004 | Medical Microbiology | 2 | 4 |
| APH2006 | Basic Pharmacology | 2 | 4 |
| ABM3001 | Blood Banking | 3 | 4 |
| ABM3004 | Laboratory Management & Quality Assurance | 3 | 4 |
| AMP3006 | Major Project | 3 | 8 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACH1006 | Principles of Inorganic & Physical Chemistry 2 | 1 | 5 |
| BRM1002 | Principles of Retail Management | 1 | 4 |
| ABT2014 | Metabolic Biochemistry | 2 | 4 |
| ABT2015 | Mammalian Cell Technology | 2 | 3 |
| ACE2009 | Occupational Safety & Health | 2 | 4 |
| ACE2010 | Process Control & Instrumentation | 2 | 5 |
| APH2002 | Pharmaceutical Chemistry | 2 | 4 |
| BRM2006 | Store Management | 2 | 4 |
| ABM3003 | Drug Development & Clinical Trials | 3 | 5 |
| APH3005 | Bioprocess Technology | 3 | 5 |
| APH3006 | Good Dispensing Practice & Pharmacotherapy | 3 | 5 |
| APH3008 | Biopharmaceutical Unit Operations | 3 | 4 |
| BMK3007 | Principles of Entrepreneurship | 3 | 4 |
| BMK3012 | Sales Management | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Biotechnology

***The Biotechnology intern we had was an exceptional student – the best I have ever had! His capacity to carry out research is very high. I told him he is welcome back any time. Proteomics is my expertise and he carried out his research project well, far exceeding my expectations.***

*Prof Chris Florides*
*Managing Director*
*Saturn Biotech Ltd*
*State Agricultural Biotechnology Centre*
*Murdoch University*

Genes, molecular biology, cloning, immunology, therapeutics, diagnostics, forensics, health and diseases – do these terms excite you? Are you fascinated about how living systems work? Do you want a career that involves new biological discoveries and novel applications of knowledge? If so, this course is for you!

This course trains you to be a research technologist supporting the growing life science industry. The Singapore Government has targeted the life science industry to be our fourth pillar of economic growth, and has invested heavily to make Singapore the regional life sciences hub. As a result, research technologists are increasingly in demand in both basic and translational research on disease biology, diagnostics and therapeutics. At the same time, more manpower is also needed for research activities on economically important plants and animals so as to increase our food yield.

In your first year, you will be trained to develop a solid foundation in basic biology and chemistry. Over the next two years, you will undergo a well-integrated sequence of modules on cell and molecular biotechnology. A hands-on approach forms the core basis of training, during which you will be exposed to a repertoire of research skills in the areas of laboratory animal science and technology, genomics, proteomics, plant biotechnology, immunology and other key supporting technology essential for biomedical and scientific research. You will eventually develop a solid broad-based foundation in life sciences that will maximise your career and future educational options.

In order to further hone your technical skills, you will undergo a five-month attachment either locally or overseas in the biotechnology and biomedical industries.

## CAREER OPPORTUNITIES

Our graduates have found work in research institutions (both A*STAR and non-A*STAR), universities, hospitals, biotechnology companies and also government ministries and statutory boards. You may also work as a laboratory technologist assisting in pre-clinical trials at contract research organisations, or in laboratory operations and maintenance at research and teaching institutions, or even hospitals. Graduates interested to be technical support officers can also work in aquaculture and agrotechnology parks and farms. Your solid broad-based training will also enable you to be employed as a marketing or product specialist for life sciences instruments and products. The research skills and knowledge gained by our graduates are applicable worldwide.

## ELECTIVE CLUSTERS

Choose from one of the three elective subject clusters in your final year: Research Cluster, Forensic Cluster or Bioconservation Cluster.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| One of the following Science subjects: | Grades 1 - 6 |
| Biology, Chemistry, Combined Science, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry). | |
| Any two other subjects, excluding CCA | – |

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 95 credit units |
| Elective Subjects | : min 8 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 131 credit units |

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACS1001 | Communication Skills for Applied Science1 | 1 | 2 |
| ACS1002 | Communication Skills for Applied Science2 | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ACS2001 | Communication Skills for Applied Science 3 | 2 | 2 |
| ACS3001 | Communication Skills for Applied Science 4 | 3 | 2 |
| ASI3003 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ABM1002 | Human Physiology & Immunology | 1 | 4 |
| ABT1001 | Cell Biology | 1 | 4 |
| ABT1002 | Biomolecules | 1 | 4 |
| ACH1003 | Organic Chemistry 1 | 1 | 5 |
| ACH1005 | Principles of Inorganic & Physical Chemistry 1 | 1 | 5 |
| AMA1003 | Mathematics & Statistics 1 | 1 | 3 |
| AMA1004 | Mathematics & Statistics 2 | 1 | 3 |
| AMB1002 | Human Anatomy & Physiology | 1 | 5 |
| AMB1003 | Basic Microbiology | 1 | 5 |
| ABM2009 | Fundamentals of Pathology | 2 | 4 |
| ABM2010 | Applied Immunology | 2 | 3 |
| ABT2006 | Analytical Biochemistry | 2 | 5 |
| ABT2007 | Molecular Genetics | 2 | 5 |
| ABT2009 | Plant Cell Technology | 2 | 5 |
| ABT2013 | Molecular Biology | 2 | 4 |
| ABT2014 | Metabolic Biochemistry | 2 | 4 |
| ABT2015 | Mammalian Cell Technology | 2 | 3 |
| AMB2001 | Applied Microbiology | 2 | 5 |
| ABT3012 | Genomics & Proteomics | 3 | 3 |
| ABT3013 | Recombinant Technology & Bioinformatics | 3 | 4 |
| AVT3003 | Laboratory Animal Science & Technology | 3 | 4 |
| AMP3007 | Major Project | 3 | 8 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| AFR2001 | Forensic Toxicology | 2 | 4 |
| APH2006 | Basic Pharmacology | 2 | 4 |
| ABM3003 | Drug Development & Clinical Trials | 3 | 5 |
| ABT3014 | Ecology & Biodiversity | 3 | 4 |
| ABT3015 | Conservation Biology | 3 | 5 |
| ABT3016 | Stem Cells & Tissue Engineering | 3 | 4 |
| AFR3001 | Forensic Biological, Chemical & Physical Analysis | 3 | 5 |
| APH3005 | Bioprocess Technology | 3 | 5 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Chemical Engineering

> ***TP students and graduates from this course are responsible and inquisitive. They have a good understanding of process engineering and are able to perform their task well with minimum supervision. They also developed a good and happy relationship with our fellow employees.***
>
> *Lim Kiah Siang*
> *Training Manager*
> *Petrochemical Corporation of Singapore (Pte) Ltd*

Oil refinery giants, major manufacturers of petrochemicals and specialty chemicals and pharmaceutical giants all have a strong presence in Singapore. These companies, rooted in such diverse fields, have one thing in common — they rely on chemical engineers to determine the pulse of the process industry.

Chemical engineers are involved in the manufacture of products such as fuel, petrochemicals, cosmetics, plastics, processed foods and medicine so that we can enjoy and reap the benefits of scientific discoveries. They hold crucial responsibilities in the process industry such as running plant operations, designing reactors and process equipment, improving efficiency as well as looking into the safety and environmental aspects of processes.

This course will equip you with knowledge and skills in process technology, occupational safety and health, analytical chemistry and process engineering principles. It emphasises process engineering, chemistry, and laboratory techniques with practical knowledge of chemical process technology, petrochemical technology, pharmaceutical manufacturing technology and water and environmental technology. Practical knowledge of process control and laboratory techniques as required by the relevant industries is also included.

The extensive scope of this course will prepare you for higher education well. Besides local universities, students can enrol to SIT (Singapore Institute of Technology) for further studies. The University of New South Wales, University College of London, University of Adelaide and many top overseas universities also offer advanced standing to our graduates. You will have opportunities for local or overseas internships at MNCs and reputable institutions.

## CAREER OPPORTUNITIES

Trained to be versatile, you can work in a broad range of companies in various industries. You can embark on a career in the chemical industry, the largest manufacturing industry in Singapore. You can also conduct analytical or research work in laboratories. Alternatively, you can consider a career in pharmaceutical manufacturing companies running the production of pharmaceutical products. The water and environmental industries, technical sales or purchasing also offer excellent prospects.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on “Admission and Requirements”. For international students, please refer to the section on “Information for International Students”.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| One of the following Science subjects: | Grades 1 - 6 |
| Biology, Chemistry, Combined Science, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry). | |
| Any two other subjects, excluding CCA | – |

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 93 credit units |
| Elective Subjects | : min 7 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 128 credit units |

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACS1001 | Communication Skills for Applied Science1 | 1 | 2 |
| ACS1002 | Communication Skills for Applied Science2 | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ACS2001 | Communication Skills for Applied Science 3 | 2 | 2 |
| ACS3001 | Communication Skills for Applied Science 4 | 3 | 2 |
| ASI3002 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACE1001 | Mass & Energy Balance | 1 | 5 |
| ACE1002 | Thermodynamics | 1 | 4 |
| ACH1003 | Organic Chemistry 1 | 1 | 5 |
| ACH1004 | Organic Chemistry 2 | 1 | 4 |
| ACH1005 | Principles of Inorganic & Physical Chemistry 1 | 1 | 5 |
| ACH1006 | Principles of Inorganic & Physical Chemistry 2 | 1 | 5 |
| AMA1001 | Applied Mathematics | 1 | 4 |
| AMA1002 | Engineering Mathematics 1 | 1 | 5 |
| ACE2002 | Environmental Technology | 2 | 4 |
| ACE2007 | Unit Operations 1 | 2 | 5 |
| ACE2008 | Unit Operations 2 | 2 | 5 |
| ACE2009 | Occupational Safety & Health | 2 | 4 |
| ACE2010 | Process Control & Instrumentation | 2 | 5 |
| ACH2004 | Principles of Instrumental Analysis | 2 | 4 |
| AMA2001 | Engineering Mathematics 2 | 2 | 5 |
| AMB2005 | Introduction to Biochemistry & Microbiology | 2 | 4 |
| ACE3002 | Chemical Reaction Engineering | 3 | 4 |
| ACE3004 | Plant Safety & Loss Prevention | 3 | 4 |
| ACE3010 | Materials & Nanotechnology | 3 | 4 |
| AMP3008 | Major Project | 3 | 8 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACE2003 | Industrial Chemical Processes | 2 | 4 |
| ACE3005 | Membrane Separation | 3 | 3 |
| ACE3006 | Petrochemical Technology | 3 | 4 |
| ACH3003 | Applications of Instrumental Analysis | 3 | 5 |
| AEW3001 | Industrial Utilities | 3 | 3 |
| AEW3002 | Industrial Wastewater Treatment | 3 | 4 |
| AEW3003 | Environmental Management System | 3 | 3 |
| AMA3001 | Engineering Mathematics 3 | 3 | 4 |
| APH3002 | Current Good Manufacturing Practices | 3 | 3 |
| APH3004 | Pharmaceutical Manufacturing Technology | 3 | 4 |
| APH3005 | Bioprocess Technology | 3 | 5 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Consumer Science & Technology

> ***During the 10-week attachment, the intern from your course worked proficiently and independently and was a great asset to the Home Economics Department. She carried out her duties with enthusiasm and displayed a great sense of responsibility. With her commitment and passion, I have no doubt that she has what it takes to be a good teacher.***
>
> *Lim Chek Quay*
> *Home Economics Subject Co-ordinator*
> *Temasek Secondary School*

## Motivate. Inspire. Teach.

If you have a passion for food, science, fabric and design, consumer needs and wants, a zest for learning and an interest in nurturing students to reach their potential, you have what it takes to become a Home Economics teacher. Teach the young to value a healthy lifestyle, stretch the dollar, become a confident person and create a happy family. Show them how to manage the food we eat, the money we spend and the clothes we wear.

This course is one of two diploma programmes offered under the Ministry of Education's four-year Home Economics Teacher Training Scheme. Students embarking on this course are equipped with technical skills and scientific knowledge of nutrition, food preparation, food science, textiles, sewing and consumer education to manage the content of Home Economics in secondary schools. Graduating from TP, you will proceed to the National Institute of Education to pursue the diploma course in Education (Home Economics) that trains you in effective pedagogy.

The course incorporates various approaches that develop not only technical knowledge and skills but also life skills such as teamwork, communication, time and conflict management and skills in preparation for the realities of working life. The compulsory internship helps you to experience Home Economics teachers' work in secondary schools.

At TP, you will go through a flexible learning structure where core subjects are taken together with the character education programme, overseas community projects and cross-disciplinary subjects. This flexibility develops talents and grooms holistic individuals ready to take on the challenge of a changing Singapore education landscape.

### CAREER OPPORTUNITIES

With Singapore fast becoming an education hub, a career in teaching will give you a bright future. Graduates with both diplomas will serve as Home Economics teachers in secondary schools.

### APPLICATION

Application to this course is administered at the same time as the Joint Admissions Exercise conducted after the release of the GCE O Level results. Applications are to be made online directly to MOE at the following website: www. moe.gov.sg/careers/teach/applying/olevels/#home-economics. Applications must be submitted to MOE within one week of the release of the GCE O Level results.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| One of the following Science subjects: | Grades 1 - 6 |
| Biology, Chemistry, Combined Science, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry). | |
| Any two other subjects, excluding CCA | Grades 1 - 6 |

**Sijil Pelajaran Malaysia (SPM)/Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 17 credit units |
| Diploma Core Subjects | : 101 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 127 credit units |

## SPONSORSHIP

Students admitted into this course will be fully sponsored by MOE. This sponsorship includes course fees as well as a monthly bursary during the first three years. In the fourth year, each student will be appointed to the Education Service as an untrained teacher drawing a salary. In return, students will serve a five-year bond with MOE.

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACS1001 | Communication Skills for Applied Science1 | 1 | 2 |
| ACS1002 | Communication Skills for Applied Science2 | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ACS2001 | Communication Skills for Applied Science 3 | 2 | 2 |
| ASI2001 | Student Internship Programme | 2 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACH1002 | Organic & Biological Chemistry | 1 | 5 |
| ACH1005 | Principles of Inorganic & Physical Chemistry 1 | 1 | 5 |
| AFS1001 | Food Chemistry | 1 | 5 |
| AMA1003 | Mathematics & Statistics 1 | 1 | 3 |
| AMA1004 | Mathematics & Statistics 2 | 1 | 3 |
| AMB1002 | Human Anatomy & Physiology | 1 | 5 |
| AMB1003 | Basic Microbiology | 1 | 5 |
| ANT1001 | Science in Food Preparation | 1 | 4 |
| ANT1002 | Basic Nutrition & Food | 1 | 4 |
| DAD1134 | Lifestyle Sewing 1 | 1 | 4 |
| DAS1106 | Textile Fundamentals | 1 | 4 |
| DAS1107 | Apparel Design Fundamentals | 1 | 3 |
| AFS2001 | Food Ingredients | 2 | 4 |
| AFS2002 | Food Preservation & Quality Assurance | 2 | 5 |
| AFS2003 | Food Preservation & Quality Assurance Project | 2 | 5 |
| ANT2001 | Nutrition Across the Life Span | 2 | 5 |
| ANT2003 | Community Nutrition | 2 | 5 |
| ANT2004 | Principles of Biochemistry & Physiology for Nutrition | 2 | 5 |
| DAD2135 | Lifestyle Sewing 2 | 2 | 4 |
| AHE3001 | Advanced Food Preparation | 3 | 4 |
| AHE3003 | Consumer Resource Management | 3 | 5 |
| ANT3001 | Nutrition in Disease | 3 | 5 |
| DAD3137 | Decorative Construction | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Pharmaceutical Science

> *We were impressed with the enthusiasm, commitment and positive attitude of TP's intern. The cGMP and Pharmaceutical Legislation & Marketing modules covered in your course enabled her to blend into the company's GMP regulated environment easily. They also equipped her to participate actively in discussions and complete related assignments.*
>
> *Susan Chan*
> *Regulatory Affairs Manager*
> *Zuellig Pharma Pte Ltd*

Why are some medicines labelled as "poison"? How do they work to cure diseases? Join this field and learn about the effects of drugs on the human body. Gain the knowledge and skills required to design, analyse, manufacture and market new therapies for diseases.

Pharmaceuticals accounted for 85 percent of the biomedical science industry output for Singapore in 2010, which grew by another 10 percent for the whole year. Total output hit S$19.7 billion. Biopharmaceutical manufacturing, with six new plants announced to be set up in Singapore worth S$2.1 billion, is poised to be the next leading driver of the industry.

The course will train you to join the various sectors of the pharmaceutical and healthcare industries, and lay the foundation for you to become a specialist investigator in criminal forensics. You will learn specialised subjects related to disease, pharmaceutical legislation and marketing, drug action, chemical and biological analysis, and pharmaceutical manufacturing.

Furthermore, if you have an inclination towards analytical work, or have a passion for a career in forensics, you will have the opportunity to select elective subjects in our new Forensics & Analytical Bioscience specialisation.

You will be able to take up an internship position at hospitals, retail pharmacies, pharmaceutical manufacturing industry, or QC and research laboratories in Singapore or overseas. The internship enables you to apply theory to practice on real industry projects. During your diploma course, you can also take part in research projects offered by the School or research institutes in various research topics such as pharmaceutical science, analytical science, biologics and traditional medicine.

## SPECIALISATION

- Forensics & Analytical Bioscience
- Pharmacy Practice
- Biopharmaceutical Manufacturing

## CAREER OPPORTUNITIES

Graduates can work as pharmacy technicians in hospitals or community/ retail pharmacies, QA/QC technologists to conduct quality checks or process technologists to manufacture the drugs in the pharmaceutical industry. For the research-inclined, you can also join one of the research institutes or pharmaceutical companies to assist in research work on drug development and clinical trials, or conduct analytical work. You can also embark on a career in technical sales and marketing for pharmaceutical/ health products, or in forensics as an investigator or a laboratory technologist.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| One of the following Science subjects: | Grades 1 - 6 |
| Biology, Chemistry, Combined Science, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry). | |
| Any two other subjects, excluding CCA | – |

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 86 credit units |
| Elective Subjects | : min 12 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 126 credit units |

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACS1001 | Communication Skills for Applied Science 1 | 1 | 2 |
| ACS1002 | Communication Skills for Applied Science 2 | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ACS2001 | Communication Skills for Applied Science 3 | 2 | 2 |
| ACS3001 | Communication Skills for Applied Science 4 | 3 | 2 |
| ASI3003 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ABM1002 | Human Physiology & Immunology | 1 | 4 |
| ABT1001 | Cell Biology | 1 | 4 |
| ABT1002 | Biomolecules | 1 | 4 |
| ACH1003 | Organic Chemistry 1 | 1 | 5 |
| ACH1005 | Principles of Inorganic & Physical Chemistry 1 | 1 | 5 |
| AMA1003 | Mathematics & Statistics 1 | 1 | 3 |
| AMA1004 | Mathematics & Statistics 2 | 1 | 3 |
| AMB1002 | Human Anatomy & Physiology | 1 | 5 |
| AMB1003 | Basic Microbiology | 1 | 5 |
| ACH1004 | Organic Chemistry 2 | 1 | 4 |
| ABM2009 | Fundamentals of Pathology | 2 | 4 |
| ACH2004 | Principles of Instrumental Analysis | 2 | 4 |
| AMB2003 | Pharmaceutical Microbiology | 2 | 4 |
| APH2004 | Pharmaceutical Legislation & Marketing | 2 | 4 |
| APH2005 | Introduction to Pharmacotherapeutics | 2 | 4 |
| APH2006 | Basic Pharmacology | 2 | 4 |
| APH3002 | Current Good Manufacturing Practices | 3 | 3 |
| APH3004 | Pharmaceutical Manufacturing Technology | 3 | 4 |
| APH3007 | Pharmaceutical Analysis | 3 | 5 |
| AMP3009 | Major Project | 3 | 8 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACH1006 | Principles of Inorganic & Physical Chemistry 2 | 1 | 5 |
| BRM1002 | Principles of Retail Management | 1 | 4 |
| ABT2014 | Metabolic Biochemistry | 2 | 4 |
| ABT2015 | Mammalian Cell Technology | 2 | 3 |
| ACE2006 | Pharmaceutical Unit Operations | 2 | 5 |
| ACE2009 | Occupational Safety & Health | 2 | 4 |
| ACE2010 | Process Control & Instrumentation | 2 | 5 |
| AFR2001 | Forensic Toxicology | 2 | 4 |
| APH2002 | Pharmaceutical Chemistry | 2 | 4 |
| BRM2006 | Store Management | 2 | 4 |
| ABM3003 | Drug Development & Clinical Trials | 3 | 5 |
| ACH3004 | Laboratory Accreditation & Automation | 3 | 4 |
| AFR3001 | Forensic Biological, Chemical & Physical Analysis | 3 | 5 |
| APH3005 | Bioprocess Technology | 3 | 5 |
| APH3006 | Good Dispensing Practice & Pharmacotherapy | 3 | 5 |
| APH3008 | Biopharmaceutical Unit Operations | 3 | 4 |
| BMK3007 | Principles of Entrepreneurship | 3 | 4 |
| BMK3012 | Sales Management | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Veterinary Technology

> *The biomedical, pharmaceutical and agricultural industries are growth industries which will need more veterinary technologists to service their expanding businesses. Government-related agencies such as the AVA, research institutes and the Biopolis also have a good demand for veterinary technologists."*
>
> *Dr Ngiam Tong Tau*
> *President*
> *Singapore Veterinary Association (2007)*

Get a head start by assisting in real life animal sterilisations at TP's fully licenced TP Animal Clinic. With our intensive and practical training, you will graduate as a technically competent and much sought-after veterinary or animal technologist.

Your expertise will be very much in demand in the years ahead. There has been a significant increase in pet ownership in Singapore, and a growing awareness about animal welfare issues. Also, in our pursuit to find cures for human diseases, animals are used as models in research and pre-clinical trials. All this makes responsible and humane animal care and use extremely important.

This course focuses on establishing a good grounding in the basic and applied animal sciences for meeting the needs of the veterinary, biomedical research and pet retail industries. The practice-oriented programme equips students with specialised skill sets that will prepare them well as responsible and competent veterinary/animal technologists. Other than veterinary diagnostics, surgery and anesthesia assistance, animal nutrition and health, students will also learn about molecular and cellular techniques as well as humane care and use of laboratory animals for biomedical and veterinary research.

Your technical competency is further honed through a five-month internship stint either locally or overseas in animal facilities and research institutions, animal parks, veterinary hospitals/ clinics and other animal-related organisations.

## CAREER OPPORTUNITIES

Our graduates can work in either biomedical research or the veterinary industries. You may be employed as a veterinary technologist in veterinary clinics/ hospitals, or as an animal education officer/ assistant, animal health inspection assistant or technical support officer in animal welfare organisations, Agri-Food and Veterinary Authority of Singapore, animal quarantine centres and pet shops as well as Wildlife Reserves Singapore and Marine Life Park in Resorts World Sentosa. You may also work as an animal technologist in animal facilities at research/tertiary institutions or pre-clinical trial centres. You could also be a sales and marketing executive in pet feed or accessory companies and companies promoting veterinary/ scientific equipment.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| One of the following Science subjects: | Grades 1 - 6 |
| Biology, Chemistry, Combined Science, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry). | |
| Any two other subjects, excluding CCA | – |

*Note: Applicants with complete Colour Appreciation Deficiency are not eligible to apply.*

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Core Subjects | : 99 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 127 credit units |

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ACS1001 | Communication Skills for Applied Science 1 | 1 | 2 |
| ACS1002 | Communication Skills for Applied Science 2 | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ACS2001 | Communication Skills for Applied Science 3 | 2 | 2 |
| ACS3001 | Communication Skills for Applied Science 4 | 3 | 2 |
| ASI3001 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ABM1002 | Human Physiology & Immunology | 1 | 4 |
| ABT1001 | Cell Biology | 1 | 4 |
| ACH1002 | Organic & Biological Chemistry | 1 | 5 |
| ACH1005 | Principles of Inorganic & Physical Chemistry 1 | 1 | 5 |
| AMA1005 | Mathematics & Statistics | 1 | 3 |
| AMB1002 | Human Anatomy & Physiology | 1 | 5 |
| AMB1003 | Basic Microbiology | 1 | 5 |
| ABM2009 | Fundamentals of Pathology | 2 | 4 |
| ABM2010 | Applied Immunology | 2 | 3 |
| ABT2007 | Molecular Genetics | 2 | 5 |
| ABT2010 | Animal Anatomy & Physiology | 2 | 5 |
| ABT2013 | Molecular Biology | 2 | 4 |
| ABT2014 | Metabolic Biochemistry | 2 | 4 |
| AVT2001 | Clinical Diagnostics 1 | 2 | 5 |
| AVT2002 | Clinical Diagnostics 2 | 2 | 4 |
| AVT2003 | Laboratory Safety & Management | 2 | 2 |
| AVT2004 | Veterinary Practice Management | 2 | 2 |
| AVT2005 | Animal Care & Management | 2 | 5 |
| AVT3001 | Animal Health & Diseases | 2 | 5 |
| APH2006 | Basic Pharmacology | 3 | 4 |
| AVT3002 | Surgical & Anaesthetic Principles | 3 | 4 |
| AVT3003 | Laboratory Animal Science & Technology | 3 | 4 |
| AMP3010 | Major Project | 3 | 8 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Subject Synopses

### ABC1001 FOOD & CULTURE

This subject aims to equip you with the necessary knowledge of the different types of cuisines in selected countries, the ingredients used, and the foods and alcoholic beverages used in major festivals and celebrations in these countries. It also provides an understanding of the important roles of food in culture such as its association with religious beliefs, collective identities, symbolism, and the arts. This subject provides the cultural backdrop to enhance the understanding of food use and is relevant to other subjects in the course.

### ABC1006 FUNDAMENTAL CULINARY SKILLS

This subject covers various cooking techniques such as sautéing, broiling, poaching, simmering, pan-frying, and deep-fat frying. Knife skills, operation of equipment, purchasing, receiving and storage of food will also be covered. In addition, the fundamentals of ingredients applications in various recipes and proper food hygiene practices will be taught.

### ABC2005 BAKING SCIENCE

This subject covers the fundamentals of baking science. You will investigate the various types of flour derived from milling, the tests used to evaluate the quality of flour, the functions of common and special ingredients used in baking, and baker's mathematics. Processing methods for breads, cakes and pastries will also be covered.

### ABC2006 BAKING PRACTICUM

This subject aims to develop your repertoire of baking skills with emphasis on the preparation of lean dough and sweet dough products and cakes and pastries with the use of commercial baking equipment. You will also apply various dough/ batter processing methods in the preparation of the products. Knowledge of equipment selection and safety in the bakery will be emphasised.

### ABC2007 WESTERN CULINARY PRACTICUM

This subject aims to provide practice in the preparation, presentation, and evaluation of common dishes from various European regions with focus on French and Italian dishes. You will apply culinary skills in kitchen practicals which include stocks, sauces, soups, salads, fruits/ vegetables, grains, eggs, poultry, red meat, and seafood. Knowledge of equipment selection and kitchen safety will be emphasised.

### ABC2008 ASIAN CULINARY PRACTICUM

This subject provides practice in the preparation, presentation and evaluation of common dishes from various Asian regions with focus on Chinese and South East Asian dishes. You will apply culinary skills in kitchen practicals which include stocks, sauces, soups, salads, fruits/vegetables, grains, eggs, poultry, red meat, and seafood. Knowledge of equipment selection and kitchen safety will be emphasised.

### ABC2010 BASIC FOOD SAFETY

This subject introduces current food safety issues and basic food safety requirements related to food service operations. It covers the potential sources of food hazards and their associated health risks, personal hygiene, hygiene aspects of food premises design, cleaning and sanitation, and pest control in the food service environment.

### ABC2011 APPLIED FOOD SAFETY

This partial problem-based learning subject, which focuses on the food safety aspects associated with food service operations, will be delivered in blended e-Learning mode. It covers various types of potential food hazards from different sources, various laboratory techniques used for toxins and pathogens detection, as well as Hazard Analysis and Critical Control Point (HACCP) in food service operations.

### ABC2012 PRINCIPLES OF FOOD SERVICE MANAGEMENT

This subject provides you with basic knowledge on the management and operational functions of a food service establishment. It provides the technical and operational knowledge in facilities planning and design, menu planning and their applications in various food establishments. Production planning, quantity food production, food inventory control, human resource and financial management will also be covered.

### ABC3004 BAKING & CULINARY TECHNOLOGY APPLICATION

This subject is designed to equip you with the knowledge and skills necessary to produce foods using various technologies such as sous vide, cook-chill/ cook-freeze, and frozen dough technologies. Engineering concepts on heat transfer, freezing, equipment design and selection, and packaging will be highlighted.

### ABC3005 PRODUCT DEVELOPMENT IN FOOD SERVICE

This subject provides you with opportunities to develop new food products in the food service environment. Idea generation techniques, applications of knowledge in food science and nutrition, functionality and selection of food ingredients, food safety, and sensory evaluation are demonstrated through product development projects.

### ABM1002 HUMAN PHYSIOLOGY & IMMUNOLOGY

This subject covers the knowledge of human physiology and basic immunology. It introduces common terms, concepts, fundamental procedures and applications used in both physiology and immunology.

### ABM2007 CLINICAL CHEMISTRY

This subject focuses on the pathophysiological changes in disease and the application of clinical chemistry concepts for diagnosis, prognosis, monitoring and screening of disease.

### ABM2008 HISTOLOGICAL TECHNIQUES

This subject covers the basic knowledge, principles and skills of histotechnology which include fixation, decalcification, tissue processing, microtomy, frozen sections and staining. It also covers basic diagnostic cytopathology.

### ABM2009 FUNDAMENTALS OF PATHOLOGY

This subject introduces the fundamental knowledge of general and systemic pathology. You will learn the nature and cause of diseases, disease mechanisms as well as structure and functional abnormalities of diseased organs and organ systems.

### ABM2010 APPLIED IMMUNOLOGY

This subject covers the immunopathology and immunological techniques used in screening, diagnosis and monitoring of diseases. It also deals with the way in which our immune system is manipulated for prevention and treatment of diseases through various immune interventions and approaches.

### ABM2011 HAEMATOLOGY

This subject covers theoretical foundations and practical skills in haematology. It includes development of blood cells, diseases and disorders related to blood as well as bone marrow. It focuses on screening, diagnosis, prognosis and monitoring of haematological diseases and disorders.

### ABM3001 BLOOD BANKING

This subject provides the basic knowledge of blood banking and covers the theoretical, practical and clinical aspects of blood transfusion. There is emphasis on the application of immunologic principles as applied to blood grouping, antibody screening, identification and compatibility testing. It also stresses the importance of laboratory quality control and clinical considerations in transfusion practices.

### ABM3003 DRUG DEVELOPMENT & CLINICAL TRIALS

This subject introduces a comprehensive overview of drug discovery, drug development and clinical trial. It includes different approaches to drug design and discovery such as rational drug design and computer aided drug design etc. This subject also incorporates studies involved in the drug development process such as pharmacological and toxicological studies etc. Different phases of clinical trial are also covered. An outline of the roles of GLP, GMP and GCP from the time of drug discovery to the time it enters the market is also provided.

### ABM3004 LABORATORY MANAGEMENT & QUALITY ASSURANCE

This subject covers laboratory management, quality assurance, laboratory automation, statistical methods and safety regulations practised in laboratories. The role of different quality systems monitoring the quality assurance is also included.

### ABT1001 CELL BIOLOGY

This subject covers the biology of cells of higher organisms: structure-function relationships of cellular membranes and internal organelles, cell cycle and cell division; transport mechanisms and cell communication, cell motility and the cytoskeleton and cell death. You will also acquire basic laboratory skills.

### ABT1002 BIOMOLECULES

This subject investigates the properties of carbohydrates, lipids and proteins, and their significance in biological systems. It aims to provide an overview of metabolism and emphasises the relationship between anabolism and catabolism, and their role in maintaining life.

### ABT2006 ANALYTICAL BIOCHEMISTRY

This subject focuses on the applications of analytical and biochemical techniques in the field of biotechnology. Topics covered include sample pre-treatment, separation techniques, spectrometry, chromatography, and the use of fluorochromes and radioisotopes in biochemical analysis.

### ABT2007 MOLECULAR GENETICS

This subject teaches both the theoretical knowledge and practical techniques of molecular genetics using the E. coli system as a model. Topics covered include DNA structure, replication, transcription, translation, mutations, and regulation of gene expression in prokaryotes.

### ABT2009 PLANT CELL TECHNOLOGY
This subject covers the theoretical and practical aspects of plant cell technology. Topics covered include micropropagation techniques, callus induction, organogenesis, somatic embryogenesis, protoplast isolation and secondary metabolites production.

### ABT2010 ANIMAL ANATOMY & PHYSIOLOGY
This subject covers an introduction to veterinary anatomy related to systemic, applied and comparative anatomy. It also covers veterinary physiology in relation to anatomy, using the basic principle of form and function, to explain the functions of the various organ systems. There is also a basic introduction to zoology as seen from the veterinary perspective.

### ABT2013 MOLECULAR BIOLOGY
This subject provides you with the basic theoretical and practical knowledge of Molecular Biology. Topics include the molecular biology techniques, gene regulation in eukaryotes, eukaryotic viruses, genetics and cancer.

### ABT2014 METABOLIC BIOCHEMISTRY
This subject focuses on the principles of Biochemistry by building on concepts learnt from Organic Chemistry 1 and Biomolecules. You will be introduced to the basics of bioenergetics before progressing to studying energy metabolism pathways and their regulation. The individual pathways will then be integrated together to give you a holistic view of energy metabolism.

### ABT2015 MAMMALIAN CELL TECHNOLOGY
This subject provides basic theoretical and practical knowledge of mammalian cell culture. Topics covered include cell culture techniques, prevention and contamination control, isolation of primary cell from tissue, working in a tissue culture laboratory and applications of animal cell culture in biotechnology such as hybridoma generation.

### ABT3012 GENOMICS & PROTEOMICS
This subject covers the technologies used in global analysis of genes (genomics) and proteins (proteomics). This will include microarrays, real-time PCR, serial analysis of gene expression (SAGE), high-throughput sequencing, labelling technologies, 2D-Gel Electrophoresis, 2D-nano-Liquid Chromatography and mass spectrometry. The principles behind the technologies as well as the data interpretation methods will be strongly emphasised.

### ABT3013 RECOMBINANT TECHNOLOGY & BIOINFORMATICS
This subject covers both the theory and practical techniques of bioinformatics and molecular biotechnology. It includes studies on the applications, potential, present and future trends of molecular and protein technology.

### ABT3014 ECOLOGY & BIODIVERSITY
This subject covers the principles of ecology as well as the study of plant and animal distributions and their interactions with one another and their environment. It will also cover the effects of environmental factors such as climate and topography that define the habitat for animals and plants. The biodiversity topics will train students on the study of life-forms within an ecosystem which will include genetic diversity, species diversity and ecosystem diversity.

### ABT3015 CONSERVATION BIOLOGY
This subject covers theoretical and practical skills used in the study of conservation biology in relation to nature and marine conservation. Topics covered will include trends and process of biodiversity loss, species extinction and preservation, sustainable management of natural systems, species and communities as well as the impact of imbalance in the ecosystem and biodiversity.

### ABT3016 STEM CELLS & TISSUE ENGINEERING
This subject covers the principles and methods of stem cells technology and tissue engineering. You will be taught the importance of knowledge integration in life sciences and engineering so as to enhance your understanding of structural-function relationships in normal and pathological mammalian tissues. The isolation and use of stems cells, as well as the development of biological substitutes that restore, maintain or improve tissue function will also be discussed.

### ACE1001 MASS & ENERGY BALANCE
This subject examines the scientific principles and techniques involved in material and energy balances which are the fundamentals of chemical engineering. Topics include the understanding of units, dimensional analysis and material balance with emphasis on application. Ideal and non-ideal gas laws, gas mixtures and psychometrics will also be studied in relation to engineering applications.

### ACE1002 THERMODYNAMICS
This subject investigates the scientific principles and techniques which are the basic laws of chemical engineering thermodynamics. Further studies into the first and second law of thermodynamics, energy analysis, gibbs free energy, phase equilibrium and chemical reaction equilibrium will be included.

### ACE2002 ENVIRONMENTAL TECHNOLOGY

This subject provides the basic scientific knowledge related to environmental problems and environmental control technology. Topics include water treatment, air pollution and pollution control technology, solid waste management, hazardous waste treatment technology, pollution control strategies and environmental monitoring in Singapore.

### ACE2003 INDUSTRIAL CHEMICAL PROCESSES

This subject covers selected chemical processes and operations. Topics include the making of petrochemical raw materials from various sources and studies on the manufacture and uses of industrial gases, adhesives, plastics and pharmaceutical products.

### ACE2006 PHARMACEUTICAL UNIT OPERATIONS

This subject emphasises the application of engineering principles in the unit operations commonly employed in the upstream, pharmaceutical industry. Topics covered include reagent handling, dissolution, extraction, distillation, crystallisation, filtration and drying. The subject also covers the various fractionation processes and mechanical operations including solids handling, sieving, milling and comminution. Commonly used equipment in pharmaceutical manufacturing are also introduced.

### ACE2007 UNIT OPERATIONS 1

This subject is a development from basic engineering principles and covers both Newtonian and non-Newtonian flows, basic equations, fluid flow in pipes and fittings as well as fluidisation and filtration. It also covers the principles and operations of pumps, compressors and their performances. Practicals are included to enhance understanding.

### ACE2008 UNIT OPERATIONS 2

This subject investigates the fundamental scientific principles and techniques in chemical engineering. Selected unit operations which involve diffusion and gas-liquid mass transfer (absorption and humidification), gas-liquid mass transfer (batch and continuous distillation) and liquid-liquid mass transfer (extraction) are discussed.

### ACE2009 OCCUPATIONAL SAFETY & HEALTH

This subject covers health issues and safety at the workplace. The section on health examines the causes of occupational diseases and their respective controls (heat stress/strain, ventilation, noise and industrial lighting). The section on safety explores topics like machinery safety, electrical safety, hazards of fire and explosion, housekeeping and material handling, personal protection equipment and legislation concerning occupational safety and health.

### ACE2010 PROCESS CONTROL & INSTRUMENTATION

This subject covers the basic concepts and principles of process control and instrumentation in chemical process industries. Current journals are used to highlight the latest advancement in process control and instrumentation technologies. Topics include process measuring instruments, basic concept of process control and open and closed-loop control systems. In addition, application of control systems in different aspects of chemical processes is covered.

### ACE3002 CHEMICAL REACTION ENGINEERING

This subject examines the scientific principles behind the kinetics of chemical reactions and techniques which are the basic principles of chemical engineering. Further studies into the characteristics of batch reactors, mixed-flow reactors and plug-flow reactors will be carried out. Differences in the behaviour of ideal and non-ideal reactors are also highlighted.

### ACE3004 PLANT SAFETY & LOSS PREVENTION

This subject examines plant and process safety. Emphasis will be on risk assessment, hazard analysis and the concept of loss prevention in the chemical plant.

### ACE3005 MEMBRANE SEPARATION

This subject covers the fundamental principles of membrane separation operation and maintenance of membrane equipment and its applications for water treatment and wastewater reclamation. Topics include membrane separation principles, membrane types and system configurations, membrane fouling and control, and advanced membrane processes such as diffusion dialysis, electrodialysis and continuous deionisation, etc.

### ACE3006 PETROCHEMICAL TECHNOLOGY

This subject covers the production of petrochemicals from various sources, the basic chemistry of petrochemicals, their usefulness and applications. You will also learn about raw materials and their building blocks and the various processes and unit operations involved in the production of petrochemicals.

### ACE3010 MATERIALS & NANOTECHNOLOGY

This subject provides key concepts of materials technology and their relevance to the chemical process industry. You will also be exposed to various groups of nanomaterials, their properties and potential applications. Topics include basic concepts of materials property, types of materials, materials corrosion and prevention, and nanotechnology.

### ACH1002 ORGANIC & BIOLOGICAL CHEMISTRY

This subject provides the basic concepts in organic chemistry as well as the constituents of biological systems and their properties and significance to biological science. Topics covered include organic chemistry, proteins and enzymes, carbohydrates and lipids.

### ACH1003 ORGANIC CHEMISTRY 1

This subject provides the basic concepts in organic chemistry which correlate the structure of organic molecules with their properties of the functional groups. Topics covered are classification of organic compounds, structure and properties of alkanes, alkenes, alcohols, aldehydes and ketones, carboxylic acids, amines and stereochemistry. Emphasis will be on the applications of organic compounds and their derivatives, and their impact on the chemical related industries.

### ACH1004 ORGANIC CHEMISTRY 2

This subject provides the additional concepts in organic chemistry with emphasis placed on reaction mechanisms. Topics covered include nucleophilic substitution and dehydrohalogenation of alkyl halides, structure and properties of derivatives of carboxylic acids, condensation reactions in carbonyl compounds, electrophilic aromatic substitution in aromatic hydrocarbons, phenol and aniline.

### ACH1005 PRINCIPLES OF INORGANIC & PHYSICAL CHEMISTRY 1

This subject provides the basic theory and practical knowledge of inorganic and physical chemistry. Topics include fundamentals of chemistry, gas laws, atomic structure, chemical bonding, periodic table and periodicity, nomenclature, stoichiometry and equilibria concepts of a chemical reaction.

### ACH1006 PRINCIPLES OF INORGANIC & PHYSICAL CHEMISTRY 2

This subject provides the additional theory and practical knowledge of inorganic and physical chemistry. Topics include ionic equilibria and calculations, chemical kinetics, chemistry of transition elements, electrochemistry and phase equilibria and phase diagrams.

### ACH2004 PRINCIPLES OF INSTRUMENTAL ANALYSIS

This subject provides the basic knowledge of the principles and applications of some instruments commonly used in chemical industries. Topics include measurement uncertainty, sampling techniques, sample pre-treatment, UV-visible spectroscopy, gas chromatography, high performance liquid chromatography and atomic absorption spectroscopy.

### ACH3003 APPLICATIONS OF INSTRUMENTAL ANALYSIS

This subject provides the additional knowledge of the principles and applications of some specialised instruments used in the analytical laboratory. Topics include atomic and molecular spectroscopic methods, sampling, data analysis, test method development, test method validation and technique development.

### ACH3004 LABORATORY ACCREDITATION & AUTOMATION

This subject covers concepts of quality management in the areas of laboratory accreditation and automation. You will be exposed to SAC-SINGLAS accreditation in accordance with ISO/ IEC 17025 standard as well as various relevant standards. Topics on work flow and safety practices in laboratory design and applications of automation in the laboratory, with an emphasis on Laboratory Information Management System (LIMS), will also be covered.

### ACS1001 COMMUNICATION SKILLS FOR APPLIED SCIENCE 1

This subject introduces you to the fundamentals of reading and writing in the context of the Applied Science diploma courses. It also covers the basic principles of interpersonal skills that will enhance your ability to work effectively in teams.

### ACS1002 COMMUNICATION SKILLS FOR APPLIED SCIENCE 2

This subject hones your public speaking skills and provides you with opportunities for hands-on experiences in the preparation and delivery of successful oral presentations in the context of the Applied Science courses. It also trains you to evaluate a presentation.

### ACS2001 COMMUNICATION SKILLS FOR APPLIED SCIENCE 3

This subject introduces the fundamentals of technical project report writing skills. It covers aspects of information literacy skills and equips you with the basic knowledge and skills to present the technical project report in an appropriate format, language and style in the context of the Applied Science courses.

### ACS3001 COMMUNICATION SKILLS FOR APPLIED SCIENCE 4

This subject equips you with job application skills, such as writing effective cover letters and resumés to secure job interviews. The interview skills component provides you with tips for successful job interviews. Written communication skills in the context of the Applied Science workplace will also be covered.

### AEW3001 INDUSTRIAL UTILITIES

This subject covers the operation and maintenance of common utilities found in the manufacturing industries. Topics include ultrapure water production systems, boiler systems, industrial chillers and cooling towers.

### AEW3002 INDUSTRIAL WASTEWATER TREATMENT

This subject covers the classification of industrial wastewaters and the strategies for wastewater treatment to meet trade effluent standards and for resource recovery. Case studies on the unique characteristics and treatment methodology for industries like chemical, semiconductor, pharmaceutical, metal-plating, etc, will be covered.

### AEW3003 ENVIRONMENTAL MANAGEMENT SYSTEM

This subject covers an integrated approach to environmental management through the consideration of the potential impact of human activities on the physical and biological environment. Topics include environmental impact assessment, ISO 14001 and environmental resource management.

### AFR2001 FORENSIC TOXICOLOGY

This subject aims to develop your understanding of the practice of the application of toxicology from a legal perspective. It will teach you to carry out analytical toxicology tests on biological and non-biological samples. The subject will also cover the pathological observations associated with different drug toxicities, and the common analytical techniques available in the field of forensic toxicology. You will learn how to interpret the data acquired and formulate informed conclusions to appropriate case studies.

### AFR3001 FORENSIC BIOLOGICAL, CHEMICAL & PHYSICAL ANALYSIS

This subject covers the application of bioanalytical, chemical and physical analytical techniques in forensics investigation. Topics include the evaluation of evidences, biological fluids, biomolecules produced by the body and skeletal remains with an emphasis on DNA profiling, finger-printing and blood, semen and saliva stains analysis. It also focuses on the use of instrumental techniques such as optical microscopy, microspectroscopy, molecular spectroscopy, chromatography, mass spectrometry and capillary electrophoresis in the analysis of alcohols, illicit drugs and poisons, glass, paints, fibres, explosions and firearms.

### AFS1001 FOOD CHEMISTRY

This subject covers the four major components in food, namely water, carbohydrates, fats and oils, and protein. You will investigate the chemical reactions, physical and functional properties of these components.

### AFS2001 FOOD INGREDIENTS

This subject covers the main ingredients/ additives commonly used in food manufacture. These include emulsifiers, stabilisers, sweeteners, flavourings, colourings, acidulants, bulking agents, chelating agents and leavening agents. Food regulations on the use of additives are also covered.

### AFS2002 FOOD PRESERVATION & QUALITY ASSURANCE

This subject is an integration of three areas: Food Quality Control, Food Preservation and Food Microbiology. You will learn to apply basic concepts of food preservation and quality assurance to produce quality products with respect to microbiological, chemical and physical aspects, hence ensuring food quality and safety for compliance with standards and legislation.

### AFS2003 FOOD PRESERVATION & QUALITY ASSURANCE PROJECT

This is a Problem-based Learning subject, integrating three content areas: Food Quality Control, Food Preservation and Food Microbiology.

### AFS2004 APPLIED FOOD SANITATION

This subject focuses on the sanitation aspects associated with food establishments. The emphasis is on professional sanitation practices and procedures needed to ensure wholesome and safe food products from processing to consumption. Topics covered include hygienic aspects of food premise design and equipment, water sanitation and the appropriate use of cleaning and sanitising chemicals.

## AFS3001 FOOD SAFETY

This subject is delivered in a blended learning mode. The main content areas are foodborne illnesses, food regulations and legislation, the HACCP system, Genetically Modified foods/ ingredients and principles of instrumental analysis.

## AFS3003 PRODUCT DEVELOPMENT & MARKETING

This subject provides technical skills training for developing new food products. You will integrate and apply knowledge in nutrition, food chemistry, food legislation, quality control, microbiology, food ingredients and labelling in product development projects. The effects of food preparation, food processing, packaging and marketing are also emphasised.

## AFS3004 ADVANCED FOOD SCIENCE

This subject covers specialised topics such as rheology of foods, sensory evaluation of food products, experimental design and statistical analysis. You will be kept up-to-date with some of the more advanced developments in food science.

## AFS3005 FOOD PROCESSING & PACKAGING

This subject provides a general overview of the current food processing methods used in the food industry. In addition, the processing conditions and equipment for selected food commodities are discussed. This subject also provides an insight into food packaging technology and a brief introduction to process control.

## AHE3001 ADVANCED FOOD PREPARATION

The subject integrates your knowledge and skills in food science and nutrition with food preparation, emphasising the application of food science to the principles of cooking. It incorporates food preparation and food investigation skills.

## AHE3003 CONSUMER RESOURCE MANAGEMENT

This subject illustrates the basic concepts and principles of consumer resource management and family life management. It introduces the basis of goal-setting and the management of various consumer resources like money and time, emphasising the various tools used for making effective consumer decisions. In addition, it also illustrates the principles of economics on consumption and the power of advertising and its influences on consumer behaviour.

## AMA1001 APPLIED MATHEMATICS

This subject equips you with the basic applied mathematical concepts and techniques that are essential for your course of study. Topics include the application of statistics and mechanics. The section on statistics covers investigations into basic statistics, sampling distribution, hypothesis testing and analysis of variances. The section on mechanics includes investigations into statistics, kinematics, Newton's Laws of Motion, circular motion and impulses.

## AMA1002 ENGINEERING MATHEMATICS 1

This subject enhances your knowledge of the basic concepts of mathematics and applications in an engineering environment by adopting the problem-solving approach. Topics covered include the types of basic functions, composite and inverse functions, quadratic equations, remainder and factor theorems, partial fractions and basic Calculus.

## AMA1003 MATHEMATICS & STATISTICS 1

This subject equips you with the basic mathematical techniques that are essential for your course of study. Algebra, differentiation, integration, linear regression and their applications are some topics that are covered.

## AMA1004 MATHEMATICS & STATISTICS 2

This subject provides you with the basic statistical techniques that are essential for your course of study. Topics covered include basic probability and distributions, basic statistics, sampling distribution, hypothesis testing, analysis of variance and chi-square testing.

## AMA1005 MATHEMATICS & STATISTICS

This subject is designed to equip you with basic mathematical knowledge in calculus and statistics that are essential for the course of study. Topics covered include differentiation and integration, basic probability and distributions, basic statistics, sampling distribution, hypothesis testing, analysis of variance and chi-square testing.

## AMA2001 ENGINEERING MATHEMATICS 2

This subject, a continuation of Engineering Mathematics 1, equips you with the advanced concepts of engineering mathematics that can be applied to an engineering environment using a problem-solving approach. Topics include types of arithmetic and geometric series, convergence, matrices and transformations, trigonometry and differential equations.

## AMA3001 ENGINEERING MATHEMATICS 3

This subject enhances your understanding of advanced mathematical concepts. You will learn to apply these concepts to solve problems related to Chemical Engineering. This subject also provides adequate grounding for further tertiary education. Topics include types of Laplace transform, numerical methods, vectors and complex numbers.

### AMB1002 HUMAN ANATOMY & PHYSIOLOGY
This subject provides you with a basic understanding of human anatomy and physiology. Topics include anatomy of human organs and organ systems and their functions.

### AMB1003 BASIC MICROBIOLOGY
This subject investigates the important fundamentals of microbiology and its relevance to the food, biomedical and biotechnology industries. It covers the types of microorganisms, their cultivation and growth as well as their control.

### AMB2001 APPLIED MICROBIOLOGY
This subject has a theoretical and practical/ laboratory focus that allows you to build on the basic concepts in microbiology to its application in the fields of food, industry, medicine and environment.

### AMB2003 PHARMACEUTICAL MICROBIOLOGY
This subject covers the importance of micro-organisms in the manufacture of pharmaceutical products. It includes the applications of antimicrobial agents, sterilisation methods, aseptic dispensing and microbiological testing in the pharmaceutical industry. Laboratory skills for assessing product quality and safety, and the practice of quality assurance, current Good Manufacturing Practice (cGMP) and Good Laboratory Practice (GLP) are also emphasised.

### AMB2004 MEDICAL MICROBIOLOGY
This subject covers the host-microbe interactions with emphasis on infectious diseases in humans. It includes various modes of transmission, diagnosis, prevention and control of infectious diseases caused by bacteria, viruses, fungi and parasites.

### AMB2005 INTRODUCTION TO BIOCHEMISTRY & MICROBIOLOGY
This subject investigates the importance of fundamentals of biochemistry and microbiology. Topics covered for biochemistry include the classes of biomolecules, enzymes and major biochemical pathways like the krebs Cycle and glycolysis. Topics on microbiology include classification of microorganisms, laboratory microbial techniques and microbial nutrition.

### AMP3001 MAJOR PROJECT (APPLIED FOOD SCIENCE & NUTRITION)
This subject provides a framework for you to solve practical and/ or technical problems, conduct research work and/or develop studies through a self-managed project. The scope of the subject includes project proposal, investigative studies, data analysis, interpretation of results, written report and presentation.

### AMP3005 MAJOR PROJECT (BAKING & CULINARY SCIENCE)
This subject provides a framework for you to solve practical and/ or technical problems, conduct product development work and/ or develop studies through a self-managed project. The scope of the subject includes project proposal, investigative studies, data analysis, interpretation of results, written report and presentation.

### AMP3006 MAJOR PROJECT (BIOMEDICAL SCIENCE)
This subject provides a framework for you to solve practical problems, conduct research work and/ or develop studies, through a self-managed project. The scope of the subject includes project proposal, investigative studies, analysis, interpretation of results, written report and presentation.

### AMP3007 MAJOR PROJECT (BIOTECHNOLOGY)
This subject provides a framework for you to solve practical problems, conduct research work and/ or develop studies, through a self-managed project. The scope of the subject includes project proposal, investigative studies, analysis, interpretation of results, written report and presentation.

### AMP3008 MAJOR PROJECT (CHEMICAL ENGINEERING)
This subject provides a framework for you to solve practical problems, conduct research work and/ or develop studies, through a self-managed project. The scope of the subject includes project proposal, investigative studies, analysis, interpretation of results, written report and presentation.

### AMP3009 MAJOR PROJECT (PHARMACEUTICAL SCIENCE)
This subject provides a framework for you to solve practical problems, conduct research work and/ or develop studies, through a self-managed project. The scope of the subject includes project proposal, investigative studies, analysis, interpretation of results, written report and presentation.

### AMP3010 MAJOR PROJECT (VETERINARY TECHNOLOGY)
This subject provides a framework for you to solve practical problems, conduct research work and/ or develop studies, through a self-managed project. The scope of the subject includes project proposal, investigative studies, analysis, interpretation of results, written report and presentation.

## ANT1001 SCIENCE IN FOOD PREPARATION

This subject illustrates the principles of food science and food preparation, emphasising the functional and structural properties of food constituents and their behaviour during food preparation. It also integrates the science of cooking with the selection, storage, purchase and preparation of fresh and processed foods available today. Throughout the subject, careful attention is given to the preservation of major nutrients and palatability of prepared food. Learning experiences are built through basic demonstration of key principles and the application of such principles.

## ANT1002 BASIC NUTRITION & FOOD

Topics covered in this subject include the roles and importance of macro- and micronutrients, energy balance, the nutritive value of food and recent advances in the field of nutrition. You will be provided with basic understanding and application of human nutrition, food and dietary practices in relation to health.

## ANT2001 NUTRITION ACROSS THE LIFE SPAN

This subject covers the nutritional requirements of man during his life span. Topics covered include nutrition in pregnancy and lactation, nutrition for the growing years, adults and elderly.

## ANT2003 COMMUNITY NUTRITION

This subject focuses on the importance of disease prevention and health promotion in the community setting. It covers the steps involved in the planning and delivery of a nutrition programme. The methods used to assess the nutritional status of a population and the types of nutrition education for the community are also discussed. Basic knowledge in behavioural change models relating to programme design and delivery of nutrition messages in the public setting are included.

## ANT2004 PRINCIPLES OF BIOCHEMISTRY & PHYSIOLOGY FOR NUTRITION

This subject provides a basic knowledge of biochemistry and human physiology in relation to nutrition. The content of this subject builds on the knowledge acquired in the year one subjects such as Human Anatomy & Physiology and Basic Nutrition & Food.

## ANT2005 FOOD SERVICE MANAGEMENT

This subject focuses on the management strategies in foodservice to enable you to supervise a foodservice operation. It equips you with the technical knowledge and operational know-how in production planning, food inventory control, customer service skills, human resource and financial management and total quality management. Various management information system software will also be incorporated.

## ANT2006 HEALTH & WELLNESS

This subject focuses on selected public health concerns, the risk factors involved and the prevention of these health problems. You will apply key procedures involved in the planning and delivery of health promotion programmes.

## ANT2007 CATERING TECHNOLOGY

This subject provides you with a basic knowledge on the operational functions of a catering establishment namely: menu planning, operation of foodservice equipment, facilities planning and design, purchasing, receiving and storage of food. It will also equip you with the necessary practical skills in quantity food production and quality control.

## ANT3001 NUTRITION IN DISEASE

This subject focuses on the dietary principles and its relevance to the medical nutrition therapy of diet-related diseases. It covers the basic knowledge of the pathophysiology of some diet-related diseases. You will learn to integrate and apply the knowledge of food and nutrition sciences in the management of these diet-related disorders.

## ANT3002 APPLIED NUTRITION

This subject focuses on the theory and skills required for counselling and effective communication in the healthcare industry. It also covers basic concepts and principles of research methodology and survey techniques. Knowledge associated with statistical analysis is included to inculcate a critical disposition towards reading health statistics.

## APH2002 PHARMACEUTICAL CHEMISTRY

This subject examines the important functional group chemistry of pharmaceutical compounds and their structure-activity relationships. Concepts relevant to drug action and biological systems, and theories of drug-receptor interaction and receptor characterisation will be examined. An introduction to drug discovery and development will also be covered.

### APH2004 PHARMACEUTICAL LEGISLATION & MARKETING

This subject provides an overview of legislations affecting the pharmaceutical industry. Topics covered include Poisons Act, Misuse of Drugs Act, Medicine Act, Sale of Drugs Act, SAPI code of marketing practice and legal status of Traditional Chinese Medicine. It also provides an understanding of basic marketing concepts, tools and techniques pertaining to the commercialisation of pharmaceutical products.

The focus is on market analysis, marketing strategies and planning, product development programme, pricing strategies and product life cycle management. You will also gain an understanding of the pharmaceutical industry and healthcare services.

### APH2005 INTRODUCTION TO PHARMACOTHERAPEUTICS

This subject covers the pharmacotherapeutic approaches in the management of ailments, with emphasis on basic pathophysiology and the role of medications and/or retail products and their use. It also covers basic over-the-counter dispensing and counselling practices and an appreciation of complementary medicine.

### APH2006 BASIC PHARMACOLOGY

This subject covers the basic principles and knowledge of pharmacology. Topics include an introduction to pharmacology, pharmacodynamics, pharmacokinetics, pharmacology of classes of drugs and an overview of toxicology.

### APH3002 CURRENT GOOD MANUFACTURING PRACTICES

This subject provides the fundamental knowledge and applications of cGMP in the pharmaceutical industries. An overview of cGMP, quality systems, documentation and record keeping, laboratory controls, validation and self-inspection are among the topics that will be covered.

### APH3004 PHARMACEUTICAL MANUFACTURING TECHNOLOGY

This subject equips you with the fundamental knowledge of pharmaceutical downstream manufacturing processes. Topics covered include industrial aspects of drug production, manufacturing techniques and packaging technologies. It also covers solid, liquid and gaseous dosage formulation design and characterisation. The importance of cGMP and the associated regulatory aspects are also covered.

### APH3005 BIOPROCESS TECHNOLOGY

This subject provides the fundamental principles of bioprocess technology and its relevance to the biotechnology industry. Topics include an overview of industrial bioprocesses, with an emphasis on fermentation and enzymes application, operations involved at various bioprocess stages, beginning from raw materials to finished products, basic concepts of bioprocess engineering, process control and instrumentation, bioreactor designs for culturing microorganisms, animal cells and plant cells.

### APH3006 GOOD DISPENSING PRACTICE & PHARMACOTHERAPY

This subject covers the fundamentals of good dispensing practice to enable you to read and interpret prescriptions, to prepare and pack medicine in accordance with prescriptions within the legal requirements of pharmacy law. It also covers the theory of common diseases and the use of drugs to treat these diseases. Patient counselling and OTC product counselling will also be taught.

### APH3007 PHARMACEUTICAL ANALYSIS

This subject introduces the principles and applications of pharmacopeial analytical methods. It emphasises analytical instruments such as high performance liquid chromatography (HPLC), ultraviolet-visible spectrophotometry and infrared (IR) spectroscopy as well as their applications in the analysis of pharmaceuticals. Physical analytical methods such as particle size analysis, dissolution, disintegration and friability tests will also be included. Method development will be elaborated in relevance to the optimisation of chromatographic performance. Method validation will be covered based on International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) guidelines.

### APH3008 BIOPHARMACEUTICAL UNIT OPERATIONS

This subject provides an overview of the biopharmaceutical processing, with emphasis on the unique separation and purification processes applied in the biopharmaceutical industry. Examples of such unit operations include chromatography, membrane chromatography and cross flow filtration. Consideration is also given to both analytical and process validation issues that are critical to successful manufacturing.

### ASI2001 STUDENT INTERNSHIP PROGRAMME (CONSUMER SCIENCE & TECHNOLOGY)

This programme will help orient and integrate you into the working world. It also provides you with the opportunity to put theory into practice and enhances your ability to develop and organise the different aspects of a Home Economics teacher's role in a secondary school.

### ASI3002 STUDENT INTERNSHIP PROGRAMME (CHEMICAL ENGINEERING)

This programme involves a compulsory 16-week attachment at a chemical or chemical-related company. It will enable you to apply knowledge and skills to solve practical problems and develop studies or product formulations. Emphasis will be placed on the development of skills such as teamwork, safety consciousness and written and oral presentation skills. Prior to the programme, students are required to undergo a six-week training programme at the Chemical Process Technology Centre.

### ASI3003 STUDENT INTERNSHIP PROGRAMME (BIOMEDICAL SCIENCE/ BIOTECHNOLOGY/ PHARMACEUTICAL SCIENCE/VETERINARY TECHNOLOGY)

This programme involves attachment to industries related to the course of study for a period of 20 weeks. You are expected to undertake various activities discussed with and assigned by the participating host organisations. The programme enables you to apply knowledge and skills acquired in the course of your study to solve practical problems in the real workplace. Emphasis is also placed on training of transferable skills such as teamwork, interpersonal, written and oral communication skills.

### ASI3004 STUDENT INTERNSHIP PROGRAMME (BAKING & CULINARY SCIENCE)

For a period of 16 weeks, you are attached to industries related to your course of study – companies in the food industry or food and beverage establishments. You are required to undertake various tasks and activities as discussed with, and agreed upon, by the participating organisations. Besides training in technical knowledge and skills, emphasis is placed on training in desired professional conduct in areas such as communications – both oral and written, team-work, problem-solving and self-management.

### ASI3005 STUDENT INTERNSHIP PROGRAMME (APPLIED FOOD SCIENCE & NUTRITION)

You will be attached to industries related to your course of study – food, healthcare or catering industries for a period of 16 weeks. You will be required to undertake various tasks and activities as discussed with, and agreed by the participating organisations. Besides training in technical knowledge and skills, emphasis is placed on training in desired professional conduct in areas such as communications – both oral and written, team-work, problem-solving and self-management.

### AVT2001 CLINICAL DIAGNOSTICS 1

This subject covers microbiology, radiology, histology and cytology in relation to veterinary applications.

### AVT2002 CLINICAL DIAGNOSTICS 2

This subject covers clinical chemistry and haematology in relation to veterinary applications. Topics include the processes and principles used to evaluate pancreatic and liver functions, kidney function and electrolytes, haematology and making of blood smears.

### AVT2003 LABORATORY SAFETY & MANAGEMENT

This subject covers basic principles and techniques of laboratory safety, and management as well as quality assurance, risk assessment and management.

### AVT2004 VETERINARY PRACTICE MANAGEMENT

This subject covers the fundamentals on good dispensing practice, simple patient counselling skills, record keeping and veterinary reception.

### AVT2005 ANIMAL CARE & MANAGEMENT

This subject covers an introduction to the care and management of animals (young and ageing) in general, and of specific animals, in the areas of housing, environmental factors, nutrition, reproduction, breed identification, first aid and wound management and animal behaviour. Animals covered would include birds, fish, rodents, dogs, cats, equine and some exotic animals. Dental prophylaxis will also be covered.

### AVT3001 ANIMAL HEALTH & DISEASES

This subject covers an introduction to animal diseases of significance to veterinary technicians. The subject introduces you to pathogenic agents, their modes of action, and the observed symptoms as well as basic epidemiology and veterinary microbiology.

### AVT3002 SURGICAL & ANAESTHETIC PRINCIPLES

This subject covers the principles of surgery and anaesthetic management for laboratory and selected companion animals. Topics covered include anaesthetic administration, monitoring and recovery from anaesthesia, basic suturing skills, preoperative preparations and postoperative care of animals.

### AVT3003 LABORATORY ANIMAL SCIENCE & TECHNOLOGY

This subject covers the care and use of common laboratory animals for research as well as operations and maintenance of animal facilities, animal biosafety levels, animal research models, disease prevention and occupational health and safety.

### BMK3007 PRINCIPLES OF ENTREPRENEURSHIP

This subject covers the key principles of entrepreneurship. The early part of the course examines the traits of successful entrepreneurs. You will learn how to identify business opportunities and be given the opportunity to conduct field research in order to identify, evaluate and select viable businesses. You will then prepare basic business plans.

### BMK3012 SALES MANAGEMENT

Selling forms an integral part of the promotion component of the marketing mix. This subject provides a comprehensive coverage of consultative selling, partnering, value-added selling, sales force automation, contextualised selling in both consumer and non-consumer industries, and time-proven fundamentals of sales management.

### BRM1002 PRINCIPLES OF RETAIL MANAGEMENT

This subject introduces the basic principles and concepts in the field of retailing with particular emphasis on topics ranging from an introduction to basic retailing principles and practices, building and sustaining relationships in retailing to the key elements in the retail marketing mix.

### BRM2006 STORE MANAGEMENT

This subject introduces the basic principles of store management with particular emphasis on topics ranging from introduction to store management, human resource management to operational management.

### DAD1134 LIFESTYLE SEWING 1

This subject introduces the basics of operating the sewing machine. Basic sewing techniques are taught to make lifestyle items such as bags, hair accessories, cushion covers and tablecloths, etc. Lessons are specially designed for you to have fun while discovering the functions of the sewing machine.

### DAD2135 LIFESTYLE SEWING 2

This subject introduces you to the technique in basic sketching, study of measurements, flat pattern drafting techniques, pattern layout, while applying sewing techniques in making basic apparel and lifestyle products.

### DAD3137 DECORATIVE CONSTRUCTION

This subject introduces the basic skills involved in the surface decoration of textiles for clothing, furnishing, wall hanging and accessories. Various fabric manipulation techniques will be taught through hands-on demonstrations. You will be encouraged to carry out your ideas through intermediate design work and find personal ways of designing on fabrics so that a rich and stimulating base will be established in an integrated approach during the design development process.

### DAS1106 TEXTILE FUNDAMENTALS

This subject gives a basic understanding of fibres and yarn in the context of textiles formation. You will be taught the fundamentals of knits and weaves, and to identify fabrics by names through visual identification and their intrinsic characteristics. Your understanding of textiles will encompass production processes, practices and new developments in the industry.

### DAS1107 APPAREL DESIGN FUNDAMENTALS

The subject explores the three basic elements of design: line, colour and texture, and the design principles specific to apparel and accessory items. It examines their effects on personal appearances as well as their influences on changes in fashion trends in the apparel industry.

### GCD1001/1002/1003 APPLIED PRINCIPLES FOR EFFECTIVE LIVING (APEL)

Applied Principles for Effective Living is TP's Core Programme consisting of three subjects, namely APEL 1 (Personal Effectiveness), APEL 2 (Interpersonal Effectiveness) and APEL 3 (Extropersonal Effectiveness). APEL was specially developed for TP students with the aim to help nurture in them the dispositions (ie, attitudes, skills, knowledge) towards the Principles for Effective Living, hence laying the vital foundation for their life-long success. The principles introduced in this programme are largely derived from applied psychological studies.

# School of Business

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The School offers 11 courses that will prepare you for rewarding careers in various areas of contemporary business. Designed with input from eminent industry experts, all our courses aim to equip you with up-to-date knowledge and life skills, fulfil your academic and career aspirations, and offer you an education and a student life that is real, relevant and rewarding.

We make your training real by collaborating with the industry. Through these partnerships, you will get opportunities to work on real-life projects of many renowned local and global companies. Our Student Internship Programme will also expose you to first-hand work experience and allow you to apply the knowledge and skills that you have acquired. You may choose to complete your internship either locally or overseas. Our industry-relevant and dedicated training facilities would ensure that you are fully ready for the world of work when you graduate.

We ensure the knowledge and skills you acquire are relevant by designing a rigorous and industry-oriented curriculum. Through multiple learning methods such as tutorials, group projects, e-learning and Problem-based Learning, you will develop important life skills such as innovation and resourcefulness. These will enable you to adapt to changing conditions and anticipate future opportunities. Furthermore, through the tutelage of our professional and experienced staff, you will hone your problem-solving, creative thinking and communication skills, all of which are relevant for your future careers or further studies.

We offer you a rewarding student experience by providing a well-rounded education with strong emphasis on co-curricular activities and enrichment programmes. These are conducted on-campus, out-of-campus, locally, as well as abroad. You are encouraged to participate in community service projects, industry competitions or even embark on entrepreneurial initiatives. All these experiences, together with a caring and nurturing learning environment provided by your Care Persons and lecturers, will help you realise your full potential during your three years at the school.

# Centres Of Excellence

The School of Business firmly believes in a practical orientation for all its courses. To better prepare you for the world of work, the school has a wide range of laboratories and teaching facilities that allow you to undergo hands-on training.

## ACCOUNTING & FINANCE LAB

Students can explore the exciting financial markets and a real trading environment with online share prices, interest rates, bond, currency and derivative prices worldwide using Reuters. Information and news from diverse sources can be gleaned from Factiva, a state-of-the-art research tool widely used in the finance industry. A computerised accounting software, Sage Accpac ERP, is also on hand for accounts enthusiasts.

## KELLY SERVICES CAREER CENTRE

The centre operates as a branch of a global staffing corporation, Kelly Services (a Fortune 500 company and listed on NASDAQ). It gives students hands-on training in international recruiting and staffing practices.

## TELEVISION STUDIO

This 200 square metre studio is fully-equipped with broadcast technology equipment that allows students to learn how to produce television programmes and news bulletins. It is also equipped with postproduction facilities for online and offline editing.

## CENTRE FOR LOGISTICS & OPERATIONS MANAGEMENT

This centre houses laboratories that simulate the entire supply chain. It includes a warehouse management system, operations management subsystem and transport and distribution sub-system. It is also equipped with logistics simulation games that teach the concepts used in logistics and operations management.

## THE BRAND HUB

Understanding the world of branding is a key competitive advantage for our marketing graduates. The Brand Hub was set up with this in mind. Subjects such as Brand Management and Integrated Marketing Communications are conducted in this well-equipped facility. It also provides the perfect setting for students to meet real life clients, as well as develop and produce marketing strategies to build their clients' brand image.

## 1ST AVENUE

An on-campus retail training store managed by students, 1st Avenue helps to develop students' entrepreneurial acumen through hands-on retailing store management. The facility will be used by students to develop skills and expertise in managing all aspects of retail operations.

## FOCUS GROUP ROOM

This is a multi-purpose marketing research training room. Fully-equipped as a real commercial focus group room, it allows observation of group discussions and sales presentations.

## E-BUSINESS CENTRE

The centre offers a training platform for students to learn the complexity of using state of-the-art technology in electronic business development. It aims to provide a real-life project development environment for students and staff to work on electronic business projects. It can also be used as a launch pad for e-commerce projects or for students to work on proof-of-concepts with industry partners.

## THE COMMUNICATION HUB

The Communication Hub is specially designed to support communication learning. It is well-equipped with facilities to help students experience various aspects of corporate communication work, especially in the areas of corporate journalism and publications, media relations and news dissemination. The layout of the hub is also specially designed for Problem-based Learning discussions.

## SILICON STUDIOS

The twin Silicon Studios are equipped with state-of-the-art multimedia facilities to enable students to do project research, make presentations and engage in collaborative learning. Besides workstations and an intelligent classroom management system, there are network points for students to access the network and other IT facilities using notebooks. Wireless access to the network is also possible in the Silicon Studios.

## THE TEMASEK CULINARY ACADEMY

This training complex houses modern kitchens as well as two attractive and contemporary dining outlets: "Sugarloaf" which is a quick-service café and "Top Table" which is a full-service restaurant. The kitchens comprise the Skills kitchen, Pastry and Bakery, Asian and western kitchens, and a garde manger (cold kitchen). These training facilities will allow students in the Diploma in Culinary & Catering Management to hone their skills in food preparation and food service. It is an ideal platform to train them in the art of providing excellent service.

## BUSINESS TECHNOLOGY LABS

The labs are designed to support the teaching of the latest information technologies to students. They allow staff and students to explore application software, programming languages, and emerging technologies in a structured manner. These labs are used for student research, projects and presentations.

## LEGALAB

The lab offers students training and practice in a wide range of software as well as electronic filing and information retrieval systems used in the courts and the legal profession.

## NEWSROOM & PUBLISHING ROOM

These facilities replicate the real print journalism environment. The newsroom represents the front-end of the news production process involving reporters and editors, while the Publishing Room involves the back-end subediting process where page layout is done. Journalism students use the facilities to produce a regular campus newspaper and gain valuable hands-on experience working in a newsroom set-up.

## ILAW CHAMBERS

The ILaw Chambers is a simulated law office training facility set up with the intention of exposing students to the full workflow involved in running a legal matter. It is used to train students in the day-to-day running of a typical law firm, from the moment a client brings in a new matter to the time the case is closed and the client billed.

## RADIO STUDIO

This studio provides students with practical training in using industry-standard equipment. The radio facility comprises a training studio, an on-air studio and several production suites. Students also broadcast live from the on-air radio studio.

# Accounting & Finance

> *TP trains its students in the practical aspects of accounting and finance and meets the needs and demands of the accounting and fast-growing finance industry. The graduates have achieved high standards. The proof of the pudding is in the eating and we have been very satisfied with those who have joined us.*
>
> *Kon Yin Tong*
> *Managing Partner, CPA Firm*
> *Foo Kon Tan Grant Thornton*

With the Government's commitment to promote Singapore as a financial centre and wealth management hub, demand for finance professionals will continue to increase. The emphasis on corporate governance and vision to transform Singapore into a global accountancy hub also fuel the need for qualified accountants.

The dual specialisation in both Accounting and Finance offers you wide career and further study options. Our broad-based training aims to instil confidence and equip you with technical and soft skills for the dynamic accounting and finance sectors.

We achieve this through an industry-relevant curriculum, with opportunities to develop problem-solving, communication and service skills. You will learn through hands-on activities such as industry projects, investment games and application of financial databases, accounting software and research tools widely used in the industry.

Furthermore, you get to choose your preferred Accounting, Banking or Investment specialisation and take cross-disciplinary subjects to pursue interests beyond your diploma course.

A key focus in the first year is to provide a solid grounding in general business and management disciplines like economics, management, statistics, information technology and financial accounting. The next two years build on industry knowledge and skills through subjects like Finance, International Finance, Investment, Management Accounting, Taxation, and Corporate Reporting & Audit. In the final year, you will select electives from a range of Accounting, Banking and Investment subjects to fit your preferred career path.

Your knowledge and skills will also be applied in the industry through a 14-week Student Internship Programme.

## CAREER OPPORTUNITIES

Exciting career opportunities await you in the areas of accounting, audit, taxation, finance, banking, investment, insurance, stock-broking and wealth management. You could be employed in the Big 4 or local accounting firms, banks or other financial institutions, and accounts/ finance departments of companies in diversified industries.

Many of our graduates pursue further studies in accountancy and business programmes offered by local universities and enjoy credit transfers to many overseas universities in Australia, United Kingdom and New Zealand. They are also granted exemptions from selected modules of professional qualifications such as the ACCA, CIMA, ICAEW, ICSA and CMFAS examinations.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must also have sat for at least one of the following subjects: Art/ Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, Higher Art, Higher Music, History, Introduction to Enterprise Development, Literature in English/ Chinese/Malay/Tamil, Media Studies (English Language), Media Studies (Chinese Language), Music or Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 22 credit units |
| Diploma Subjects | |
| Core Subjects | : 78 credit units |
| Elective Subjects | : min 16 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 125 credit units |

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing & Presentation Skills | 1 | 4 |
| BCS1008 | Meeting Skills & Communication Etiquette | 1 | 3 |
| BCS1009 | Business Correspondence & Job Search Skills | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BSI3011 | Student Internship Programme | 3 | 10 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BAF1003 | Financial Accounting 1 | 1 | 4 |
| BAF1004 | Financial Accounting 2 | 1 | 4 |
| BBS1001 | Principles of Management | 1 | 4 |
| BBS1002 | Organisational Behaviour | 1 | 4 |
| BBT1007 | Business Office Applications | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BHT1018 | Etiquette of Business & Service knowledge | 1 | 1 |
| BLO1001 | Business Statistics | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BAF2002 | Business Finance | 2 | 4 |
| BAF2003 | Computerised Accounting System | 2 | 4 |
| BAF2004 | Cost & Management Accounting 1 | 2 | 4 |
| BAF2005 | Cost & Management Accounting 2 | 2 | 4 |
| BAF2006 | Fundamentals of Investment | 2 | 4 |
| BAF2007 | International Finance | 2 | 4 |
| BAF2011 | Partnership & Company Accounts | 2 | 4 |
| BAF2018 | Fundamentals of Taxation | 2 | 4 |
| BAF2019 | Corporate Reporting & Audit | 2 | 4 |
| BLM2005 | Legal Aspects of Business | 2 | 4 |
| BAF3008 | Financial Analysis | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Accounting Elective Cluster** | | | |
| BAF3014 | Practice of Taxation | 3 | 4 |
| BAF3019 | Advanced Accounting | 3 | 4 |
| BAF3020 | Audit Practice | 3 | 4 |
| **Banking Elective Cluster** | | | |
| BAF3006 | Consumer Banking | 3 | 4 |
| BAF3007 | Credit Administration & Control | 3 | 4 |
| BAF3013 | Personal Financial Planning | 3 | 4 |
| **Investment Elective Cluster** | | | |
| BAF3003 | Bank Treasury Management | 3 | 4 |
| BAF3013 | Personal Financial Planning | 3 | 4 |
| BAF3016 | Security Analysis & Portfolio Management | 3 | 4 |
| **Diploma Free Elective Subjects** | | | |
| BLO1002 | Business Calculus | 1 | 4 |
| BAF3009 | Financial Institutions & Markets | 3 | 4 |
| BAF3019 | Advanced Accounting | 3 | 4 |
| BLM3009 | Company Law for Business | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Business Studies Grouping
## (Business/ Logistics & Operations Management/ Marketing)

This is a common first-year course that offers you the unique opportunity to study various core subjects in your first two semesters and to discover your personal strengths, aptitude, interests and career aspirations. During this time, you can explore the career opportunities and course requirements of the three diplomas before opting for one course.

### CURRICULUM FOR FRESHMAN YEAR

Students enrolled in this grouping take the following core subjects in the Freshman year of study:

- Principles of Management
- Writing & Presentation Skills
- Business Accounting 1
- Business Accounting 2
- Applied Principles for Effective Living 1 (APEL 1)
- Organisational Behaviour
- Microeconomics
- Macroeconomics
- Computer Systems & Applications
- Marketing Fundamentals
- Business Statistics

### COURSE OPTION FOR JUNIOR AND SENIOR YEARS

Towards the end of your Freshman year, you are given the choice to opt for one of the following three diploma courses:

- Business
- Logistics & Operations Management
- Marketing

Each of these diploma courses is a specialised area of study relevant to the industry in which you aspire to start your career. You will be streamed into the respective courses from your third semester of study. Please see the sections on the respective courses in the following pages for more information.

# Business

*The Business graduates from the School of Business are highly competent and adaptable; and given the training they have received, I am confident that they are geared for success in the business world of today and tomorrow.*

*Dhirendra Shantilal*
*Senior Vice President, Asia Pacific*
*Kelly Services*

This course will give you a broad-based and holistic business education in management, international business, marketing and finance. The flexible and relevant curriculum covers the core knowledge and skills that supervisors and executives are expected to have in business and management.

Throughout your studies here, you will be challenged with real-life business problems and assignments. Through the Problem-based Learning pedagogy adopted, you will develop critical thinking, problem-solving, analytical, teamwork and communication skills. Hands-on learning opportunities are available through the Kelly Services Career Centre (TP branch), The Communication Hub, as well as the Student Internship Programme. Our students are given abundant opportunities to maximise their international exposure through overseas study trips and overseas student internship programmes.

The course provides graduates with a strong foundation of business and management concepts, covering core business-related disciplines. Subjects covered include Management, Business Accounting, Economics, Business Statistics, Marketing, Computing, Human Resource Management, Finance, Managerial Accounting, Entrepreneurship, International Business, Communication and Law.

In the latter half of your course, you will specialise in two business areas out of eight business elective clusters: International Business, Tourism & Leisure Business, Finance & Investment, Human Resource Management, Marketing, Corporate Communication, Banking and Entrepreneurship. You can take non-business Cross-Disciplinary Subjects that interest you.

## CAREER OPPORTUNITIES

Trained with a global outlook, you will be equipped to take on supervisory and executive level positions in a wide range of companies and organisations. By the end of the course, you are expected to possess relevant business knowledge and skills, be well-versed in IT, and possess good interpersonal skills.

Our graduates enjoy a wide choice of employment positions in a wide range of industries in the public or private sectors. You can take on jobs in international business, tourism, banking, finance, human resource management, media, manufacturing, government and services. There is a continuous demand for our graduates in Singapore and the region. You can get credit exemptions from more than 60 reputable local and foreign universities.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must also have sat for at least one of the following subjects: Art/ Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, Higher Art, Higher Music, History, Introduction to Enterprise Development, Literature in English/ Chinese/Malay/Tamil, Media Studies (English Language), Media Studies (Chinese Language), Music or Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Subjects | |
| Core Subjects | : 69 credit units |
| Elective Subjects | : min 28 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 126 credit units |

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing & Presentation Skills | 1 | 4 |
| BCS1008 | Meeting Skills & Communication Etiquette | 1 | 3 |
| BCS1009 | Business Correspondence & Job Search Skills | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BSI3002 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BAF1001 | Business Accounting 1 | 1 | 4 |
| BAF1002 | Business Accounting 2 | 1 | 4 |
| BBS1001 | Principles of Management | 1 | 4 |
| BBS1002 | Organisational Behaviour | 1 | 4 |
| BBT1001 | Computer Systems & Applications | 1 | 4 |
| BBT1002 | Managing Business Systems | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BLO1001 | Business Statistics | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BRM1005 | Marketing Fundamentals | 1 | 4 |
| BAF2002 | Business Finance | 2 | 4 |
| BBS2001 | Human Resource Management | 2 | 4 |
| BLM2005 | Legal Aspects of Business | 2 | 4 |
| BAF3011 | Managerial Accounting 1 | 3 | 4 |
| BAF3012 | Managerial Accounting 2 | 3 | 4 |
| BMK3005 | International Business | 3 | 4 |
| BMK3006 | Practice of Entrepreneurship | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **International Business Cluster** | | | |
| BAF2007 | International Finance | 2 | 4 |
| BLO3015 | Global Trade & Singapore Logistics | 3 | 4 |
| BBS3007 | Issues in Global Management | 3 | 4 |
| BRM3008 | International Marketing & Retailing | 3 | 4 |
| **Tourism & Leisure Business Elective Cluster** | | | |
| BHT2003 | Club & Resort Business | 2 | 4 |
| BHT2005 | Event Management | 2 | 4 |
| BHT2010 | Special Interest Tourism | 2 | 4 |
| BHT2012 | Travel & Leisure Business | 2 | 4 |
| **Finance & Investment Elective Cluster** | | | |
| BAF2006 | Fundamentals of Investment | 2 | 4 |
| BAF3008 | Financial Analysis | 3 | 4 |
| BAF3013 | Personal Financial Planning | 3 | 4 |
| BAF3016 | Security Analysis & Portfolio Management | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Human Resource Management Elective Cluster** | | | |
| BBS2002 | Recruitment & Human Resource Administration | 2 | 4 |
| BBS2003 | Management of Employee Relations | 2 | 4 |
| BBS3001 | Human Resource Development | 3 | 4 |
| BBS3002 | Performance & Compensation Management | 3 | 4 |
| **Marketing Elective Cluster** | | | |
| BMK2001 | Advertising & Promotion | 2 | 4 |
| BMK2002 | Consumer Behaviour | 2 | 4 |
| BMK2003 | Customer Relationship Management | 2 | 4 |
| BMK3012 | Sales Management | 3 | 4 |
| **Corporate Communication Elective Cluster** | | | |
| BBS2006 | Principles of Corporate Communication | 2 | 4 |
| BBS2007 | Corporate Journalism & Publications | 2 | 4 |
| BBS3003 | Corporate Events Management | 3 | 4 |
| BBS3004 | Media Relations & News Dissemination | 3 | 4 |
| **Banking Elective Cluster** | | | |
| BAF2007 | International Finance | 2 | 4 |
| BAF3003 | Bank Treasury Management | 3 | 4 |
| BAF3006 | Consumer Banking | 3 | 4 |
| BAF3007 | Credit Administration & Control | 3 | 4 |
| **Entrepreneurship Elective Cluster** | | | |
| BBS2008 | Franchising Business | 2 | 4 |
| BBS2009 | Managing Small & Medium Enterprises | 2 | 4 |
| BBS3005 | Product Development & Innovation | 3 | 4 |
| BBS3006 | Strategic Entrepreneurship | 3 | 4 |
| **Business Calculus Elective** | | | |
| BLO1002 | Business Calculus | 1 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Business Information Technology

*Talent development is a key priority for SAP and we remain committed to address the IT talent crunch by developing qualified professionals who are well versed in SAP software and best practices. The teaching of SAP in the Diploma in Business IT (Temasek Polytechnic's School of Business) will enable students to better understand real-world business challenges and equip them with the necessary skills for future employment."*

*Kowshik Sriman*
*Managing Director*
*SAP Singapore*

Singapore's Intelligent Nation 2015 (iN2015) master plan seeks to fuel economic growth through the innovative use of technology and targets to create as many as 80,000 additional jobs and value-add $26 billion to the infocomm industry within the next 10 years. Riding high on this exciting growth are graduates with the right mix of business and IT skills.

If you believe you have the potential, there is every opportunity for acquiring the necessary skills to contribute to Singapore's success and your personal development. Jointly offered by the School of Business and the School of Informatics & IT, this course opens doors for students who envision themselves as the catalyst of business growth through the use of IT.

You will learn concepts applicable across all business domains such as accounting, management, economics and marketing. Subjects like E-Business Management and Open Technology & Business Systems will train you to apply technological solutions for businesses. Subjects like Enterprise Resource Management and Data Mining will help you harness technology to add value to business verticals such as financials and supply chains.

In your Senior year, you can choose to specialise in Enterprise Applications, Business Intelligence, Outsourcing Management and Business Strategies in IT.

The course stresses experiential learning. Through projects, role-play, business simulations and a 16-week internship programme, you will work with business veterans and gain real world working experience even before graduating.

## CAREER OPPORTUNITIES

You will be adept at business and IT, and bridge the gap between them. Graduates from the course have found careers in business as well as IT; ranging from banking, financials, trading, logistics and manufacturing. Armed with business acumen and a technological mind-set, you can start as a business analyst, data miner, ERP/ CRM analyst, pre-sales analyst, project coordinator, account executive, marketing executive and more.

You can become a well-recognised business IT consultant by acquiring professional certifications like the SAP Certified Business Associate awarded by the SAP University Alliance Programme in the course of your study.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (Elementary or Additional) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must have also sat for at least one of the following subjects: Additional Combined Science, Additional Science, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Human & Social Biology, Integrated Science, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

*Note: Applicants with complete/ full Colour Appreciation Deficiency are not eligible to apply. Applicants with partial Colour Appreciation Deficiency may apply.*

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 22 credit units |
| Diploma Subjects | |
| Core Subjects | : 80 credit units |
| Elective Subjects | : min 12 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 123 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing & Presentation Skills | 1 | 4 |
| BCS1008 | Meeting Skills & Communication Etiquette | 1 | 3 |
| BCS1009 | Business Correspondence & Job Search Skills | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BSI3003 | Student Internship Programme | 3 | 10 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BAF1001 | Business Accounting 1 | 1 | 4 |
| BAF1002 | Business Accounting 2 | 1 | 4 |
| BBS1001 | Principles of Management | 1 | 4 |
| BBS1002 | Organisational Behaviour | 1 | 4 |
| BBT1005 | Computer Technology & Office Systems | 1 | 5 |
| BBT1006 | E-Business Management | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BLO1001 | Business Statistics | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| CFI1C04 | System Analysis | 1 | 4 |
| CID1C02 | Web Design | 1 | 4 |
| CIM1001 | Database Information Systems | 1 | 5 |
| BBT2002 | Open Technology & Business Systems | 2 | 5 |
| BBT2003 | Data Mining | 2 | 4 |
| BBT2004 | Enterprise Resource Management | 2 | 4 |
| BMK2009 | Principles of Marketing | 2 | 4 |
| BBT3005 | Business Information System Security & Audit | 3 | 4 |
| BMP3003 | Major Project | 3 | 8 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BLO1002 | Business Calculus | 1 | 4 |
| BAF2016 | Management Accounting & Finance | 2 | 4 |
| BLM2007 | Legal Aspects of IT | 2 | 4 |
| BBT3006 | Business Strategies in IT | 3 | 4 |
| BBT3007 | Outsourcing Management | 3 | 4 |
| BBT3008 | Business Intelligence | 3 | 4 |
| BBT3009 | Enterprise Applications | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Communications & Media Management

*The Sunday Times has seen a couple of interns from this course and I must say they have been impressive. After a while, they usually prove they are good enough to be assigned stories that are intended for the main paper and not just as someone helping out senior reporters with the legwork. During their stints with the paper, the by-lines of these interns appear together with that of other journalists and some of their stories are as good as any you will read in The Straits Times.*

*Mathew Pereira*
*Sports Editor, The Straits Times*
*(Former News Editor, The Sunday Times)*

The communication specialists of tomorrow will have the skills necessary to function effectively in any area of the mass media and its related industries. Graduates will be equally proficient in any chosen medium and will be able to transcend the divide between print, broadcast and new media.

This course combines practical, hands-on training with conceptual and critical thinking skills so that you will be able to adapt to the rapidly-changing media world. Regardless of the medium chosen, you will be armed with the fundamental journalistic, communication and design skills to be effective in your chosen fields. You could also explore a career in other media-related businesses such as public relations, marketing communications and entertainment.

The course structure places equal emphasis on both the traditional and essential aspects of the media business and the latest communications technology. You will focus on the fundamentals of mass media and get a solid grounding in journalism in your Freshman year. Juniors will be comprehensively trained in the fundamentals of audio, radio, video and television production in the second year of the course, and will get to choose diploma electives as well. In the first semester of your Senior year, you will be required to complete a six-month internship programme with media and media-related companies such as MTV, MediaCorp and Singapore Press Holdings. In the second semester, you will work on an industry-driven major project in one of these chosen tracks – Print, Broadcast or Media Marketing.

## CAREER OPPORTUNITIES

Besides the mass media, graduates are likely to find employment in areas such as public relations, advertising and promotions, corporate communications, marketing communications, as well as video and new media production.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on “Admission and Requirements”. For international students, please refer to the section on “Information for International Students”.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 3 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any one of the following subjects | Grades 1 - 6 |

Art/ Art & Design, Business Studies, Chinese, Combined Humanities, Commerce/ Commercial Studies, Creative 3D Animation, Design & Technology, Economics, Food & Nutrition, Geography, Higher Art, Higher Chinese, Higher Malay, Higher Music, Higher Tamil, History, Introduction to Enterprise Development, Literature in English/Chinese/Malay/Tamil, Malay, Media Studies (English Language), Media Studies (Chinese Language), Music, Principles of Accounts, Tamil.

| | |
|---|---|
| Any two other subjects | Grades 1 - 6 |

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 3 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 27 credit units |
| Diploma Subjects | |
| Core Subjects | : 79 credit units |
| Elective Subjects | : min 8 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 123 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing & Presentation Skills | 1 | 4 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BCM2017 | Professional Communication | 2 | 4 |
| BSI3004 | Student Internship Programme | 3 | 16 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCM1013 | Marketing & Corporate Communications | 1 | 4 |
| BCM1012 | Essentials of Graphic Design | 1 | 5 |
| BCM1014 | Media Scriptwriting | 1 | 4 |
| BCM1004 | Journalism 1: Newswriting | 1 | 4 |
| BCM1005 | Journalism 2: Feature writing | 1 | 4 |
| BCM1006 | Media & Society | 1 | 4 |
| BCM1007 | Media Management Principles | 1 | 4 |
| BCM1009 | Photography | 1 | 5 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BCM2018 | Media Research | 2 | 4 |
| BCM2007 | Introduction to Audio Production | 2 | 5 |
| BCM2008 | Multi-Camera Studio Production | 2 | 5 |
| BCM2010 | Radio Studio Production | 2 | 5 |
| BCM2011 | Single Camera Production | 2 | 5 |
| BCM2014 | Digital Media Production | 2 | 4 |
| BCM3010 | Web & Digital Media Management | 3 | 4 |
| BCM3011 | Major Project | 3 | 8 |
| BLM3016 | Media Law | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BLO1002 | Business Calculus | 1 | 4 |
| BCM2002 | Basic Sub-editing | 2 | 4 |
| BCM2003 | Broadcast Performance | 2 | 4 |
| BCM2006 | Film Theory & Criticism | 2 | 4 |
| BCM2015 | Chinese Media Writing | 2 | 4 |
| BCM2016 | Magazine Production | 2 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Culinary & Catering Management

*During the Dream Team Competition held at Food and Hotel Asia, the participating students demonstrated amazing qualities in both their floor and kitchen work. Their attitude and potential were impressive and it would be exciting to follow their career development in our industry upon their graduation.*

*Emmanuel Stroobant*
*Chef and Owner*
*Saint Pierre, The Restaurant*

The culinary and catering industry in Singapore and the region is set to grow in the next decade and beyond. Supporting facilities and services such as restaurants, hotels, as well as events and conventions, will be in great demand. Conceived against this exciting backdrop, this course will propel you into a rewarding and creative world with exciting career opportunities.

The course focuses on giving you a thorough appreciation of ideas ranging from the management of the overall customer experience in restaurants to the complex and integrated processes found in catering establishments. The course allows your passion for the culinary arts and your commitment to providing great food and wine to be translated into operating and managing a restaurant with excellence.

You will learn about food product knowledge, wine and beverage, basic business skills and develop an understanding of the culinary and catering industries. The course also covers more advanced areas of study such as revenue management and marketing for the restaurant and catering industries. Your culinary and service skills will be honed through hands-on practice and projects in our modern kitchens and restaurants on the campus. You will also undergo a 20-week internship in your Senior year in a commercial environment.

Together with our experienced lecturers and instructors, award-winning chefs and through our partnership with the Culinary Institute of America, you will be trained by some of the best in the industry.

## CAREER OPPORTUNITIES

Our broad-based training grooms you to be highly versatile food & beverage professionals. Career opportunities include junior executive positions in food & beverage service, production and distribution in hotels, restaurants, cafés, catering companies and other food & beverage-related enterprises.

You will also have the option to further your studies in universities in Singapore and abroad with credit exemption or advanced standing. Our diploma is well-recognised by many renowned universities and institutions such as the Culinary Institute of America.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (Elementary or Additional) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must also have sat for at least one of the following subjects: Art/ Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, History, Higher Art, Higher Music, Introduction to Enterprise Development, Literature in English/ Chinese/Malay/Tamil, Media Studies (English Language), Media Studies (Chinese Language), Music or Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 22 credit units |
| Diploma Subjects | |
| Core Subjects | : 90 credit units |
| Elective Subjects | : min 3 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 126 credit units |

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results, as well as directly through the Joint Polytechnic Special Admissions Exercise (JPSAE). Students who are shortlisted through the JPSAE will be required to undergo an interview. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

**Note**

*• As this course focuses on several aspects of food & beverage operations and management, the curriculum includes exposing students to a wide variety of food & beverage products including alcohol, meats (e.g. beef and pork) and their by-products. Our kitchens and restaurants are not Kosher or Halal certified. Although tasting is optional, students will be required to handle and serve these products, in addition to washing non-Kosher/ Halal equipment.*

*• Applicants with medical conditions and/or physical disabilities which affect best safety and sanitation practices should declare them and such applicants should submit qualified doctor's certification of fitness for enrolment.*

*• Students will also need to purchase cookbooks, uniforms, knife sets, etc., which are not included in the tuition fee.*

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing & Presentation Skills | 1 | 4 |
| BCS1008 | Meeting Skills & Communication Etiquette | 1 | 3 |
| BCS1009 | Business Correspondence & Job Search Skills | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BSI3012 | Student Internship Programme | 3 | 13 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BBS1001 | Principles of Management | 1 | 4 |
| BBS1002 | Organisational Behaviour | 1 | 4 |
| BBT1003 | Business Computing Skills | 1 | 4 |
| BCC1001 | Food Science & Product Knowledge | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BHT1010 | Introduction to Hospitality & Tourism | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BAF2001 | Accounting for Hospitality & Tourism | 2 | 4 |
| BCC2001 | Wine & Beverage | 2 | 4 |
| BCC2002 | Food Safety & Hygiene | 2 | 2 |
| BCC2003 | Food & Beverage Operations | 2 | 4 |
| BCC2004 | Culinary Practicum | 2 | 20 |
| BHT2022 | Business Etiquette & Service Excellence | 2 | 3 |
| BHT2014 | Principles of Marketing for Hospitality & Tourism | 2 | 4 |
| BCC3001 | Service Practicum | 3 | 8 |
| BCC3002 | Catering Management | 3 | 4 |
| BCC3003 | Business Revenue Management | 3 | 3 |
| BCC3005 | Marketing for Restaurant & Catering | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BLO1002 | Business Calculus | 1 | 4 |
| BLR2004 | Introduction to Gaming Operations | 2 | 3 |
| BHT3002 | E-business in Hospitality & Tourism | 3 | 4 |
| BHT3014 | Hotel Revenue Management | 3 | 3 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Hospitality & Tourism Management

*Singapore is evolving into an ever more exciting tourism destination and much of this is attributable to the industry leaders and professionals who have the business capabilities and creativity to bring exceptional Singapore experiences to visitors. The Singapore Tourism Board is confident that Temasek Polytechnic will continue to be an important catalyst in the development of talent and human capital capabilities for the tourism industry.*

*Aw Kah Peng*
*Chief Executive*
*Singapore Tourism Board*

Singapore's hospitality and tourism industries have experienced exceptional growths in the past year with further strong growths for Singapore and the Asia-Pacific region as forecasted by the United Nations World Tourism Organisation. Against this backdrop, you can be assured that future career prospects within these thriving industries will be greatly promising.

Our course is comprehensively structured around three core areas namely, Travel & Tourism, Air Transportation and Hospitality & Accommodation Management. The course structure allows for flexible transitions and versatile career options across all these sectors.

You will enjoy a well-established reputation amongst our industry partners because of the differentiating factors within the course. These include your active engagement in practical, service training sessions in our contemporary training restaurant, Temasek Culinary Academy, and mastering the finer points of etiquette and grooming. You will also have the opportunity to be involved in our mentorship programmes with our industry partners.

Your learning journey culminates in a 24-week attachment to a company which you will be guided to select. This final destination in your learning journey ensures that you are more than well-prepared to assimilate into the work-life of your chosen hospitality or tourism career.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results as well as directly through the Joint Polytechnic Special Admissions Exercise (JPSAE). Students who are shortlisted through the JPSAE will be required to undergo an interview. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## CAREER OPPORTUNITIES

Having been groomed for junior executive positions, you can choose to work in virtually any service sector. Many of our graduates find employment with, hotels, resorts, airlines, tour operators, museums, national tourism organisations, as well as businesses dealing with food services, events management, and exhibitions and conventions.

You will also have the option to further your studies in universities in Singapore and abroad with credit exemption or advanced standing. Our diploma is well-recognised by many renowned universities. In addition, Temasek Polytechnic is the partner-institution of the University of Nevada, Las Vegas (UNLV) and the Culinary Institute of America (CIA) where TP graduates will enjoy up to two years advanced standing in their degree programmes.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must also have sat for at least one of the following subjects: Art/Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, History, Higher Art, Higher Music, Introduction to Enterprise Development, Literature in English/Chinese/Malay/Tamil, Media Studies (English Language), Media Studies (Chinese Language), Music or Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 28 credit units |
| Diploma Subjects | |
| Core Subjects | : 84 credit units |
| Elective Subjects | : min 6 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 127 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing & Presentation Skills | 1 | 4 |
| BCS1008 | Meeting Skills & Communication Etiquette | 1 | 3 |
| BCS1009 | Business Correspondence & Job Search Skills | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BSI3014 | Student Internship Programme | 3 | 16 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BBS1001 | Principles of Management | 1 | 4 |
| BBS1002 | Organisational Behaviour | 1 | 4 |
| BBT1003 | Business Computing Skills | 1 | 4 |
| BCC1002 | Fundamentals of Food & Beverage | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BHT1010 | Introduction to Hospitality and Tourism | 1 | 4 |
| BHT1019 | Travel Geography | 1 | 2 |
| BLO1004 | Research for Hospitality & Tourism | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BAF2001 | Accounting for Hospitality & Tourism | 2 | 4 |
| BAF2009 | Management Accounting & Finance for Hospitality & Tourism | 2 | 4 |
| BHT2009 | Service Skills Methodology | 2 | 4 |
| BHT2014 | Principles of Marketing for Hospitality & Tourism | 2 | 4 |
| BHT2020 | Airlines Business Management | 2 | 3 |
| BHT2021 | Travel & Tour Business | 2 | 3 |
| BHT2022 | Business Etiquette & Service Excellence | 2 | 3 |
| BCC3004 | Operations & Management of Food & Beverage | 3 | 4 |
| BHT3006 | Destination Planning & Development | 3 | 4 |
| BHT3008 | Meetings, Incentives, Conventions & Exhibitions | 3 | 4 |
| BHT3012 | Contemporary Special Interest Tourism | 3 | 4 |
| BHT3013 | Lodging Management | 3 | 4 |
| BLR3001 | Festivals & Events Management | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BLO1002 | Business Calculus | 1 | 4 |
| BHT2004 | Culinary Science | 2 | 4 |
| BHT2015 | Ticketing & Reservations | 2 | 3 |
| BLR2004 | Introduction to Gaming Operations | 2 | 3 |
| BLR2005 | Tourism Culture & Society | 2 | 3 |
| BHT3002 | e-business in Hospitality & Tourism | 3 | 4 |
| BHT3014 | Hotel Revenue Management | 3 | 3 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Law & Management

> *With the best of the best setting up shop in Singapore, paralegals with specialist skills, particularly in languages, will likely be in great demand.*
>
> *Senior Counsel Davinder Singh*
> *Chief Executive Officer*
> *Drew & Napier LLC*

## This course provides you with legal and management knowledge and skills to function as paralegal professionals in the local and global arena.

The course aims to equip you with relevant skills and knowledge, including the general management, administration and day-to-day running of a law office or legal department. You will be equipped with cutting-edge information technology skills for the legal environment and be exposed to hands-on training through projects, assignments and through the Student Internship Programme. In using the Problem-based Learning (PBL) approach, the course will develop the capacity for independent learning, and instil the spirit of professional ethics and integrity in you. It also develops your creative problem-solving and analytical skills, your oral and written communication skills, as well as your interpersonal and teamwork skills.

You will study a wide range of substantive and procedural law subjects. You will also study Cross-Disciplinary Subjects and elective subjects. Where suitable, substantive law subjects will be taught using the PBL approach, involving at times web-based, online interaction. You will study various procedural law subjects using the Real Environment Active Learning (REAL) approach which promotes active learning by simulating the actual working environment of the legal profession. Furthermore, the subject Management of Law Office & Court Technology taught in the Senior year will reinforce the management and legal issues learnt over the previous two years.

### CAREER OPPORTUNITIES

Graduates are well-placed to find employment as office administrators and paralegals in both law and non-legal organisations. You will assist lawyers in legal work like drafting of documents, legal research and in day-to-day management and administration.

The diploma is recognised by the National University of Singapore, the Singapore Management University, various United Kingdom, Australian and New Zealand universities as an entry qualification into their LLB programmes. In addition, many overseas universities also accord our graduates advanced standing towards various non-law degree courses.

### APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on “Admission and Requirements”. For international students, please refer to the section on “Information for International Students”.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 4 |
| Mathematics (Elementary or Additional) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must also have sat for at least one of the following subjects: Art/ Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, Higher Art, Higher Music, History, Introduction to Enterprise Development, Literature in English/Chinese/Malay/ Tamil, Music, Media Studies (English Language), Media Studies (Chinese Language), or Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 4 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Subjects | |
| Core Subjects | : 95 credit units |
| Elective Subjects | : min 6 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 130 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1003 | Legal Communication Skills 1 | 1 | 5 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BCS2001 | Legal Communication Skills 2 | 2 | 4 |
| BSI3006 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BAF1001 | Business Accounting 1 | 1 | 4 |
| BAF1002 | Business Accounting 2 | 1 | 4 |
| BBS1001 | Principles of Management | 1 | 4 |
| BBS1002 | Organisational Behaviour | 1 | 4 |
| BBT1001 | Computer Systems & Applications | 1 | 4 |
| BBT1002 | Managing Business Systems | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BLM1001 | Criminal Law | 1 | 4 |
| BLM1002 | Law of Tort | 1 | 4 |
| BLM1003 | Legal Systems & Methods 1 | 1 | 4 |
| BLM1004 | Legal Systems & Methods 2 | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BLM2001 | Conveyancing Law & Procedure | 2 | 6 |
| BLM2002 | Criminal Procedure | 2 | 4 |
| BLM2003 | Family Law | 2 | 4 |
| BLM2004 | Law of Contract | 2 | 4 |
| BLM3005 | Company Law | 2 | 4 |
| BAF3004 | Company & Partnership Accounts | 3 | 3 |
| BLM3003 | Civil Procedure | 3 | 6 |
| BLM3006 | Corporate Governance & Compliance | 3 | 3 |
| BLM3008 | Intellectual Property | 3 | 4 |
| BLM3011 | Management of Law Office & Court Technology | 3 | 5 |
| BLM3013 | Trusts, Wills & Probate | 3 | 3 |

## Diploma Subjects - Elective Subjects (students to choose TWO subjects)

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BLM3001 | Advanced Civil Procedure | 3 | 3 |
| BLM3002 | Arbitration & Alternative Dispute Resolution | 3 | 3 |
| BLM3004 | Commercial Transactions | 3 | 3 |
| BLM3007 | Insurance Law & Practice | 3 | 3 |
| BLM3010 | Law of Banking & Finance | 3 | 3 |
| BLM3012 | Shipping Law & Practice | 3 | 3 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Leisure & Resort Management

*IAAPA introduced the Show Ambassadors Program for the first time in Asia at Asian Attractions Expo 2011 in Singapore. For the inaugural program, we worked exclusively with the students from Temasek Polytechnic's Leisure & Resort Management programme. During the event, their performance generated much positive comments from the delegates at the Expo. The students displayed a sense of helpfulness and enthusiasm that won praise from many at the event.*

*Andrew Lee*
*Executive Director – Asia Pacific*
*International Association of Amusement Parks and Attractions (IAAPA Asia Pacific)*

The resort and related leisure businesses will contribute significantly to the success of the remaking of Singapore into a Leisure Island. With a major increase in the demand for trained personnel in the leisure and resort industries, you will be on the pulse of some of the most exciting, trendiest and fastest growing businesses in the world.

This course aims to provide you with maximum exposure to a comprehensive spectrum of leisure and resort business operations and management practices with ample real life and hands-on learning opportunities and interactions with industry leaders. One of the key features of the course is a 20-week attachment at a self-selected company either locally or overseas, in some of the best known resorts and leisure businesses in the world. Our curriculum strongly emphasises three major segments of the tourism industry: the resort business, leisure business and meetings and events business. In each area, you will be exposed to key aspects of operating and managing resorts and leisure entities such as clubs, spas, attractions and cruise ships. Moreover, you will have the opportunity to organise meetings and real events.

You will also be prepared for the demands of working life by learning the essentials of cross-cultural communication and how to interact professionally in a business environment. In addition, you will have a choice of elective Subjects designed to broaden your knowledge of the tourism industry such as Introduction to Gaming Operations and Culinary Science. The course is also focused on honing your creative thinking and problem-solving skills through active engagement in industry forums and presentations.

## CAREER OPPORTUNITIES

You will be prepared for a wide range of career options and readily find employment in leisure and resort businesses such as lodging properties which include hotels and resorts; country clubs; attractions; cruise businesses; spas; event, meeting, exhibition and convention companies. You can expect to assume a junior executive position at the workplace.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results as well as directly through the Joint Polytechnic Special Admissions Exercise (JPSAE). Students who are shortlisted through the JPSAE will be required to undergo an interview. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must also have sat for at least one of the following subjects: Art/ Art& Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Music, Geography, History, Higher Art, Higher Music, Introduction to Enterprise Development, Literature in English/Chinese/ Malay/Tamil, Music, Media Studies (English Language), Media Studies (Chinese Language) or Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 25 credit units |
| Diploma Subjects | |
| Core Subjects | : 89 credit units |
| Elective Subjects | : min 6 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 129 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing & Presentation Skills | 1 | 4 |
| BCS1008 | Meeting Skills & Communication Etiquette | 1 | 3 |
| BCS1009 | Business Correspondence & Job Search Skills | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BSI3013 | Student Internship Programme | 3 | 13 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BBS1001 | Principles of Management | 1 | 4 |
| BBS1002 | Organisational Behaviour | 1 | 4 |
| BBT1003 | Business Computing Skills | 1 | 4 |
| BCC1002 | Fundamentals of Food & Beverage | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BHT1010 | Introduction to Hospitality & Tourism | 1 | 4 |
| BLO1004 | Research for Hospitality & Tourism | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BAF2001 | Accounting for Hospitality & Tourism | 2 | 4 |
| BAF2009 | Management Accounting & Finance for Hospitality & Tourism | 2 | 4 |
| BHT2009 | Service Skills Methodology | 2 | 4 |
| BHT2014 | Principles of Marketing for Hospitality & Tourism | 2 | 4 |
| BHT2022 | Business Etiquette & Service Excellence | 2 | 3 |
| BLR2001 | Introduction to Leisure & Recreation | 2 | 4 |
| BLR2002 | Attractions Management | 2 | 4 |
| BLR2006 | Leisure & Resort Facilities Management | 2 | 3 |
| BHT3006 | Destination Planning & Development | 3 | 4 |
| BHT3008 | Meetings, Incentives, Conventions & Exhibitions | 3 | 4 |
| BLR3001 | Festivals & Events Management | 3 | 4 |
| BLR3002 | Resort Operations & Management | 3 | 4 |
| BLR3004 | Club Management | 3 | 4 |
| BLR3005 | Cruise Business | 3 | 3 |
| BLR3008 | Spa & Wellness Management | 3 | 3 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BLO1002 | Business Calculus | 1 | 4 |
| BHT2004 | Culinary Science | 2 | 4 |
| BHT2015 | Ticketing & Reservations | 2 | 3 |
| BLR2004 | Introduction to Gaming Operations | 2 | 3 |
| BLR2005 | Tourism Culture & Society | 2 | 3 |
| BHT3002 | E-business in Hospitality & Tourism | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Logistics & Operations Management

*With more than 200 stores islandwide, NTUC FairPrice depends on an efficient logistics chain to ensure fresh, quality products are delivered in time to our stores to meet the needs of 1.5 million shoppers every week. Efficient logistics and good supply chain management is integral to many businesses. Logisticians, such as those trained by TP, have an important role to play especially in the retail industry where timely delivery of the right product to the right place is a critical success factor.*

*Dickson Yeo*
*Director, Supply Chain*
*NTUC FairPrice*

Any company that is involved in making, storing or selling a product, or providing a service, needs people with knowledge and skills in logistics and operations. The employment opportunities and career prospects are abundant as organisations extend their geographical reach and influence. Companies need trained people who understand the nature of logistics and supply chain in an increasingly connected world.

The course provides you with a strong business foundation in the Freshman year. In the Junior and Senior years, you will be equipped with business knowledge on how companies manage their physical products and services through subjects like Management Science, Management Accounting & Finance, Operations Management, Materials Management, Quality Management and Purchasing Principles & Practice.

Specialised knowledge in logistics will be introduced through subjects like Logistics & Supply Chain Management, Transport Management and Distribution Centre Management. You will be offered three areas of focus in the Senior year where you can choose from a pool of electives.

In order to draw on the knowledge and skills you have acquired from the course and be exposed to the reality of the working world, you will be required to participate in the Student Internship Programme as well as undertake a major industry-based project.

The course emphasises a practical approach that provides you with a good foundation in business studies together with an in-depth knowledge of logistics. You will also develop team-building, problem-solving and human relations skills.

## CAREER OPPORTUNITIES

You can look forward to a fruitful and challenging career in the logistics industry or in the operations function of many organisations. There are many career opportunities in the service and manufacturing industries for graduates such as purchasing officer, inventory and production planner, customer service officer, warehousing executive, freight forwarding executive, shipping administrator, logistics executive and supply chain analyst.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on “Admission and Requirements”. For international students, please refer to the section on “Information for International Students”.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (Elementary or Additional) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must also have sat for at least one of the following subjects: Art/ Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, History, Higher Art, Higher Music, Introduction to Enterprise Development, Literature in English/Chinese/Malay/ Tamil, Music, Media Studies (English Language), Media Studies (Chinese Language) or Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Subjects | |
| Core Subjects | : 89 credit units |
| Elective Subjects | : min 12 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 130 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing and Presentation Skills | 1 | 4 |
| BCS1008 | Meeting Skills & Communication Etiquette | 1 | 3 |
| BCS1009 | Business Correspondence & Job Search Skills | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BSI3007 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BAF1001 | Business Accounting 1 | 1 | 4 |
| BAF1002 | Business Accounting 2 | 1 | 4 |
| BBS1001 | Principles of Management | 1 | 4 |
| BBS1002 | Organisational Behaviour | 1 | 4 |
| BBT1001 | Computer Systems & Applications | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BLO1001 | Business Statistics | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BRM1005 | Marketing Fundamentals | 1 | 4 |
| BAF2016 | Management Accounting & Finance | 2 | 4 |
| BLO2002 | Logistics & Supply Chain Management | 2 | 4 |
| BLO2003 | Management Science | 2 | 4 |
| BLO2004 | Operations Management | 2 | 4 |
| BLO2005 | Purchasing Principles & Practice | 2 | 4 |
| BLO2010 | Distribution Centre Management | 2 | 4 |
| BLO2011 | Materials Management | 2 | 4 |
| BLO3003 | Logistics Planning & Control Systems | 3 | 4 |
| BLO3007 | Quality Management | 3 | 4 |
| BLO3008 | Transport Management | 3 | 4 |
| BLO3009 | Logistics & Operations Measurement | 3 | 4 |
| BMP3007 | Major Project | 3 | 8 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BBT1002 | Managing Business Systems | 1 | 4 |
| BLO1002 | Business Calculus | 1 | 4 |
| BBS2001 | Human Resource Management | 2 | 4 |
| BMK2002 | Consumer Behaviour | 2 | 4 |
| BLO3012 | Logistics Service Management | 3 | 4 |
| **Supply Chain Focus** | | | |
| BLO3013 | Advanced Supply Chain Management | 3 | 4 |
| BLO3014 | Supply Chain Simulation & Modelling | 3 | 4 |
| **International Logistics Focus** | | | |
| BLO3015 | Global Trade & Singapore Logistics | 3 | 4 |
| BLO3016 | International Freight Practices | 3 | 4 |
| **Specialised Logistics Focus** | | | |
| BLO3011 | Bio-Chemical Logistics | 3 | 4 |
| BLO3017 | Cold Chain Management | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Marketing

*We are very impressed with the high quality of presentations done by the marketing students of Temasek Polytechnic. They have demonstrated an acute understanding of the product and have shared valuable marketing insights and creative ideas which can be implemented in the real world. Kudos to the students and the lecturers for a job well done!*

*Josephine Soh*
*Marketing Manager*
*Cerebos Pacific Ltd (Singapore)*

Markets are different, but marketing is universal and applicable to a job in any part of the world. In fact, all companies ranging from hotels, banks, airlines to government ministries and agencies require marketing and branding expertise to grow their businesses and be leaders in their respective fields. Today, marketing is one of the most exciting, creative and important aspects of any business practice.

The course develops your knowledge and skills through a rigorous curriculum that meets the requirements of a knowledge-based economy. It provides you with practical and innovative learning experiences to prepare you for a career in this field.

The Freshman-year curriculum is oriented towards a fundamental understanding of the business environment and teaches basic business skills and concepts. In your Junior year, the curriculum focuses on the development of functional competencies in areas such as marketing research, consumer behaviour, new media marketing and customer relationship management. The Senior-year curriculum focuses on strategic marketing, brand management, integrated marketing communications, global marketing and public relations to prepare you for entry into the professional marketing environment.

Through activities such as client-based projects, overseas study trips, industry talks and enrichment courses, you will see the transition of textbook theories to the practicalities of the real world. Our facilities, such as The Brand Hub, also add to your real learning by creating the actual working environment.

## CAREER OPPORTUNITIES

This course opens the door to a varied range of opportunities for you. As you are trained to be flexible and creative problem solvers, employment prospects are bright in a wide range of challenging fields such as branding, advertising, marketing communications, events marketing, resort marketing, public relations, trade and consumer sales and marketing.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on “Admission and Requirements”. For international students, please refer to the section on “Information for International Students”.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must also have sat for at least one of the following subjects: Art/ Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, History, Higher Art, Higher Music, Introduction to Enterprise Development, Literature in English/Chinese/Malay/ Tamil, Music, Media Studies (English Language), Media Studies (Chinese Language) or Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Subjects | |
| Core Subjects | : 93 credit units |
| Elective Subjects | : min 4 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 126 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing & Presentation Skills | 1 | 4 |
| BCS1008 | Meeting Skills & Communication Etiquette | 1 | 3 |
| BCS1009 | Business Correspondence & Job Search Skills | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BSI3008 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BAF1001 | Business Accounting 1 | 1 | 4 |
| BAF1002 | Business Accounting 2 | 1 | 4 |
| BBS1001 | Principles of Management | 1 | 4 |
| BBS1002 | Organisational Behaviour | 1 | 4 |
| BBT1001 | Computer Systems & Applications | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BLO1001 | Business Statistics | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BRM1002 | Principles of Retail Management | 1 | 4 |
| BRM1005 | Marketing Fundamentals | 1 | 4 |
| BMK2001 | Advertising & Promotion | 2 | 4 |
| BMK2002 | Consumer Behaviour | 2 | 4 |
| BMK2003 | Customer Relationship Management | 2 | 4 |
| BMK2004 | Financial Aspects of Marketing | 2 | 4 |
| BMK2005 | Marketing Research | 2 | 4 |
| BMK2007 | New Media Marketing | 2 | 4 |
| BMK2014 | Creative Campaign Project | 2 | 4 |
| BMK3003 | Global Marketing | 3 | 4 |
| BMK3004 | Strategic Marketing | 3 | 4 |
| BMK3008 | Public Relations | 3 | 4 |
| BMK3011 | Brand Management | 3 | 4 |
| BMK3012 | Sales & Account Management | 3 | 4 |
| BMK3013 | Integrated Marketing Communications | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BLO1002 | Business Calculus | 1 | 4 |
| BMK3010 | Services Marketing | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Retail Management

*In today's competitive retail climate it is essential to learn, understand, and execute the mechanics behind successful retailing. Retailing is the final and decisive step in a complex business process between product development and customer satisfaction. There are few business schools focusing on retailing. This course will be a valuable contribution to the vibrant world of retailing today.*

*Tom Huzell*
*Managing Director*
*IKANO Pte Ltd, IKEA Singapore and Malaysia*

The retail industry is a key sector of Singapore's vibrant economy. There is an increasing focus on creating clear skills and career advancement routes to raise the professionalism of jobs, improve customer service and retail productivity to make the retail industry an attractive long-term employment option.

This course trains you exclusively in the processes, technologies and trends of retail management. The training aims to help both large as well as small retailers in Singapore to level up and introduce world-class service standards into the specialised field of retailing.

In your Freshman year, training will focus on providing a strong business foundation and building your awareness of the nature and demands of the retail industry. In your Junior and Senior years, analytical and specialised subjects on the various aspects of retail management are offered. There is a strong emphasis on active learning and practical hands-on training in this course.

Furthermore, you will be exposed to up-to-date computer-based learning materials and methodologies and software application packages currently used in the retail industry. Highly specialised skills will be acquired through subjects such as Merchandise Buying, Retail Visual Merchandising, Mall Management, International Marketing & Retailing, and Retail Informatics.

You will engage in practical retail shop floor activities in our simulated retail store, 1st Avenue. This provides you with the necessary hands-on experience on the shop-floor level in the various practicums to facilitate your transition from education into the workplace.

## CAREER OPPORTUNITIES

The field of retailing is large and opportunities for employment are available in many business organisations. With the multidisciplinary skills and relevant shop-floor practice acquired from the course, you will be suitable for a wide range of retailing careers. You could also be entrepreneurs managing your own businesses or be employed as retail operations supervisors, retail business development executives, merchandisers, visual merchandisers or marketing executives.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must also have sat for at least one of the following subjects: Art/ Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, Higher Art, Higher Music, History, Introduction to Enterprise Development, Literature in English/Chinese/Malay/ Tamil, Music, Media Studies (English Language), Media Studies (Chinese Language), or Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Subjects | |
| Core Subjects | : 95 credit units |
| Elective Subjects | : min 4 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 128 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BCS1007 | Writing & Presentation Skills | 1 | 4 |
| BCS1008 | Meeting Skills & Communication Etiquette | 1 | 3 |
| BCS1009 | Business Correspondence & Job Search Skills | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| BSI3010 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BBS1001 | Principles of Management | 1 | 4 |
| BBT1001 | Computer Systems & Applications | 1 | 4 |
| BEC1001 | Microeconomics | 1 | 4 |
| BEC1002 | Macroeconomics | 1 | 4 |
| BLO1001 | Business Statistics | 1 | 4 |
| BMK1001 | Basics of Entrepreneurship | 1 | 1 |
| BRM1001 | Retail Accounting 1 | 1 | 4 |
| BRM1002 | Principles of Retail Management | 1 | 4 |
| BRM1003 | Retail Accounting 2 | 1 | 4 |
| BRM1005 | Marketing Fundamentals | 1 | 4 |
| BMK2005 | Marketing Research | 2 | 4 |
| BRM2002 | Retail Visual Merchandising | 2 | 4 |
| BRM2003 | Merchandise Buying | 2 | 4 |
| BRM2006 | Store Management | 2 | 4 |
| BRM2009 | Retail Buying Behaviour | 2 | 4 |
| BRM2110 | Financial Aspects in Retail Management | 2 | 4 |
| BRM2111 | Retail Practical 1 | 2 | 3 |
| BRM2112 | Retail Practical 2 | 2 | 3 |
| BMK3002 | Entrepreneurship | 3 | 4 |
| BRM3007 | Retail Informatics | 3 | 4 |
| BRM3008 | International Marketing & Retailing | 3 | 4 |
| BRM3009 | Mall Management | 3 | 2 |
| BRM3110 | Retail Practical 3 | 3 | 3 |
| BRM3111 | Distribution Channels | 3 | 4 |
| BRM3112 | Strategic Retailing | 3 | 4 |
| BRM3113 | Retail Practical 4 | 3 | 3 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BLO1002 | Business Calculus | 1 | 4 |
| BRM3006 | Retail Promotion & Branding | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Subject Synopses

## BAF1001 BUSINESS ACCOUNTING 1

This subject provides an understanding of basic accounting concepts, the accounting conventions, and their applications in businesses. It covers the general framework of the accounting process, including the double entry system, the measurement of income, assets, liabilities and owner's equity, and the preparation of income statement and balance sheet for sole-proprietorships.

## BAF1002 BUSINESS ACCOUNTING 2

This subject provides an understanding of various types of organisations, and skills to prepare and interpret final accounts of these organisations. It also covers preparation of the cash flow statement, accounting and control of non-current assets, cash and inventory.

## BAF1003 FINANCIAL ACCOUNTING 1

This subject equips you with the principles of accounting, the analysis and recording of business transactions using the double entry system, the accounting process and accounting cycle for businesses. You will learn how to prepare financial statements within the framework of accounting assumptions and principles.

## BAF1004 FINANCIAL ACCOUNTING 2

This subject builds on the foundation laid in Financial Accounting 1. It focuses on business profit determination under the accrual accounting system, the accounting system used to account for and control various business assets namely non-current assets, cash and inventory, and independent topics like accounting for incomplete records, and clubs and societies.

## BAF1007 BASIC BUSINESS FINANCE

This subject provides a general overview of the balance sheet and profit and loss statement of the company. It also provides a basic understanding of the sources and allocation of funds within a business enterprise, and an appreciation of some of the financial tools and techniques used by the financial manager in the management of funds and other financial resources.

## BAF2001 ACCOUNTING FOR HOSPITALITY & TOURISM

This subject explains and illustrates the accounting process and practices in hospitality and tourism establishments. You will learn double-entry bookkeeping and the preparation of financial statements.

## BAF2002 BUSINESS FINANCE

This subject provides a basic understanding of the sources and allocation of funds within a business enterprise and the tools and techniques used by the financial manager in the management of funds and other financial resources.

## BAF2003 COMPUTERISED ACCOUNTING SYSTEM

This subject prepares you to be a competent and effective user of a computer-based accounting information system. Areas covered include transaction flow and information processing in an accounting system, controls in accounting systems, and concepts of data flow from e-commerce applications to accounting systems. You will also be trained in accounting software widely used in industry.

## BAF2004 COST & MANAGEMENT ACCOUNTING 1

This subject focuses on the use of accounting information for management planning decisions with emphasis on product costing. Topics covered include elements of costing, activity-based costing and activity-based management, absorption and variable costing, and cost-volume-profit analysis.

## BAF2005 COST & MANAGEMENT ACCOUNTING 2

This subject focuses on the use of accounting information for planning, control and decision-making. Topics covered include relevant costing, performance evaluation, transfer pricing and budgetary control.

## BAF2006 FUNDAMENTALS OF INVESTMENT

This subject provides a framework for understanding and analysing securities, and covers the key institutional features and theories of investment. Topics covered include the investment environment, return and risk in an investment setting, common stocks, fixed-income securities and alternative investments.

## BAF2007 INTERNATIONAL FINANCE

This subject equips you with the practices of financial institutions, exporters and importers in international trade and introduces you to swaps, options and other instruments available for businesses in hedging foreign exchange and interest rate risks.

## BAF2009 MANAGEMENT ACCOUNTING & FINANCE FOR HOSPITALITY & TOURISM

This subject covers the basic concepts of cost and financial management and introduces the use of different types of management tools for management decision-making within the context of a hospitality and tourism organisation. Topics include ratio analysis, cost-volume-profit analysis, time value of money and budgeting.

## BAF2011 PARTNERSHIP & COMPANY ACCOUNTS

This subject focuses mainly on the business structures of the partnership and company forms of organisation. You will learn how to prepare the financial accounts of partnerships and companies.

## BAF2012 INTRODUCTION TO BUSINESS FINANCE

This subject provides a general overview of the balance sheet and profit and loss statement of the company. It also gives a basic understanding of the sources and allocation of funds within a business enterprise, and an appreciation of some of the financial tools and techniques used by the financial manager in the management of funds and other financial resources.

## BAF2016 MANAGEMENT ACCOUNTING & FINANCE

This subject covers the general framework of the financial and cost management processes. The subject focuses on the management of financial resources with topics such as financial analysis, sources of financing and capital investment evaluation. It also deals with basic cost concepts and how accounting information is used for costing, pricing and budgeting.

## BAF2018 FUNDAMENTALS OF TAXATION

This subject gives an understanding of the Singapore income tax laws and practices and how these are applied to companies, individuals and other taxable persons. The computation of adjusted trade profit, capital allowances, personal reliefs and income tax liabilities will be discussed.

## BAF2019 CORPORATE REPORTING & AUDIT

This subject introduces the financial reporting framework in Singapore and provides you with the basic skills in preparing and presenting group (consolidated) financial statements. You will also be exposed to fundamental concepts and techniques in auditing to gain an understanding of the purpose and practice of auditing in Singapore.

## BAF3003 BANK TREASURY MANAGEMENT

This subject provides an overview of the foreign exchange and money markets. You will be introduced to the mechanics of trading in these markets and understand the operations of the settlement procedures.

## BAF3004 COMPANY & PARTNERSHIP ACCOUNTS

This subject covers in detail the accounting requirements with regard to partnerships and companies. You will also learn the procedures to account for the legal profession in the preparation of Solicitors' Accounts.

## BAF3006 CONSUMER BANKING

This subject provides an insight into the basic types of consumer banking services available in Singapore, and how these services are operated and marketed. Cases will be introduced to illustrate how these personal financial services are marketed.

## BAF3007 CREDIT ADMINISTRATION & CONTROL

This subject enables you to become familiar with and understand the supportive functions of the credit administration department. It provides a working knowledge of the importance of good control systems in the credit risk and management department with the primary objective of effectively monitoring the quality of loan portfolio.

## BAF3008 FINANCIAL ANALYSIS

This subject covers the application of financial analysis for investment, management and credit decision-making. You will learn how to review annual reports together with other sources of information and analyse company performance in the light of industry and economic conditions.

## BAF3009 FINANCIAL INSTITUTIONS & MARKETS

This subject provides a comprehensive overview of the financial system structure in Singapore. You will learn the role and functions of the various financial institutions and how these institutions provide financial support to different types of business organisations and individual clients.

## BAF3011 MANAGERIAL ACCOUNTING 1

This subject provides an insight into how accounting information is used as a tool by managers for making planning and control decisions. It emphasises the analysis and interpretation of cost information in management decisions and deals with the effect of management decisions on these costs. Topics include product costing, activity-based costing, analysis of segments and cost-volume-profit analysis.

## BAF3012 MANAGERIAL ACCOUNTING 2

This subject introduces you to the tools and techniques used by managers in decision-making, control of operations and evaluation of performance. It emphasises the use of accounting information in managing an organisation. Topics include relevant costing, pricing, budgeting and performance measurements.

## BAF3013 PERSONAL FINANCIAL PLANNING

This subject introduces you to personal financial planning. It covers the key aspects of financial planning, encompassing cash and credit management, investment planning, insurance planning, retirement planning, tax planning and estate planning.

## BAF3014 PRACTICE OF TAXATION

This subject builds on the principles and concepts acquired from Fundamentals of Taxation. The calculation of benefits in kind for individuals, taxation treatment of partnerships, common investment incentives for companies, double taxation reliefs and distribution of corporate profits are covered.

## BAF3016 SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

This subject teaches you how to apply the financial tools and techniques to make decisions in selecting a portfolio of securities that meet a company's predetermined set of financial goals, especially in the investment of funds. Topics covered include security analysis and valuation, modern portfolio theory and formulation of investment policy.

## BAF3019 ADVANCED ACCOUNTING

This subject provides an in-depth study of the advanced concepts and principles relating to accounting standards and consolidated accounts. It equips you with the requisite knowledge and skills to be effective in handling realistic and higher level problems and issues in financial reporting.

## BAF3020 AUDIT PRACTICE

This subject provides a practical learning experience in which you will apply audit principles and techniques in simulated individual and group audit assignments. The aim is to prepare you for employment in professional firms where you will be able to handle various aspects of an audit assignment.

## BBS1001 PRINCIPLES OF MANAGEMENT

This subject provides an insight into the key functions of management and the practical issues which managers of today face. Aspects of management such as planning, organising, leading, controlling, international management, business ethics and social responsibility will be covered.

## BBS1002 ORGANISATIONAL BEHAVIOUR

This subject provides an insight into the key determinants of individual and group behaviour in an organisation. You will also learn how to use these concepts to improve your personal, interpersonal and group interaction skills.

## BBS2001 HUMAN RESOURCE MANAGEMENT

This subject emphasises the role of line managers/supervisors in maximising organisational and employee performance through effective human resource management practices.

## BBS2002 RECRUITMENT & HUMAN RESOURCE ADMINISTRATION

This subject provides you with the knowledge and requisite skills to support the following major functions of human resource management: manpower planning, recruitment, selection, placement, orientation, employee communication, employee wellness, and computerised human resource information systems.

## BBS2003 MANAGEMENT OF EMPLOYEE RELATIONS

This subject exposes you to labour laws, the industrial relations framework of organisations and how to manage employee relations. You will also be introduced to a range of employee relations programme and learn how these can contribute to organisational effectiveness.

## BBS2006 PRINCIPLES OF CORPORATE COMMUNICATION

This subject provides an overview of the principles and practices of corporate communication. Topics include corporate communication strategy, internal and external stakeholders, corporate identity and image management, corporate advertising, crisis management and corporate communication challenges.

## BBS2007 CORPORATE JOURNALISM & PUBLICATIONS

This subject provides you with a theoretical and practical understanding of corporate journalism and publications so that you can critique and produce corporate communication tools for appropriate target stakeholders. You will plan, develop, present and evaluate various corporate communication literature and tools like newsletters, brochures, flyers, annual reports, websites and corporate videos.

## BBS2008 FRANCHISING BUSINESS

This subject equips you with an understanding of franchising. It covers issues relating to the screening, evaluating, setting-up and expanding of new businesses in the area of franchising. The subject enables you to acquire skills to identify viable and feasible franchising business opportunities.

## BBS2009 MANAGING SMALL & MEDIUM ENTERPRISES

This subject equips you with an understanding of how to manage the operations and challenges of small and medium-sized enterprises. You will acquire skills to manage the nature and challenges of small and medium entrepreneurial businesses. Through an understanding of issues pertaining to growth factors, market strategies and resource and operations management, the subject enables you to understand how an organisation manages the growth of business as markets and the competitive environment change.

## BBS3001 HUMAN RESOURCE DEVELOPMENT

This subject provides you with well-rounded knowledge in the field of human resource development. Topics such as training needs analysis, design, implementation and evaluation of training programmes, and career development will be covered.

## BBS3002 PERFORMANCE & COMPENSATION MANAGEMENT

This subject provides information on the design and implementation of performance and compensation management systems. Topics include performance appraisal, potential appraisal, pay for performance, salary and incentives administration.

## BBS3003 CORPORATE EVENTS MANAGEMENT

This subject provides a theoretical and practical understanding of corporate events and enables you to develop practical skills necessary to plan, develop, present and evaluate a major corporate event. You will learn the whole corporate event management process, identify the key elements that are essential to the success of a corporate event and demonstrate an ability to plan, execute and evaluate a corporate event.

## BBS3004 MEDIA RELATIONS & NEWS DISSEMINATION

This subject equips you with the practical knowledge and skills in media relations. You will learn how to plan a media relations programme, write news releases and captions, organise a media event, prepare for a media interview, create a media kit, conduct media research and select the appropriate media that will maximise coverage for an organisation.

## BBS3005 PRODUCT DEVELOPMENT & INNOVATION

This subject equips you with the process skills for product development and innovation through a comprehensive approach for success. You will focus on the process of innovation – the process for entrepreneurs to exploit change, with the intention of practising the processes behind developing new products based on industry pressure to innovate. You will learn how to best transform exciting ideas into successful new products; how to capture knowledge and creativity in the successful development of products; and understand the structures and systems appropriate for innovation and new product development.

## BBS3006 STRATEGIC ENTREPRENEURSHIP

This subject equips you with an understanding of entrepreneurship and entrepreneurial management from a strategic perspective. You will learn entrepreneurial strategy, how entrepreneurial firms overcome resource limitations, entrepreneurial action in innovation, market entry mode choices of corporate entrepreneurs, networking and alliances of small entrepreneurial firms with large companies, international entrepreneurship, strategic leadership, and the relationship between entrepreneurship and growth. Through understanding the issues and challenges of strategic entrepreneurship, you will appreciate the different approaches used by entrepreneurs in wealth creation in the current business environment.

## BBS3007 ISSUES IN GLOBAL MANAGEMENT

This subject examines a variety of business and leadership practices with emphasis on global organisational values, diversity, challenges and culturally appropriate strategies for success in the rapidly changing world of international and multinational business.

## BBT1001 COMPUTER SYSTEMS & APPLICATIONS

This subject covers the fundamental concepts in the main hardware components of a computer system. It provides you with an understanding of how these components are set up and how they function together. Current IT trends, mainly in the areas of e-commerce and Internet applications, will be discussed within the core framework of data communications, networks and security issues. Theory will be supplemented with hands-on exposure to web page creation and designing, and spreadsheet application.

## BBT1002 MANAGING BUSINESS SYSTEMS

This subject draws upon the foundation studies in computing taught earlier in Computer Systems & Applications. The major components are database design, database management and information systems management. The subject will cover database concepts and techniques and the use of a popular database package. You will also learn about the strategic use of information systems and how they are developed and managed.

## BBT1003 BUSINESS COMPUTING SKILLS

This subject is application-based and covers advanced features in office automation tools like presentation tools and spreadsheets, and how these can aid in business decision-making. You will also be taught to design and create web pages using popular web authoring tools and multimedia applications. Projects requiring these skills will be assessed. The hands-on aspect of the subject is complemented with fundamental concepts on computer systems and software, and an appreciation of the Internet and current IT trends.

## BBT1005 COMPUTER TECHNOLOGY & OFFICE SYSTEMS

This subject covers the fundamental concepts governing the main hardware and software components of a computer system. It also covers the basic concepts of computer networking and Internet-networking and provides an introduction to information systems in organisations. Theory will be complemented with laboratory sessions, aimed to expose students to office productivity tools and to equip them with basic technical support skills.

## BBT1006 E-BUSINESS MANAGEMENT

This subject covers the different types of e-commerce/business models, namely Business-to-Consumer and Business-to-Business. You will learn how companies adopt both business strategies and technologies to do business online, which include key concepts such as Internet marketing, customer relationship management and electronic payment systems. You will use an appropriate software to understand how an e-commerce system helps support B2C and B2B sales.

## BBT1007 - BUSINESS OFFICE APPLICATIONS

This subject provides you with the fundamental concepts underlying the major components of a computer system and how these components work together efficiently and effectively. The theoretical foundation is complemented with laboratory hands-on exposure to using relevant office application software. It covers both basic and advanced features in the software to capture and manipulate data for strategic use.

## BBT2002 OPEN TECHNOLOGY & BUSINESS SYSTEMS

This subject covers the phases of technological advancement, with emphasis on the characteristics of open technologies in general, and on information technologies in particular. The subject builds upon your knowledge of general business functions and leads to an understanding of the use of open technologies in business systems. You will be exposed to procedures, standards and practices in open technologies, and learn how to use an open-source language and a database to build an application.

## BBT2003 DATA MINING

This subject equips you with the knowledge and skills of data mining to help companies understand their customers better and enhance their competitiveness. It aims to develop your understanding of the knowledge discovery process and build your awareness of the structure of data warehouses. The subject enables you to use various data mining techniques to discover patterns in data to explain current behaviour or to predict future outcomes. You will use data mining software to experimentally build and test data mining models, as well as interpret results and apply them to appropriate problems.

## BBT2004 ENTERPRISE RESOURCE MANAGEMENT

This subject dwells on Enterprise Resource Planning (ERP), a powerful tool which provides a seamless information system to integrate the various functional modules of an enterprise. You will get to see how data sharing in real time throughout a company's functional areas increases the efficiency of operations and helps managers make better decisions. Today, greater attention is focused on extending the ERP to the Internet for e-commerce applications. You will understand the value of ERP systems to supply chain management and business intelligence. A popular ERP software will be used for hands-on exercises.

## BBT3005 BUSINESS INFORMATION SYSTEM SECURITY & AUDIT

The main focus of this subject is to provide you with an understanding of information security with respect to information systems. It highlights the main principles of information security, introduces the different aspects of information security management and provides a high level view of computer forensics analysis. This subject also draws attention to the current industry practices, government policies and future trends by looking at certification, audits and plans that businesses are working on.

## BBT3006 BUSINESS STRATEGIES IN INFORMATION TECHNOLOGY

This subject seeks to reinforce and consolidate the knowledge you have acquired in common business modules by applying them in the context of technology products and IT service companies. You will be taught sales force management, marketing, business development and other related strategies in IT companies. You will also learn the various stages of entrepreneurship, start-up financing, and strategies for start-up and growth. Through case studies and role plays, you will be exposed to contract management, negotiation, pricing, business proposal preparation and other common business activities in the IT industry.

## BBT3007 OUTSOURCING MANAGEMENT

This subject provides you with an understanding of the basic concepts of outsourcing, the trends of outsourcing, the processes involved, and the business advantages that can be obtained. Organisations may seek benefits beyond cost cutting, such as service improvements and radical transformation, although this carries with it associated risks and challenges. You will learn about risk management in a rapidly changing business and IT landscape. This subject will cover both operational issues and strategic risks of IT outsourcing and multi-sourcing.

## BBT3008 BUSINESS INTELLIGENCE

This subject aims to further your knowledge and understanding of the tools and techniques to support executive decision-making and manage business performance. It equips you with skills in using online analytical processing tools, visualisation tools, as well as advanced data mining techniques to bring about business intelligence for companies. It also examines the role that business intelligence plays in customer relationship management and knowledge management and explores trends affecting the future of business intelligence.

## BBT3009 ENTERPRISE APPLICATIONS

This subject aims to equip you with the knowledge to successfully plan, design and implement enterprise applications. You will understand how the success of enterprise applications depends upon effective management, organisational change and the use of advanced technology. You will be kept abreast on how enterprise system vendors quickly adapt their systems to take advantage of the latest technologies like open systems, client/server technology, Internet/Intranet and e-commerce. You will have a chance to integrate the web-based ERP system and see the integration within and beyond the organisation.

## BCC1001 FOOD SCIENCE & PRODUCT KNOWLEDGE

This subject provides you with the essential knowledge about food products, such as fruits, meats, vegetables, herbs and spices, used in the culinary and catering industry. Topics such as origin, classification, characteristics, storage, quality criteria, usage and nutrition will also be covered. You will also be introduced to wine and other alcoholic and non-alcoholic beverages from a food-harmony perspective. To encourage a thirst for knowledge and continuous improvement, food trends will also be discussed and taught.

## BCC1002 FUNDAMENTALS OF FOOD & BEVERAGE

This subject introduces you to the fundamentals in food and beverage, which is essential knowledge in the catering business. You will learn about the various types of food, including the selection criteria for quality food and current food trends as well as the different types of alcoholic and non-alcoholic beverages. Essential knowledge on nutrition and correct hygiene practices are also covered.

## BCC2001 WINE & BEVERAGE

This subject provides you with a broad understanding of wine and beverages. Topics covered include non-alcoholic beverages, fermented beverages, fortified and aromatised beverages, distilled beverages, compound beverages, mixed beverages and all major wine regions and their wines. You will also be able to appreciate the concepts of responsible service of alcohol, the effects of alcohol on the human body and mind, as well as food and wine harmony.

## BCC2002 FOOD SAFETY & HYGIENE

This online subject introduces you to food production practices which are governed by regulations. Topics include hazards control; contamination prevention; pathogens and their characteristics; personal, food and environmental hygiene practice; food safety procedures and HACCP procedures; food flow and food quality management; cleanliness and sanitation; as well as pest management, accident prevention and crisis management.

## BCC2003 FOOD & BEVERAGE OPERATIONS

This subject introduces you to all aspects of food and beverage operations. Historical influences and future trends in the industry will be discussed in the context of how they affect the business today. The steps to opening a restaurant will be covered. These include location selection, interior design and menu planning, as well as day-to-day operational concerns such as hygiene and sanitation, marketing, staff scheduling, motivation and management, service styles, customer service issues, profit and loss statements and technological innovations. Current legal, human resource and licensing issues will also be discussed.

## BCC2004 CULINARY PRACTICUM

This subject is an intensive 600-hour practical course on the fundamentals of Western cooking with elements of Baking & Pastry as well as Asian cuisine. Not only are basics such as knife skills, stocks, sauces and cooking techniques covered in detail, there is also a strong focus on professionalism and developing the right service mind-set to excel in this exciting industry. Students will be cooking in modern, fully-equipped kitchens for real paying customers dining in our on-campus restaurants.

## BCC3001 SERVICE PRACTICUM

This subject gives you first-hand experience in operating food and beverage outlets that provide guests with information, products and services. In the process, you will learn how to provide excellent service in guest relations and food and beverage environments. This will be carried out with a focus on maximising guest satisfaction.

## BCC3002 CATERING MANAGEMENT

This subject focuses on the managerial aspects of food and beverage operations. It requires you to apply your learning from the subject Food & Beverage Operations. The subject culminates in a restaurant concept proposal and covers aspects such as manpower-planning, menu and wine list development, food and beverage costs control, as well as developing a food and beverage quality assurance programme.

## BCC3003 BUSINESS REVENUE MANAGEMENT

This subject equips you with the knowledge and skills to effectively manage restaurant revenue by using techniques such as yield management, cost control, menu planning and engineering, as well as marketing and sales.

## BCC3004 OPERATIONS & MANAGEMENT OF FOOD & BEVERAGE

This subject introduces food service management and operations. It covers the implications of day-to-day operations, basic cost control systems, profitable menu planning, restaurant floor plans, equipment layout and planning, human resource deployment and training, low cost internal marketing ideas, customer care and building sales, and technological innovations. Legislation and various licenses governing food and beverage operations will also be covered. The subject will challenge you to review ways of raising operational efficiency of food and beverage business set-ups.

## BCC3005 MARKETING FOR RESTAURANT & CATERING

This subject exposes you to the marketing theories and techniques employed in the restaurant and catering business. It prepares you for the working world by not only equipping you with examples of tried and tested marketing efforts, but also challenges you to exercise creativity and innovation by developing your own marketing plan for a restaurant or catering business.

## BCM1004 JOURNALISM 1: NEWSWRITING

This subject covers the fundamentals of news-gathering, news-writing and news-judgement for all media, study of news sources, fieldwork, research and interview techniques.

## BCM1005 JOURNALISM 2: FEATURE WRITING

This subject exposes you to practice in research, interviewing and writing the feature story, human interest, trends, personality profiles, sidebars, backgrounders, and colour writing.

## BCM1006 MEDIA & SOCIETY

The subject exposes you to an investigation into the societal role played by the mass media as a cultural, social, informational, economic, political and educational force. It examines the inter-relationships of all media and their potential impact on the population.

## BCM1007 MEDIA MANAGEMENT PRINCIPLES

The subject is an introductory class to media management. It covers the managing of media institutions and discusses their evolution, development, institutional arrangements, operations, and economic and organisational structure. You will also learn the ways in which institutional and organisational arrangements affect professional behaviour and media content.

## BCM1009 PHOTOGRAPHY

This subject introduces you to the technical and aesthetic principles of photography and digital imaging manipulation. The subject will cover aperture and shutter speed control, exposure and lens angling and image reproduction like the characters and ISO sensitivity of different films. You will also learn the basic concepts and practical skills of photojournalism.

## BCM1012 ESSENTIALS OF GRAPHIC DESIGN

This subject is an introductory class to serve as the foundation for other core subjects. It will cover both the design and software aspects of graphics and layout. You will learn the various stages of conceptualising and drafting, as well as the actual production and incorporation of all elements into a single piece of print or electronic publication. You will also be taught the principles of design, typography and colour, to bring your message across to the target audience and elicit the correct response.

## BCM1013 MARKETING & CORPORATE COMMUNICATIONS

This subject introduces you to the world of media marketing and publicity through various strategies and activities designed to promote products and services from an organisational perspective. You will also learn various promotional tactics in order to execute a marketing campaign to generate positive publicity and media coverage.

## BCM1014 MEDIA SCRIPTWRITING

This subject provides a foundation in the principles and concepts involved in writing script for the media. It covers writing for different media platforms: radio, TV, video, new media as well as multimedia. You will learn the various stages of conceptualising ideas or stories, structuring and outlining, producing treatments, drafting scripts based on audience and purpose and revising scripts, taking into consideration visual treatments and styles for various scripts.

## BCM2002 BASIC SUB-EDITING

In this subject, you will acquire skills in editing stories for clarity, consistency and conciseness for newspapers and news publications. You will also learn about editing for accuracy, word clarity, completeness and story organisation, grammar and word usage, punctuation, spelling, house style, as well as the mechanics of writing headlines and captions.

## BCM2003 BROADCAST PERFORMANCE

You will be introduced to the fundamental aspects of presentation required for effective on-air broadcast performance. The main components covered will include breathing techniques, pronunciation, sentence structure, diction and vocal delivery. You will also be taught the relevant broadcast presenting skills for the different types of on-air broadcasting and how to conduct broadcast interviews.

## BCM2006 FILM THEORY & CRITICISM

In film theory, you will be introduced to the aesthetics of cinema and taught how a film is created and how it functions. Attention will be focused on the four primary components of film technique and production: mis-en-scene, cinematography, editing and sound. Film criticism introduces you to the different schools of film criticism and how to write film critiques.

## BCM2007 INTRODUCTION TO AUDIO PRODUCTION

This is an introductory subject to audio production. You will learn the essential writing, listening and technical skills required to produce programmes for radio. You will also learn the various tools of the trade and how to operate each effectively. As part of the course, you will be required to produce a series of short capsules for radio.

## BCM2008 MULTI-CAMERA STUDIO PRODUCTION

In this subject, you will be introduced to the principles and concepts of multi-camera studio production. You will be taught to perform the various roles of the studio production crew and will be required to direct your own studio productions and complete a series of projects as part of the assessment.

## BCM2010 RADIO STUDIO PRODUCTION

You will learn the techniques of live studio presentation including on-air announcing/ presentation, conducting one-on-one interviews and chairing live panel discussions. You will also be trained to operate equipment used during live broadcasts. The subject also focuses on research and writing for radio, particularly in relation to planning of interviews and radio documentaries.

## BCM2011 SINGLE CAMERA PRODUCTION

You will learn the concepts and processes in single camera production and will be taught the various stages of production. As part of the subject, you will learn camera operations, filming techniques, indoor/outdoor lighting techniques, basic scripting, directing and nonlinear editing.

### BCM2014 DIGITAL MEDIA PRODUCTION

This subject offers an insight into the theory and practice of digital media design and development. It aims to provide you with an understanding of the fundamentals of interactive media design through exposure and manipulation of various media and techniques. You will learn the various tools required for creating digital content.

### BCM2015 CHINESE MEDIA WRITING

Specially tailored for students interested in writing for the Chinese language media, this subject covers the various techniques and formats for writing in Chinese through an examination of reviews, editorials, features and reports. It also explores basic translation techniques.

### BCM2016 MAGAZINE PRODUCTION

This subject covers the principles and techniques of magazine editing and production. You will practise writing headlines, titles and captions, photo-editing, layout design and use of computer editing technology. You will also study tools with which you can turn raw copy into publishable content that caters to specific audiences, angles and communication needs.

### BCM2017 PROFESSIONAL COMMUNICATION

This subject emphasises the communication skills in a professional setting. You will be taught how to write effective business correspondences, including job application letter and resume, and how to conduct yourself at interviews. You will also be taught aspects of intercultural communication, meeting skills, as well as how to write minutes of meetings and proposals in a business setting.

### BCM2018 MEDIA RESEARCH

The subject gives you a broad understanding of media research. It covers research methods, content analysis, survey research, experimental design, computer-based analysis tools and investigative reporting. You will conduct case studies on research reported in the media, examine the consequences of media research and study the research of "consumers" or readers.

### BCM3010 WEB & DIGITAL MEDIA MANAGEMENT

This subject provides you with the knowledge and skills to develop and manage web pages and digital media applications. Through hands-on sessions, you will be introduced to the essential tools needed to develop digital media projects. You will also explore and discuss new technological changes in the media and communications industries. As part of the deliverables of the subject, you are expected to be able to build a fully-functional website and applications for various platforms.

### BCM3011 MAJOR PROJECT

This 8-cu subject takes the form of a final project. It allows you to propose and develop one that showcases the knowledge, skills and abilities that you have gained through the CMM course. Working in a team, you will be given freedom to develop your projects within a supervisory relationship with your lecturers. In addition, you will also document and reflect on your project outcomes. You will also be taught basic project management skills such as proposal planning and crafting, budget planning and management, and drawing up timelines.

### BCS1003 LEGAL COMMUNICATION SKILLS 1

This subject provides you with competencies for the academic world. You will be taught thinking and writing skills as well as skills in collaborative learning, oral presentation and basic writing.

### BCS1006 ACADEMIC RESEARCH & WRITING SKILLS

This subject exposes you to the rigours of academic writing. It focuses on the writing process, structure of essays, idea development, and evaluation and use of resources. You will also be required to submit literature reviews and an academic essay.

### BCS1007 WRITING & PRESENTATION SKILLS

The subject will give you an overview of report writing and presentation skills. In report writing, you will learn about the different types of reports and how to put together a complete business report using the appropriate language and format. In terms of presentation skills, you will learn how to prepare and deliver an effective oral presentation.

### BCS1008 MEETING SKILLS & COMMUNICATION ETIQUETTE

This subject aims to equip you with the communication skills that are vital for your success at the work place. You will learn the skills of conducting yourself professionally in different formal business situations. You will also learn how to deal with cross-cultural situations and acquire networking skills. Additionally, you will develop skills in writing different types of business documents such as agenda, notice of meeting and minutes of meeting.

### BCS1009 BUSINESS CORRESPONDENCE & JOB SEARCH SKILLS

The subject provides you with the relevant business correspondence skills for internal communication with company staff, and external communication with business partners. You will study business writing skills such as writing emails, memos and letters for inter-office and intra-office communication. You will also learn how to write job application letters and resumes, and how to conduct yourself appropriately at job interviews.

## BCS2001 LEGAL COMMUNICATION SKILLS 2

This subject provides you with skills for the world of work. You will learn skills involving meetings, interpersonal relations, report writing and business correspondence.

## BEC1001 MICROECONOMICS

This subject provides an understanding of the broad framework of microeconomic analysis Conceptual tools of economic analysis such as scarcity, demand and supply will be introduced, followed by a study of consumer behaviour, product market and resource market.

## BEC1002 MACROECONOMICS

This subject provides an understanding of the broad framework of macroeconomic analysis. The equilibrium level of national income, business cycle, unemployment, inflation, and monetary and fiscal policies will be discussed, followed by a study of international trade.

## BHT1010 INTRODUCTION TO HOSPITALITY & TOURISM

This subject provides an overview of the multi-faceted nature of the hospitality and tourism industry. You will gain an insight into how the key sectors are organised and structured and how they relate to each other as an industry. The concept of tourism demands and tourism consumer behaviour will be introduced. Lastly, you will explore trends, issues and challenges facing the industry.

## BHT1018 ETIQUETTE OF BUSINESS & SERVICE KNOWLEDGE

This subject covers the fundamentals of grooming, dining, office culture and practices that are essential in enabling you to make the transition from education to work. The service knowledge aspect will serve as a foundation upon which you can draw various theories and strategies of customer service and learn how to apply these in your future dealings with clients/customers during your internship and work life.

## BHT1019 TRAVEL GEOGRAPHY

This subject approaches the study of key tourist destinations worldwide through an understanding of basic geographical characteristics and how these determine tourism resources in a country. It also highlights how these resources distinguish destinations and influence travel, and how travel, in turn, shapes the development of the tourism resources. Through e-learning, you will learn the framework on which you build your knowledge of world travel, explore techniques to enhance learning and build your confidence to sell destinations.

## BHT2003 CLUB & RESORT BUSINESS

This subject covers the various definitions and classifications of club and resort business, resort planning and development, as well as operations and marketing of clubs and resorts. It gives you an appreciation of the operational challenges faced by clubs and resorts.

## BHT2004 CULINARY SCIENCE

This subject provides you with basic culinary and catering knowledge and skills, and the opportunity to apply these through operating a commercial kitchen. You will learn the key aspects of kitchen operations which include professionalism, safety and sanitation, kitchen equipment operation, technical Western culinary skills and teamwork.

## BHT2005 EVENT MANAGEMENT

The subject introduces the scope of events and their application in the context of the tourism industry. From this macro perspective, you will build a foundation in event conceptualisation, development and production, covering topics such as marketing of events, human resource management and budgeting, and staging.

## BHT2009 SERVICE SKILLS METHODOLOGY

This subject gives you first-hand experience in operating a range of F&B outlets in their respective service styles. In the process, you will learn not only the technical skills required to provide efficient and competent service, but also how to provide elegant and gracious service to guests. This will be carried out with a focus on the mastery of basic technical skills such as wine service, order-taking and table setting. Maximising guest satisfaction through effective communication, attention to detail, creative and critical thinking skills will also be taught. The value of leadership and teamwork in running a successful food and beverage enterprise will be emphasised.

## BHT2010 SPECIAL INTEREST TOURISM

This subject provides an overview of the development of special interest tourism within the context of general tourism, as well as the factors responsible for the growth of special interest tourism. You will also explore the specific interest areas in terms of product development and marketing.

## BHT2012 TRAVEL & LEISURE BUSINESS

The subject provides an overview of the travel and leisure business in the 21st century. Specifically, topics encompassing the components and structure, key dynamics and the environment, and issues facing the world's largest business will be covered.

## BHT2014 PRINCIPLES OF MARKETING FOR HOSPITALITY & TOURISM

This subject covers basic theories, concepts, and strategies applied in the marketing of hospitality and tourism products. Special attention will be given to marketing management issues surrounding the intangible nature of these products with key emphasis being placed on the importance of the service element.

## BHT2015 TICKETING & RESERVATIONS

The subject looks at the reservation and ticketing of air products. You will be provided with an insight into how an itinerary is priced and tickets are issued. Hands-on learning is a feature of the subject as you will experience using a global distribution system programme such as the Amadeus Reservations System. Upon successful completion of the programme, you will be issued with a Certificate in Reservations and Ticketing that is recognised by the industry. The subject will also cover essential knowledge of the airline and travel industry.

## BHT2020 AIRLINES BUSINESS MANAGEMENT

This subject will familiarise you with fundamental concepts on scheduled international air passenger transportation, and how the different components of this industry work together efficiently and effectively. Topics covered include an overview of the air transportation industry, airline marketing, airline operations and aircraft and route network.

## BHT2021 TRAVEL & TOUR BUSINESS

The subject provides you with theoretical knowledge and foundational skills to manage travel and tour businesses in the area of itinerary planning and design and tour coordination and operations. You will also be exposed to niche tourism, business travel and the critical role played by Travel Management Companies (TMC). This subject wraps up with a look at the emerging trends, issues and challenges and the technological impacts faced by the industry.

## BHT2022 BUSINESS ETIQUETTE & SERVICE EXCELLENCE

This subject focuses on two areas, the soft skills aspects of business and customer service. The former illustrates the importance of appropriate dressing, dining etiquette, cross cultural psychology and skills necessary to make the transition from student academic life to the work place. The latter (service excellence) grooms you to be practical philosophers of customer service. You will be challenged to look beyond the service norms to achieve a much higher level of desired service.

## BHT3002 E-BUSINESS IN HOSPITALITY & TOURISM

This subject highlights how advancements in technology have shaped hospitality and tourism businesses. It also spots the trends in e-businesses and focuses on basic concepts such as e-customer relationship management and e-business planning and strategies.

## BHT3006 DESTINATION PLANNING & DEVELOPMENT

This subject examines the processes involved in planning and developing a tourist destination. It provides you with the skills and knowledge necessary to plan, develop, and manage natural, cultural and financial resources in an environmentally responsible manner. It also focuses on the benefits and impacts associated with tourism development, as well as the strategies to enhance the benefits and counter the adverse effects of tourism development.

## BHT3008 MEETINGS, INCENTIVES, CONVENTIONS & EXHIBITIONS

You will be introduced to a variety of theories, concepts, and strategies applied in the context of meetings, incentives, conventions and exhibitions (MICE). The subject equips you with an awareness of the diversity of meetings and their roles and contributions in enhancing tourism and destination development. It provides a broad understanding of the planning process for MICE activities and the different relationships between industry parties involved.

## BHT3012 CONTEMPORARY SPECIAL INTEREST TOURISM

The subject provides an overview of the development of special interest tourism as a response to a more mature travelling public seeking a wide spectrum of experiences such as nature-based, cultural and heritage tourism. The factors responsible for the growth of special interest tourism, specific interest areas, strategies, policies, product development and marketing of this new and growing tourism sector will also be examined.

## BHT3013 LODGING MANAGEMENT

This subject focuses on the fundamentals of lodging operations and management. It concentrates on the roles of the customer, operator and service provider. You will have a clear understanding of the importance of lodging systems and its effect on operations. The subject also provides an overview of the delivery management system. Emphasis will be placed on the property management and preventive maintenance systems as well as the distribution channel. There will be opportunities for you to apply knowledge gained within the area by exploring new and innovative ways to improve existing lodging operations and management.

## BHT3014 HOTEL REVENUE MANAGEMENT

This subject provides an overview of revenue management as practised in lodgings as well as a review of the fundamental concepts of why, how and when to apply revenue management. Throughout the subject, you will have to integrate and apply your prior knowledge of other subjects to revenue management. You will then appreciate the role and importance of revenue management in the industry and its link to profitability. Case-studies based on real-life scenarios will feature in the subject and enable you to practise the principles learnt in revenue management.

## BLM1001 CRIMINAL LAW

This subject covers the law relating to criminal offences and defences. The focus is on identifying and understanding the elements of major offences and defences in the Penal Code with reference to decided cases. Criminal offences in other key legislation such as the Misuse of Drugs Act and the Women's Charter will also be dealt with.

## BLM1002 LAW OF TORT

This subject covers the main areas of civil actions available to parties seeking civil redress. These include the laws relating to negligence, nuisance, defamation, assault and battery.

## BLM1003 LEGAL SYSTEMS & METHODS 1

This subject introduces the concept of law and the legal system in Singapore. You will learn the respective roles and structure of the executive, legislature and the judiciary. You will also be trained in case reading and statutory interpretation.

## BLM1004 LEGAL SYSTEMS & METHODS 2

This is a follow-up on Legal Systems & Methods 1 to further reinforce skills such as statutory interpretation. There will be field trips to key legal institutions such as Parliament to bring alive the study of the legal system of Singapore. You will gain an insight into the Legislature and the Executive in this component.

## BLM2001 CONVEYANCING LAW & PROCEDURE

This subject introduces the basic concepts relating to real property in Singapore and the procedural aspects connected with property transactions. You will learn topics connected with the ownership of land, registration systems, the law in relation to mortgages, landlords and tenants and strata titles. The procedures involved in the preparation of instruments for lodgement for such transactions will also be covered.

## BLM2002 CRIMINAL PROCEDURE

This subject deals with the procedure in respect of criminal matters, from arrest to criminal litigation and appeal. It covers the entire process of administering criminal justice and criminal litigation as provided for in the Criminal Procedure Code and portions of the Evidence Act, and trains you to assist a criminal lawyer effectively.

## BLM2003 FAMILY LAW

This subject introduces the law relating to the family in Singapore. Topics covered include marriage, divorce, the maintenance of wife and children, custody of children, family violence, division of matrimonial assets and the maintenance of parents. Close attention will be paid to the Women's Charter and relevant cases.

## BLM2004 LAW OF CONTRACT

This subject provides an overview of the legal principles governing the formation of contracts, the rights and obligations created by certain types of clauses and the consequent remedies available to anyone who suffers a breach of contract. It also covers the major vitiating factors and the ways in which contracts can be terminated.

## BLM2005 LEGAL ASPECTS OF BUSINESS

This subject provides a working knowledge of the general principles of law that are important to business. Topics covered will include law of contract, sale of goods and intellectual property.

## BLM2007 LEGAL ASPECTS OF IT

The subject covers at an introductory level the law which is relevant to the information technology industry, and which an IT professional will be likely to apply in the course of his work or business.

## BLM3001 ADVANCED CIVIL PROCEDURE

This subject focuses on the civil litigation process from the post-judgement stage, including the basics of insolvency proceedings. It also covers accident litigation, matrimonial proceedings and an introduction to the Electronic Filing System.

## BLM3002 ARBITRATION & ALTERNATIVE DISPUTE RESOLUTION

This subject introduces the various dispute settlement processes with emphasis on mediation and arbitration. You will be coached on how to conduct a mediation session and will learn the various stages of the mediation process. Practical sessions will be reinforced with the theory of mediation, its concepts and techniques. The difference between mediation, arbitration and other dispute resolution will also be highlighted. Key concepts of arbitration and the laws and rules governing the arbitration process will be taught. An arbitration project will introduce you to the drafting of various documents required during the arbitration process.

## BLM3003 CIVIL PROCEDURE

This subject introduces the litigation process from commencement of a writ action to enforcement of a judgement. It also covers the substantive legal principles underlying civil procedures and includes hands-on training in the drafting of court documents.

## BLM3004 COMMERCIAL TRANSACTIONS

This subject introduces the Sale of Goods Act, the concepts of "property" and the passing of risk. It includes common commercial transactions like hire purchase and leasing and covers international trade and legal issues relating to e-commerce.

## BLM3005 COMPANY LAW

This subject provides a basic understanding of the law that governs and regulates companies. Topics include types of corporate entities, Memorandum and Articles of Association, directors' duties, rights of members, corporate finance, winding up and judicial management of companies.

## BLM3006 CORPORATE GOVERNANCE & COMPLIANCE

This subject equips you with an understanding of basic principles for good corporate governance in private and listed companies, as well as the internal compliance adopted by companies to comply with applicable laws and policies. You will learn the law which governs and regulates companies in Singapore with particular emphasis on the practical and procedural aspects.

## BLM3007 INSURANCE LAW & PRACTICE

This subject provides an understanding of the law that governs the insurance business in Singapore as well as the concepts and legal aspects of insurance and its application to the main classes of insurance. Topics covered include risk management, insurance operation, insurance legislation and documentation, principles of insurance such as duty of utmost good faith and insurable interest, various classes of insurance such as motor insurance and the operational aspects of insurance in relation to claims and settlements. It also covers the duties and responsibilities of Agents and Brokers.

## BLM3008 INTELLECTUAL PROPERTY

This subject covers the substantive law relating to main types of Intellectual Property Rights (IPRs) and includes Law of Confidence, Law of Passing Off, Law of Copyright, Law of Trade Marks, Law of Patents and Law of Designs. You will receive a brief introduction to the registration processes for trademarks and patents and to civil and criminal enforcements. You will also be given an overview of the Law of Information Technology, with reference to the Computer Misuse Act.

## BLM3010 LAW OF BANKING & FINANCE

This subject introduces you to key aspects of the banker-customer relationship, and the rights and obligations owed by each party to the other. It covers the law relating to negotiable instruments and also examines the legal framework for various financing transactions.

## BLM3011 MANAGEMENT OF LAW OFFICE & COURT TECHNOLOGY

This subject will cover most aspects of running and managing a law office including the management of human resources, the office environment, work flow management, office automation, record and document management, logistical support, electronic filing and litigation support systems.

## BLM3012 SHIPPING LAW & PRACTICE

This subject introduces the general principles of shipping law and practice in Singapore, with emphasis on procedures in the arrest and sale of vessels and the salient aspects of ship registration. The law governing carriage of goods by sea will also be covered.

## BLM3013 TRUSTS, WILLS & PROBATE

This subject is a study of the law relating to trusts, wills, intestacy, probate and administration. Particular attention will be paid to drafting of wills and the procedures for obtaining grant of Letters of Administration and Probate.

## BLM3016 MEDIA LAW

Designed for non-law students, this subject looks at the laws, rules and regulations governing the media in Singapore. In particular, it focuses on intellectual property, slander and libel laws in relation to the broadcast, print and Internet media. The subject also addresses ethical issues and considerations in news reporting and gathering.

## BLO1001 BUSINESS STATISTICS

This subject provides an overview of descriptive and inferential statistics. It includes sampling methodologies, basic concepts of probability and hypotheses testing used in inferential statistics.

## BLO1002 BUSINESS CALCULUS

The subject provides concepts of calculus and an understanding of the application of calculus to solve business problems. Topics such as functions, graphs and limits, differentiation, exponential and logarithmic functions, and integration will be covered.

## BLO1004 RESEARCH FOR HOSPITALITY & TOURISM MANAGEMENT

The subject provides a basic understanding of statistics and research techniques. You will learn to formulate a research problem relating to the hospitality and tourism industry, and to validate information sources that are useful in the solution of the problem. The subject also covers basic research theories and research-related software.

## BLO2002 LOGISTICS & SUPPLY CHAIN MANAGEMENT

This subject covers the macro aspects of business logistics and supply chain management. It emphasises the integration of logistics with other functions of business and the contribution of logistics to the economy. It also examines other trends such as outsourcing and third party logistics (3PL). You will be given hands-on experience in using computer software to simulate the bull-whip effect in the supply chain.

## BLO2003 MANAGEMENT SCIENCE

This subject equips you with management science techniques to solve real-life operations-related applications or problems. You will be able to apply the knowledge gained by using the related software in your decision-making processes.

## BLO2004 OPERATIONS MANAGEMENT

This subject provides the various concepts and principles of operations management. The subject will focus on the application of operation tools used in both manufacturing and service industries. It will also cover the nature of operations, product development, process design and analysis, quality improvement tools, capacity planning, operations scheduling, facility location and layout planning.

## BLO2005 PURCHASING PRINCIPLES & PRACTICE

This subject provides the knowledge of purchasing principles and practices, coupled with an understanding of the operations in supply chain management required for purchasing personnel to perform their duties. It covers supplier management, purchasing performance measurements, planning and control, negotiation, bidding and international procurement. You will be able to understand and appreciate the constraints associated with this field and be prepared for potential employment in the industry.

## BLO2010 DISTRIBUTION CENTRE MANAGEMENT

This subject covers the various aspects of managing a distribution centre/warehouse. It includes the role of distribution in the total logistics process, the planning process for efficient operations of a distribution centre, the impact on customer service and cost, materials handling system, practices and trends of the warehousing industry in Singapore.

## BLO2011 MATERIALS MANAGEMENT

This subject provides an overview of materials management with emphasis on planning, scheduling and controlling the flow of materials to achieve shorter lead time and faster turnaround for finished goods to reach customers. It also equips you with knowledge of inventory management and control. You will be taught the application of IT in materials management.

## BLO3003 LOGISTICS PLANNING & CONTROL SYSTEMS

This subject deals with information systems and technology applications in logistics planning and control as a competitive advantage in business. You will be exposed to the application of IT in demand planning, warehouse management, transport management, order processing and other logistics areas. It also includes hands-on instruction and practice using industrial application software.

## BLO3007 QUALITY MANAGEMENT

This subject deals with quality competitiveness and its impact on the success of organisations. It focuses on the principles of Total Quality Management and some of the common techniques associated with controlling quality. The subject covers the criteria and framework used in assessing companies' achievement of system quality. You will also be introduced to international industrial standards such as the ISO 9000 series and the Singapore Quality Award.

## BLO3008 TRANSPORT MANAGEMENT

This subject covers the entire process of freight shipment. It includes the importance of transport in a changing business environment, costing and pricing methods for freight transportation, international shipments on import/export customs procedures and documentation. Other aspects of the shipment process such as terms of sales, impact on goods and services tax, insurance, liability and claims management, and special handling requirements of hazardous cargo will be discussed. You will be given hands-on training in the use of Tradenet and transport resource planning software.

## BLO3009 LOGISTICS & OPERATIONS MEASUREMENT

This subject deals with the current approaches used in measuring performance of logistics and operations activities. You will be introduced to key performance indicators commonly used in the industry through the use of case studies. You will also learn to identify opportunities for performance improvement, conduct feasibility studies, quantify the benefits of the improvements and implement various improvement processes.

## BLO3011 BIO-CHEMICAL LOGISTICS

The subject equips you with basic understanding of international and local regulations governing the logistical aspects of chemical and biochemical products and how to apply these regulations to ensure the safe storage, handling and transportation of chemical and bio-chemical products without endangering the safety of personnel and the environment. This subject also instils a sense of responsibility which is necessary when you have to deal with such products in an actual work environment.

## BLO3012 LOGISTICS SERVICE MANAGEMENT

This subject focuses on the quantitative and qualitative aspects of managing customer-centric logistics services. It begins with an overview of logistics services and customer service. The service elements as applied to the supply chain processes of source, make, deliver and return will be discussed. You will also be introduced to common tools and techniques that support customer-driven service requirements. Discussions on customer service in an outsourced environment with central focus on 3PL will be also conducted.

## BLO3013 ADVANCED SUPPLY CHAIN MANAGEMENT

The subject covers advanced topics in supply chain management. It comprehensively covers e-markets and extended enterprise for collaborative commerce, as well as relationship management and fulfilment strategies. Competitive supply chain models will be expounded on with contemporary measures on supply chain risks and continuity. The subject also uses industry software to help your learning.

## BLO3014 SUPPLY CHAIN SIMULATION & MODELLING

This subject enables you to learn how to view supply chains as integrated process systems instead of isolated entities. You will use specialised software to model variables in production and delivery lead times, demand patterns as well as other random behaviours exhibited by supply chain members. You will learn the theory behind business process reengineering and how improvements can be made, as well as the use of software to model supply chain member relationships.

## BLO3015 GLOBAL TRADE & SINGAPORE LOGISTICS

This subject deals with the roles of global trade and its impact on our economy. You will be able to use an appropriate trade financing or payment method in order to minimise risks in global trade. The subject also examines the roles of logistics in supporting the Singapore economy especially in the areas of distribution, manufacturing and transportation. You will gain a good understanding of the logistics sector and current key initiatives driven by government agencies such as the Economic Development Board and International Enterprise Singapore.

## BLO3016 INTERNATIONAL FREIGHT PRACTICES

This subject provides you with in-depth knowledge of freight management, built on the foundation knowledge acquired in Transport Management. It focuses on the significance of freight transport in the global setting and freight as part of the production and distribution systems. Topics related to freight tariff systems, costing, operational flows, customs documentation and clearance procedure give you a good understanding of the practices in the industry. You will also be taught the best practices and performance measurements used in the industry. Strategies to increase the efficiency of freight and to encourage more efficient freight delivery will also be discussed.

## BLO3017 COLD CHAIN MANAGEMENT

This subject provides you with the knowledge of health and safety factors in the storage, handling and transport of chilled and frozen food products. Topics related to food safety and health issues affecting individuals and the food industry will be discussed. You will be introduced to the regulations relating to the storage and transportation of chilled and frozen products in Singapore. You will also be taught the import and export requirements covering the logistical aspects of chilled and frozen food products.

## BLR2001 INTRODUCTION TO LEISURE & RECREATION

This subject provides an overview of the leisure and recreation industry in Singapore and throughout the world. It covers the history, theories and concepts as well as an examination of the structure of the industry. You will learn how to manage the dynamics of leisure businesses by examining the social-political environments. Issues and challenges facing the industry will also be discussed in relation to the existing and potential key business players.

## BLR2002 ATTRACTIONS MANAGEMENT

Forming the backbone of this subject is the study of the various types of visitor attractions, both man-made and natural, their unique characteristics and corresponding management and operational concerns. The linkage between attractions and their importance to the tourism industry will also be discussed. Case studies of the various types of attractions around the world will be used as platforms for discussing the various management issues facing the attractions industry.

## BLR2004 INTRODUCTION TO GAMING OPERATIONS

The subject is designed to provide an overview of gaming operations. Key topics include the development of gaming, gaming trends, technology, hotel and resort gaming organisational structure, government regulations, consumer behaviour, marketing strategies, economic impact, social and cultural concerns.

## BLR2005 TOURISM, CULTURE & SOCIETY

This subject is designed to provide an overview of how tourism will influence and impact upon culture and society. The key areas include heritage and culture as tourism products, the development of identity and place, cultural tourism, and the impact of societal trends on the tourism industry.

## BLR2006 LEISURE & RESORT FACILITIES MANAGEMENT

This subject emphasises managerial responsibilities for efficiency in leisure and resort facilities design, cost-reduction management strategies and property maintenance strategies to ensure optimal performance of the facilities. Coverage also includes preventive and contract maintenance systems and processes, ISO 14000 requirements and major facility systems. Through e-learning mode, the scope covers most leisure and resort facilities ranging from spa, cruise and ferry terminals, airports, resorts, tourist attractions, clubs, as well as convention and exhibition facilities.

## BLR3001 FESTIVALS & EVENTS MANAGEMENT

The subject introduces the scope and the operational aspects of events in the context of the leisure industry. To achieve this, you will be introduced to knowledge involved in the planning, development, programming and production of medium and large scale events. Key topics such as the type, importance of events for the leisure and tourism sectors, marketing, human resource management, and budgeting and staging will be examined.

## BLR3002 RESORT OPERATIONS & MANAGEMENT

This subject gives you an understanding of the resort industry by first covering the historical development of resorts. This enables you to understand why various management approaches are applied to operational issues unique to resorts. Special attention will be paid to the planning, development, design and operations of year-round resorts, and especially on the programming of guest activities and the provision of recreation. The business aspects of resort management will also be examined.

## BLR3004 CLUB MANAGEMENT

This subject covers the study of different types of clubs including city, country, and other recreational and social clubs. It focuses on the administration and management of club operations in the areas of lodging, food and beverage, management of service excellence and quality issues, financial management, marketing, events planning, recreation, sport and fitness facilities management. The subject emphasises the development of technical and conceptual skills for successful club management.

## BLR3005 CRUISE BUSINESS

This subject covers a variety of theories, concepts and strategies applied in the context of cruise business management. The key areas include the historical development and growth of the modern cruise industry, as well as its characteristics, maritime issues, cruise facilities, cruise operations management with an emphasis on cruise destinations, itinerary planning, and sales and marketing aspects of the cruise business.

## BLR3008 SPA & WELLNESS MANAGEMENT

This subject provides a comprehensive overview of the operations and management of spa and wellness businesses. As a starting point it will examine the different types of spa and wellness organisations and proceed to examine key areas in treatments and protocols, safety and hygiene practices, branding and facilities design, planning and management, marketing, human resource management and retailing. The dynamics of the spa and wellness industry as well as major issues and trends will be discussed.

## BMK1001 BASICS OF ENTREPRENEURSHIP

This subject examines the traits of successful entrepreneurs and the basic elements of generating new business ideas. Through lectures, online learning and tutor consultation, you will have the opportunity to identify, assess and select viable businesses, and then develop preliminary business proposals through a typical entrepreneurship process. It helps to develop your entrepreneurial mind set.

## BMK2001 ADVERTISING & PROMOTION

This subject provides you with an understanding of customer communications. It focuses on the role and the entire process that marketing communications play in developing strong relationships with customers, channels and other stakeholders in a variety of contexts.

## BMK2002 CONSUMER BEHAVIOUR

This subject provides you with an understanding of customer buying behaviour. It focuses on the internal and external forces affecting customers' buying decisions in a variety of contexts.

## BMK2003 CUSTOMER RELATIONSHIP MANAGEMENT

This subject provides an overview of the importance of developing long-term and profitable relationships with customers and the processes that enable an organisation to communicate and relate to customers. It focuses on managing customer dynamics, attitudes and perceptions.

## BMK2004 FINANCIAL ASPECTS OF MARKETING

This subject provides a broad overview of financial management and introduces financial techniques and concepts that are important to marketers. It gives you an opportunity to use financial statements and ratio analysis to assess a company's financial health and its future prospects.

## BMK2005 MARKETING RESEARCH

This subject provides an overview of the role of marketing research in the decision-making process that marketing managers undertake. In a rapidly changing world where timely and accurate information is vital to making sound business decisions, marketing research is an absolute necessity.

## BMK2007 NEW MEDIA MARKETING

This subject offers you insights into the use of Internet technology and other new media as marketing tools and describes the manner in which transactions take place over networks in the practice of marketing.

## BMK2009 PRINCIPLES OF MARKETING

This subject provides an integrated introduction to marketing. A managerial approach will be employed to build a basic range of skills needed to sense, serve and satisfy customer needs now and in the future. Key topics include the environmental forces affecting the marketing process, tools used by modern marketers and the key marketing mixes.

## BMK2014 CREATIVE CAMPAIGN PROJECT

This subject provides an understanding of the creative process and practical issues in marketing campaigns. You will learn to generate effective communication messages and creative strategies and explore different techniques in visual communication. You will also learn the essentials of client and campaign management and get an overview of socially responsible communication and practices.

## BMK3002 ENTREPRENEURSHIP

This subject gives you an opportunity to conduct field research, in order to identify, evaluate and develop a viable business. You will create a realistic business plan expected of an entrepreneur or intrapreneur. You will also be given the opportunity to learn the skills for managing entrepreneurial start-up businesses and understand the difficulties faced by entrepreneurs.

## BMK3003 GLOBAL MARKETING

This subject covers the principles and practices of global marketing. Among other things, you will acquire the ability to assess and select target country-markets for market development, know how to evaluate and use the most suitable market entry strategies to service country-markets and develop a basic global marketing plan.

## BMK3004 STRATEGIC MARKETING

This subject provides an overview of the planning and control in strategic marketing development and implementation. Product development, innovation and creativity are highlighted to reflect the increasing importance in these key areas. The impact of rapid advances in technology on globalisation and implications for marketing will also be covered. You will develop core skills in preparing and presenting practical marketing plans.

## BMK3005 INTERNATIONAL BUSINESS

This subject is a broad study of the field of international business. The major topics focus on theories and patterns of international trade and international investment, the international business environment, the market entry strategies of international firms, international human resource management and issues, the global monetary system and the strategic management of international businesses.

## BMK3006 PRACTICE OF ENTREPRENEURSHIP

This subject gives you the opportunity to conduct field research in order to identify, evaluate and select a viable business. You will develop a realistic business plan expected of an entrepreneur or intrapreneur. You will be given the opportunity to learn the skills needed for managing entrepreneurial start-up companies and to understand the challenges faced by entrepreneurs and intrapreneurs working for large companies.

## BMK3007 PRINCIPLES OF ENTREPRENEURSHIP

This subject covers the key principles of entrepreneurship. The early part of the course examines the traits of successful entrepreneurs. You will learn how to identify business opportunities and be given the opportunity to conduct field research in order to identify, evaluate and select viable businesses. You will then prepare basic business plans.

## BMK3008 PUBLIC RELATIONS

This subject seeks to equip students with the essentials of public relations and event management. Students will acquire the theories, tools and techniques of public relations and apply them to real-life situations professionally. Emphasis will be placed on public relations and events that seek to enhance understanding between an organisation and its stakeholder publics.

## BMK3010 SERVICES MARKETING

This subject focuses on the unique challenges of managing services and delivering quality service to customers. The attraction, retention, and building of strong customer relationships through quality service are at the heart of the subject content. The content is equally applicable to organisations whose core product is service and to those that depend on service excellence for their competitive advantage.

## BMK3011 BRAND MANAGEMENT

One of the most valuable intangible assets that a company has is the brand that it has invested in and developed over time. Like people, brands have their own individual personality. This differentiation drives the ability for the brand to grow and expand. This subject focuses on exploring and understanding the importance of brands, what brands mean to consumers and how to develop, manage and protect brands.

## BMK3012 SALES & ACCOUNT MANAGEMENT

This subject provides you with a comprehensive coverage of consultative selling, partnering, value-added selling, contextualised selling in both consumer and non-consumer industries, and fundamentals of sales management.

## BMK3013 INTEGRATED MARKETING COMMUNICATIONS

This subject provides you with an opportunity to gain a basic understanding of the various marketing communication functions, media alternatives, creative strategy and the integrated marketing communications concept and process. Topics covered include advertising, public relations, sales promotion, direct marketing and evaluation and strategies in integration. You will apply these tools and concepts to develop long-term, profitable brand relationships.

## BMP3003 MAJOR PROJECT (BUSINESS INFORMATION TECHNOLOGY)

This subject provides you with an opportunity to apply your knowledge and skills acquired during classes and working experience in the Student Internship Programme. Students work in teams throughout the semester to produce a business proposal, system prototype, and technical documentation. They are also required to make a formal presentation of the project undertaken.

## BMP3007 MAJOR PROJECT (LOGISTICS & OPERATIONS MANAGEMENT)

This subject provides you with an opportunity to understand real-life problems in companies. The integration of the various fields of logistics requires you to apply the knowledge learnt to solve real-life problems. You will work as a team to identify objectives and provide recommendations for improvement.

## BRM1001 RETAIL ACCOUNTING 1

This subject explains and illustrates how retail business transactions are recorded, summarised, classified and reported and the underlying accounting principles that govern the techniques employed.

## BRM1002 PRINCIPLES OF RETAIL MANAGEMENT

This subject introduces the basic principles and concepts in the field of retailing with particular emphasis on topics ranging from an introduction to basic retailing principles and practices, building and sustaining relationships in retailing to the key elements in the retail marketing mix.

## BRM1003 RETAIL ACCOUNTING 2

This subject explains and illustrates how a retail business transacts with particular emphasis on cash management, inventory management, accounts receivables, accounts payables, fixed assets, long-term liabilities and shareholders' equity.

## BRM1005 MARKETING FUNDAMENTALS

This subject provides an understanding of the basic concepts and practices of modern marketing. It focuses on the role and the tools utilised by marketers in developing the appropriate marketing mix and in the identification of target segments.

## BRM2002 RETAIL VISUAL MERCHANDISING

This subject equips you with the skills and abilities to help retail operations visually differentiate themselves. It focuses on principles and practices of visual merchandising with particular emphasis placed on design principles, visual display components, types of visual merchandising techniques and emerging trends in visual merchandising.

## BRM2003 MERCHANDISE BUYING

This subject provides you with an understanding of merchandise buying in a retail context. It focuses on the internal and external forces affecting buyers' decisions in a variety of retail contexts. Topics include the role of a buyer, retail merchandise planning and assortments and factors surrounding the purchasing environment.

## BRM2006 STORE MANAGEMENT

This subject introduces the basic principles of store management with particular emphasis on topics ranging from introduction to store management, human resource management to operational management.

## BRM2009 RETAIL BUYING BEHAVIOUR

This subject provides you with an understanding of consumers' buying behaviour in a retail context. It focuses on the internal and external forces affecting consumers' decisions in buying behaviour in a variety of retail contexts.

## BRM2110 FINANCIAL ASPECTS IN RETAIL MANAGEMENT

This subject provides a broad overview of finance and accounting fundamentals that includes financial techniques and concepts that are important to the retailing industry. You will learn the various financial aspects of retailing such as the analysis of financial statements, merchandise budgeting and capital investment decisions.

## BRM2111 RETAIL PRACTICAL 1

This subject provides you with hands-on practical experience as front-liners in the retail industry. You will experience and carry out the roles of cashiers, sales associates and kiosk executives. You will be equipped with the knowledge, skills and selling techniques to provide excellent customer service and create a customer focused retail environment.

## BRM2112 RETAIL PRACTICAL 2

This subject provides you with hands-on opportunities in the understanding and application of retail concepts. You will learn to conceptualise ideas and apply the appropriate visual displays and fixtures, merchandise planning and assortments to create an impressive retail image that will be retained in the customer's mind.

## BRM3006 RETAIL PROMOTION & BRANDING

This subject covers the fundamental principles of retail advertising and promotion together with retail branding. It explains the role of an integrated marketing communication strategy in the creation of a brand image that retailers adopt to differentiate themselves from the competitors. Topics covered range from situational analysis, marketing communication mix to building brand equity.

## BRM3007 RETAIL INFORMATICS

This subject provides you with the working fundamentals in Internet retailing and Customer Relationship Management (CRM). Emphasis will be placed on understanding the role and contemporary challenges of Internet retailing, customer relationship management strategies, basics of website design and ethical issues on the Internet.

## BRM3008 INTERNATIONAL MARKETING & RETAILING

This subject provides you with skills to address major issues and complexities affecting marketing and retailing at a global level. Areas of focus include internationalisation strategies and the cultural dimensions impacting international marketing/retailing and global trends.

## BRM3009 MALL MANAGEMENT

This subject covers an overview of fundamental aspects and practices in mall management. It includes topics on mall positioning strategies, tenant management and leasing negotiations. You will learn to determine mall retail strategies, apply retail techniques to optimise tenant mix and manage mall resource allocations.

## BRM3110 RETAIL PRACTICAL 3

This subject seeks to provide you with the opportunity to plan and manage retail events such as new retail business launches, product launches, and other high profile retail promotional events. You will have the opportunity to create a project blueprint for the planning and execution of important retail-based events, for example, new retail store launches and new retail concept launches.

## BRM3111 DISTRIBUTION CHANNELS

This subject introduces the principles of distribution channels in the retail business. It covers the logistics and supply chain concept and its applicability to the retail sector. Topics include relationships in the supply chain management, retail logistics and the impact of technological factors on the distribution channels.

## BRM3112 STRATEGIC RETAILING

This subject provides an overview of the planning and control in strategic retailing and implementation. Product development, innovation and creativity are highlighted to reflect the increasing importance in these key areas. The impact of rapid advances in technology on globalisation and implications for marketing are also covered.

## BRM3113 RETAIL PRACTICAL 4

This subject provides you with the knowledge and skills required to start a retail business and develop a differentiating retail strategy. It integrates the knowledge and content covered over your three years of study. You are expected to apply core retail concepts and frameworks in the context of retail management.

From the perspective of a start-up retailer, you will have the opportunity to analyse and evaluate the relevance of retail format, location analysis, target market behaviour, customer retention programme, customer service and store image analysis. Your analysis allows you to formulate a business plan covering aspects such as retail operations, merchandising, product development, visual merchandising communication, financial forecast, human resource, promotion and branding.

## BSI3011 STUDENT INTERNSHIP PROGRAMME (ACCOUNTING & FINANCE)

This 14-week internship links your learning with the real world. You will be placed in relevant industrial/commercial organisations so that you can bring your classroom knowledge into the working world and apply them in actual work situations. Besides reinforcing technical concepts and skills in accounting and finance, this practical training also provides the opportunity to build important soft skills such as problem-solving, communication and teamwork.

## BSI3002 STUDENT INTERNSHIP PROGRAMME (BUSINESS)

This 12-week internship links your learning with the real world. You will be placed in relevant industrial/commercial organisations so that you can relate what you have learnt in the classrooms with actual work situations. This practical training provides you with the opportunity to apply the concepts and skills acquired through specific jobs.

## BSI3003 STUDENT INTERNSHIP PROGRAMME (BUSINESS INFORMATION TECHNOLOGY)

This 16-week internship programme links your learning with the real world. You will be placed in relevant industrial/commercial organisations so that you can relate what you have learnt in the classrooms with actual work situations. This practical training also provides you with the opportunity to apply the concepts and skills acquired through working in companies and organisations.

## BSI3004 STUDENT INTERNSHIP PROGRAMME (COMMUNICATIONS & MEDIA MANAGEMENT)

The 24-week internship programme is designed to expose you to the work environment where you will not only learn how organisations are run, but will also be given the chance to apply what you have learnt in the first two years of your course. You will be interning with media companies or performing in a communications and media role with companies in many different industries.

## BSI3006 STUDENT INTERNSHIP PROGRAMME (LAW & MANAGEMENT)

This 12-week internship links your learning with the real world. You will be placed in law firms, the courts or legal departments of private and public organisations, so that you can apply what you have learnt in the classrooms to actual work situations. This practical training also provides you with the opportunity to pick up concepts and skills that can only be acquired at the workplace.

## BSI3007 STUDENT INTERNSHIP PROGRAMME (LOGISTICS & OPERATIONS MANAGEMENT)

This 12-week internship links your learning with the real world. You will be placed in relevant industrial/commercial/service organisations so that you can relate what you have learnt in the classrooms to experiences in an organisational setting. This practical training also provides you with the opportunity to apply logistics and operations management concepts and skills to projects and work situations.

## BSI3008 STUDENT INTERNSHIP PROGRAMME (MARKETING)

The Student Internship Programme is intended to supplement your education by providing real-world experience within a formal organisational setting. It couples the necessary integration of substantive knowledge with behavioural skills and communication techniques that are essential for effective professional performance.

## BSI3010 STUDENT INTERNSHIP PROGRAMME (RETAIL MANAGEMENT)

The Student Internship Programme is intended to supplement your education by providing real-world experience within a formal organisational setting. It couples the necessary integration of substantive knowledge with behavioural skills and communication techniques that are essential for effective professional performance.

## BSI3012 STUDENT INTERNSHIP PROGRAMME (CULINARY & CATERING MANAGEMENT)

This subject is designed to supplement your education through first-hand experience of the work environment. It allows you to integrate the knowledge and skills you have learnt over the course of your study and apply them to actual situations in the industry.

## BSI3013 STUDENT INTERNSHIP PROGRAMME (LEISURE & RESORT MANAGEMENT)

This subject is designed to supplement your education through first-hand experience of the work environment. It allows you to integrate the knowledge and skills you have learnt over the course of your study and apply them to actual situations in the industry.

## BSI3014 STUDENT INTERNSHIP PROGRAMME (HOSPITALITY & TOURISM MANAGEMENT)

The Student Internship Programme is designed to give you first-hand experience of the work environment. It provides an opportunity for learning through the application of the skills sets, techniques and classroom knowledge gained to real life situations. All students must undertake a project that is beneficial to the company they are placed in.

## CID1C02 WEB DESIGN

This subject covers the basic characteristics of multimedia elements and the underlying technologies behind text, graphics, animation, audio and video. You will learn to use multimedia and web authoring tools to create a multimedia website based on sound design principles.

## CFI1C04 SYSTEMS ANALYSIS

This subject introduces the theory and practice of Systems Analysis in the problem definition, requirements analysis and logical design phases of an application project life cycle. It enables you to undertake, in a methodical manner, the analysis of a given problem situation, to produce a definition of user requirements and to design an appropriate information system from the requirement specifications, using appropriate methods, tools and techniques.

## CIM1Z01 DATABASE INFORMATION SYSTEMS

This subject equips you with the necessary skills to formulate queries and use simple Web forms for information system development. It will introduce you to the fundamental concepts of relational database systems and the techniques of designing relational databases.

## GCD1001/1002/1003 APPLIED PRINCIPLES FOR EFFECTIVE LIVING (APEL)

Applied Principles for Effective Living is TP's Core programme consisting of three subjects, namely APEL 1 (Personal Effectiveness), APEL 2 (Interpersonal Effectiveness) and APEL 3 (Extropersonal Effectiveness). APEL was specially developed for TP students with the aim to help nurture in them the dispositions (i.e., attitudes, skills, knowledge) towards the Principles for Effective Living, hence laying the vital foundation for their life-long success. The principles introduced in this programme are largely derived from applied psychological studies.

# School of Design

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At the Temasek Polytechnic School of Design, students thrive and learn in an exciting environment which encourages creativity and versatility of expression. Here, they are exposed to the rapid changes in trends, thinking and concepts of the design world. As the only design institution in Singapore that offers the fullest, most comprehensive range of design disciplines, the cross-disciplinary and synergistic nature of design work can be explored here to the fullest.

The School of Design is well-recognised in the local and international arena as an award-winning institution. Our students have won many prestigious international and local competitions. In addition, our accomplished external examiners from reputable overseas institutions have consistently attested to the very high quality of our courses. Our graduates have been accorded advanced standing by the very best degree-granting design institutions for undergraduate and postgraduate studies in Australia, UK, USA, Europe and other parts of the world.

Because the design industry is very much a project-based one, learning here is also very hands-on in nature. The School constantly engages industry with dialogues and workshops. You will also have opportunities to work on "live" projects with some of the best design firms in industry. Not only will you develop your creative and technical skills, you will also hone your own project and time management abilities, thus preparing you for a challenging career in an industry driven by briefs and deadlines.

It is not all studio and classroom work. Design is global in nature and your learning experiences here will reflect that. Overseas study trips, exchange programmes with other design institutions, competitions, community projects and an industry internship programme, locally or overseas will immerse you in different ideas and cultures that will better shape your thinking and sharpen your sensitivities as designers.

## SELECTION PROCEDURE

All applications meeting our minimum entry requirements are considered. Candidates with good O Level results may apply via the Joint Admissions Exercise (JAE). Candidates with good portfolios and strong inclination for creativity and design may apply through the Joint Polytechnic Special Admission Exercise (JPSAE). If short-listed, you may be required to attend an interview to which you should bring samples/portfolios of your work in art and design exercises or other media of expression that show evidence of creativity and imagination. You may also show certificates of completed courses and letters of recommendation from employers. Other qualities like commitment, motivation and passion for art and design are most favourably considered. The process seeks to ascertain your aptitude, attitude, knowledge and potential for the course.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

# Centres Of Excellence

## CENTRE FOR DESIGN INNOVATION (CDI)

As the design and consulting centre of the school, CDI seeks to be the think-tank and resource for new thinking and directions in design. It is dedicated to creating high impact, result-oriented design solutions, and offers fresh-thinking and future-focused consultancy and design services to a wide range of clients. CDI responds to needs in research and consulting in the broad areas of apparel design, new product concepts and design, branding and visual communication, new media design, and interior space and architectural design.

## >60 DESIGN CENTRE

This is Singapore's first think-tank for design issues that will impact the growing elderly population. The centre generates ideas and solutions that are not only user-friendly but also life-impactful in the areas of habitat, healthcare, communications, mobility, fashion and lifestyle for the elderly.

## HEREAFTER (HD) POST-PRODUCTION STUDIO

This is the first HD post-production laboratory in the region using Apple's High Definition (HD) technology and 2K workflow. This high-end facility features the latest, state-of the-art HD post-production editing suites used in industry today. Using the latest equipment and editing software, the suites represent a complete workflow from filming to editing in HD format. The new technology allows students to film and edit on the go, cutting post-production time significantly.

*In addition to these Centres of Excellence, the School is well-equipped with other key facilities that support a world-class design education. These include:*

## HEAVY MODEL MAKING WORKSHOP

This is a comprehensive workshop for wood, metal, plastic and ceramics work. Here, students will explore 3D ideas and concepts and learn the basics of product semantics through making maquettes, highly-finished models and aesthetic prototypes.

## COMPUTER-AIDED DESIGN AND MANUFACTURING LABORATORIES

Equipped with the latest hardware, CAID and 3D modelling software, the CAM facilities allow students to add professionalism to their apparel and textile designs, mood boards and merchandising projects, enabling them to relate to the production aspect of the apparel industry. Students can add professional lustre to their apparel and textile design projects here.

## DIGITAL PHOTOGRAPHY STUDIO

Equipped with state-of-the-market technology and innovation, the digital photo studio caters to the emergence and convergence of electronic manipulation, traditional media and analogue imaging.

## LIGHT AND SOUND STUDIO

Here, students experience, experiment, measure and assess the effects of lighting and sound quality in an interior environment.

## MODEL SIMULATION STUDIO

This studio is used for taking interior photographs of models to support studio-based projects and self-directed learning. It is equipped with a sophisticated model scope, digital camera, computer, and basic photographic accessories complete with lighting, product table and backdrops.

## MATERIAL RESOURCE STUDIO

This is a library which offers Interior Architecture & Design students the opportunity to access material samples and supplier catalogues so that they get to learn how to work professionally.

# Apparel Design & Merchandising

> ***I have been an external examiner for numerous BA Hons and MA courses internationally and would consider the students' performance to be easily of equal, and in some cases a better, standard to their peers on comparable and higher level courses.***
>
> *Prof. Wendy Dagworthy*
> *Head of School and Head of Department*
> *School of Fashion & Textiles*
> *Royal College of Art, UK.*

You are someone who walks by designer store windows or fashion mannequins and says to yourself, "I could have easily designed that dress!" And your friends keep telling you what great taste you have. Deep inside, you relish the challenge of creating a fashion statement, driving fashion trends and having a say in the process of making fashion. Know what? We've got just the course for you.

The fashion industry is a dazzling, exciting and bewildering arena of many specialised areas. The course offers a broad overview of the industry, as well as an introduction to design fundamentals. When you are better-informed, you can then choose to specialise in either the niche area of Fashion Design & Merchandising or Retail & Visual Merchandising.

In Fashion Design & Merchandising, you will discover the challenging intricacies of the apparel design and merchandising workflow. You will learn about, and experiment with, different fabrics and trims to translate your bold visions in fashion and apparel into actual wearable pieces. You will learn the key tools of drafting, draping and sewing to bring your ideas into fruition on the catwalk.

Retail & Visual Merchandising is no less exciting an area if you enjoy the business end of fashion. You will learn about all the activities related to the business aspects of developing, promoting, marketing and managing apparel items from conception to purchase. Essentially, you will better understand the fashion customer and you will use this knowledge to its best advantage in your product line.

## CAREER OPPORTUNITIES

Retail & Visual Merchandising graduates land successful careers as fashion stylists, retail supervisors, fashion advisors, buyers, fashion editors, visual merchandisers, display artists and fashion show coordinators and event managers, while Fashion Design & Merchandising graduates make fashion waves as apparel and textiles designers, merchandisers with apparel manufacturers and product development department, assistant pattern-makers and sample-makers. Some of our graduates have even set up their own businesses.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

Applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Art/ Art & Design, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Higher Art, Human & Social Biology, Integrated Science, Media Studies (English), Media Studies (Chinese), Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants who have partial or complete Colour Appreciation Deficiency should not apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Subjects | |
| Core Subjects | : 57 credit units |
| Option Subjects | : 36 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 122 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DCS1013 | Communicating Design Ideas | 1 | 3 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| DCS2014 | Professional Communication for Design | 2 | 3 |
| DSI2019 | Student Internship Programme | 2 | 8 |
| DCS3016 | Communicating Design Arguments | 3 | 3 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DAD1101 | History of Costume | 1 | 3 |
| DAD1102 | Fashion Merchandising | 1 | 3 |
| DAD1104 | Introduction to Visual Merchandising | 1 | 3 |
| DAD1140 | Fashion Retail Management | 1 | 3 |
| DAD1148 | Textiles Fundamentals | 1 | 3 |
| DAD1149 | Textiles Manipulation & Design | 1 | 3 |
| DAD1151 | Apparel Production 1 | 1 | 3 |
| DAD1161 | Basic Sewing Techniques | 1 | 3 |
| DAD1162 | Concept Research & Presentation Techniques | 1 | 3 |
| DAD1163 | Figure Drawing & Production Drawing | 1 | 3 |
| DPS1020 | Design Fundamentals | 1 | 6 |
| DPS1021 | Marketing for Design | 1 | 3 |
| DVC1509 | Digital Essentials | 1 | 3 |
| DAD2113 | Sourcing & Costing | 2 | 3 |
| DAD2122 | Apparel Manufacturing Process | 2 | 3 |
| DMP3012 | Major Project: ADM | 3 | 9 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Fashion Design & Merchandising Option** | | | |
| DAD1150 | Fashion Illustration & Production Drawing | 1 | 3 |
| DAD1152 | Basic Draping | 1 | 3 |
| DAD2116 | Advanced CAD | 2 | 3 |
| DAD2138 | Basic CAM | 2 | 3 |
| DAD2144 | Pattern Grading | 2 | 3 |
| DAD2147 | Apparel Design Projects | 2 | 6 |
| DAD2153 | Apparel Production 2 | 2 | 3 |
| DAD2154 | Advanced Draping | 2 | 3 |
| DAD3127 | Quality Assurance in Textiles & Apparel | 3 | 3 |
| DAD3157 | Apparel Production 3 | 3 | 3 |
| DAD3158 | Tailoring | 3 | 3 |
| **Retail & Visual Merchandising Option** | | | |
| DIA1202 | Media Techniques & Presentation | 1 | 3 |
| DIA1220 | Space Planning | 1 | 3 |
| DIA1221 | Color & Light | 1 | 3 |
| DVC1542 | Photography | 1 | 3 |
| DAD2116 | Advanced CAD | 2 | 3 |
| DAD2142 | Fashion Purchasing Management | 2 | 3 |
| DAD2155 | Visual Merchandising Project 1 | 2 | 6 |
| DAD2156 | Visual Merchandising Project 2 | 2 | 6 |
| DAD3160 | Events Management | 3 | 3 |
| DIA3218 | Retail Design | 3 | 3 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Environment Design

*This course addresses the key issues of environmental sustainability through the design and its implementation of landscapes in the tropics. This is a niche area which is essential for the further growth and development of the landscape industry in Singapore and in the region.*

*P Teva Raj*
*Director, Industry Division*
*National Parks Board*

You are someone who lives in a world where a comfortable and designed lifestyle has become more a necessity than a luxury. You are an out-and-moving person who believes that our landscapes and open public spaces can actually be so much better designed. You have the passion and determination to create a better environment for all of us to live in. We have the ideal course for you.

This course crosses over several subject disciplines to cover elements of landscape architecture, urban planning, architecture and environmental technologies. It deals with the design and execution of external space like civic plazas and neighbourhood centres, focusing mainly on quality design for the environment which has become a major issue in developing and developed nations.

You will be plugged into the latest developments in urban Singapore, exploring the aesthetics of creating urban spaces, combined with the knowledge of natural and technical sciences. All this will equip you with critical skills to create exciting urban environments that are beautiful, capable of uplifting the spirit of the users, easily maintained, ecologically-friendly and economically-viable.

This course will have you engaging in actual projects to escalate your personal learning and to enhance realism. Also, our project-based approach will further develop skills such as decision making, critical thinking, creativity, problem solving and innovation. You'll love what we have in store for you!

## CAREER OPPORTUNITIES

When you graduate, you can find exciting careers in companies dealing with urban planning, landscape architecture, architecture, horticulture and parks management consultancies. Or, after acquiring several years of working experience, you may be able to achieve a designer's ultimate dream of establishing your own design practice, offering a range of design services to local and regional clients.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

Applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Art/ Art & Design, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Higher Art, Human & Social Biology, Integrated Science, Media Studies (English), Media Studies (Chinese), Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants who have partial or complete Colour Appreciation Deficiency should not apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Core Subjects | : 93 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 122 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DCS1013 | Communicating Design Ideas | 1 | 3 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| DCS2014 | Professional Communication for Design | 2 | 3 |
| DSI2019 | Student Internship Programme | 2 | 8 |
| DCS3016 | Communicating Design Arguments | 3 | 3 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DED1801 | EVD Project 1 | 1 | 6 |
| DED1816 | Introduction to Architectural Principles | 1 | 3 |
| DED1817 | Sustainable Materials | 1 | 3 |
| DED1818 | Architectural & Landscape Drawing | 1 | 3 |
| DED1821 | Form & Space Exploration | 1 | 3 |
| DPS1020 | Design Fundamentals | 1 | 6 |
| DPS1021 | Marketing in Design | 1 | 3 |
| DED2819 | Computer-aided Design Drawings | 2 | 3 |
| DED2822 | Environmental Elements & Control | 2 | 3 |
| DED2823 | Landscape Design Studies | 2 | 3 |
| DED2824 | Principles of Plant Design | 2 | 3 |
| DED2826 | Urban Design Studies | 2 | 3 |
| DED2827 | EVD Project 2 | 2 | 9 |
| DED2828 | EVD Project 3 | 2 | 9 |
| DED3812 | EVD Project 4 | 3 | 9 |
| DED3813 | Eco Design | 3 | 3 |
| DED3820 | Digital Visualisation & Presentation | 3 | 3 |
| DED3825 | Basic Construction | 3 | 3 |
| DED3710 | Professional Practice | 3 | 3 |
| DMP3019 | Major Project: EVD | 3 | 12 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Interactive Media Design

*We hand-selected students from this School for their state of-the-art training and impressive skills. This industry demands a constantly evolving skill set, and we are excited to integrate such innovative talent into our global network. We are happy to have the Interactive Media Design students become part of Y&R and Wunderman's creative and digital production teams in Hong Kong, Shanghai, Singapore and New York, serving some of the world's best known brands – the likes of Microsoft, Nokia and Citi.*

*Bill Manfredi*
*Executive Vice President*
*Global Talent Management*
*Wunderman/Y&R*

You love design and think in visuals. You are a radical creative individual — a big idea maker who wants to create smart work that moves and engages people. In this age of new media, you are forward thinking and passionate about all the latest in art, culture and technology. Breathe life into your ideas and make them come alive through compelling graphics, illustrations and typography. Join us to unleash your creative potential.

Here in Interactive Media Design, it's about mastering the art of creativity and conceptualising ideas with a 360° approach. It's also about connecting people and brands with the best mediating art, ideas and technologies to create engaging experiences. On top of that, you will be taught by professionals in their specialised fields to develop and expand your aesthetic skills and knowledge. You will learn to be innovative and offer creative solutions in the graphic design and digital advertising fields.

Learning goes beyond the classroom. There will be field trips, workshops and seminars, visits to exhibitions that highlight the latest innovations in interactive design as well as overseas study trips. To give you a well-rounded outlook of the design industry, our Student Internship Programme will equip you with invaluable real-world working experiences and professional design practices in Singapore or abroad.

## CAREER OPPORTUNITIES

As an Interactive Media Design graduate, interesting careers await you in the advertising, design, branding and media agencies. These include interactive media designers, advertising creatives, information architects, content developers, interface designers and visual communicators.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

Applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Art / Art & Design, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Higher Art, Human & Social Biology, Integrated Science, Media Studies (English), Media Studies (Chinese), Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants who have partial or complete Colour Appreciation Deficiency should not apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Core Subjects | : 93 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 122 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DCS1013 | Communicating Design Ideas | 1 | 3 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| DCS2014 | Professional Communication for Design | 2 | 3 |
| DSI2019 | Student Internship Programme | 2 | 8 |
| DCS3016 | Communicating Design Arguments | 3 | 3 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DIM1345 | Ideation | 1 | 3 |
| DIM1366 | Interactive Studio: Web | 1 | 3 |
| DPS1020 | Design Fundamentals | 1 | 6 |
| DPS1021 | Marketing in Design | 1 | 3 |
| DVC1506 | Typography | 1 | 3 |
| DVC1509 | Digital Essentials | 1 | 3 |
| DVC1542 | Photography | 1 | 3 |
| DVC1550 | History of Graphic Design | 1 | 3 |
| DVC1564 | Graphic Stylisation & Techniques | 1 | 3 |
| DIM2367 | Interactive Studio: Web 2 | 2 | 3 |
| DIM2368 | Studio Project | 2 | 6 |
| DIM2369 | Interactive Studio: Media | 2 | 3 |
| DIM2370 | Interactive Studio: Media 2 | 2 | 3 |
| DIM2371 | Interface Design | 2 | 3 |
| DIM2376 | Interactive Project | 2 | 6 |
| DVC2514 | Advertising | 2 | 3 |
| DVC2565 | Typography 2 | 2 | 3 |
| DVC2566 | Prepress & Applied Techniques | 2 | 3 |
| DVC2567 | Publication Design | 2 | 3 |
| DVC2574 | Advertising Communication | 2 | 3 |
| DIM3372 | Studio Project 2 | 3 | 6 |
| DIM3373 | Interactive Studio: Beyond Screen | 3 | 3 |
| DIM3374 | Interactive Studio: Mobile Devices | 3 | 3 |
| DIM3375 | Advertising Media Strategy | 3 | 3 |
| DMP3010 | Major Project: IMD | 3 | 9 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Interior Architecture Design

*This School has made very good progress in terms of the final-year students' substance, design philosophy and concept, graphic and 3D presentation etc. It is also a good reflection on the teams of course managers, tutors, lecturers, school management staff and those who are involved in one way or another. It is a dynamic, creative and progressive School which I am sure will go even further from here.*

*Joseph Lau Tse Kit*
*Managing Director*
*Laud Architects Private Limited*

You buy stacks of magazines on interior architecture designs. You have many creative and exciting design ideas, and love planning the spaces you live, play and work in – whether it is your living room, your neighbourhood library, your bus interchange or your favourite hangout. You look at private and public spaces and think of a dozen ways to improve the environment for the users. We've got a great course that will transform your aspirations into a profession.

You will learn the use of space and its elements within the shells and structures of buildings. And by space, we really mean anywhere that people live and work - offices, cinemas, homes for the elderly, museums, schools, etc. You will learn how to best balance function and appeal in the use of any given space. Not only should your designed space look good, it also needs to function efficiently. Through your many hands-on, problem-based creative projects, you will learn about colours, materials, lighting, media, shapes and forms. You will use these and other tools to shape a specific space while considering the requirements of the project. The course will also hone your ability to communicate ideas through a wide range of presentation media, as very often in the real world, one has to work with a variety of clients with different needs.

If you are someone who enjoys thinking out of the box and conceptualising different approaches and uses of a stimulating and functional environment, this is the course for you.

## CAREER OPPORTUNITIES

Armed with professional skills to provide interior design services for corporate exhibition, institutional and residential projects, graduates from our course can find careers as designers and consultants in interior design consultancies, design- related businesses or an architect's office. Or, you could easily land a job in event management, exhibition design, interior product design and in-house design for museums and galleries. Many graduates have also realised their dreams of starting their own design consultancies.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

Applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Art/ Art & Design, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Higher Art, Human & Social Biology, Integrated Science, Media Studies (English), Media Studies (Chinese), Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants who have partial or complete Colour Appreciation Deficiency should not apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Core Subjects | : 93 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 122 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DCS1013 | Communicating Design Ideas | 1 | 3 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| DCS2014 | Professional Communication for Design | 2 | 3 |
| DSI2019 | Student Internship Programme | 2 | 8 |
| DCS3016 | Communicating Design Arguments | 3 | 3 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DIA1202 | Media Techniques & Presentation | 1 | 3 |
| DIA1204 | Digital Architectural Drafting | 1 | 3 |
| DIA1223 | Form Exploration | 1 | 6 |
| DIA1226 | Materials & Finishes | 1 | 3 |
| DPS1021 | Marketing in Design | 1 | 3 |
| DPS1020 | Design Fundamentals | 1 | 6 |
| DIA2205 | Architectural Design Theory | 2 | 3 |
| DIA2206 | Digital Media Visualisation & Presentation | 2 | 3 |
| DIA2222 | Portfolio Development | 2 | 6 |
| DIA2223 | IAD Project 1 | 2 | 6 |
| DIA2224 | IAD Project 2 | 2 | 9 |
| DIA2228 | Construction & Detailing | 2 | 3 |
| DIA2229 | Building Codes & Standards | 2 | 3 |
| DIA3215 | IAD Project 3 | 3 | 9 |
| DIA3230 | IAD Project 4 | 3 | 9 |
| DIA3231 | Museum & Exhibition Studies | 3 | 3 |
| DIA3232 | Sustainable Environment | 3 | 3 |
| DMP3020 | Major Project: IAD | 3 | 12 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Moving Images

*Mix talented students with an accomplished and dedicated faculty and you get a dynamic film school. The best student work at Temasek Polytechnic is comparable to the best in other film schools in Europe and America.*

*Professor Mark Jonathan Harris*
*Distinguished Professor*
*School of Cinematic Arts*
*University of Southern California*
*and three-time Academy Award Winner*

You critique every film or TV programme you watch and you know you can do better than what you see. Not only that. You have a passionate love affair with your battered old handycam, but lament the lack of top-end facilities to do a top notch job. Well, this is the place where your prize-winning film can materialise. And it's a pretty cool place to be too.

Our course offers you the environment, knowledge and technical skills to be a professional, and still lets you own your creative voice. How many other vocations out there are this generous?

We will impart the essential skills in content creation, conceptualisation, technical knowledge and skills and professional practice in a world-class learning environment conducive for nurturing industry-ready professionals for the vibrant media industry. You will be among the first in the region to go fully HD (high definition) with the use of high-end equipment from cameras down to post production suites. With mega industry partners working in tandem with us, you can rest assured knowing you'll receive a quality education that is on par with the best in the world.

You will acquire production and editing skills for the video and broadcast media. For both, you will be constantly exposed to client-based projects that will equip you with real-world working experience. You will sharpen your competitive edge by participating in international and local competitions, while the Student Internship Programme increases your exposure to professional practices, in Singapore and overseas.

## CAREER OPPORTUNITIES

Your skills will enable you to have challenging and rewarding careers in the growing film and media industries, not only here in Singapore, but internationally. You might just be the next big name film or television producer/ director, digital post-production editor, or top-notch director of photography.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

Applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Art / Art & Design, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Higher Art, Human & Social Biology, Integrated Science, Media Studies (English), Media Studies (Chinese), Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants who have partial or complete Colour Appreciation Deficiency should not apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Core Subjects | : 93 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 122 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DCS1013 | Communicating Design Ideas | 1 | 3 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| DCS2014 | Professional Communication for Design | 2 | 3 |
| DSI2019 | Student Internship Programme | 2 | 8 |
| DCS3016 | Communicating Design Arguments | 3 | 3 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DMV1601 | Creative Storytelling | 1 | 3 |
| DMV1604 | Camera & Lighting | 1 | 3 |
| DMV1655 | Media History and Trends | 1 | 3 |
| DMV1656 | Basic Video Project | 1 | 6 |
| DPS1020 | Design Fundamentals | 1 | 6 |
| DVC1542 | Photography | 1 | 3 |
| DMV2606 | Audio 1 | 2 | 3 |
| DMV2609 | Scriptwriting Essentials | 2 | 3 |
| DMV2610 | Film Language | 2 | 3 |
| DMV2611 | Video Editing | 2 | 3 |
| DMV2612 | Audio 2 | 2 | 3 |
| DMV2644 | Project Pitching | 2 | 3 |
| DMV2645 | Production Planning & Management | 2 | 3 |
| DMV2646 | Advanced Editing | 2 | 3 |
| DMV2647 | Directing | 2 | 3 |
| DMV2648 | Cinematography | 2 | 3 |
| DMV2652 | Understanding Factual Television | 2 | 3 |
| DMV2657 | Documentary Project | 2 | 6 |
| DMV2658 | Short Film Project | 2 | 6 |
| DMV2660 | Studio Production | 2 | 6 |
| DMP3009 | Major Project: MOI | 3 | 9 |
| DMV3626 | Screen Writing | 3 | 3 |
| DMV3653 | Visual Effects | 3 | 3 |
| DMV3659 | Advanced Video Project | 3 | 6 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Product & Industrial Design

reddot design award
winner 2008

> *The School has continued to stay relevant by producing creative thinkers, not just designers, and is cultivating a unique attitude towards design, not just skills and knowledge of design. Design thought leadership will be critical in the coming years for the graduates and the School.*
>
> *Low Cheaw Hwei*
> *Senior Design Director*
> *Philips Electronics Singapore Pte Ltd*

You see design in the most surprising or most unexpected of places: an MP3 player that responds to motion, a washing machine small and sleek enough to fit any living room and medicine bottles that dispense just the right amount of cough syrup without a spoon. These ideas are not science fiction but international award-winning designs from our students. You too could very well be our next award-winning product designer!

The course teaches and hones design specialists to design specific products and services that enrich our lives. If you want to create interesting and notable products that make life better for users – this course is just right for you.

The course will address design fundamentals and build your entrepreneurial, experiential, collaborative and professional skills further through projects and assignments. Here, you will learn to design with understanding of the end-users and their needs through experiential and human-centred design approaches. You will have to think out of the box and be able to frame innovative solutions with aesthetics and usability. You will be encouraged to pit your skills against others in exciting local and international competitions, as well as to participate in industry-initiated projects. This course prepares you for the dynamically creative profession where the boundaries and definitions are constantly challenged. There are new and unlimited opportunities in the profession and our Product & Industrial Design course will prepare you well to meet these dynamic challenges in the creative industry.

## CAREER OPPORTUNITIES

Our graduates are simply needed everywhere. In diverse fields such as consumer electronics, medical products, entertainment design (special effects, set design, concept design, model/ prop design), furniture design, packaging design, transportation design, product merchandising, object/craft design, advertising and environmental design including building interiors and signage. Many of our graduates have also started their own successful design or design-related studios and enterprises.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

Applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Art/ Art & Design, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Higher Art, Human & Social Biology, Integrated Science, Media Studies (English), Media Studies (Chinese), Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants must ensure that they do not suffer from complete Colour Appreciation Deficiency. Applicants who do not satisfy the pre-requisite may not be accepted into the course. For safety reasons, applicants must also ensure that they do not suffer from medical conditions such as epilepsy or hearing impairment.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Core Subjects | : 93 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 122 credit units |

# Course Structure

## TP Core Subjects

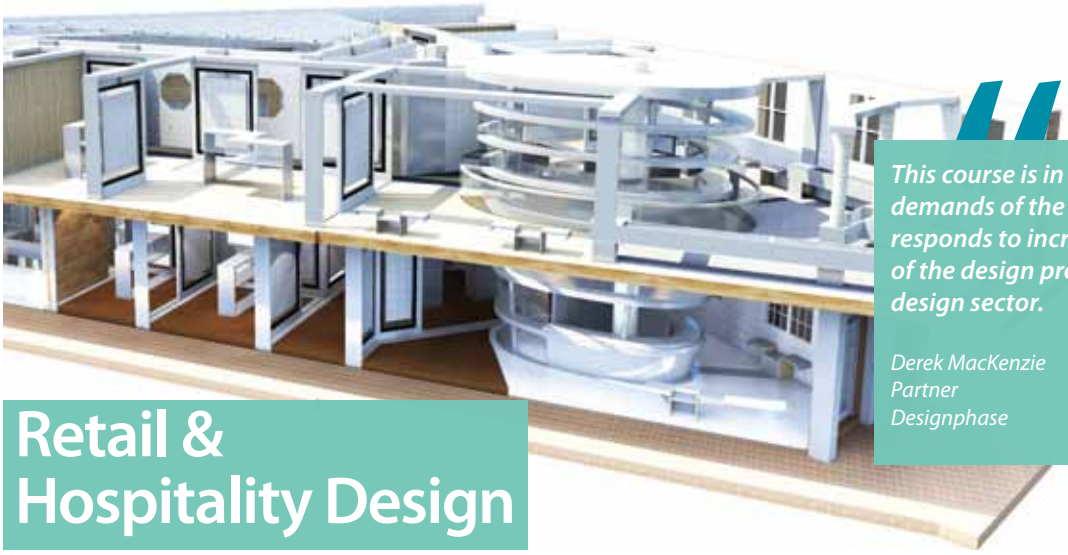
| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DCS1013 | Communicating Design Ideas | 1 | 3 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| DCS2014 | Professional Communication for Design | 2 | 3 |
| DSI2019 | Student Internship Programme | 2 | 8 |
| DCS3016 | Communicating Design Arguments | 3 | 3 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DPD1402 | Perspective & Freehand Drawing | 1 | 3 |
| DPD1413 | CAID 1 | 1 | 3 |
| DPD1422 | Prototype Methodology | 1 | 3 |
| DPD1423 | Concept Sketching & Communication | 1 | 3 |
| DPD1424 | Materials, Processes & Trends | 1 | 3 |
| DPS1020 | Design Fundamentals | 1 | 6 |
| DPS1021 | Marketing in Design | 1 | 3 |
| DPD2412 | Product Engineering Principles | 2 | 3 |
| DPD2419 | PID Project 1 | 2 | 6 |
| DPD2420 | PID Project 2 | 2 | 6 |
| DPD2425 | Cognition, Emotion & Usability | 2 | 3 |
| DPD2426 | Interaction Design Tools & Application | 2 | 3 |
| DPD2427 | Service Design Methodology | 2 | 3 |
| DPD2432 | CAID 2 | 2 | 3 |
| DPD3417 | The Business of Design | 3 | 3 |
| DPD3418 | Advanced Product Design | 3 | 9 |
| DPD3421 | PID Project 3 | 3 | 6 |
| DPD3428 | Innovation, Science & Technology | 3 | 3 |
| DPD3429 | PID Project 4 | 3 | 6 |
| DPD3430 | Specialisations for Industrial Designers | 3 | 3 |
| DPD3431 | CAID 3 | 3 | 3 |
| DMP3011 | Major Project: PID | 3 | 9 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.



# Retail & Hospitality Design

> *This course is in line with the emerging demands of the building industry and responds to increasing specialised needs of the design professionals in the interior design sector.*
>
> *Derek MacKenzie*
> *Partner*
> *Designphase*

Whether it is an up-scale hotel or resort, snazzy bar restaurant, happening entertainment hub, swanky boutique or cutting-edge showroom, this course develops your design thinking and teaches you the professionally-driven skills to create these spaces.

In this course, you will undergo a rigorous programme covering spatial design, communication graphics, environmental branding, visual merchandising and the detailing of good interior spaces. You will research culture, emerging lifestyles and the latest concepts in design.

The course teaches you to develop a keen sense of observation, an attention to design detail and the ability to conduct accurate and meaningful research. You will learn the principles of interior design theory, interior environmental technology as well as develop the ability to communicate design ideas and to transform their concepts further to working drawings.

## CAREER OPPORTUNITIES

Our strengths in graduate employability are a result of the course being aligned to the needs of the industry. Graduates of this course have secured employment and skills profiles to step confidently into the retail and hospitality design industry. You will be able to work with multi-disciplinary design companies, industry-related firms, in project management, as a space planner or draftsperson, or you may even choose to work in interior and architectural design firms with retail and hospitality projects. After acquiring work experience, you could even establish a design practice offering a range of design services to clients locally and regionally.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

Applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Art / Art & Design, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Higher Art, Human & Social Biology, Integrated Science, Media Studies (English), Media Studies (Chinese), Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants who have partial or complete Colour Appreciation Deficiency should not apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Core Subjects | : 93 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 122 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DCS1013 | Communicating Design Ideas | 1 | 3 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| DCS2014 | Professional Communication for Design | 2 | 3 |
| DSI2019 | Student Internship Programme | 2 | 8 |
| DCS3016 | Communicating Design Arguments | 3 | 3 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DIA1204 | Digital Architectural Drafting | 1 | 3 |
| DPS1020 | Design Fundamentals | 1 | 6 |
| DPS1021 | Marketing in Design | 1 | 3 |
| DRH1701 | Architectural Drawing | 1 | 3 |
| DRH1702 | RHD Project 1 | 1 | 6 |
| DRH1703 | Architectural Rendering | 1 | 3 |
| DRH1714 | Fundamentals in Design | 1 | 3 |
| DRH1715 | Tectonics & Structure | 1 | 3 |
| DRH1716 | Design Studio | 1 | 6 |
| DRH2705 | RHD Project 2 | 2 | 6 |
| DRH2706 | RHD Project 3 | 2 | 6 |
| DRH2707 | Communication Graphics | 2 | 3 |
| DRH2717 | Design Theory & Ideas | 2 | 3 |
| DRH2718 | Interior Elements | 2 | 3 |
| DRH2719 | Construction & Detailing | 2 | 3 |
| DRH2720 | Building Systems | 2 | 3 |
| DIA3216 | Interior Design Practice | 3 | 3 |
| DMP3016 | RHD Major Project | 3 | 9 |
| DRH3708 | Digital Modelling | 3 | 3 |
| DRH3709 | RH Planning & Design | 3 | 3 |
| DRH3711 | Consumer Psychology | 3 | 3 |
| DRH3712 | RHD Project 4 | 3 | 6 |
| DRH3721 | Building Services | 3 | 3 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Visual Communication

*Compared to students at my home institution and the creative work I have seen in comparable courses in Canada, Germany and many other countries, the overall performance is at least equal to, if not better than, other institutions I have observed in my 30-plus years of teaching.*

*Hanno Ehses*
*Professor of Design*
*Director MDes*
*School of Graduate Studies*
*NSCAD University, Canada*

You love graphic design, advertising, photography and illustration. You want to be taught by experienced and passionate design professionals in a creative environment that is awash with colours, typography, images and messages. If you're an out-of-the-box thinker who enjoys the adrenalin-laced fast-paced creative industry, this is the place to start.

In this course, you will encounter the birth of creative concepts, taking them all the way through the processes of refinement, implementation and presentation. You will master the fundamental skills and knowledge relating to creative thinking, drawing, digital media, graphic design and design studies.

You will gain an intellectual understanding of visual information and messages and you will learn how to manage, and turn these abilities and knowledge into memorable and effective solutions. Above all, you will be constantly challenged to think creatively and be encouraged to truly innovate.

Our well-managed Student Internship Programme gives you invaluable hands-on industry exposure. You will also experience study trips, industry visits, workshops and seminars that will enhance your learning and provide a holistic perspective of the design profession.

## CAREER OPPORTUNITIES

You will face an array of possible career opportunities in the buzzing, adrenalin-driven world of advertising, graphic design, branding, photography and multimedia agencies. And yes, many of our graduates have also successfully founded their own studios and agencies. How cool is that!

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

Applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Art/ Art & Design, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Higher Art, Human & Social Biology, Integrated Science, Media Studies (English), Media Studies (Chinese), Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants who have partial or complete Colour Appreciation Deficiency should not apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 20 credit units |
| Diploma Subjects | |
| Core Subjects | : 66 credit units |
| Option Subjects | : 27 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 122 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DCS1013 | Communicating Design Ideas | 1 | 3 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| DCS2014 | Professional Communication for Design | 2 | 3 |
| DSI2019 | Student Internship Programme | 2 | 8 |
| DCS3016 | Communicating Design Arguments | 3 | 3 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DIM1345 | Ideation | 1 | 3 |
| DIM1366 | Interactive Studio: Web | 1 | 3 |
| DPS1020 | Design Fundamentals | 1 | 6 |
| DPS1021 | Marketing in Design | 1 | 3 |
| DVC1506 | Typography | 1 | 3 |
| DVC1509 | Digital Essentials | 1 | 3 |
| DVC1542 | Photography | 1 | 3 |
| DVC1550 | History of Graphic Design | 1 | 3 |
| DVC1564 | Graphic Stylisation & Techniques | 1 | 3 |
| DIM2367 | Interactive Studio: Web 2 | 2 | 3 |
| DVC2565 | Typography 2 | 2 | 3 |
| DVC2566 | Prepress & Applied Techniques | 2 | 3 |
| DVC2567 | Publication Design | 2 | 3 |
| DVC2514 | Advertising | 2 | 3 |
| DIM2368 | Studio Project | 2 | 6 |
| DIM3372 | Studio Project 2 | 3 | 6 |
| DMP3014 | Major Project: VSC | 3 | 9 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Photography Option** | | | |
| DVC1579 | Narrative Photography | 1 | 3 |
| DVC2521 | Product & Advertising Photography | 2 | 3 |
| DVC2553 | Studio Lighting | 2 | 3 |
| DVC2561 | Alternative Photographic Techniques | 2 | 3 |
| DVC2568 | Digital Imaging Techniques | 2 | 3 |
| DVC2572 | Tactile Design | 2 | 3 |
| DVC3569 | Landscape Photography | 3 | 3 |
| DVC3570 | Fashion Photography | 3 | 3 |
| DVC3571 | Conceptual Imaging | 3 | 3 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Graphic Design: Branding Option** | | | |
| DPS2022 | Brand Strategies | 2 | 3 |
| DVC2518 | Information Design | 2 | 3 |
| DVC2572 | Tactile Design | 2 | 3 |
| DVC2573 | Kinetic Graphics | 2 | 3 |
| DVC2574 | Advertising Communication | 2 | 3 |
| DVC3536 | Corporate Identity | 3 | 3 |
| DVC3575 | Beyond Print | 3 | 3 |
| DVC3576 | Branding Design | 3 | 3 |
| DVC3580 | Packaging Design | 3 | 3 |
| **Graphic Design: Illustration Option** | | | |
| DVC2518 | Information Design | 2 | 3 |
| DVC2552 | Expressive Illustration | 2 | 3 |
| DVC2572 | Tactile Design | 2 | 3 |
| DVC2573 | Kinetic Graphics | 2 | 3 |
| DVC2574 | Advertising Communication | 2 | 3 |
| DVC3556 | Digital Illustration | 3 | 3 |
| DVC3575 | Beyond Print | 3 | 3 |
| DVC3577 | Narrative Illustration | 3 | 3 |
| DVC3578 | Explorative Illustration | 3 | 3 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Subject Synopses

## DAD1101 HISTORY OF COSTUMES

This subject introduces you to the history of Western costumes and fashion from ancient Egyptian to the 21st century. You will explore major art, cultural and social movements which have made significant impact on the evolution of costumes and accessories through the ages.

## DAD1102 FASHION MERCHANDISING

This subject covers the characteristics and systems of the apparel industry – the importance of the consumer's influence over trend and fashion prediction, the process from the design concept to the consumer, the apparel markets and business aspects, as well as careers in the apparel industry.

## DAD1104 INTRODUCTION TO VISUAL MERCHANDISING

This subject covers the principles of window and floor display situations, and the techniques involved in catalogue and storyboard layout, with close references to colour, graphic principles and fashion retail trends.

## DAD1140 FASHION RETAIL MANAGEMENT

This subject guides you in understanding the dynamics of the consumer marketplace and fundamental concepts and issues faced by retailers such as store ownership, merchandise mix, customer target, locality, promotions, etc. You will also be introduced to the several operational aspects of operation management such as store format and size, space allocation, personnel utilisation, store maintenance, inventory management and store security.

## DAD1148 TEXTILES FUNDAMENTALS

This subject gives a basic understanding of fibres and yarn in the context of textiles formation. You will be taught the fundamentals of knits and weaves, and to identify fabrics by names through visual identification and their intrinsic characteristics. Your understanding of textiles will encompass production processes, practices and new developments in the industry.

## DAD1149 TEXTILES MANIPULATION & DESIGN

This subject will bring you to the next level of textiles and surface design. You will carry out your ideas through intermediate design work and find personal ways of designing on paper and fabric. The print shop will be heavily used in exploring the dynamics of pattern through painting, silkscreen printing and dyeing, exploring lines, spaces, shapes, textures, colours on paper and fabric. The use of mixed media together with all aspects of visual research will be demonstrated in sketchbooks, croquis, through to the making of the final product.

## DAD1150 FASHION ILLUSTRATION & PRODUCTION DRAWING

This subject provides you with the skills required to visually present your apparel design ideas to the apparel industry. Fashion illustration will allow the visual expression of fashion design ideas on paper, using idealised fashion figures.

## DAD1151 APPAREL PRODUCTION 1

This subject introduces you to the fundamentals of flat pattern drafting as well as to the basic sewing processes.

## DAD1152 BASIC DRAPING

This subject introduces basic draping skills as part of your training in apparel construction and production.

## DAD1161 BASIC SEWING TECHNIQUES

This subject equips you with fundamental knowledge on how to operate and handle sewing machines in the apparel industry. It also provides you with the basic sewing fundamentals of construction and techniques in sewing components of a garment in accordance with industrial standards.

## DAD1162 CONCEPT RESEARCH & PRESENTATION TECHNIQUES

This subject introduces you to the essential stages of creative concept research and also provides you with the skills required to present visually and communicate your apparel design ideas effectively to the apparel industry. The skills acquired will be in the areas of concept research and presentation techniques.

## DAD1163 FIGURE DRAWING & PRODUCTION DRAWING

This subject provides you with the basic fundamental skills required to present visually the drawn figure as representation of the human form. It is conveyed in the mode of proportion acceptable to fashion designing standards. Production drawing focuses on the technical aspect of the apparel. Basic proportions and design details are translated and presented into neatly rendered technical drawing exercises to enable the pattern maker draft the required patterns for production.

## DAD2113 SOURCING & COSTING

This subject provides you with an introduction to understanding the global perspective of the textiles and apparel industry, as well as the costing structure of apparel. These are the essential tools for the designer or merchandiser to strategically source for materials and production in countries that have the comparative and competitive edge.

## DAD2116 ADVANCED CAD

This subject offers a broader picture of some of the technological changes that have emerged in the world of apparel and textile. It provides you with a way of integrating this technology in the designing process. The importance of the development process, from concept to consumer, continues to surface in the subject as you explore the various designing software and programmes pertaining to apparel and textiles design, and visual merchandising.

## DAD2122 APPAREL MANUFACTURING PROCESS

This subject covers the process of mass production in the apparel industry from preproduction planning to product completion. It relates to issues associated with the concepts of product performance and quality, and the functional organisation of apparel manufacturing firms. It also articulates the involvement of various professionals in product development up to the manufacturing stage and includes field trips to garment factories for you to gain some experience of the working environment in the industry.

## DAD2138 BASIC CAM

This subject focuses on the application of CAD-Accumark software in marker making, gradation of sizes and modification of a basic block to required pattern pieces that relates to the production aspect of the apparel industry.

## DAD2142 FASHION PURCHASING MANAGEMENT

This subject focuses on every aspect of buying and the roles played by the practitioners. Operating figures such as Open-to-buy, Dollar Planning and Control, Mark ups/ Markdowns, Retail Pricing and Inventory Control are covered.

## DAD2144 PATTERN GRADING

This subject provides a basic understanding, foundational skills and hands-on experience in the manual grading of a basic block to required pattern pieces that relates to the production aspect of the apparel industry.

## DAD2147 APPAREL DESIGN PROJECTS

This subject provides you the opportunity to integrate the multiple interfaces of apparel design and production training in the development of different collections for the apparel industry. The process will include the conceptualising and production of two different lines of clothing.

## DAD2153 APPAREL PRODUCTION 2

This subject builds on Apparel Production 1 in the progressive development of flat pattern drafting techniques and sewing skills. It will also build on your proficiency in operating more complex sewing machines required in the realisation of designs of two collarless tops in lightweight fabrics.

## DAD2154 ADVANCED DRAPING

This subject covers the advanced level of draping to enable the execution of complex designs.

## DAD2155 VISUAL MERCHANDISING PROJECT 1

This subject provides a platform for you to display design concepts and issues in the area of store planning and fixture design which are used for the visual presentation of products that will enhance sales opportunity in an exhibition or trade show environment.

## DAD2156 VISUAL MERCHANDISING PROJECT 2

This subject provides a higher platform to adapt design concepts and issues in the areas of retail store planning and fixture design for visual merchandise presentation to generate optimum sales.

## DAD3127 QUALITY ASSURANCE IN TEXTILE & APPAREL

This subject covers the principles of quality, the various quality concepts such as Just In Time, Kaizen, Reengineering, Benchmarking and Total Quality Management and the tools used in quality control and assurance. You will have practical lessons on statistical sampling in which you will do a visual garment inspection, a complete inspection report, and conduct tests on textiles and apparel using AATCC and ASTM standards or adapted versions. You will engage in active research and discussion of some common quality issues faced by the industry such as fabric skewing, fabric pilling, colour fastness failure, snaps failure, and wet garment processing.

## DAD3157 APPAREL PRODUCTION 3

This subject integrates a sense of professionalism with the development of flat pattern drafting techniques and sewing processes in the interpretation and realisation of more complex designs.

### DAD3158 TAILORING
This subject introduces you to the construction of women's jackets and pants suits using mass production methods. The entire process from drafting to sewing will be required to complete the assignments and project.

### DAD3160 EVENTS MANAGEMENT
This subject introduces you to project management skills, negotiation, and other challenges. More than just a how-to guide, it also offers insights on communicating your goals and visions effectively to the audience so that every project is in line with brand or company objectives.

### DCS1013 COMMUNICATING DESIGN IDEAS
A rich and sophisticated language repertoire is required for articulating and presenting design ideas. This subject explores the creative use of language features such as denotation, connotation, metaphors, tone and style in a variety of genres. It further analyses the discourse modes of description, narration and exposition as used in the design context. Next, it focuses on the application of these language features in written and oral presentations for expressing, examining and supporting design concepts in design critiques.

### DCS2014 PROFESSIONAL COMMUNICATION FOR DESIGN
Effective written and oral communication skills play a critical role in advancing a design professional's career. Designers are expected to be persuasive in articulating their design ideas in order to secure design contracts and employment. This subject focuses on the use of persuasion in two broad areas of professional communication for designers: client relationship and career self-promotion.

### DCS3016 COMMUNICATING DESIGN ARGUMENTS
The culmination of the design process is the communication of design solutions. This subject focuses on the argumentation process that leads to the articulation of informed, rational and creative design solutions. You will identify key issues in a client's brief, conduct research, analyse findings, define design directions and rationalise design solutions through written and oral presentations.

### DED1801 EVD PROJECT 1
This exploratory project introduces the fundamentals in environmental design and allows you to exercise your creativity in the realm of design in relation to a selected small-scaled external environment. Issues like concept, form, composition and aesthetics are focused upon in this project. You are to produce an experiential urban landscape.

### DED1816 INTRODUCTION TO ARCHITECTURAL PRINCIPLES
This subject provides an overview on the principal theories of architectural design from the ancient to the modern era. Through the process of critical observation and analysis, the overview provides the basis for an analytical and systematic approach to the study of architectural principles and design.

### DED1817 SUSTAINABLE MATERIALS
The subject focuses on the study of materials commonly used in public spaces with emphases on both their functional and visual properties. The subject provides a platform for exploration of surface finishes as an essential component for achieving the intended spatial quality; which at the same time satisfy the current standard of sustainability.

### DED1818 ARCHITECTURAL & LANDSCAPE DRAWING
This subject introduces the basics and principles of visualisation techniques for architectural and landscape drawing. It equips you with the skills and knowledge to produce drawings, apply basic methods of hatching techniques, orthographic projections, perspective drawings and basic landscape graphics.

### DED1821 FORM & SPACE EXPLORATION
The subject focuses on the sculpting and manipulation of the built form and its implication on the external space. It addresses concepts pertaining to spatial concepts and qualities, resolution of geometry and design principles. You will have the opportunity to explore 3-dimensional forms and develop a set of design vocabulary.

### DED2819 COMPUTER-AIDED DESIGN DRAWINGS
The subject introduces the fundamentals of Computer-Aided Drafting in generating architectural drawings. It emphasises architectural and landscape drawing conventions and documentation.

## DED2822 ENVIROMENTAL ELEMENTS & CONTROL

The subject provides you with the fundamental knowledge needed in the designing with the environment for users. You will be introduced to the importance of site, context, passive design and ergonomics and human comfort. This subject also equips you with the skills and knowledge to understand the various environmental climatic elements such as rain, wind and sun, perform basic site analysis of a given site and design a simple shelter without the need of mechanical control, maximise user's comfort and health, while minimising energy use.

## DED2823 LANDSCAPE DESIGN STUDIES

This subject provides an understanding of landscape architectural principles and its impact on the built and natural environment. You will be introduced to how nature is integrated to the character of built environment and sustainably preserve by appropriate practices of using materials, scale, texture to site context with conscious managing and planning for what is sustainable for the landscape.

## DED2824 PRINCIPLES OF PLANT DESIGN

This subject provides an understanding of the significance of plants and its roles in shaping the external environment. You will understand how plant forms, habits and types of plants that co-habits affect the design of spaces and ambience in our tropical climate.

## DED2826 URBAN DESIGN STUDIES

This subject equips you with the skills and knowledge in the reviewing of the important factors that contribute towards urban design. You will be able to apply your knowledge of good urban design in your designs, and identify the importance of urban design guidelines in the local context.

## DED2827 EVD PPROJECT 2

This project focuses on site analysis and allows you to explore the responses to a selected site. It provides opportunity for you to be introduced to issues such as universal design, culture, identity, way-finding, etc. You are encouraged to think out of the box while incorporating basic and real issues.

## DED2828 EVD PROJECT 3

This project focuses on site analysis and allows you to explore the responses to a selected site. It will introduce environmental issues such as sustainability, recycling, comfort zones and energy conservation. Group research and analysis of case studies will be used as a learning tool.

## DED3710 PROFESSIONAL PRACTICE

You will learn about the professional practice of environmental design. You will be introduced to the relevant standards, codes, rules, regulations and bye-laws which govern the practice of environmental design. The subject will help you understand proper procedures prevalent in the office or site environment and exposes you to the different roles and responsibilities of members of the project team. You will be further equipped to contribute towards efficient and successful office, design and project management. You will be made aware of prevalent contractual agreements and contractual obligations which will be part and parcel of your responsibilities in the course of a design project.

## DED3812 EVD PROJECT 4

This project focuses on the formulation of innovative and workable ideas to solve urban design issues such as high density living, conservation, image ability and revitalisation. You will be introduced to brief formulation in preparation for the Major Project.

## DED3813 ECO DESIGN

This subject introduces you to the bases of eco design, concepts that aid the integration of the built form to the surroundings, and the identification of different aspects of Eco-Design. You will also learn about new, ecologically sound design ideas through case-studies, and these are illustrated through understanding and application of Eco-design criteria. It will equip you with the skills and knowledge to define key Eco-design concepts, examine and differentiate designs that implemented Eco-design concepts and apply these design concepts in assignments.

## DED3820 DIGITAL VISUALISATION & PRESENTATION

This subject focuses on the use of computer as a design tool in three dimensional design creation and visualisation to effectively present ideas and concepts in digital mode. It aims to allow you to understand software application and exploration of 3D digital design for presentation purposes.

## DED3825 BASIC CONSTRUCTION

This subject introduces you to the knowledge and application of outdoor materials and construction in external environment. You will be equipped with the skills and knowledge to provide technical drawings, specification and basic construction detailing.

### DIA1202 MEDIA TECHNIQUES & PRESENTATION

This subject introduces basic visualisation and presentation techniques for interior architecture and design. It covers basic methods of constructing geometricdrawings, orthographic projections, perspective drawings and presentation techniques to effectively represent architectural design ideas, concepts and details.

### DIA1204 DIGITAL ARCHITECTURAL DRAFTING

This subject introduces the fundamentals of Computer-Aided Drafting in generating architectural drawings. It emphasises interior/ architectural conventions and documentation, as well as the fundamentals of architectural drawing.

### DIA1220 SPACE PLANNING

This subject focuses on understanding of space planning that sets the stage for effective interior environments. It addresses issues pertaining to anthropometry, ergonomics, behavioural science and design programming and provides a platform for exploring various techniques to creatively resolve challenges related to function and quality of human environments.

### DIA1221 COLOUR & LIGHT

This subject covers the theory and application of colour and light to the built environment to create specific responses. It will enable you to make considered judgments in the selection of colours, materials and texture moderated by effect of light, as an integral part of the design process.

### DIA1223 FORM EXPLORATION

This subject focuses on the sculpting of the building form and its implications on interior space design. It addresses issues pertaining to s patial concepts, resolution of geometry and form-function as vehicles for the study of the built environment that leads to the development of spatial design vocabulary amongst students.

### DIA1226 MATERIAL & FINISHES

This subject focuses on the study of the range of materials commonly used in building interiors with emphasis on their appropriate selection based on functional and visual properties. It provides a platform for exploration of surface finishes as an essential component of interior architecture and design.

### DIA2205 ARCHITECTURAL DESIGN THEORY

This subject provides a review of the concepts and associated principal theories of design from the ancient to the modern era. This will then form the basis for a systematic approach to evaluating architectural and interior design through the process of investigation, critical observation, and analysis. These, in turn, provide a degree of explanation on theoretical issues that confront the interior design profession today.

### DIA2206 DIGITAL MEDIA VISUALISATION & PRESENTATION

This subject introduces you to the use of the computer as a design tool in three-dimensional design creation and visualisation to effectively present ideas and concepts in the digital mode.

### DIA2222 PORTFOLIO DEVELOPMENT

The subject equips you with the knowledge and skills in developing a design portfolio. It explores the means and techniques of design presentations in digital modes. A compilation of effectively communicated design ideas and concepts would form appropriate portfolio for job application.

### DIA2223 IAD PROJECT 1

This subject serves as a platform to introduce you to design projects. Exploratory and experimental in nature, it encourages you to develop varying perspectives in design approaches and processes, encompassing design conceptualisation, visualisation and expression of a set theme.

### DIA2234 IAD PROJECT 2

This subject introduces you to concept development as a seamless process of design from the inception of a design idea to the resolution of the design process. It focuses on the physical developmental evidences of the design process as the key to externalising conceptual thinking and development.

### DIA2228 CONSTRUCTION & DETAILING

This subject explains building construction elements, through a comparison of structural and non-structural function, to provide students with understanding of the constructional framework of the building and the parameters within which interior space can be altered and manipulated.

### DIA2229 BUILDING CODES & STANDARDS

The subject introduces you to the various regulatory and discretionary building codes and standard to which design proposal must conform or adhered. It highlights recommended guidelines, and explains procedures for project applications to the relevant authorities.

## DIA3215 IAD PROJECT 3

This subject takes a issue-driven approach through which you will be given opportunities to explore issues pertaining to interior architecture through investigation and studies. You will also be required to generate design solutions to address the identified issue or environmental factors.

## DIA3216 INTERIOR DESIGN PRACTICE

The subject equips you with the fundamentals of the interior design profession in relation to its management within the regulatory and legal framework of the practice. It also provides you with an operational framework in managing a design project. You will be exposed to the pertinent codes and standards in the building industry so as to be able to interpret and apply them in relation to interior design practice. This subject will be conducted totally online.

## DIA3218 RETAIL DESIGN

This subject introduces the basic principles and approaches to the design of spatial and physical elements in a retail interior, from conceptualisation of retail themes and images to the practical detailing of lighting, displays and fixtures. It explores the critical issues of retail design as they relate to the successful integration of design, commerce and consumer behaviour through the development and deployment of the appropriate visual language for the retail environment.

## DIA3230 IAD PROJECT 4

The subject aims to serve as a precursor to major project. It equips you with necessary professional design skills to develop a specific design option that integrates your own interest within the context of interior architecture. This will involve self-driven research and exploration on contemporary design issues specifically related to the chosen option. The scope of the project encompasses various phases of design from inception, exploration of ideas, design development to design realisation.

## DIA3231 MUSEUM & EXHIBITION STUDIES

The subject intends to develop an understanding of the various approaches in developing concepts for permanent and temporary exhibitions in museum and event promotion. You will learn how to develop space, structure, identity and image of an exhibition in an effective communicative environment.

## DIA3232 SUSTAINABLE ENVIRONMENT

The subject deals with the relationship between the built interior space, materiality and environmental performance, and how this evolves in response to climatic conditions and emerging approaches in sustainability.

## DIM1345 IDEATION

This subject introduces you to some idea generation, analysis and synthesis techniques within a problem-solving framework. Through these techniques, you will explore and develop fluidity of thought as well as an analytical mind. It also introduces visual literacy through which you develop your personal visual language to communicate a great variety of concepts. You will also develop and demonstrate your aesthetic awareness and design sensibility.

## DIM1366 INTERACTIVE STUDIO : WEB

This subject introduces you to the basics of designing interactive media for the Web. You will learn the basics of Web authoring using HTML editors and other interactive application software. You will also learn how to prepare media for the web, such as graphics, audio, video and other media formats. A foundation will be given for the understanding of basic programming and scripting techniques that can enhance the interactivity of Web projects.

## DIM2367 INTERACTIVE STUDIO : WEB 2

This subject builds upon Interactive Studio: Web. You will apply the basics of designing interactive media for the Web. You will learn the advanced techniques of Web authoring using HTML editors and other interactive application software. You will also be able to prepare rich media for multimedia projects, such as video, audio, interactive menus and moving visuals. You will be able to apply these elements together with advanced authoring techniques to enhance the interactivity of Web projects.

## DIM2368 STUDIO PROJECT

This subject serves as an exploratory platform for collaborative engagement among students with varied interests to produce a project that integrates learning from earlier subjects. You will experience design and production processes that align with professional studio practice, with the option of working collaboratively in small teams or independently. Opportunities will be given for you to investigate and explore a wide range of media, materials, techniques and processes. You will learn to think creatively and apply yourself to a range of design scenarios using a variety of approaches.

### DIM2369 INTERACTIVE STUDIO : MEDIA

This subject will focus particularly on the development and integration of multimedia content in the area of web infotainment. The subject will cover rich media integration at an advanced level, and the development of rich Internet applications using appropriate development tools. The aim of this subject is to explore and push the limits of digital interactivity, with a focus on the online infotainment experience.

### DIM2370 INTERACTIVE STUDIO : MEDIA 2

This subject aims to develop critical and practical skills appropriate for expanding the understanding of the creative possibilities of advanced design and authoring to maintain large-scale, interactive web sites with consideration to visual design, usability, audio and video integration, on-going site management, and web accessibility.

### DIM2371 INTERFACE DESIGN

This subject introduces the basic principles of graphic user interface (GUI) and user experience design. It focuses on the basic rules of visual information organisation and hierarchy, and explores the process of navigation on screen. It also examines the choice of appropriate styles and graphic treatment for the intended audience, and the use of conceptual models for creating appropriate user experience.

### DIM2376 INTERACTIVE PROJECT

This subject takes the form of a project and enables you to apply and consolidate knowledge acquired in other subjects. You will work in teams and produce an interactive media project. Through this subject, you will further develop the understanding of the design process, research skills and the application of fundamental design principles.

### DIM3372 STUDIO PROJECT 2

This is an advanced module that offers you the opportunity to conduct further investigation into your preferred areas of expertise to produce a highly developed project. You may decide to focus your studies in an area of specialisation or experiment with alternative design processes and methodologies to expand on your design vocabulary and personal repertoire. You are expected to align your learning closely with professional studio practices while working collaboratively in small teams or independently. You will demonstrate the ability to think creatively and apply yourself to a range of design scenarios using a variety of approaches to produce a comprehensive outcome that demonstrates a high level of design sensitivity, maturity and sophistication.

### DIM3373 INTERACTIVE STUDIO : BEYOND SCREEN

This subject allows you to experiment and explore current or emerging trends in interaction design. You will be encouraged to explore and push boundaries using visual, audio and tactile interaction for the display of digital content on various mediums both screen and beyond.

### DIM3374 INTERACTIVE STUDIO : MOBILE DEVICES

This subject introduces the design of applications and interfaces for mobile devices. You will apply design principles to small-screen interfaces and develop application prototypes for mobile devices. You will be encouraged to analyse and anticipate trends in mobile devices and applications.

### DIM3375 ADVERTISING MEDIA STRATEGY

This course is designed to prepare you for the imminent changes in the advertising landscape. You will explore the emergence and impact of new technology and the resulting consumer behaviors. Course material will also investigate the sociological and economic factors impacting advertising and entertainment and causing the shifts that are occurring in the way consumers interact with companies and the communication companies produce.

### DMP3009 MAJOR PROJECT : MOVING IMAGES

This subject takes the form of a final project. It allows you to propose one that showcases the abilities you have developed throughout the Moving Images course, reflecting your specialisation within the course. You will utilise ideation techniques to arrive at a project idea, develop your own scripts, storyboards, sound and time plans to support your project idea within presentations. You will be given freedom to develop your projects within a supervisory relationship with your lecturers. In addition to developing your project, you will document and reflect upon your project outcomes.

## DMP3010 MAJOR PROJECT : INTERACTIVE MEDIA DESIGN

This subject takes the form of a final project where you will consolidate and apply knowledge and skills you have learnt to conduct a sustained and systematic investigation in an area of special interest, determined by you. You will be required to formulate, plan, manage and execute a substantial body of work that exemplifies creative independence, strong conceptual thinking and technical proficiency in the area you have chosen. In the process, you will gain practical exposure to professional studio practice and project planning and management issues; strengthen your self-confidence; as well as grow in maturity as a designer. The desired outcome of this project is a production that is original, imaginative and comprehensive that meets or exceeds prevailing design industry expectations.

## DMP3011 MAJOR PROJECT : PRODUCT & INDUSTRIAL DESIGN

This subject introduces you to a self-initiated project that includes a written thesis on the rationale, design research approach and personal design viewpoints, in a problem-based approach. The design and development process will be systematically recorded in a journal which will evolve into a detailed thesis. It covers a wide spectrum of design issues from anthropological, social, cultural, market behaviour, human factors and technology in the upstream processes to the downstream production processes of CAD simulation, prototyping, product testing and user feedback.

## DMP3012 MAJOR PROJECT : APPAREL DESIGN & MERCHANDISING

This project provides you with the opportunity to integrate the multiple aspects of the discipline of your choice i.e., Apparel Design & Merchandising or Retail & Visual Merchandising in a self-initiated project. You are to initiate, research, plan and execute an individual body of work showcasing conceptual thinking and proficiency in areas of their choice in greater depth. Through this project, you will gain an up-to-date working knowledge of professional practice and at the same time produce a well-articulated, original and industry-ready portfolio which is reflective of your professional aptitude.

## DMP3014 MAJOR PROJECT : VISUAL COMMUNICATION

This project provides the opportunity for you to apply previous knowledge and skills acquired in solving a self-initiated project. Employing one or more of the disciplines taught, you will initiate, plan and execute an individual body of work showing creative independence, strong conceptual thinking and proficiency in areas which you would like to pursue in greater depth. Through this project, you will gain an up-to-date working knowledge of professional practice and, at the same time, produce a well-articulated, original and industry-ready portfolio, which is reflective of your professional aptitude.

## DMP3016 MAJOR PROJECT : RETAIL & HOSPITALITY DESIGN

This subject provides the framework for you to experience a self-initiated and comprehensive interior design project related to the field of retail and hospitality design. The scope of the subject includes the inception and exploration of design ideas and concepts within a specific context.

## DMP3019 MAJOR PROJECT : ENVIRONMENT DESIGN

This subject focuses on the formulation of innovative and workable ideas to solve environment design issues in the context of landscape, special event and exhibition, and public spaces. The scope of the subject encompasses the various phases of design from inception, exploration of design ideas and concepts, planning, design development, detailing and technical specifications.

## DMP3020 MAJOR PROJECT: INTERIOR ARCHITECTURE & DESIGN

This subject provides the framework for the organisation, management and coordination of a design process based on a self-initiated and comprehensive interior design project brief. The scope of it includes the inception and exploration of design ideas and concepts within a specific context, the investigative study, analysis and research into pertinent design issues and the resolution of the design process leading to an appropriate interior design outcome.

## DMV1601 CREATIVE STORYTELLING

This subject looks at how to express an idea through a story that an audience will find engaging. You will be introduced to elements such as story structure, character(s) and conflict to build your story from. You will also be exposed to the various tools of story development as well as the different ways stories can be told.

## DMV1604 CAMERA & LIGHTING

This is a basic subject in electronic cinematography foundation techniques. You will be taught the operational basics of camera and lighting equipment, exposure and lighting techniques, and visual composition. You will also learn the essential job descriptions and division of labour that an efficient film crew requires.

### DMV1655 MEDIA HISTORY & TRENDS
This subject gives you a basic and foundational understanding of the vital turning points in the media industry as well as the trends that affect the kind of programmes and films that are produced. This will help you to design better stories that will cater to the needs of audiences.

### DMV1656 BASIC VIDEO PROJECT
This module takes the form of a production project that allows you to apply and consolidate your academic and vocational knowledge to date, culminating in a video clip. You will practice visual narration techniques, pre-production, production and post-production techniques and teamwork.

### DMV2606 AUDIO 1
This subject introduces you to basic audio recording techniques, studio equipment setup, recording process, digital audio workstation and microphone techniques. Through these learning processes, you will acquire the vocabulary, basic studio recording skills, producing and mixing techniques.

### DMV2609 SCRIPTWRITING ESSENTIALS
This subject gives an overview of scriptwriting for an audio-visual medium and how to design scripts for different non-fiction video and television programme formats. It also provides an understanding of how to apply scriptwriting principles and skills in order to develop the script for a message or a story.

### DMV2610 FILM LANGUAGE
This subject provides you with an understanding of the film structure as a medium of communication. You will be introduced to the narrative techniques of film and the design of the communicative language of the film form.

### DMV2611 VIDEO EDITING
This subject introduces you to non-linear video editing with the principles and grammar of editing to be introduced and further developed. You will also practice and develop the skills-sets of an editor.

### DMV2612 AUDIO 2
This subject introduces you to audio post production, a process of creating the soundtrack for any visual sequence. Both technical and creative aspects will be emphasised. Through these learning processes, you will acquire the skills necessary for the creation of a professional audio soundtrack.

### DMV2644 PROJECT PITCHING
This subject covers pitching techniques and teaches you how to sell or market your projects. You will learn how to prepare the basic budget and schedule documents, and creative documents such as a story outline and treatment, visual references or storyboards and trailers.

### DMV2645 PRODUCTION PLANNING & MANAGEMENT
This subject teaches you the skills that are required in pre-production planning. They include budgeting, scheduling, location scouting and casting. You will also learn how to manage a production efficiently and timely, as well as put together the necessary documents after you have finished post-production.

### DMV2646 ADVANCED EDITING
This subject offers an in-depth insight into the process of post-production. You will learn about media management during post, integrating projects across different platforms, creating advanced colour effects and compositing. The subject aims to equip you with advanced skills that editing professionals need to know with hands-on projects and technical and aesthetic lectures.

### DMV2647 DIRECTING
This subject introduces the complex craft of directing a drama production. You will learn how to interpret the dramatic possibilities of a screenplay, work with actors and crew and translate a written script into a cinematic story.

### DMV2648 CINEMATOGRAPHY
This subject builds on the skills acquired in the Camera & Lighting subject. You will learn advanced lighting theory and techniques, camera placement, camera angles, camera movement and lens choice, as the basis towards telling a good story.

### DMV2652 UNDERSTANDING FACTUAL TELEVISION
This subject introduces a variety of non-fiction television programmes such as documentary, docu-drama and reality television. Through screenings and discussion, you develop a critical understanding of the research and creative approaches involved in developing the non-fiction genre.

### DMV2657 DOCUMENTARY PROJECT
This subject takes the form of a project to encourage the application of the various skills set such as scriptwriting and project management to the production of a video with non-fiction content. This subject aims to develop your ability to apply audio visual narrative techniques and integrate the knowledge acquired in other subjects to a video production.

## DMV2658 SHORT FILM PROJECT

This subject takes the form of a project and allows you to fully utilize the understanding and abilities developed over the previous areas of the course to produce a project in a Fictional Narrative Form. You will define a film genre and utilise project planning and management skills to bring the project to completion. You will develop project management and research processes and strategies in relation to your option discipline.

## DMV2660 STUDIO PRODUCTION

This module provides an understanding of the organisation and skills involved when producing a video programme in a multi-camera production set-up. You will apply and develop your design and technical skills to direct and produce a programme segment in a controlled setting. They include producing and directing different programme formats, pre-production and production tasks, simultaneous camera direction and instantaneous vision mixing.

## DMV3626 SCREEN WRITING

This subject introduces you to the craft of screen writing. It will provide you with an understanding of the principles of fictional storytelling for the screen and the process of writing a screenplay.

## DMV3653 VISUAL EFFECTS

This subject explores the production of visual effects design. It focuses on graphic elements, structure and onscreen aesthetics for time-based media. The subject develops skills in typography, compositing, colour correction, layering, type animation, masking, pacing, rhythm of edit and the integration of video elements.

## DMV3659 ADVANCED VIDEO PROJECT

This subject takes the form of a project and allows you to fully utilise the understanding and abilities developed over all the previous areas of the course to produce a video of either the fictional narrative or non-fictional genre. You will define a video piece initially, and utilise your creative, technical and project planning and management skills to bring the project to completion.

## DPD1402 PERSPECTIVE & FREEHAND DRAWING

This subject emphasises drawing through observation, using basic drawing media. It provides experiences gained from exploring and viewing the physical environment and development of the drawn image. The drawing sessions will generally be based on freehand drawing, placing special demands on seeing/ perception (eyeballing), scale, composition and perspective.

## DPD1413 COMPUTER-AIDED INDUSTRIAL DESIGN 1

This subject introduces basic computer 3D modelling, material creation and rendering. You will be taught to create and evaluate concepts and ideas from 3D surface models, assign surface materials and produce still photorealistic images for presentation.

## DPD1422 PROTOTYPE METHODOLOGY

The subject explores the different fidelities of prototypes, machineries/tool and the necessary planning to construct prototype. You will learn how to define the requirements and limitation of the different types of prototype and construct it based on the resources available.

## DPD1423 CONCEPT SKETCHING & COMMUNICATION

This subject develops a range of presentation techniques and skills to produce strong and informative design concepts. You will experiment and try out different techniques, media and digital tools to effectively enhance and communicate the design ideas.

## DPD1424 MATERIALS, PROCESSES & TRENDS

This subject explores how trend plays a part in defining creative use of materials. You will explore and define new application of materials and its production processes. You will also learn how and what to specify on the finished models or prototypes.

## DPD2412 PRODUCT ENGINEERING PRINCIPLES

This subject deals with the understanding of product systems involving prime movers, input and output devices, and energy storage devices. You will be introduced to basic mechanical engineering, basic structural engineering and basic electrical and electronics engineering.

## DPD2419 PRODUCT & INDUSTRIAL DESIGN PROJECT 1

This project looks at design methodology, with an emphasis on research, problem identification and analysis, and simple problem solving. Sketch ideas generated on paper will be translated into coloured renderings and general assembly drawings with the aid of maquettes and mockups, using a variety of media and workshop technologies. Issues of functionality, practicality and product semantics and aesthetics will be discussed and refined.

### DPD2420 PRODUCT & INDUSTRIAL DESIGN PROJECT 2

This project emphasises the application and use of industrial processes to meet user needs so that manipulative and workshop skills are developed into an understanding of production processes. You will learn entrepreneurship, leadership, batch production, marketing and sale of your designs.

### DPD2425 COGNITION, EMOTION & USABILITY

This subject explores how emotion interacts with and influences other domains of cognition, in particular attention, memory, and reasoning. The psychological consequences and mechanisms suggest more in-depth design resulting better use and usability.

### DPD2426 INTERACTION DESIGN TOOLS & APPLICATION

This subject covers the practice of designing interactive digital products, environments, systems, and services. You will synthesise and imagine objects as they might be through the interaction design tools and application.

### DPD2427 SERVICE DESIGN METHODOLOGY

This subject covers the methods and tools to control new elements of the design process, such as the time and the interaction between user and service provider. Together with the traditional methods used for product design, you will understand the behavior of the users, their needs/motivations and inform changes to an existing service or creation of new services.

### DPD2432 COMPUTER-AIDED INDUSTRIAL DESIGN 2

This subject enables you to ideate and generate concepts onscreen using the appropriate digital tools. You will further explore digital CAD modelling, 3D animation and general downstream practices.

### DPD3421 PRODUCT & INDUSTRIAL DESIGN PROJECT 3

This project introduces you to a professional level of work attitude and design standards on projects varying from large structures and systems to mass-produced consumer durables. You will have to demonstrate your ability to internalise current socio-economic issues and evolve self-motivated areas of design research that lead to initiation of design problem-setting. You will also need to evaluate and test your design solutions.

### DPD3417 THE BUSINESS OF DESIGN

This subject introduces the form and structure of various business organisations, financial and accounting issues, legal aspects (contractual agreements, design fees, taxes, trademarks, patents and copyrights), promotion, sales and the building of personal portfolio and credibility. It also gives a contextual understanding of the professional practice of design in an entrepreneurial environment.

### DPD3418 ADVANCED PRODUCT DESIGN

This subject introduces you to a professional level of work attitude and design standards on projects varying from large structure/ systems to mass-produced consumer durables. You will analyse current social-economic issues and evolve self-motivated design research that will lead to innovative and creative solutions. This subject adds to your accumulation of a professional portfolio for use when you seek commercial employment.

### DPD3428 INNOVATION, SCIENCE & TECHNOLOGY

This subject discusses how the influence of science and technology affect design and vice versa. You will be exposed to the innovation behind these domains and also the processes involved from creation to the protection of your ideas.

### DPD3429 PID PROJECT 4

This project looks at design methodology, with an emphasis on collaborative work model. You will be challenged to work in cross-disciplinary groups within the school or with external organisations. The process will include research, problem identification and analysis, and solution framing.

### DPD3430 SPECIALISATIONS FOR INDUSTRIAL DESIGNERS

This is an e-learning subject that will expose the case studies of emerging segments in Industrial Design and address the challenges in the different specialisations. You will learn about the emerging/ potential market for industrial designers and the competitiveness of design in the global context.

### DPD3431 COMPUTER-AIDED INDUSTRIAL DESIGN 3

This subject introduces you to rapid prototyping in Computer-Aided Industrial Design process. You will be taught to create and evaluate 3D surface models and produce physical highly finished 3D rapid prototypes.

### DPS1002 MARKETING FOR DESIGNERS

This subject provides an understanding of marketing principles typically adopted by businesses through a process of observation research. It raises your awareness of the makeup of the internal and external environment of a business, helping you relate the goals of the business to the opportunities and threats it faces.

## DPS1003 BRAND BUILDING STRATEGIES

This subject introduces the make-up of a brand through multiple lenses, from the corporate, personal, social and cultural perspectives. Learning activities allow you to discuss how a brand comes to mean what it is today to consumers, and enables you to think about possible brand re-design directions for the future.

## DPS1018 DESIGN HISTORY & CULTURE

This subject introduces cultural ideas and imageries corresponding to design movements in design history after the industrial revolution. Through the introduction of history and culture, you will develop an awareness and appreciation of culture and issues pertinent to the design field and gain a broader understanding of how design affects and is affected by the culture of human society.

## DPS1020 DESIGN FUNDAMENTALS

The subject introduces you to art and design fundamentals, aesthetic awareness and cultural appreciation. It will develop an understanding for the art and design processes, and enable you to reflect and see the world from a designer's perspective. Through this subject you will discover how to express yourself visually and with confidence in areas of art and design.

## DPS1021 MARKETING IN DESIGN

This module introduces you to the definitions and practice of Marketing in Design with a focus on people, spaces and interactivity. It provides an understanding of the scope and purpose of marketing and its integrated role within the design process. The module enables you to develop processes to identify the target audience, understand the clients and brands and understand the competition of the marketplace. The module also covers the fundamentals of marketing research methodology through field work such as simple field interviews, data analysis, comparative analysis and matrices. Most salient is the exposure to the language of marketing and its relevance to designers in the business of Design.

## DPS2005 CONSUMER LIFESTYLE RESEARCH

This subject provides you with qualitative research tools to explore and understand the lives of consumers from their perspective. You research real and virtual worlds exploring consumption practices, consumers' product and brand experiences, and emerging lifestyle trends.

## DPS3007 DESIGN ACADEMIC PAPER

This subject provides an opportunity for you to conduct in-depth study into an area of personal interest or your area of design specialisation as preliminary investigation for your Major Project. It covers academic inquiry, argumentation and writing skills. You will write an academic paper and present your thesis. The subject is recommended for students who intend to pursue university studies.

## DPS2022 BRANDING STRATEGIES

This subject will develop your understanding of the impact of brand management and communications to the overall business of a company. By studying brand semiotics, visual identity and applications you will be able to appreciate the strict methodology and rules that designers must adhere to ensure consistent conveyance of brand identity across various media and environments. Also covered are the designer's role in brand management and in protecting the brand image, semiotics and usage. Underpinning this will be brand communications which emphasises the relationship of the brand to the marketplace, the 5Ps of communication touch points and the designers' role in managing these touch points.

## DRH1701 ARCHITECTURAL DRAWING

This subject introduces the various visualisation techniques for architectural drawings. The topic covers basic methods of constructing geometric drawings, orthographic projections and perspective drawings necessary for communicating a successful design presentation.

## DRH1702 RHD PROJECT 1

This subject serves as a platform to introduce you to retail and hospitality design project. Exploratory and experimental in nature, it encourages you to develop varying perspectives in design approaches and processes, encompassing design conceptualisation, visualisation and expression of a set theme.

## DRH1703 ARCHITECTURAL RENDERING

The subject introduces various rendering techniques for illustrating interior space design intent. As an integral part of the design process, the subject leads you to make considered judgments in the selection of appropriate rendering media to best visualise the design intent of all components that shape the interior space.

## DRH1714 FUNDAMENTALS IN DESIGN

This subject introduces the basic fundamentals of spatial design from the massing and sculpting of built forms to its implications on interior space design. It exposes you to the basic principles of design, through manipulation of geometry and the understanding of the basic measurement of human proportion and how the impact of ergonomics and anthropometrics has its implications in the spatial context.

## DRH1715 TECTONICS & STRUCTURE

The subject aims to provide you with an insight and understanding of the expressive nature of architectural tectonics. It covers an overview of tectonics and structure as well as a study of significant examples of structural systems and their materials and finishes.

## DRH1716 DESIGN STUDIO

Design Studio is a project that allows you to apply the fundamentals in design thinking through methods and tools of design process. It provides a platform for you to be exploratory and experimental in the process of sculting forms that leads to the development of spatial design.

## DRH2705 RHD PROJECT 2

This subject introduces you to concept development as a seamless process of design from the inception of a design idea to the resolution of the design process. The subject focuses on the physical developmental evidences of the design process as the key to externalising conceptual thinking and development in retail and hospitality design.

## DRH2706 RHD PROJECT 3

This subject focuses on understanding of the retail and hospitality design profession and learning to apply areas related to branding, display, graphics/ signages, lighting, space planning, consumer culture and trends, etc. You are required to generate design solutions to address the above.

## DRH2707 COMMUNICATION GRAPHICS

This subject focuses on graphic design related to interior and exterior built environment. It is a creative science which integrates two and three-dimensional graphics into the built environment for functional and aesthetic purposes.

## DRH2717 DESIGN THEORY & IDEAS

The subject equips you with the knowledge to understand the thinking, influences and conditions affecting the shaping and design of significant interior spaces. It covers an overview of theories and ideas in relation to interior design, furniture, fittings and accessories.

## DRH2718 INTERIOR ELEMENTS

The subject is an introduction to elements in the interior and highlights the importance of secondary elements in a space. It introduces the impact of colour theory with the effect of lighting quality in a spatial context. It aims to provide a cohesive understanding together with the interior forms to provide a basic balanced equation to what makes an interior space.

## DRH2719 CONSTRUCTION & DETAILING

This subject introduces the interplay of design decisions on interior elements. It concentrates on the interior design conventions and specifications and encompasses the detailing aspect of materiality and tactility. You are encouraged to explore the practical assembly and construction aspect of interior design components.

## DRH2720 BUILDING SYSTEMS

Building Systems provides an overview of service elements needed to facilitate the smooth running of buildings and their interiors and to further provide for the comfort, health and safety of the users. The subject aims to further equip you with an awareness and understanding of fire safety requirements, escalators and lifts, security, telephone and IT communications and intelligent building systems.

## DRH3708 DIGITAL MODELLING

This subject focuses on the fundamentals of interior digital modelling applications to represent ideas and concepts in visualising 3D design creations. It provides you with an opportunity to explore the basics of 3D digital built environment design, develop an understanding of the software application and be familiar with the fundamentals of 3D design creation and visualisation.

## DRH3709 RH PLANNING & DESIGN

This subject introduces the basic planning and design principles that relates to retail and hospitality specific spaces. Hotel and store planning concepts will be covered in the subject.

## DRH3711 CONSUMER PSYCHOLOGY

This is the study of how people relate to the products and services that they purchase or use. The subject aims to provide retail and hospitality designers some valuable information from the understanding of consumer market, their thoughts and decision-making processes, for design thinking.

## DRH3712 RHD PROJECT 4

This subject focuses on the issue-driven approach. You will be given opportunities to explore issues pertaining to design in the realm of retail and hospitality though investigation and studies. You will also be required to generate design solutions to address the identified issue or topic chosen.

## DRH3721 BUILDING SERVICES

The subject is a study of the nature of different service elements needed to allow buildings and their interiors to function well and to provide for the comfort, health and safety of the users.

## DVC1506 TYPOGRAPHY

This subject introduces the principles of type and using type as an expressive communication tool. It allows you to explore issues concerning type, such as form and meaning, hierarchy of information, legibility and readability, structure and composition, and the design of type. You will learn to exploit type with colour, creative integration of type and images, and typographic layout in print communication.

## DVC1509 DIGITAL ESSENTIALS

Software application is integral to the creative process in the design industry. This subject introduces you to basic knowledge and skills needed to use the computer as a desktop publishing tool. You will learn to apply skills in a drawing software for creating graphics; an image editing software for retouching graphics; and a page layout software for executing publication tasks. This knowledge is needed to facilitate design execution.

## DVC1542 PHOTOGRAPHY

This subject introduces the fundamentals of using the camera. It provides you with the necessary theoretical knowledge and practical skills required to apply the basic principles of photography in image recording and management in black and white, colour slides, and digital images using the 35mm SLR and the Digital SLR camera. Topics include camera manipulation such as aperture and shutter speed control, exposure and lens angling and image reproduction like character and ISO sensitivity of different films, digital capture and aspects pertaining to the depth of field.

## DVC1550 HISTORY OF GRAPHIC DESIGN

This subject gives an insight into the evolution of graphic design and its impact on society. It traces the rich heritage of man's quest for ideas and forms in visual graphics by examining the developments in writing, printing, typography, photography and design. It also follows the changes of graphic design from traditional to mechanical forms and finally examines its present state in the electronic age.

## DVC1564 GRAPHIC STYLISATION & TECHNIQUES

This subject instills the ability to create, apply and evaluate conceptual visual representations and stylisations through your knowledge of art and design styles and movements.

## DVC1579 NARRATIVE PHOTOGRAPHY

This subject deals with the narration of a story through photographic images. It compares the effectiveness of a group of photographs to tell a story or a topic within a concept with the different interpretations that a single picture may bring about. This will also include situations found in photojournalism, photo essays or documentaries.

## DVC2514 ADVERTISING

This subject anticipates the challenges and influences posed by the mass media on society, and to impart the thinking, methods, skills and processes. It also extends skills and new insights beyond the influence of the interactive electronic age. A firm foundation is provided upon which a more advanced and progressive knowledge and skills in advertising can be built. It covers the importance of target marketing to ensure effective advertising for a consumer product or a service industry. Through a series of assignments, you will explore and discuss the appropriateness and effectiveness of visual images and messages in the creation of persuasive advertisements.

## DVC2518 INFORMATION DESIGN

This subject provides the opportunity for you to understand the basic role of a graphic designer to communicate information through various design elements. The ability to formulate the right mixture of photo images and two-dimensional text is vital to communicate successfully. The final communication ought to be clear and understandable without loss of intended message. Logo design and instructional symbol and diagram are integral parts of this subject.

## DVC2521 PRODUCT & ADVERTISING PHOTOGRAPHY

This subject provides you with the necessary theoretical knowledge and practical skills required to operate the medium-format camera and the 4x5 view camera, for making a variety of photographic illustrations comprising products, food and beverage, portraiture, commercial prints to be used for magazine and press advertisements, brochures, posters, annual reports, record covers, calendars and other visual communication purposes.

### DVC2552 EXPRESSIVE ILLUSTRATION

This subject involves further experience with unifying elements of design, colour, drawing and technique to create a successful illustration in a personal manner. Intensive investigation will be conducted on the techniques and principles presented in previous Applied Illustration course, with a continuing emphasis on concept and its relationship to the many elements of an illustration.

### DVC2553 STUDIO LIGHTING

This subject introduces you to the Lighting Studio. You will learn the various types of lighting techniques for portrait, fashion as well as product in order to take charge effectively in the studio. You will also learn the use of umbrella, soft box, cone, snoot, reflectors, block cards, etc.

### DVC2561 ALTERNATIVE PHOTOGRAPHIC TECHNIQUES

This subject introduces you to film processing, enlargement using RC and FB papers, other alternative photographic processes including hand-applied emulsions of Cyanotype, Van Dyke Brown and other non-silver processes. You will explore other experimental photographic techniques in colour and black and white. This subject will enhance your ability to visualise beyond using the camera and also broaden your range of creative expressions through the different processes taught.

### DVC2565 TYPOGRAPHY 2

Typography and layout knowledge will be rigorously applied to particular contexts and design systems, allowing the individual nature of the project content and audience to start influencing and determining their typographic choices.

### DVC2566 PREPRESS & APPLIED TECHNIQUES

This subject focuses on the crucial stages of offset production, as it provides the basic and essential understanding for designers to ensure smooth production process and defined designer's preproduction responsibility.

### DVC2567 PUBLICATION DESIGN

This subject focuses on advanced page layout and design techniques in publications and its production requirements. You will learn to produce more complex publications using advanced page layout software skills, as well as advanced design techniques.

### DVC2568 DIGITAL IMAGING TECHNIQUES

This subject covers the area of image enhancement and manipulation with the use of imaging software. With digital technology a new principal in imaging has been produced, where the image can be and will be recreated using imaging software such as Photoshop. It requires you to re-evaluate such fundamental concepts as realism and representation in the imaging context, and how this relates to a computer network media.

### DVC2572 TACTILE DESIGN

You will explore beyond common reproduction techniques when crafting your final design solution. New techniques may include silk-screen printing, lino/woodblock printing, etc. The tactility of materials chosen for print will also be explored and experimented to allow for more innovative usage of materials in design.

### DVC2573 KINETIC GRAPHICS

This subject emphasises on the relationship between design principles and animation fundamentals, as well as focusing on the systems, structure, and synthesis of text and image for time-based media.

### DVC2574 ADVERTISING COMMUNICATION

This subject covers historical aspects of the advertising and graphic design fields, as well as addressing communication strategies including the effective use of metaphors, iconography, idioms, allegories, clichés and methodologies. Problem-solving and conceptual thinking are emphasised. The subject also provides an introduction to the craft of advertising copywriting and gives you a basic understanding of the copywriting process as it applies to advertising. Assignments given are to reinforce/ teach the importance of presenting information clearly, provocatively and memorably.

### DVC3536 CORPORATE IDENTITY

This subject focuses on corporate identity and its importance in today's business. It provides you with the opportunity to learn the importance of maintaining corporate image and philosophy by creating effective corporate identity manuals and guidelines.

### DVC3556 DIGITAL ILLUSTRATION

This subject explores and defines the visual formulae that occur in popular images. You will then reinvent and tweak these formulae, while developing your own personal voice. We will strive for innovative, edgy solutions to problems, and discuss how an artist can produce marketable art for the mainstream while not compromising his or her aesthetics. Particular attention will be paid to issues of scale, period styles, tracing post-modern sources, and subculture genres. You will combine your own drawn and found materials with the use of Adobe Photoshop and Illustrator.

## DVC3569 LANDSCAPE PHOTOGRAPHY

The subject examines the area of photography concerned with the environment as expressed by photographers, artists and documenter. It will explore the history of this subject, from early explorative photographers to the modern genre. The technical and creative aspects of landscape and cityscape photography will form a basis for practical work.

## DVC3570 FASHION PHOTOGRAPHY

This subject focuses on imaging of the human form and costumes and the way it relates to the fashion industry. It examines the approach to imaging the fashion industry, and every element that creates fashion: trend and styling, hair and make-up, location, lighting, model behaviour.
You will explore issues pertaining to the fabrication of the fashion statement. It also introduces the concept of the fashion story within fashion imaging and its editorial significance in fashion news.

## DVC3571 CONCEPTUAL IMAGING

This subject requires you to seek an alternative understanding and interpretation through imagery derived as a result from using aids such as poems, stories, music, philosophies, paintings or by any other initial form. This subject encourages you to explore non- conventional forms of solution in design, but rather using the methods normally used in fine-art to solve the problem thus creating a "new vision" or sometimes known as personal statement.

## DVC3575 BEYOND PRINT

This subject aims to broaden your means of communication and persuasion for a product or topic beyond the printed medium. It will provide you with the edge to have a creative approach to design problems that may include environmental graphics, merchandising paraphernalia, interactive digital outputs and other platforms, media and formats that best bring across the design expression.

## DVC3576 BRANDING DESIGN

This module introduces the fundamentals of a brand, a basic understanding of a brand strategy leading to a visual language and design devices that will overall express the brand's vision, values and personality. You will learn to design a system of visual devices that can organically and flexibly be applied across various formats and mediums.

## DVC3577 NARRATIVE ILLUSTRATION

This subject introduces you to the classic plot structure as well as the use of sequential image settings. You will learn the techniques and knowledge required to create illustrations suitable for narrative formats such as storyboards, graphic novels, comic book, manuals and picture books. You will also learn the techniques of conceptualisation, ideation and graphic composition through this sequential image-making process.

## DVC3578 EXPLORATIVE ILLUSTRATION

You will be encouraged to develop your own approach and methodology in your illustration work process. This subject emphasizes on the modern world of illustration, and its many forms and opportunities. You will expose and explore the multiple illustration medium, techniques, media and styles, with an emphasis on original and spontaneous composition, to create an explorative piece of illustration.

## DVC3580 PACKAGING DESIGN

This module builds on and follows from previous subjects on the fundamentals of branding knowledge. The module provides packaging design principles and developing packages that engage the consumer and communicates the brand's ethos and values. You will learn to design pack graphics that convey a clear brand promise and the personality of the brand.

## GCD1001/1002/1003 APPLIED PRINCIPLES FOR EFFECTIVE LIVING (APEL)

Applied Principles for Effective Living is TP's Core Programme consisting of three subjects, namely APEL 1 (Personal Effectiveness), APEL 2 (Interpersonal Effectiveness) and APEL 3 (Extropersonal Effectiveness). APEL was specially developed for TP students with the aim to help nurture in them the dispositions (i.e., attitudes, skills, knowledge) towards the Principles for Effective Living, hence laying the vital foundation for their life-long success. The principles introduced in this programme are largely derived from applied psychological studies.

** This is not an exhaustive list of subject synopses. The subjects listed and their contents may change in view of relevance and currency. The information is correct at the time of printing and may be subject to change.*

# School of Engineering

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This School is the place Where the Future Happens — where opportunities are provided for you to realise your ambitions. Always at the forefront of technology, we emphasise innovation, creativity, problem-based learning, and a practical hands-on approach.

We offer 15 exciting diploma courses and three special programmes — all of which provide you with a broad based curriculum that opens the doors to flexible career opportunities in Singapore's new knowledge-based economy. The electives/options in our courses allow you to specialise in exciting fields with great prospects, and yet get a broad-based training in other popular engineering areas. In short, there is specialisation with flexibility, so as to give you an edge in a dynamic and rapidly evolving world of engineering.

# Centres Of Excellence

With the most up-to-date facilities and equipment, coupled with highly effective teaching methods, the School of Engineering is in the position to ensure that you get a wholesome education that prepares you to meet future economic challenges.

Our strength lies in our ability to be forward-looking to ensure that we remain at the cutting edge of technology. Seven Centres of Excellence have been set up to undertake R&D work in collaboration with the industry, so as to further our expertise in specialised technological areas. These Centres help to enhance the professional and academic capability of our staff and students.

## BIOMEDICAL ENGINEERING RESEARCH CENTRE

This inter-disciplinary research centre provides the platform for clinicians, chemists, biochemists, electrical and electronic engineers, mechanical and mechatronic engineers, software engineers and industrial designers to interact, invent, and innovate, and to provide cost-effective solutions in the treatment of conditions such as end-stage renal disease (ESRD). The Centre also aims to provide the industry with the technological know-how for commercialisation as well as the expertise in biomedical regulatory compliance.

## TEMASEK AVIATION & AEROSPACE CENTRE

This Centre was created to meet the needs of the aviation/ aerospace industry for quality training, consultancy and collaborative industry-focused applied research projects. The Centre's core competencies lie in the areas of aeronautical sciences and human factors, aviation management, aerospace electronics and aerospace engineering. Equipped with state-of-the-art training and research facilities, it aims to collaborate with like-minded industry players and training institutions to further the industry's human resources development, safety and economic goals.

## CLEAN ENERGY RESEARCH CENTRE

This is the leading research centre in Singapore providing clean energy solutions for sustainable urban living. The Centre focuses on clean energy generation, energy storage, and efficient power management and distribution for a variety of industrial applications such as portable power, electric vehicles, distributed generation and flight propulsion. The Centre has full design and fabrication capabilities in fuel cells and power electronics, as well as state-of-the-art equipment for conducting applied and industry-relevant R&D. It also possesses in-depth engineering competency in energy harvesting technologies such as solar photovoltaics. Today, the Centre is a preferred partner for developing cutting-edge technologies and is also a specialist training centre for the emerging renewable energy industry. Our partners include major industry players Toyota Tsusho and ST Engineering.

## INFOCOMM SOLUTIONS CENTRE

This Centre focuses on core technologies involving enterprise web services and solutions, network technologies, mobile applications and digital media development. It aims to proliferate and develop these technologies for R&D, training and industry collaboration. The Centre seeks to continually renew and align itself with IDA's iN2015 initiatives, and has successfully partnered consortiums led by industry champions in various Calls for Collaborations (CFC) such as Connecting the Community CFC (2002), Healthcare CFC (2004), FutureSchools@SG CFC (2008) and Learning On the Move CFC (2011). Some of the Centre's key collaboration partners include the Infocomm Development Authority of Singapore, Microsoft Singapore, ST Electronics (Training & Simulation Systems) Pte Ltd, and Panasonic Systems Asia Pacific.

## INTERACTIVE DIGITAL CENTRE ASIA (IDC ASIA)

IDC Asia provides creative and innovative 3D solutions for the Interactive Digital Media (IDM) landscape in Singapore and the Asia-Pacific region. The Centre undertakes use-inspired applied research in emerging fields of 3D media technologies, specifically in primary areas such as interactive glasses-free 3D display technology and 2D-to-3D digital content conversion, to create strategic value innovations for the industry. Setup in November 2007, the Centre's key role is to help various industry sectors such as engineering, architecture, transportation, media and education, to adopt value-added IDM solutions so as to gain competitive advantage in their businesses. The Centre's partners are key industry players MAXON Computer, IM Innovations and EON Reality.

## MICROELECTRONICS CENTRE

Microelectronics has formed the fundamental basis of modern industry and has penetrated into almost every aspect of modern living. This Centre continuously updates and aligns capabilities in micro and nano standards while focusing on the main area of microfabrication, solar cell, solid state lighting, sensors, and nanofabrication, which combines the top-down (etching) and bottom-up (self-assembly) strategies. This Centre has the capability to produce bulk silicon solar cell in small volume, with development efforts in thin film solar cell technology, dye-sensitised solar cell technology, and printing (organic and inorganic) solar cell technology. In solid state lighting, the focus is on quality substrate, novel process in device fabrication, optical design and heat management in packaging, with emphasis on lighting application. In the field of sensors, the Centre focuses on the mechanisms of converting non-electrical quantity into electronic signal, with primary emphasis on biochemical reaction in biosensors.

## ROBOTICS & AUTOMATION CENTRE

This Centre strives to foster, develop and promote the latest technologies through innovation, applied research, capability development and application in robotics and automation that are relevant to the industry's needs. The core technological areas include wireless sensor network, embedded intelligent system, robotic navigation, path planning, obstacle navigation, motion control for research robots, programmable/ motion control for automation, machine vision, process control and simulation.

# 3D Interactive Media Technology

> *This is a unique course which combines engineering with 3D Interactive Digital Media (IDM) technologies. It shapes a new breed of graduates to meet the expected strong demand for such skills and know-how in the key sectors of Singapore's economy such as engineering, healthcare and transportation.*
>
> *Vincent Ong*
> *Managing Director*
> *IM innovations Pte Ltd*

You must have come across 3D animation, graphics or simulation used in educational materials, advertising, websites, presentations, computer games, and of course, in movies. These are all part of interactive digital media – the growth of which is becoming virtually unstoppable today.

Under Singapore's Media 21 plan, the government aims to transform the country into a global media city that develops and trains professionals in such interactive 3D applications. This very exciting course will enable you to tap into this growing market for Interactive Digital Media (IDM) as more companies start to deploy state-of-the-art technology to create 3D graphics to market their products or to design and simulate real-life effects in virtual training for maintenance and manufacturing.

Companies in the aerospace, medical and automotive industries, as well as defence weapon manufacturers and architectural design firms are utilising such 3D applications to conceptualise futuristic devices that do not exist currently. Schools and educational institutions are also using 3D modelling and animation tools to teach and illustrate complex concepts.

In this course, you will be equipped with a solid foundation in not just engineering, but also digital media design concepts, and interactive 3D visualisation and simulation for the IDM industry.

## CAREER OPPORTUNITIES

You will be able to find excellent employment opportunities in the IDM sector, involving 3D application development, 3D content creation, as well as 3D modelling and animation. The worldwide digital media market is projected to grow in value from $1.6 trillion today, to $4 trillion by 2015. In Singapore, the government has also set aside $500 million for research and development in IDM over the next five years, creating 10,000 new jobs by 2015. You can choose to be involved in front-line sales and marketing, or be a 3D content-developer or trainer in the exciting IDM industry.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Core Subjects | : 110 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 138 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DNG1342 | Drawing Essentials | 1 | 3 |
| DNG1344 | 3D Art Fundamentals | 1 | 3 |
| DNG1345 | Ideation | 1 | 3 |
| ECC1003 | Web Design & Development | 1 | 4 |
| EDM1001 | Modelling & Animation | 1 | 5 |
| EDM1002 | Fundamentals of Digital Media Processing | 1 | 4 |
| EDR1003 | Engineering Drawing | 1 | 4 |
| EEE1006 | Engineering Fundamentals | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESE1005 | Computer Programming | 1 | 4 |
| DNG2339 | Interface Design 1 | 2 | 3 |
| DNG2347 | Interface Design 2 | 2 | 3 |
| EBM2004 | Project Management | 2 | 4 |
| EDM2003 | Fundamental 3D Interactive Digital Media | 2 | 3 |
| EDM2004 | Advanced Digital Animation & Special Effects | 2 | 4 |
| EDM2005 | IDM Project | 2 | 6 |
| EED2008 | Product, Process & Computer Aided Design | 2 | 4 |
| EED3013 | Rapid Prototyping & Model Making | 3 | 4 |
| EDM3001 | Advanced Interactive Digital Media | 3 | 4 |
| EDM3002 | 3D Real-time Visualisation | 3 | 4 |
| EDM3003 | Interactive 3D Display System | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |
| ESE3001 | Database Management System & Design | 3 | 5 |
| ESE3006 | ASP .NET Web Programming | 3 | 4 |

## Diploma Subjects - Special Electives

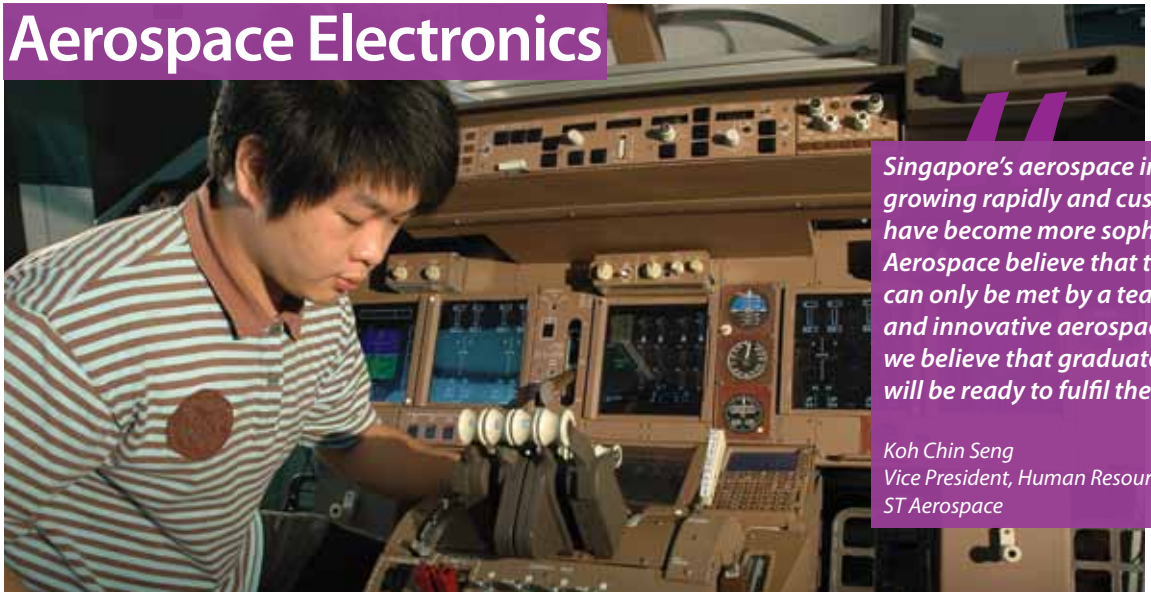
Students can opt to take Special Electives when offered. These optional subjects aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Aerospace Electronics



*Singapore's aerospace industry has been growing rapidly and customers' demands have become more sophisticated. We at ST Aerospace believe that these new challenges can only be met by a team of highly skilled and innovative aerospace professionals, and we believe that graduates from this course will be ready to fulfil the industry's needs.*

*Koh Chin Seng*
*Vice President, Human Resource*
*ST Aerospace*

Step into an aircraft's cockpit and you will see a myriad of colourful lights, state-of-the-art instruments, bright LCD displays and dual joysticks for flight control navigation. Want to know how these gadgets work together to control the aircraft thousands of metres above sea level? This course will provide you with the answers, and more!

In 2010, there were 19,400 commercial aircrafts worldwide and this figure is set to double to 39,500 by the year 2030. With over 100 aerospace companies in Singapore capturing a quarter of the Asian MRO (maintenance, repair and overhaul) market, your goal of realising your dream job in the aerospace industry has never been better.

Our strong focus on aerospace MRO, as well as aircraft maintenance skills training, offered together with world renowned aircraft maintenance training provider, Lufthansa Technical Training, will give you a head-start for a rewarding career in the aerospace industry.

In this course, you will learn about aircraft electronic (avionic) systems, aircraft navigation and flight control systems. You will also be trained to sit for the 12 modules in the SAR-66 Aircraft Maintenance License (AML) Category B2 examinations, and may earn direct credits that allow you to get your AML certification much sooner.

If you aspire to be a pilot, you can also fulfil your dream by taking flying lessons as part of your Higher Aerospace Training, and obtaining a Private Pilot Licence (PPL).

## CAREER OPPORTUNITIES

The rapid growth of the aerospace industry will create a strong demand for skilled aerospace professionals in the next few decades. You will be highly sought-after as an aircraft maintenance engineer, aircraft electrical system specialist, avionics design and development engineer, avionics system specialist, or avionics test engineer. Career opportunities abound in the field of aircraft maintenance, repair and overhaul, avionics testing and measurement, the design, development, manufacturing and technical sales of aircraft systems and components, or aerospace engineering support and services.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM) / Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply. For safety reasons, applicants should not be suffering from epilepsy or hearing impairment.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 95 credit units |
| Option Subjects | : 10 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 133 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EAE1002 | Electrical Fundamentals | 1 | 4 |
| EAE1003 | Electronic Fundamentals & Systems | 1 | 4 |
| EAE1004 | Fundamentals of Aeronautical Science | 1 | 4 |
| ECC1002 | Networking Fundamentals | 1 | 4 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1002 | Electronic Devices & Circuits | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EEE1004 | Digital Fundamentals 2 | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| EAE2002 | Aviation Legislation & Human Factors | 2 | 4 |
| ECT2001 | Circuits & Control Systems | 2 | 5 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| EAE3006 | Radio Fundamentals & Navigation Systems | 3 | 4 |
| EAE3007 | Propulsion & Instrument Systems | 3 | 4 |
| EAE3009 | Basic Aerodynamics | 3 | 3 |
| EAE3010 | Electrical Power & Onboard Systems | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EAE3011 | Aircraft Structures & Flight Control | 3 | 4 |
| EAE3012 | Aircraft Test & Measurement | 3 | 3 |
| EAE3013 | Higher Aerospace Training | 3 | 10 |
| EAE3014 | Lean Processes | 3 | 3 |

## Diploma Subjects - Special Electives.

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Aerospace Engineering

***This course has shown leadership by hiring staff fresh from the industry, and partnering recognised world class training institutions such as Lufthansa Technical Training (LTT) to inject the latest, the best, and the most realistic practices from the aviation industry into its curriculum. The knowledge that you receive as students will definitely be both current and relevant to your future work environment.***

*Roberto Kobeh Gonzalez*
*President*
*The Council of the International Civil Aviation Organisation (ICAO)*

Have you ever wondered what it is like inside the cockpit of an aircraft, how a 100- tonne aircraft overcomes gravity, or how an aircraft is shaped to fly faster than sound? These are some of the things you will find out in this course.

The aerospace industry needs pilots, engineers, technicians and designers. Since 1990, this industry has grown at an average rate of 12 percent, and in 2009, the aerospace industry achieved a record output of S$7 billion, employing 18,000 workers. Today, Singapore has the most comprehensive maintenance, repair and overhaul (MRO) facilities in Asia.

This course prepares you for an exciting future that realises man's dream of flight. You will learn about aircraft flight, aircraft design, airframe structure, engine systems, and manufacturing of aircraft systems.

Temasek Polytechnic is currently the only local polytechnic that is partnering a SAR-147 organisation – Lufthansa Technical Training (LTT) of Germany – to provide you with quality and certified training. You will be equipped with SAR-66 B1.1 knowledge and skills and can earn credits to shorten your subsequent professional training to become a Licensed Aircraft Engineer (LAE).

If you aspire to be a pilot, you can also fulfil your dream by taking flying lessons as part of your Higher Aerospace Training, and obtaining a Private Pilot Licence (PPL).

## CAREER OPPORTUNITIES

The rapid growth of the aerospace industry will create a strong demand for skilled aerospace professionals in the next few decades. You will be highly sought-after as an aircraft maintenance engineer, structural or composites specialist, engine or power plant technologist, aerospace component design engineer, or an aero-mechanical systems specialist. Your fundamental engineering training will also equip you to further your aspirations in future local and overseas degree programmes.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply. For safety reasons, applicants should not be suffering from epilepsy or hearing impairment.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 98 credit units |
| Option Subjects | : min 10 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 136 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EAE2001 | Aerospace Physics | 1 | 4 |
| EDR1003 | Engineering Drawing | 1 | 4 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1002 | Electronic Devices & Circuits | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EEE1004 | Digital Fundamentals 2 | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EME1002 | Statics & Strength of Materials | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| EAE1002 | Electrical Fundamentals | 2 | 4 |
| EAE1003 | Electronic Fundamentals & Systems | 2 | 4 |
| EAE1005 | Engineering Design | 2 | 3 |
| EAE2002 | Aviation Legislation & Human Factors | 2 | 4 |
| EAE3008 | Gas Turbine Engine | 2 | 4 |
| EAE3009 | Basic Aerodynamics | 2 | 3 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| EME2008 | Principles of Dynamics | 2 | 5 |
| EME2006 | Engineering Materials | 2 | 4 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EAE3013 | Higher Aerospace Training | 3 | 10 |
| EAE3014 | Lean Processes | 3 | 3 |
| EAE3015 | Aircraft Structures & Composites | 3 | 4 |
| EAE3016 | Aircraft Aerodynamics & Systems | 3 | 3 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Aviation Management & Services

> ***I remain very impressed with your aviation training programmes, the passion of your students and staff, and your innovative efforts to meet the increasing demands of the aviation industry, for a challenging present and a bright future.***
>
> *Roberto Kobeh Gonzalez*
> *President*
> *Council of the International Civil Aviation Organization (ICAO)*

Over one billion people and 40 percent of the world's manufactured exports are transported by air each year, making the aviation business one of the key drivers of world trade. It is an international business that spans six continents, linking cities, islands and communities worldwide.

The exponential growth of the aviation industry has created a high demand for specialised and highly-skilled aviation professionals to operate and manage the existing and new aviation services, facilities and infrastructures, such as Changi Airport's third passenger terminal, the Seletar Aerospace Park, and the new aircraft such as the Airbus A380 and Boeing 787 Dreamliner.

This diploma course, the first of its kind in Asia, will equip you with a broad range of specialised skills and knowledge of the various aviation and business domains, from managing a world class airport to understanding what it takes to run the best airline in the world.

If you aspire to be a pilot, you can fulfil your dream by taking the Aeronautical Science Option in your final year which allows you to take flying lessons and subjects required to obtain a Private Pilot Licence (PPL).

## CAREER OPPORTUNITIES

Take a flight with us into this fast paced and dynamic industry where exciting and rewarding careers await you in Singapore and across the region. You can look forward to a wide spectrum of careers in operations and customer services, flight operations (including flying), air traffic control, in-flight hospitality, aviation commercial development, marketing and management with airport operators, airlines, aerospace companies, aviation consulting and investment companies, civil aviation authorities and ground handling companies.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 98 credit units |
| Option Subjects | : 12 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 138 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EAD1001 | Introduction to Civil Aviation | 1 | 4 |
| EAL1001 | Principles of Aeronautical Science | 1 | 5 |
| EAM1001 | Airport Operations & Management | 1 | 4 |
| EBT1003 | Facilities Operations & Maintenance | 1 | 5 |
| EBZ1001 | Business Fundamentals | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| EAM2001 | Ground Handling Operations & Management | 2 | 4 |
| EAM2003 | Aviation Safety Management & Human Factors | 2 | 4 |
| EAM2005 | Airline Flight Operations | 2 | 4 |
| EAT2001 | Airport Systems 1 | 2 | 4 |
| EAT2002 | Airport Systems 2 | 2 | 4 |
| EAT2003 | Airfield Systems 1 | 2 | 4 |
| EBD2001 | Total Building Performance | 2 | 4 |
| EBD2005 | Security & Surveillance | 2 | 4 |
| EBM2004 | Project Management | 2 | 4 |
| EBZ2006 | Service Quality & Management | 2 | 4 |
| EAL3001 | Airline Operations & Management | 3 | 4 |
| EBM3003 | Financial Management & Forecasting | 3 | 4 |
| EBM3004 | Business Continuity Management | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Special Electives

Students will take one of the following options in their final year. Students will be streamed based on their interests, a selection process and test.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Airport & Airline** | | | |
| EAM1002 | Airport Administration | 1 | 4 |
| EAL2002 | Management of Air Cargo | 2 | 4 |
| EAT2004 | Airfield Systems 2 | 2 | 4 |
| **Aeronautical Science** | | | |
| EAM2006 | Meteorological Studies | 2 | 4 |
| EAL2003 | Air Navigation | 2 | 4 |
| EAL2004 | Flight Planning | 2 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Biomedical Informatics & Engineering

*As the medical and healthcare solutions industry continues to globalise and advance at a rapid pace, biomedical professionals today face increasing demands and challenges. Fortunately, students of this course are armed with sound fundamental knowledge, giving them a mastery of informatics and engineering skills so as to empower them to excel in their future careers while meeting the rigorous demands of this industry.*

*Narayan Venkataraman*
*Director*
*Infinity Biomed Solutions, Singapore*

The development of medical devices, from a simple hearing-aid to an X-ray machine; the search for a cure for human diseases; or even the very pills that you pop into your mouth – these are all part of the biomedical life sciences, which is now seeing a rapid boom worldwide.

This course involves the application of information technologies and engineering skills to the biomedical sciences. You will be equipped with knowledge in the interdisciplinary fields of biomedical engineering and informatics. Under the Economic Development Board's "Industry 21" initiative, the field of life sciences is slated to be one of the four pillars of Singapore's economy, besides chemicals, electronics and engineering.

Singapore is on its way to becoming a global centre for medical research and advanced patient care in specialised fields such as oncology, cardiology, ophthalmology, neurology and rehabilitation. It also aims to be a regional hub for a wide spectrum of healthcare services such as integrated healthcare services, hospital management, laboratory services, healthcare consulting, medical informatics, pharmaceutical research and clinical trials.

Companies dealing in medical devices and drugs will find it attractive to undertake the development and manufacturing of new drugs and medical products in Singapore. In fact, numerous prominent overseas biomedical companies have set up base in Singapore over the past two years, providing enormous job opportunities and career advancement prospects for holders of this diploma.

## CAREER OPPORTUNITIES

You will be able to find employment in design, manufacturing and marketing companies (MNCs, SMEs or public companies) dealing in the life sciences and electronics, as well as government agencies, health care institutions, commercial firms and hospitals.

There are excellent career prospects in life science research centres, providing support in bioinformatics and medical research activities, the maintenance of equipment, and specialist procedures. You can also be employed in pharmaceutical manufacturing firms, dealing with process control and quality control, or in hospitals, handling the operations and maintenance of specialised medical equipment. Some of our graduates are in wholesale and retail firms, doing the marketing and sales of medical devices and equipment, or providing after sales services such as commissioning, maintenance and training.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 102 credit units |
| Elective Subjects | : min 8 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 138 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EBS1002 | Human Anatomy & Physiology | 1 | 5 |
| EBS1003 | Biochemistry | 1 | 4 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1002 | Electronic Devices & Circuits | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EEE1004 | Digital Fundamentals 2 | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESC1001 | Chemistry | 1 | 5 |
| ESE1005 | Computer Programming | 1 | 4 |
| EBI2001 | Introduction to Bioinformatics | 2 | 4 |
| EBS2002 | Molecular Genetics | 2 | 5 |
| EBS2003 | Biomedical Physics | 2 | 4 |
| EEE2003 | Circuits & Signals | 2 | 4 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| EMD2001 | Medical Electronics | 2 | 4 |
| EMD2002 | Medical Devices | 2 | 4 |
| EBI3001 | Biostatistics | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECT2001 | Circuits & Control Systems | 2 | 5 |
| EBI3003 | Medical Imaging & Visualisation | 3 | 4 |
| EBI3004 | Audiometry & Hearing Devices | 3 | 4 |
| EBS3001 | Biomechanics | 3 | 4 |
| EBS3003 | Clinical Laboratory Equipment | 3 | 4 |
| EEE3001 | Advanced Electronics | 3 | 4 |
| ESE3006 | ASP.NET Web Programming | 3 | 4 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Business Process & Systems Engineering

> *The subject areas covered in this course, including process optimisation, marketing strategies and business enhancement, are very relevant to the industry and will optimally equip students to meet the challenges of today's new business environment.*
>
> *Sim Sin Sin*
> *CEO*
> *Secret Recipe Café Pte Ltd*

With Singapore's vision to be a world-class service centre and logistics hub, there will be a strong demand for professionals with multi-disciplinary skills as we move into the 21st century.

The introduction of business concepts and principles into a core of engineering fundamentals will enable our graduates to enter both the engineering and service sectors in Singapore and the region.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements".
For international students, please refer to the section on "Information for International Students".

## CAREER OPPORTUNITIES

Armed with the skills of both engineering and business disciplines, you will be extremely versatile because most companies today, especially manufacturing firms, require professionals who have not just business skills, but also strong product knowledge. Hence, you will be able to find lucrative career opportunities in the financial, manufacturing, service, and wholesale and retail sectors. Potential jobs include: financial and business analysts, market researchers and analysts, customer sales executives, product marketing executives, quality and process control supervisors, productivity and management systems executives, front line operations managers, client relations officers, and wholesale and retail executives.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 98 credit units |
| Elective Subjects | : min 8 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 134 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EBZ1001 | Business Fundamentals | 1 | 5 |
| EBZ1002 | Principles of Economics | 1 | 4 |
| EEE1006 | Engineering Fundamentals | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| EPZ1001 | Introduction to Processes & Systems | 1 | 4 |
| ESE1005 | Computer Programming | 1 | 4 |
| ESZ1001 | Systems Concepts & Tools | 1 | 4 |
| ESZ1002 | Quantitative Methods | 1 | 4 |
| EBZ2002 | Marketing Intelligence | 2 | 4 |
| EBZ2003 | Engineering Economy | 2 | 4 |
| EBZ2005 | Marketing Concepts & Strategies | 2 | 4 |
| EPZ2001 | Organisational Behaviour | 2 | 4 |
| EQM2001 | Process Management & Innovation | 2 | 4 |
| ESZ2001 | Decision Analysis | 2 | 4 |
| ESZ2002 | Process Optimisation & Improvement | 2 | 4 |
| ESZ2003 | Management Systems & Assessment | 2 | 5 |
| EMF3002 | Manufacturing Logistics & Simulation | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |
| EPZ3001 | Customer Relationship Management | 3 | 4 |
| ESZ3002 | Systems Modelling & Simulation | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EBZ2006 | Service Quality & Management | 2 | 4 |
| ESZ3001 | Supply Chain Management | 3 | 4 |
| EBZ3008 | Technopreneurship | 3 | 4 |
| ESZ3003 | Systems Engineering & Management | 3 | 4 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Clean Energy

*From a small base today, the clean energy sector here is growing rapidly, thanks to several government initiatives and the declining cost of technology. We anticipate significant demand for qualified personnel in the clean energy industry by the time the first cohort graduates from this course in 2012.*

*Christophe Inglin*
*Managing Director*
*Phoenix Solar Pte Ltd*

With increasing environmental concerns such as global warming and the depletion of fossil fuels, the pursuit of alternative clean and green energy sources has become extremely urgent and vital today. Be a part of this global effort to save the earth.

In 2007, the National Research Foundation and the Research, Innovation and Enterprise Council identified the clean energy industry as a key growth engine of the Singapore economy. The sector is growing at a rate of up to 50 percent per year, and is expected to generate an annual output of $1.7 billion by the year 2015.

This course will train you in the various clean energy technologies, including photovoltaic or solar cells, fuel cells, biomass, hydropower and wind energy. Areas that are intricately connected with the utilisation of clean energy, such as battery management system (storage system) in electric vehicles (EV), electrical systems and power distribution, will also be covered. You will also get to use the new state-of-the-art Clean Energy Centre as well as the Class 100 cleanroom located on campus.

## CAREER OPPORTUNITIES

As economies around the world continue in their effort to search for alternative energy sources, the clean energy industry is expected to expand rapidly. In Singapore, the sector is expected to create 7,000 new jobs by the year 2015, spelling bright career prospects for you.

You can also obtain an additional Singapore Certified Energy Manager (SCEM) associate certificate upon graduation, giving you more exciting job opportunities. You can choose a career in the energy efficiency and management service sectors as an energy auditor or an energy management executive, or in the renewable energy sector as an electronics/ electrical assistant engineer or a research associate. There are also bright prospects in the environmental, energy, power utility and electrical service industries, renewable or clean energy companies and research centres, as well as manufacturing and equipment supply companies.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Core Subjects | : 107 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 135 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECE1001 | Fundamentals of Clean Energy | 1 | 4 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1002 | Electronic Devices & Circuits | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EEE1004 | Digital Fundamentals 2 | 1 | 5 |
| EER1001 | Electrical Services for Facilities | 1 | 4 |
| ESE1005 | Computer Programming | 1 | 4 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| EMI2001 | Semiconductor Physics & Devices | 2 | 4 |
| ECE2001 | Energy Conversion & Storage Systems | 2 | 4 |
| ECE2002 | Renewable Energy | 2 | 4 |
| ECE2003 | Fuel Cell Design & Testing | 2 | 4 |
| ECE2004 | Solar Cell & System | 2 | 4 |
| EER2001 | Electrical System & Power Distribution | 2 | 4 |
| EGB2002 | Air Conditioning & Mechanical Ventilation | 2 | 4 |
| EBM3005 | Energy Management & Audit | 3 | 4 |
| ECE3001 | Clean Energy Process Integration | 3 | 4 |
| ECE3003 | Energy Efficiency & Efficient Drive | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Special Electives

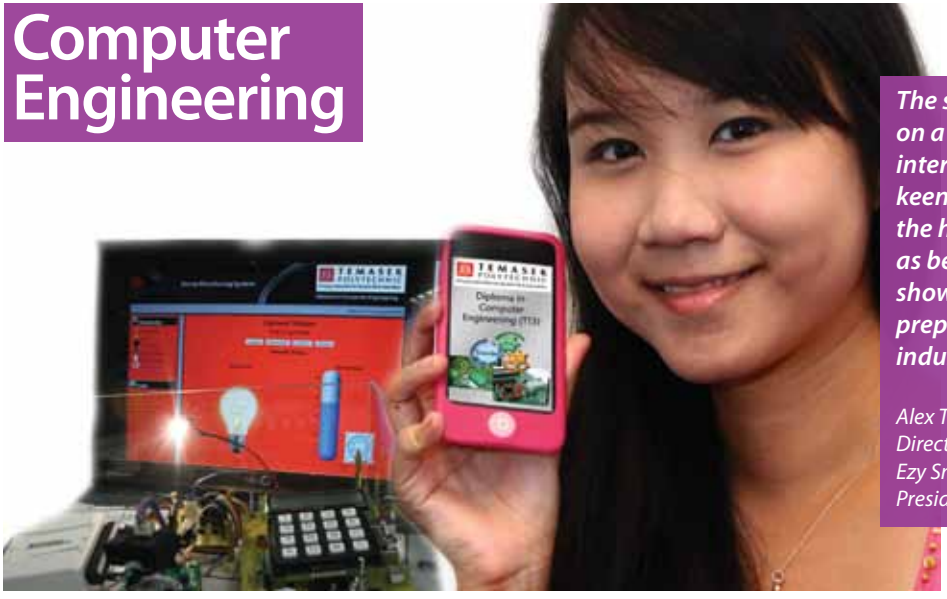
Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Computer Engineering



*The students from this course who worked on a collaboration project during their internship with us, were enthusiastic and keen to learn, and demonstrated not only the hard skills, but also the soft skills such as being able to communicate well. This shows that this diploma course thoroughly prepares students to contribute to the industry, giving them a bright future.*

*Alex Toh*
*Director*
*Ezy Snap Pte Ltd*
*President of Mobile Alliance*

Today, computers are not found only on your desktop or lap; they are everywhere. The field of computer engineering is highly pervasive and is relevant to almost every sector of the economy, from high-tech manufacturing, to finance and business.

Singapore is a fast growing IT hub in the Asia-Pacific region. The latest Intelligent Nation 2015 Master Plan initiative by the Government, as well as recent technological developments have created a need for a new type of engineer for the connected future – an engineer with a range of expertise encompassing hardware, software and hardware-software integration, to provide total solutions.

Computer Engineering is a combination of two disciplines: electronics engineering and computer science, and it is highly industry-relevant and used in all sectors of the new economy.

The course will prepare you to be amongst the few who are fully proficient in hardware and system integration, software development and implementation, and network integration, to become total solution providers. It provides knowledge and skills in computer systems, networking, IT and embedded control systems. The topics covered are challenging and interesting. They encompass software and Internet programming, microcontroller technology, embedded applications, computer interfacing, data acquisition, computer networking and security, and computer systems and architecture.

## CAREER OPPORTUNITIES

Due to the versatility of the skill sets acquired, this course opens doors to wider and better job opportunities in the electronics, Infocomm and IT industries. Upon graduation, you can look forward to careers such as web-based application developers, embedded system application engineers, computer technologists, network system specialists, customer support or sales and marketing engineers.

If you are interested to further your studies, many local and foreign universities offer advanced standing to our graduates for their degree courses. In particular, Nanyang Technological University has granted our graduates direct entry into the second year of degree programmes in Computer Engineering, Computer Science and Electrical and Electronic Engineering.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 99 credit units |
| Elective Subjects | : min 8 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 135 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECC1002 | Networking Fundamentals | 1 | 4 |
| EED1001 | Electronic Prototyping | 1 | 3 |
| EED1002 | Printed Circuit Board Design | 1 | 3 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1002 | Electronic Devices & Circuits | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EEE1004 | Digital Fundamentals 2 | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESE1005 | Computer Programming | 1 | 4 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| EMC2005 | Computer Interfacing | 2 | 4 |
| ESE2004 | Object-oriented Programming | 2 | 5 |
| ECC3004 | Enterprise Web Application | 3 | 4 |
| EMC3002 | Embedded Control & Applications | 3 | 4 |
| EMC3004 | Data Acquisition Systems | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |
| ESE3001 | Database Management System & Design | 3 | 5 |
| ESE3009 | Computer Architecture & Operating Systems | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECC2007 | Networking Infrastructure | 2 | 4 |
| ECC2011 | Network Security Fundamentals | 2 | 4 |
| ESE3006 | ASP .NET Web Programming | 3 | 4 |
| ESE3007 | Computer Game Programming | 3 | 4 |

## Diploma Subjects - Special Electives

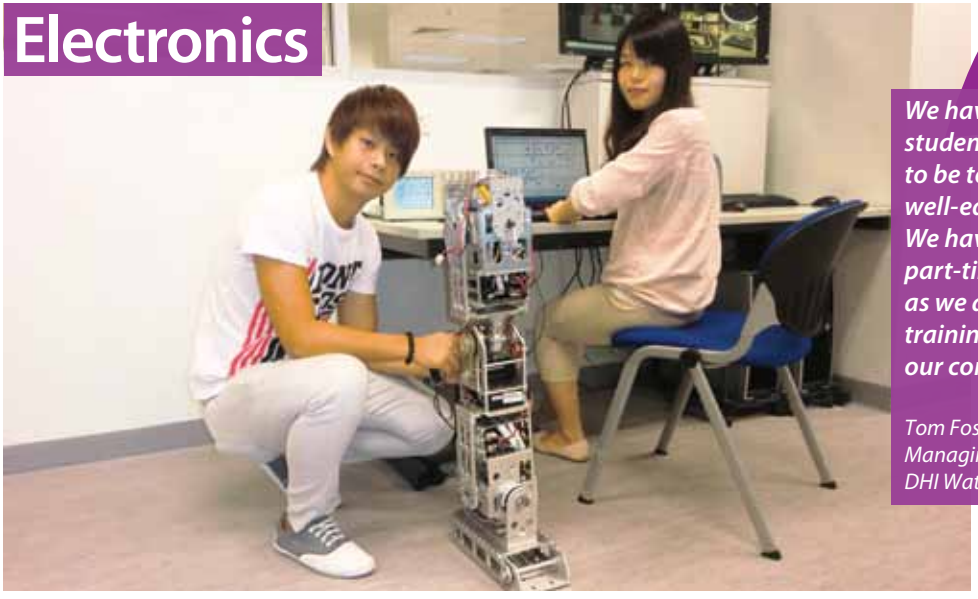
Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Electronics



*We have worked on a project with students from this course, and found them to be technically competent, creative and well-equipped with problem-solving skills. We have also employed one of them on a part-time basis pending his graduation, as we are confident that with his diploma training, he will be able to add value to our company.*

*Tom Foster*
*Managing Director*
*DHI Water & Environment (S) Pte Ltd*

Electronics forms an important part of the everyday operation of homes, offices, healthcare, factories and personal lifestyle. Satellite communication, sophisticated defence systems, medical equipment and multimedia systems are all made possible through electronics. This course will therefore give you tremendous flexibility and width – a springboard to a wide array of career options.

The Economic Development Board of Singapore aims to develop the country into a world-class electronics hub providing technology with end-to-end R&D capabilities and position it as the choice location for companies to create and manage new markets, products, processes technologies and applications.

This course is positioned to be in line with industry goals and trends. It provides you with a solid foundation in the principles and applications of electronic devices, circuits, and systems, so as to equip you to meet the changing needs of the industry.

Special emphasis is placed on embedded systems, networking, telecommunication, and power electronics and control. You will also develop effective communication, problem-solving and teamwork skills to prepare you for the workplace, as well as skills in project planning and management. To be better prepared for the advancements in technology, second-year students can choose to take one of the following Cluster Electives or Options (each of which comprises at least five subjects). These are: Aerospace Electronics, Networking, Robotics or Engineering Business.

## CAREER OPPORTUNITIES

Singapore's vision is to become a world-class electronics hub with global leadership in providing technology in manufacturing solutions, as well as in the creation and management of new products, applications and markets. New jobs will be created for knowledge-workers as the industry moves into high-end design work and high-end manufacturing and marketing activities.

You will have excellent and flexible career prospects in aerospace, telecommunication, instrumentation and control, computing, consumer and industrial electronics industries. Your job areas may include product design, development & testing, process improvement, maintenance, marketing, and sales and services.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 55 credit units |
| Option / Elective Subjects | : 50 to 53 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 133 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED1001 | Electronic Prototyping | 1 | 3 |
| EED1002 | Printed Circuit Board Design | 1 | 3 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1002 | Electronic Devices & Circuits | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EEE1004 | Digital Fundamentals 2 | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESE1005 | Computer Programming | 1 | 4 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Aerospace Electronics** | | | |
| EAE1002 | Electrical Fundamentals | 1 | 4 |
| EAE1003 | Electronic Fundamentals & Systems | 1 | 4 |
| EAE1004 | Fundamentals of Aeronautical Science | 1 | 4 |
| ECC1002 | Networking Fundamentals | 1 | 4 |
| EAE2002 | Aviation Legislation & Human Factors | 2 | 4 |
| EEE2001 | Integrated Circuit Applications | 2 | 4 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| ETW2001 | Telecommunication Principles | 2 | 5 |
| EAE3006 | Radio Fundamentals & Navigation Systems | 3 | 4 |
| EAE3007 | Propulsion & Instrument Systems | 3 | 4 |
| EAE3009 | Basic Aerodynamics | 3 | 3 |
| **Engineering Business** | | | |
| EBZ1001 | Business Fundamentals | 1 | 5 |
| EBZ1002 | Principles of Economics | 1 | 4 |
| ECC1002 | Networking Fundamentals | 1 | 4 |
| ECC1003 | Web Design & Development | 1 | 4 |
| ESZ1002 | Quantitative Methods | 1 | 4 |
| ETW1001 | Telecommunications & Systems | 1 | 4 |
| EBZ2002 | Marketing Intelligence | 2 | 4 |
| EBZ2005 | Marketing Concepts & Strategies | 2 | 4 |
| EBZ2006 | Service Quality & Management | 2 | 4 |
| ECS2002 | Engineering Business Communication | 2 | 4 |
| EBM3003 | Financial Management & Forecasting | 3 | 4 |
| EBZ3008 | Technopreneurship | 3 | 4 |
| EPZ3001 | Customer Relationship Management | 3 | 4 |

## Diploma Subjects - Cluster Elective Subjects

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Networking** | | | |
| ECC1002 | Networking Fundamentals | 1 | 4 |
| ECC2007 | Networking Infrastructure | 2 | 4 |
| ECT2001 | Circuits & Control Systems | 2 | 5 |
| EEE2001 | Integrated Circuit Applications | 2 | 4 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| ETW2001 | Telecommunication Principles | 2 | 5 |
| ECC3001 | Internetworking Technologies | 3 | 4 |
| ECC2011 | Network Security Fundamentals | 3 | 4 |
| EEE3001 | Advanced Electronics | 3 | 4 |
| EEE3004 | Power Electronics & Drives | 3 | 4 |
| EMC3002 | Embedded Control & Applications | 3 | 4 |
| **Robotics** | | | |
| ECC1002 | Networking Fundamentals | 1 | 4 |
| ECT2001 | Circuits & Control Systems | 2 | 5 |
| EEE2001 | Integrated Circuit Applications | 2 | 4 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| ETW2001 | Telecommunication Principles | 2 | 5 |
| EMC3004 | Data Acquisition Systems | 2 | 4 |
| ECT3002 | Analytical Robotics | 3 | 4 |
| ECT3003 | Robotic Control Systems | 3 | 4 |
| EEE3001 | Advanced Electronics | 3 | 4 |
| EEE3004 | Power Electronics & Drives | 3 | 4 |
| EMC3002 | Embedded Control & Applications | 3 | 4 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Green Building & Sutainability

> *The re-launching of this course to emphasise today's green initiatives and the worldwide push to make buildings more environment-friendly is definitely a step in the right direction. We are confident that this course will produce the necessary skilled manpower for this emerging industry with great potential."*
>
> *Tan Tian Chong*
> *Director, Technology Development*
> *Building & Construction Authority*

"Going Green" is today's catch phrase, reflecting a growing worldwide concern for the environment. One focus area has been green buildings that are designed to reduce the impact of the built environment on human health and our natural surroundings.

New buildings – both commercial as well as residential – now come with not just automated high-tech gadgets, but also energy-saving features. This focus on environment-friendly buildings is not just a local industry trend; it is part of a global push by governments worldwide to create an environmentally sustainable infrastructure that will support the emerging lifestyles of a new generation of people with higher expectations of how they live, work, and play.

This course will equip you with the knowledge of green building technologies and practices, including indoor air quality and the efficient use of energy and natural resources. Subjects such as Total Building Performance and Energy Audit and Measurements will give you the fundamental knowledge of good green building practices and designs.

## CAREER OPPORTUNITIES

With the launch of the Building and Construction Authority's rating system to evaluate a building's environmental friendliness, building and property owners are now striving to adopt green building technologies and the best practices in environmental design and construction.

Green buildings currently make up only 12 percent of buildings in Singapore, but come 2030, that figure is targeted to reach 80 percent of all buildings, driven by a new S$600 million government fund to "green" all existing buildings. This alone gives an indication of the enormous amount of retrofitting that will need to be done to buildings in our country, creating abundant job opportunities and a sustainable demand for green building professionals.

You can look forward to careers in the energy market, sustainable design or building design industries, and find exciting job opportunities as an energy consultant, green building consultant, eco-city planner/ designer, green marketing executive or environmentally sustainable design (ESD) engineer. You can also further your qualifications by getting a bachelor's or master's degree in the fields of sustainable design, sustainability in built environment and architectural-related programmes.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 109 credit units |
| Elective Subjects | : min 22 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 137 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 2 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 3 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 3 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EBD1001 | Computer-Aided Design & Building Specifications | 1 | 5 |
| ECE1001 | Fundamentals of Clean Energy | 1 | 4 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1005 | Digital Fundamentals | 1 | 5 |
| EER1001 | Electrical Services for Facilities | 1 | 4 |
| EGB1001 | Introduction to Green Development | 1 | 4 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESE1005 | Computer Programming | 1 | 4 |
| EBD2008 | Building Information Modelling | 2 | 4 |
| EBM2004 | Project Management | 2 | 4 |
| EBM2005 | Fire & Life Safety Management | 2 | 4 |
| EBM2006 | Building Management Systems | 2 | 4 |
| EBT2005 | Building Control Systems | 2 | 5 |
| EGB2002 | Air Conditioning & Mechanical Ventilation | 2 | 4 |
| EGB2003 | Hydraulics & Drives | 2 | 4 |
| EBM3005 | Energy Management & Audit | 3 | 4 |
| EFM3001 | Sustainable Facility Management | 3 | 4 |
| EGB3002 | Green Building Modelling & Simulation | 3 | 4 |
| EGB3003 | Total Building Performance | 3 | 4 |
| EGB3004 | Sustainable Design | 3 | 4 |
| EGB3001 | Green Strategies for Building Systems | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Infocomm & Network Engineering

> ***Students from this course have been contributing positively to our 'FutureSchools in Singapore' project. We have found their ideas to be valuable and refreshing. This testifies to the value of the training provided in this course, as it bridges the gap between technology, pedagogy and desired learning outcomes.***
>
> *Jeremy Foo*
> *General Manager*
> *ST Electronics (Training & Simulation Systems) Pte Ltd*

New social media, cloud computing, digital media and entertainment, smart-phones and tablets – these are some of today's buzzwords. These technologies are all enabled by Infocomm, a specialised field that harnesses the use of IT, communications and networking technologies.

The Infocomm sector is a key contributor to Singapore's economy. Infocomm has also enhanced Singapore's competitiveness by raising productivity and transforming business processes. This course will empower you to tap the huge market for new Infocomm services and applications in industries such as healthcare, education, hospitality, retail and tourism, and financial services. It enables you to harness the latest Infocomm technologies, and apply them to meet Singapore's evolving communication needs. The curriculum provides a comprehensive, broad-based and multi-disciplinary education devoted to information technologies, network and communications engineering.

The most up-to-date training facilities and teaching materials supported by key industry players are the hallmarks of this course. As there are many business opportunities in the Infocomm market for new services and applications, it also incorporates business skills to provide you with the know-how of being a technopreneur. You will have opportunities to work on industry-collaboration projects that will make your learning more challenging and practice-oriented.

To be further prepared for the Infocomm industry, final-year students will choose one of two Cluster Electives: (1) Networking and Communications or (2) Web and Game Development.

## CAREER OPPORTUNITIES

Under the Infocomm Development Authority's Intelligent Nation 2015 (iN2015) and Next Generation National Broadband Network (Next Gen NBN), Singapore aims to increase the value-add of the Infocomm industry to $26 billion, and Infocomm export revenue to $60 billion. An additional 80,000 Infocomm jobs would be created within the next decade.

With a strong technical foundation, you will be equipped to work in the IT, computer networking and communications industries. You can work as a programming and applications/ solution developer, system/ software designer and administrator, multimedia system engineer, network system engineer, web services specialist, wireless Internet service developer, or Infocomm sales and marketing executive.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 93 credit units |
| Elective Subjects | : min 12 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 133 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECC1002 | Networking Fundamentals | 1 | 4 |
| ECC1003 | Web Design & Development | 1 | 4 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESE1005 | Computer Programming | 1 | 4 |
| ETW1001 | Telecommunications & Systems | 1 | 4 |
| ECC2007 | Networking Infrastructure | 2 | 4 |
| ECC2010 | Mobile Device Applications Development | 2 | 5 |
| ECC2011 | Network Security Fundamentals | 2 | 4 |
| ESE2004 | Object-oriented Programming | 2 | 5 |
| ESE2007 | Software Design Process | 2 | 4 |
| ESE2008 | New Media Marketing Applications | 2 | 4 |
| ETW2005 | Wireless Technology | 2 | 4 |
| ECC3004 | Enterprise Web Application | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |
| ESE3001 | Database Management System & Design | 3 | 5 |
| ESE3006 | ASP.NET Web Programming | 3 | 4 |

## Diploma Subjects - Elective Subjects (Taken at level 2.2) - Choose 1 subject

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EDM1001 | Modelling & Animation | 1 | 5 |
| ECC3001 | Internetworking Technologies | 3 | 4 |

## Diploma Subjects - Elective Subjects (Taken at level 3.2) - Choose 1 cluster

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Cluster 1 - Networking & Communications** | | | |
| ETW3001 | Mobile Communications | 3 | 4 |
| ETW3010 | Multimedia Network & Services | 3 | 4 |
| **Cluster 2 - Web & Game Development** | | | |
| ESE3007 | Computer Game Programming | 3 | 4 |
| ESE3008 | Web Services Development | 3 | 4 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Integrated Facility Management

*This course has an outstanding faculty, curriculum, student body, as well as facilities. The Commission on Academic Affairs of IFMA is impressed with the technical depth of this IFM programme.*

*Charles M Claar*
*Commission on Academic Affairs*
*International Facility Management Association (IFMA) Foundation*

Integrated Resorts, airports, business towers, factories, shopping complexes, hospitals, schools – these facilities house an overwhelming amount of human activity. Who are the people who manage these facilities to ensure that businesses benefit? Who provides residents with the greatest human comfort at the least cost to the environment? Welcome to the world of Facility Management.

Facility Management encompasses multiple disciplines to ensure functionality of the built environment by integrating people, places, processes and technology. In this course, you will be trained in the skills of facility management with an integrated, strategic and sustainable mind-set, and you will be equipped to meet the challenges of different kinds of facilities. You can also take additional Cluster Electives in two very promising industries: Aviation Facilities and Hospitality Facilities.

As the first diploma course in Singapore dealing with facility management for the hospitality and aviation industry, and also the first diploma in the world to be accredited by IFMA Foundation as an Accredited Degree Programme, this course will give you a worldwide competitive edge.

## CAREER OPPORTUNITIES

Armed with multi-disciplinary skills, you will find employment in the facilities management or design management teams in the airport, hospitality and tourism, events and conventions, leisure and entertainment, integrated resorts, business and financial sectors.

The competencies you will develop will enable you to obtain numerous certifications recognised by the industry along with your diploma. These include the Facility Management Professional (FMP) certification by the International Facility Management Association (IFMA), the Fire Safety Manager (FSM) certification by the Singapore Civil Defence Force (SCDF), the Certified Associate in Project Management (CAPM) certification by the Project Management Institute (PMI), the Certification in Business Continuity Management by the Business Continuity Management Institute (BCMI) as well as Associate Certified Project Engineer (Assoc. CPE) certification from the Institution of Engineers Singapore (IES).

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on “Admission and Requirements”. For international students, please refer to the section on “Information for International Students”.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 96 credit units |
| Elective Subjects | : min 12 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 136 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EBD1001 | Computer-Aided Design & Building Specifications | 1 | 5 |
| EBM1002 | Real Estate Business | 1 | 4 |
| EBT1003 | Facilities Operations & Maintenance | 1 | 4 |
| EER1001 | Electrical Services for Facilities | 1 | 4 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESZ1002 | Quantitative Methods | 1 | 4 |
| EBD2007 | Human-Centred Space Planning | 2 | 4 |
| EBD2005 | Security & Surveillance | 2 | 4 |
| EBD2008 | Building Information Modelling | 2 | 4 |
| EBM2004 | Project Management | 2 | 4 |
| EBM2005 | Fire & Life Safety Management | 2 | 4 |
| EBZ2006 | Service Quality & Management | 2 | 4 |
| EFM2004 | Contract Management | 2 | 4 |
| EGB2002 | Air Conditioning and Mechanical Ventilation | 2 | 4 |
| EGB3003 | Total Building Performance | 3 | 4 |
| EBM3003 | Financial Management & Forecasting | 3 | 4 |
| EBM3004 | Business Continuity Management | 3 | 4 |
| EBM3005 | Energy Management & Audit | 3 | 4 |
| EFM3001 | Sustainable Facility Management | 3 | 4 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Hospitality Cluster** | | | |
| BHT1010 | Introduction to Hospitality & Tourism | 1 | 4 |
| EFM2003 | Integrated Resort Management | 1 | 4 |
| BHT2003 | Club & Resort Business | 2 | 4 |
| **Aviation Cluster** | | | |
| EAM1001 | Airport Operations& Management | 1 | 4 |
| EAM1002 | Airport Administration | 1 | 4 |
| EAT2001 | Airport Systems 1 | 2 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Mechatronics

*This course equips you with the fundamental knowledge and skill in integrating mechanical and electronics using computer control, so that you will definitely be well prepared to establish a career in today's modern industry. I can confidently say that, by graduating from this course, opportunities for success are open to you.*

*Robson Tan*
*Managing Director*
*NICAE Trading & Industrial Supplies*

In this era of productivity, engineering employers value graduates with knowledge of both mechanical engineering and electronics, and their ability to integrate them with intelligent control systems. This is the versatility that you will get from this course.

Mechatronics is the only discipline of engineering that gives you such versatility. This course begins by giving you a solid foundation in fundamental engineering knowledge and skills, which will then expand into core competency areas such as automation, robotics, mechatronics design, programmable logic controllers, electro-mechanical, pneumatics, vision systems, computer numerical control, sensors integration, microcontroller programming, and control engineering.

If you are keen to pursue a career in the aerospace industry, you may take the Aerospace Engineering option offered during the second year of your course. Alternatively, you may, in your final year, choose to take any of the two Cluster Electives involving key areas of technology: Process Control and Automation, or Robotics.

By applying these knowledge and skills in product design and automation processes, Mechatronics gives you the flexibility to work in a wide range of highly skilled industries such as aerospace, automation, clean room, manufacturing, medical, robotics, R&D support and wafer fabrication.

## CAREER OPPORTUNITIES

The opportunities and benefits to be gained from designing smart products and automated systems are huge, and will continue to grow rapidly in the coming years. You will excel in a wide spectrum of industries as diverse as electronics, manufacturing, food processing, pharmaceuticals, chemicals and aviation. You may also choose to do R&D work, equipment design and development, planning, project management, as well as technical sales and marketing, qualifying you to work in high-tech manufacturing environments and the growing petrochemical industry.

Your diploma will also enable you to take up local and overseas degree programmes in electronic, mechanical or computer engineering.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: For safety reasons of staff and students, applicants should ensure that they do not suffer from medical conditions such as epilepsy or hearing deficiency.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 96 credit units |
| Elective Subjects | : min 12 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 136 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EDR1003 | Engineering Drawing | 1 | 4 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1002 | Electronic Devices & Circuits | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EEE1004 | Digital Fundamentals 2 | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EME1002 | Statics & Strength of Materials | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESE1005 | Computer Programming | 1 | 4 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| EME2004 | Programmable Automation | 2 | 4 |
| EME2007 | Machining Technology | 2 | 4 |
| EME2008 | Principles of Dynamics | 2 | 5 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Aerospace Engineering** | | | |
| EAE1002 | Electrical Fundamentals | 1 | 4 |
| EAE1003 | Electronic Fundamentals & Systems | 1 | 4 |
| EAE2001 | Aerospace Physics | 2 | 4 |
| EAE2002 | Aviation Legislation & Human Factors | 2 | 4 |
| EME2006 | Engineering Materials | 2 | 4 |
| EAE3008 | Gas Turbine Engine | 3 | 4 |
| EAE3009 | Basic Aerodynamics | 3 | 3 |
| **Process Control & Automation** | | | |
| ECC1002 | Networking Fundamentals | 1 | 4 |
| ECT2001 | Circuits & Control Systems | 2 | 5 |
| ECT2004 | Instrumentation & Computer Control | 2 | 4 |
| EED2007 | Mechatronics Design Project | 2 | 4 |
| EEE3004 | Power Electronics & Drives | 3 | 4 |
| EMF3004 | Automation & Machine Vision | 3 | 4 |
| EMI3005 | Cleanroom Equipment & Technology | 3 | 4 |
| **Robotics** | | | |
| ECC1002 | Networking Fundamentals | 1 | 4 |
| ECT2001 | Circuits & Control Systems | 2 | 5 |
| EED2007 | Mechatronics Design Project | 2 | 4 |
| EEE3004 | Power Electronics & Drives | 3 | 4 |
| ECT3002 | Analytical Robotics | 3 | 4 |
| ECT3003 | Robotic Control Systems | 3 | 4 |
| EMC3004 | Data Acquisition Systems | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Media & Communication Technology

> *We are impressed with your interns from this course who helped our company to create iPhone apps. The students not only accomplished their given task, but they were also able to use their creative ideas to incorporate a fresh "look and feel" for the apps. We are confident that this course optimally equips you with the right skills and attitude, giving you a bright future.*
>
> *Margaret Kho*
> *AVP (Mobile Media Solutions)*
> *MediaCorpPte Ltd*

Interactive high definition TV (HDTV), Internet protocol television (IPTV), and iPhones – these are just some of the latest and hottest technologies within the umbrella of media and communication technology, which is set to become the next big thing in today's global economy.

This course enables you to tap into the emerging market created by the rise of such new technology in the field of communication. It enables you to participate in this fast expanding field, by equipping you with the skills to handle and manage the technology that is so vital in this sector, namely, digital communication, wireless devices, broadband, media design and other emerging media and telecommunication technologies.

You will get a sound foundation in electronics, communications and digital media, with emphasis on a "hands-on, minds-on" approach. The first year of the course is common with the Electronics course. In your second year, you will take on subjects covering the fundamentals of media and communication technology. In your third year, you will refine your specialisation by choosing elective subjects in areas such as multimedia networking and applications, wireless and mobile communications, and digital broadcasting.

## CAREER OPPORTUNITIES

The Singapore government's Next Generation National Infocomm Infrastructure plan, together with its commitment to put Singapore at the forefront of the interactive digital media (IDM) revolution worldwide, will create excellent career opportunities for graduates of this course. With the increasing shift towards wireless, digital and broadband applications in digital media today, the demand for media and communication technology professionals is therefore expected to increase tremendously in the near future, promising you excellent job prospects.

Exciting careers await you in the fields of designing, manufacturing, sales and marketing, service and maintenance or technical support in the communications, digital media, Infocomm or broadcasting industries.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: For safety reasons of staff and students, applicants should ensure that they do not suffer from medical conditions such as epilepsy or hearing deficiency.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 96 credit units |
| Elective Subjects | : min 12 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 136 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED1001 | Electronic Prototyping | 1 | 3 |
| EED1002 | Printed Circuit Board Design | 1 | 3 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1002 | Electronic Devices & Circuits | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EEE1004 | Digital Fundamentals 2 | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESE1005 | Computer Programming | 1 | 4 |
| ECC1002 | Networking Fundamentals | 2 | 4 |
| ECC2007 | Network Infrastructure | 2 | 4 |
| EDM1001 | Modelling & Animation | 2 | 5 |
| EDM1002 | Fundamentals of Digital Media Processing | 2 | 4 |
| EED2005 | Integrated Project | 2 | 4 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| ETW2001 | Telecommunication Principles | 2 | 5 |
| ETW2007 | Digital Communications | 2 | 5 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EDM2004 | Advanced Digital Animation & Special Effects | 2 | 4 |
| ECC3001 | Internetworking Technologies | 3 | 4 |
| ETW3001 | Mobile Communications | 3 | 4 |
| ETW3010 | Multimedia Network & Services | 3 | 4 |
| EWN3001 | Wireless Area Network Technologies | 3 | 4 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Microelectronics

*I am pleased to note that this course thoroughly prepares students for a career in the semiconductor industry by providing first-hand knowledge of semiconductor processes, as well as a very meaningful internship programme made possible because of the course's strong links and partnerships with wafer-fab plants in Singapore.*

*Dr Lap Chan*
*Fellow, University Research Institute*
*Globalfoundries Singapore Pte Ltd*

Dressed in spacesuit-like overalls from head to toe, you work in air-purified cleanrooms while fabricating microelectronic devices, peering into powerful microscopes examining tiny components called integrated circuit chips, and exploring nanotechnology. This is one of the many experiences you will enjoy as a Microelectronics student.

Microelectronics is a field of engineering that deals with the study of the miniaturisation of electronic components. It involves the design, fabrication and testing of microcircuits, also known as integrated circuit (IC) chips. These ICs are used extensively in computers, telecommunication equipment, audiovisual products, space equipment and other electronic products.

This course provides you with a strong foundation in the electronics and microelectronics disciplines. The first year is common with the Electronics course. In your second and third years, apart from the core electronics subjects, this course also branches into specific microelectronics areas such as computer-aided IC chip design and layout, IC chip making or wafer fabrication technology, IC chip packaging process, IC chip test engineering, and IC chip failure analysis and reliability. There will be laboratory exercises, computer-aided design assignments, mini-projects, opportunities to handle high-tech microelectronics equipment and a major project. You will also get to use our Class-100 Cleanroom and explore the field of nanotechnology, micro fuel cell technology and solar cell technology.

## CAREER OPPORTUNITIES

You will be equipped with technical skills to gain proficiency in the use of basic electronics and microelectronics-related equipment, as well as effective communication skills. You will also be proficient in analogue and digital systems. These skills will be your springboard to exciting careers with good starting salaries in multi-billion dollar wafer fabrication plants, IC chip assembly and test companies, and IC chip design centres. Job prospects are attractive and diverse, covering design, technical support, manufacturing, sales and marketing, as well as service and maintenance.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: For safety reasons of staff and students, applicants should ensure that they do not suffer from medical conditions such as epilepsy or hearing deficiency.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 102 credit units |
| Elective Subjects | : min 8 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 138 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ECS1003 | Writing & Oral Presentation | 1 | 2 |
| ECS1004 | Introduction to Effective Communication | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| ECS2003 | Organisational Communication | 2 | 2 |
| ESI2001 | Student Internship Programme | 2 | 8 |
| ECS3002 | Career Communication | 3 | 2 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED1001 | Electronic Prototyping | 1 | 3 |
| EED1002 | Printed Circuit Board Design | 1 | 3 |
| EEE1001 | Circuit Analysis | 1 | 6 |
| EEE1002 | Electronic Devices & Circuits | 1 | 6 |
| EEE1003 | Digital Fundamentals 1 | 1 | 5 |
| EEE1004 | Digital Fundamentals 2 | 1 | 5 |
| EMA1001 | Engineering Mathematics 1 | 1 | 5 |
| EMA1002 | Engineering Mathematics 2 | 1 | 4 |
| EPL1003 | Problem-solving & Process Skills | 1 | 2 |
| ESE1005 | Computer Programming | 1 | 4 |
| ECT2001 | Circuits & Control Systems | 2 | 5 |
| EMA2001 | Engineering Mathematics 3 | 2 | 5 |
| EMC2001 | Microcontroller Technology | 2 | 5 |
| EMI2001 | Semiconductor Physics & Devices | 2 | 4 |
| EMI2002 | Wafer Fabrication Process Technology | 2 | 5 |
| EMI2003 | Digital IC Design & Applications | 2 | 5 |
| EMI2005 | IC Packaging & Failure Analysis | 2 | 4 |
| EMI2007 | Analogue IC Design & Applications | 2 | 5 |
| EMI2008 | IC Process Integration | 2 | 4 |
| EMI3001 | Microelectronics Test & Measurement | 3 | 5 |
| EMP3001 | Major Project | 3 | 12 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EMI3002 | Display Technology | 3 | 4 |
| EMI3004 | Materials Science | 3 | 4 |
| EMI3005 | Cleanroom Equipment & Technology | 3 | 4 |
| EMI3007 | Nanotechnology | 3 | 4 |
| EMI3008 | IC Layout & Physical Design | 3 | 4 |

## Diploma Subjects - Special Electives

Students can opt to take Special Electives when offered. These optional subjects, taken in addition to the diploma option subjects, aim to help stretch the potential and meet the aspirations of students.

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EED3009 | Special Project 1 | 3 | 2 |
| EED3010 | Special Project 2 | 3 | 2 |
| EED3011 | Higher Engineering Skills 1 | 3 | 2 |
| EED3012 | Higher Engineering Skills 2 | 3 | 2 |
| EMA3001 | Higher Engineering Mathematics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Special Programmes

The School of Engineering also offers three special common gateway programmes which allow you to decide on the course to take after one or two semesters. You will graduate with the same diploma as students who had enrolled for a particular course right from the start.

## COMMON ENGINEERING PROGRAMME

This is a single gateway to ten different engineering diploma courses – the widest choice currently offered by any polytechnic. You do a common first semester, and choose your diploma course only in your second semester, which means you have more time to find out your strengths and interests before deciding. So if you are undecided on the engineering course to take, this flexible programme would suit you.

## ELECTRICAL & ELECTRONIC ENGINEERING (EEE) PROGRAMME

You will do a common first year, and then, after observing the economy and industry trends, choose one out of the five EEE-related courses to do from your second year onwards. All five programmes will gear you ideally for further studies in EEE-related fields at local and overseas universities.

## MECHATRONICS & AEROSPACE PROGRAMME

You will branch into either the Mechatronics or Aerospace Engineering course in your second semester. Since these two fields are closely-related, you will be well positioned to keep your options open. You also get a second chance to enter the highly-popular Aerospace Engineering course using your first semester polytechnic results.

# Special Programmes

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

Do note that you will take the same three years to complete your course, and upon graduation, you will receive the same diploma as your peers who had enrolled for a particular course right from the start.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any one of the following subjects^ | Grades 1 - 6 |
| Any two other subjects, excluding CCA | – |

** Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the English Language subject (e.g. Bahasa Inggeris).*

*^ Biology, Chemistry, Combined Science, Design & Technology, Engineering Science, Physical Science, Physics, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry).*

*Note: Any special entry requirements for specific diploma courses will also apply if you choose that course.*

# Subject Synopses

### DNG1342 DRAWING ESSENTIALS
This subject introduces the basics of sketching and drawing techniques. A primary component of this module is to understand the importance of proportion in drawing and the effect of light and its different tones on various surfaces.

### DNG1344 3D ART FUNDAMENTALS
This subject introduces the fundamentals of art through a variety of 3D techniques and media. It focuses on inculcating visual and observational skills through the tactile qualities in texture and form by feeling and working with different 3D materials.

### DNG1345 IDEATION
This subject introduces you to some idea generation, analysis and synthesis techniques within a problem-solving framework. Through these techniques, you will explore and develop fluidity of thought as well as an analytical mind. This subject introduces visual literacy through which you develop your personal visual language to communicate a great variety of concepts. You will also develop and demonstrate your aesthetic awareness and design sensibility.

### DNG2339 INTERFACE DESIGN 1
This subject introduces the basic principles of graphical user interface (GUI) and user experience design. It focuses on the basic rules of visual information organisation and hierarchy, and explores the process of navigation on screen. It examines the choice of appropriate styles and graphic treatment for the intended audience, and the use of conceptual models for creating appropriate user experience.

### DNG2347 INTERFACE DESIGN 2
This subject builds upon Interface Design 1. It develops and deepens the understanding of GUI and user experience design. It focuses on the user interface of content, applications and media delivered on different platforms, and explores related emerging technologies. It also examines different ways of user testing and the use of prototypes in the interface design process.

### EAD1001 INTRODUCTION TO CIVIL AVIATION
This module provides an overview of the aviation industry and introduces the key concepts and interaction of components in the aviation system including airports, airlines, supporting systems and authorities. It also touches on the history and the role of key players in the aviation industry.

### EAE1002 ELECTRICAL FUNDAMENTALS
This subject provides you with broad-based knowledge on electrical theories, components and devices. It also covers electrical machines. In addition, you will be equipped with the knowledge that is expected under the Singapore Airworthiness Requirements (SAR66), so that you will be competent in getting your aircraft maintenance certification later on.

### EAE1003 ELECTRONIC FUNDAMENTALS & SYSTEMS
This subject covers the basics of semiconductors, printed circuit boards, servomechanisms, electronic instrument systems, logic circuits, fibre optics, electronic displays, electronic sensitive devices, electromagnetic environment and digital aircraft systems. In addition, you will be equipped with the knowledge that is expected under the Singapore Airworthiness Requirements (SAR-66), so that you will be competent in getting your aircraft maintenance certification later on.

### EAE1004 FUNDAMENTALS OF AERONAUTICAL SCIENCE
This subject gives a broad overview of the basic concepts involved in aeronautical science. Beginning with units for different quantities, the subject covers mechanical forces, principles of moments, stress and strain, properties of solids, fluids and gases, simple harmonic motion, momentum and energy, gyroscopic principles, viscosity and compressibility, heat capacity and heat transfer, laws of thermodynamics, latent heat, principles of light, lenses & mirrors and fibre optics. Transverse and longitudinal waves, intensity and pitch of sound, and vibrating strings and pipes are also included. The syllabus is tailored to follow all topics from the Singapore Airworthiness Requirements (SAR-66) on Physics (Module M2).

### EAE1005 ENGINEERING DESIGN
This subject applies elementary engineering principles to the design and selection of common mechanical elements and systems. You will have opportunities to explore computer-aided features, and use computer-aided design (CAD) tools for basic three-dimensional (3D) modelling and drafting of design document. It also introduces design considerations in geometric dimensioning and tolerancing, limits and fits, and machining.

### EAE2001 AEROSPACE PHYSICS
This subject consists of four principal areas. Fluid dynamics covers static, dynamic and total pressure, and Bernoulli's theorem. Thermodynamics covers property of ideal gas, heat and Laws of Thermodynamics. Optics covers the reflection and refraction of light. Wave motion and sound covers mechanical waves, interference phenomena, speed of sound, production of sound and Doppler effect. The syllabus is based on the Singapore Airworthiness Requirements (SAR-66) Module 2 on Physics.

### EAE2002 AVIATION LEGISLATION & HUMAN FACTORS

The subject provides basic knowledge and understanding of aviation legislation and human factors for ab initio engineers studying for their Singapore Airworthiness Requirements (SAR-66) aircraft maintenance licences. Knowledge of this subject has a significant impact on the safety standards and responsibilities expected of the holder of an aircraft maintenance licence.

### EAE3006 RADIO FUNDAMENTALS & NAVIGATION SYSTEMS

This subject introduces basic concepts of radio theory and navigation systems. It covers the fundamentals of communication systems used in aircraft communication, including intra-aircraft communication and includes system and subsystem level coverage of different navigation systems such as Inertia Navigation System (INS), Global Positioning System (GPS), Automatic Direction Finder (ADF) and Distance Measuring Equipment (DME). It also covers basic concepts and operation of different landing systems such as Instrument Landing System (ILS) and Microwave Landing System (MLS), and fundamentals of RADAR and its application in weather detection and Air Traffic Control transponder. The syllabus is tailored to include some topics from the Singapore Airworthiness Requirements (SAR-66) on Aircraft Aerodynamics, Structures and Systems (Module M13).

### EAE3007 PROPULSION & INSTRUMENT SYSTEMS

This subject introduces the basic constructional arrangement and operation of various turbine engines used on aircrafts, as well as the operation of various instruments or systems used to measure the aircraft's engine parameters and the engine fuel control system as specified under the Singapore Airworthiness Requirements - Part 66 standard. In addition, this subject also covers the basic principles and operations of various systems such as pitot–static systems, ground proximity warning systems, air data computer system, electronic instrument systems, compasses and gyroscopes. The syllabus is tailored to follow all topics from the Singapore Airworthiness Requirements (SAR-66) on Propulsion (Module M14) and some topics from the Singapore Airworthiness Requirements (SAR-66) on Aircraft Aerodynamics, Structures and Systems (Module M13).

### EAE3008 GAS TURBINE ENGINE

This subject equips you with basic technical knowledge of aircraft propulsion methods, thermodynamic cycles, combustion, gas turbine engines, effects of atmospheric variations (temperature, density, pressure altitude) on engine auxiliary systems (such as fuel system, lubrication system, ignition, starting, fire protection and auxiliary power unit), and current developments in propulsion systems. The syllabus is aligned with the Singapore Airworthiness Requirements (SAR-66) Module M15 on Gas Turbine Engine.

### EAE3009 BASIC AERODYNAMICS

This subject introduces the principles of aerodynamics and flight controls. It is designed to give a good balance between theoretical knowledge with applications using classroom lessons, wind tunnel and computational fluid dynamics experiments. The syllabus includes all topics in the Singapore Airworthiness Requirements (SAR-66) Module M08 on Basic Aerodynamics.

### EAE3010 ELECTRICAL POWER & ONBOARD SYSTEMS

This subject introduces system and subsystem level coverage on the electrical power systems of a commercial aircraft. These include batteries installation and operation, AC power generation and regulation, AC to DC and DC to AC conversion, emergency power generation and external/ ground power systems. The requirements and operation of electronic emergency equipment and cabin entertainment equipment within the aircraft are also included. Lighting systems on aircrafts and the operation of the Central Maintenance Computer System, data loading system, electronic library system and structure monitoring system are also discussed. The syllabus is tailored to include some topics from the Singapore Airworthiness Requirements (SAR-66) on Aircraft Aerodynamics, Structures and Systems (Module M13).

### EAE3011 AIRCRAFT STRUCTURES & FLIGHT CONTROL

This subject introduces the theory of flight through aeroplane aerodynamics and flight controls. It will discuss high speed flight and rotary wing aerodynamics. Aircraft structural systems, zonal and station identification, electrical bonding and lightning strike provision will also be covered. The fundamentals of automatic flight control, its working principles and command signal processing will be discussed in detail. Automatic landing systems and fly by wire systems will also be introduced. The syllabus is tailored to include some topics from the Singapore Airworthiness Requirements (SAR66) on Aircraft Aerodynamics, Structures and Systems (Module M13).

### EAE3012 AIRCRAFT TEST & MEASUREMENT

This subject introduces the common practices in test and measurement procedures and methodologies in the avionics industry. This includes learning the functions of various types of low-frequency and radio-frequency equipments used in testing. The principles and techniques of performing various types of measurements will be covered in details. Equipment calibration and traceability concepts will also be introduced.

### EAE3013 HIGHER AEROSPACE TRAINING

This subject allows you to work in Singapore Airworthiness Requirements - Part 145 Approved Maintenance Organisations, Part 147 Approved Maintenance Training Organisations or equivalent organisations. You may work on special industrial collaboration projects or embark on student exchange programmes with universities or tertiary institutions relevant to the aerospace industry. You may also represent the Polytechnic in competitions or participate in specialised training programmes relevant to the aerospace industry. The on-the-job training nature of this programme will provide opportunities for you to apply engineering concepts and skills to solve problems.

### EAE3014 LEAN PROCESSES

This subject introduces the principles of lean tools and techniques to eliminate waste, manage inventory and improve product flow in a manufacturing organisation. Key concepts such as 6S, just-in-time (JIT) and process management prepare you to work effectively in a manufacturing environment.

### EAE3015 AIRCRAFT STRUCTURES & COMPOSITES

This subject covers the general knowledge of airframe structures and their construction methods. Topics include structural strength, construction of typical airframe structures, methods of surface protection and structural assembly techniques. An introduction to composites and their fabrication and repair methods will also be covered.

### EAE3016 AIRCRAFT AERODYNAMICS & SYSTEMS

This subject equips you with knowledge of the operation of aero-mechanical systems and various on-board systems that are responsible for the functionality of an aircraft. Topics include operation and effects of flight control surfaces, air-conditioning and cabin pressurisation, electrical power generation, fuel and other aircraft systems.

### EAL1001 PRINCIPLES OF AERONAUTICAL SCIENCE

This subject provides you with a basic understanding of the fundamentals of flight operations. Topics covered include the theory of flight, elements of air navigation, aircraft systems and performance, flight physiology, aviation regulations and safety, aircraft types and performance, as well as an overview of careers as commercial pilots.

### EAL2002 MANAGEMENT FOR AIR CARGO

The subject provides an understanding of the fundamentals of the aviation logistics and cargo management. Topics covered include the importance of air cargo to the economy, cargo rates and tariffs issues, terminal facilities and work flow for cargo operations, as well as forecasts and future trends of the cargo industry.

### EAL2003 AIR NAVIGATION

This subject will provide you with a basic understanding of navigation in general. It involves the study of the shape and dimension of the earth. Topics covered include chart projections, air speed, time datum, altimetry, and conversion of distances, speed, weight and wind velocity. An overview of the navigation computer will also be covered.

### EAL2004 FLIGHT PLANNING

This subject will introduce you to the fundamentals of navigation flight planning, from simple cross-country trips to international long-distance flights. Topics covered include aeronautical map and chart reading, understanding the Aeronautical Information Publishing (AIP), the use of the navigation computers and radio navigation aids, load sheet calculation, and calculation of other flight parameters such as fuel amount, heading, track, distances, wind velocity and speed.

### EAL3001 AIRLINE OPERATIONS & MANAGEMENT

This subject introduces the fundamentals of airline management. Topics covered include airline organisational structures and business modelling, route planning and development, airline and route profitability, air transport agreements and the regulatory framework of the airline industry, airline alliances, fleet and facilities planning, airline financing, product development and acquisition, as well as key airline performance indicators.

### EAM1001 AIRPORT OPERATIONS & MANAGEMENT

This subject introduces the fundamental concepts and principles involved in the management and operation of modern international airports. You will learn about the principles of airport management and the various aspects of airport operations, including, airport terminal layout and planning, terminal signage systems, gate and baggage belt assignments, terminal contingency planning, airport emergency systems, airport support services and equipment, estate management and terminal landscaping.

### EAM1002 AIRPORT ADMINISTRATION

This subject covers the fundamental concepts and principles involved in the organisational, and administration of modern international airports. Topics include airport performance, productivity and feedback systems, and airport-related commercial management, public relations, corporate/business planning, organisational structures, financial and accounting strategies, as well as revenue and expense sources.

### EAM2001 GROUND HANDLING OPERATIONS & MANAGEMENT

This subject introduces you to the fundamentals of ground handling operations and management. Topics covered include passenger, ramp and baggage handling services, ground handling agreements, in-flight catering and apron control management and its regulatory requirements.

### EAM2003 AVIATION SAFETY MANAGEMENT & HUMAN FACTORS

This module provides you with a broad understanding of aviation human factors and the role that human factors play in flight operations and safety. This will lead up to the elements of a safety management system, human factors within system safety, threat and error management, and principles of safety information systems. You will have an opportunity to embark on a problem-based learning approach to learn about the causes of aviation accidents, and how to prevent them.

### EAM2005 AIRLINE FLIGHT OPERATIONS

This subject introduces you to the fundamentals of airline operations. Topics covered include crew planning and scheduling, punctuality management, fleet assignment, maintenance and engineering issues, seat inventory control, flight dispatching and irregular operations and airline contingency plans. The operations of corporate aviation enterprises and an overview of future trends and challenges facing the airline industry are also covered.

### EAM2006 METEOROLOGICAL STUDIES

This subject will provide you with a basic understanding of the atmosphere and weather. You will learn about the changes in temperature, air pressure, moisture and wind directions that determine the weather pattern. Topics covered include the behaviour of the atmosphere of the earth, various aviation weather phenomena and the impact of adverse weather conditions on airline and airport operations.

### EAT2001 AIRPORT SYSTEMS 1

This module provides an overview of the key facilities and systems in an airport, including passenger check-in systems, the flight information display systems, and the fully-automated baggage handling system such as the high-speed inter-terminal baggage transfer system and automated early bag storage key airport terminal system. In addition, you will also gain an understanding of the operation of the people mover system which ensures the seamless transfer of passengers between airport terminal buildings.

### EAT2002 AIRPORT SYSTEMS 2

This subject provides an overview of the key facilities and systems found at the airside of an airport. Topics include airfield design, airport lighting systems and aircraft pavement. For the airfield design, you will learn about airport classification codes and design standard. In the airport lighting systems, you will learn the characteristics and components of airport lighting systems. You will learn about aircraft pavement types, its strength, runway surface and pavement management system.

### EAT2003 AIRFIELD SYSTEMS 1

This module provides you with a basic understanding of the various air traffic control radar and communications systems used in the aviation industry, as well as the fundamentals of air traffic management. Topics include aviation meteorology, air traffic service (ATS)/ flight crew organisational structures, practices and procedures, aerodrome, approach and area control services, aeronautical information services and telecommunication, aerodrome ground aids, as well as an overview of careers as air traffic controllers.

### EAT2004 AIRFIELD SYSTEMS 2

This module provides you with advanced theoretical and practical skills in air traffic management. It allows you, after a suitable period of on-the-job training and training on local requirements, to acquire the required level of expertise to obtain an Aerodrome or Radar/ Non-Radar Control Rating. Topics covered include air law, aeronautical ground aids/ navigational aids, ATC-emergency procedures, procedures and techniques for managing air traffic, military ATC operations, and an overview of careers as operational air traffic controllers.

### EBD1001 COMPUTER-AIDED DESIGN & BUILDING SPECIFICATIONS

This subject introduces graphical representations and the use of computer-aided design tools in building drawings. Particular emphasis is given to architectural and engineering design, specifications and drawing conventions.

### EBD2005 SECURITY & SURVEILLANCE

This subject gives an overview of security and surveillance, including the entire process of security and surveillance design and integration. The main emphasis is placed on applying scientific and engineering principles for the design of the system and the use of component performance measures to establish the effectiveness of such systems when applied across various business sectors.

### EBD2006 SUSTAINABLE DESIGN

This subject covers the design principles of sustainable buildings/ facilities. This design practice emphasise integrated design process which used applied technologies and architecture principles to eliminate negative environmental impacts. You will learn planning and design applications of renewable energy in hardscape and softscape and sustainable building materials selections and techniques towards sustainable and healthy buildings.

### EBD2007 HUMAN-CENTRED SPACE PLANNING

This module covers design methodologies such as design program and design development. Key considerations include the building codes, flexible space utility, ergonomics, interior furnishing and universal design. You will learn to use building information modelling software to aid in creating three-dimensional (3D) models of space and its facility planning. This module will allow you to acquire basic representation techniques used by designers in planning and organising interior space in residential, hospitality and commercial projects.

### EBD2008 BUILDING INFORMATION MODELING

This subject emphasises the application of Building Information Modelling (BIM) to conceptualise and develop building design that meets the intended objectives. You will learn about the BIM processes from conceptualisation stage to design, visualisation & simulation, and the application of BIM in integrating and coordinating the digitised models for architectural, mechanical and electrical systems. The use of the as-built models and the information contained therein for Computer-aided Facility Management (CAFM) and other simulation tools like energy modelling will also be discussed.

### EBD3004 SUSTAINABLE DESIGN

This subject covers architectural design concepts used in the analysis of sustainable or green buildings and facilities. You will learn about incorporating environmental and sustainable processes and practices into the planning and designing of integrated facilities. There will be emphasis on human-centered design and passive design concepts, incorporating practical problem solving skills. You will also use Building Information Modelling (BIM) models to simulate and visualise the design strategies and solutions, so as to effectively design spaces that can achieve optimal year-round comfort, reduce energy consumption, and eliminate or limit any damage to the environment.

### EBI2001 INTRODUCTION TO BIOINFORMATICS

This subject covers basic bioinformatics concepts, databases, tools and applications. This includes the following areas: dynamic programming for sequence alignment, pair-wise and multiple alignment techniques, discovery of evolutionary relationships, gene hunting, EST and microarray. It also provides a brief overview of proteomics.

### EBI3001 BIOSTATISTICS

This subject equips you with statistical techniques that can be applied in the biomedical sciences to solve biological problems. These techniques are used in many decision making processes, especially in clinical trials and experimental studies that involve human subjects. Topics include the basics of probability and statistics, estimation of process characteristics, analysis of means (ANOM), analysis of variances (ANOVA), correlation cum regression techniques, and a brief introduction to experimental designs.

### EBI3003 MEDICAL IMAGING & VISUALISATION

This subject provides you with the principles of the various medical imaging techniques such as diagnostic ultrasound, computed tomography, nuclear medicine imaging, and magnetic resonance imaging. It also covers the fundamental of image representation, image processing, and image visualisation used in biomedical applications.

### EBI3004 AUDIOMETRY & HEARING DEVICES

This subject focuses on the hearing health sector in biomedicine. It exposes you to the science of hearing assessment and technologies available to remediate hearing loss. You will study the properties of sound, the physiology of hearing and the causes of hearing impairment; and you will be equipped with the skills to screen for hearing impairment. You will also learn about the underlying technologies behind digital hearing aids.

### EBM1002 REAL ESTATE BUSINESS

This subject covers the knowledge in real estate business, which includes land, buildings and facilities. You will learn all aspects of the real estate business which includes the legal systems, economics, urban planning, valuation and investment, marketing and management.

### EBM2004 PROJECT MANAGEMENT

This subject aims to provide an overview of the principles and concepts in project management and equip you with the theoretical foundation and skills in using project management tools. It emphasises the knowledge and practices which are widely applied in project management. Topics covered include the project management framework, project management processes and project management knowledge areas.

### EBM2005 FIRE & LIFE SAFETY MANAGEMENT

This subject introduces the roles and responsibilities of a Fire Safety Manager for both commercial buildings and industrial premises. You will be exposed to the procedure adopted in running a fire command centre, the use of detection, protection and control systems, fire investigation and formulation of a fire emergency plan.

### EBM2006 BUILDING MANAGEMENT SYSTEMS

This subject equips you with the knowledge of Building Management System (BMS) and associated technologies. It covers building management tools, heating ventilation and air-conditioning (HVAC) control, and energy management system, while focusing on the components, functions, and control strategies for the chiller plant and air-handling systems. It also deals with facility and maintenance management programmes, including the application and integration of building management tools in an intelligent building.

### EBM3003 FINANCIAL MANAGEMENT & FORECASTING

This module introduces key concepts of financial management and forecasting techniques. It focuses on the use of financial information in managing financial resources, capital investment evaluations, and the analysis of the profitability, liquidity and efficiency of business operations. You will also learn techniques like return on investment (ROI) and life cycle cost (LCC) analysis which are needed to evaluate the feasibility of new construction and retrofitting projects.

### EBM3004 BUSINESS CONTINUITY MANAGEMENT

This subject introduces the concepts and trends in the design, development, implementation and management of business continuity. Beginning with an introduction of business continuity management (BCM), it delves into business impact analysis, risk evaluation, BCM strategies and BCM plan development. Emergency response and crisis management plans and the coordination with external agencies are also discussed.

### EBM3005 ENERGY MANAGEMENT & AUDIT

This subject covers two main areas: energy management and energy audit. For the former, the subject illustrates the intrinsic value and concept of energy management as well as the considerations and steps involved in implementation. For Energy Audit, the emphasis is on the method and procedure in auditing energy efficiency and evaluating the energy performance of buildings and its sub-systems. These will include the use of energy performance benchmarks and a comparison with acceptable practices and prevailing codes and regulations. Finally, the subject discusses how the life-cycle-cost concept is used to evaluate the economic viability of any proposal to improve energy performance.

### EBS1002 HUMAN ANATOMY & PHYSIOLOGY

This subject provides you with a basic understanding of human anatomy and physiology. Topics covered include the anatomy of the organs and organ systems and their functions.

### EBS1003 BIOCHEMISTRY

This subject investigates the constituents of biological systems, their properties and their significance to biological sciences with particular reference to carbohydrates, lipids, proteins and enzymes. This extends to the understanding of the functions of proteins and enzymes as well as protein synthesis and information pathways.

### EBS2002 MOLECULAR GENETICS

This subject teaches both the theory and practical techniques of the E.coli system in molecular genetics. Topics include DNA structure, DNA replication, DNA transcription, translation and DNA mutations. You will also be introduced to the different types of operons and study how these are regulated.

### EBS2003 BIOMEDICAL PHYSICS

This subject builds the necessary foundation to initiate you into the biomedical physics discipline. Fundamental physics relevant to the field of biomedical engineering will be covered. You will be introduced to the scope of biomedical physics including the spectrum of electromagnetic waves, optics, lasers, gas laws, fluid mechanics and magnetic fields, with emphasis on biomechanics and sound waves. Other introductory topics include the physiological effects of electrical currents, protection against electrical shock and electrical safety standards. Bioethical issues are also discussed.

### EBS3001 BIOMECHANICS

This subject introduces the basic concepts of mechanics and anatomy in biological systems. Topics covered include the kinematics and kinetic concepts of analysing human motion, the biomechanics of human bone growth, skeletal articulation and muscles. A brief introduction to the biomechanics of tissue engineering will also be covered.

### EBS3003 CLINICAL LABORATORY EQUIPMENT

This subject focuses on important aspects of clinical laboratory and instruments widely used in clinical laboratories. Topics include centrifuges, automated analysers, separation techniques, bioreactors, mass spectrometry and clinical trials. Essential insights to clinical laboratory practices are also given.

### EBT2005 BUILDING CONTROL SYSTEMS

This subject introduces the concepts of control systems in intelligent buildings. Beginning with different types of control systems, it focuses on interfacing of sensors and actuators to controllers and the different types of controls used in building automation systems. Emphasis is placed on the study of Programmable Logic Controllers (PLCs) used for automation and control applications in buildings. Direct Digital Controllers (DDCs) will also be discussed.

### EBT2007 BUILDING SENSORS & ACTUATORS

This subject introduces you to sensors and actuators used in building automation systems. It focuses on digital and analogue sensor technologies as well as electromechanical systems. You will be taught the principles of sensors and actuators, their design, and the implementation of such systems.

### EBT3007 INTELLIGENT DEVICES & SYSTEMS INTEGRATION

This subject equips you with knowledge on microprocessor-based controllers, networking and systems integration. You will be exposed to various techniques in the making of intelligent devices. Low level and high level methods of integration will be discussed.

### EBZ1001 BUSINESS FUNDAMENTALS

This subject provides you with an overall view pertaining to the four pillars of business: Management, Marketing, Money and Manpower. Introductory topics correlating to the four pillars of operation - Management Fundamentals, Marketing Principles, Financial Statements and Organisation Behaviour, will be taught.

### EBZ1002 PRINCIPLES OF ECONOMICS

The subject provides you with a broad introduction on the major topic areas on the theoretical knowledge and application of the key principles of economics and the related economic behaviour in the business environment within the Singapore economy. Some of the key principles and theories include supply and demand, market structures, GDP measurement, aggregate demand and aggregate supply and macroeconomic policies.

### EBZ2002 MARKETING INTELLIGENCE

This subject provides an overview of the role of marketing intelligence in decision making processes. It covers the methodologies in marketing intelligence and the use of timely and accurate information for making vital and sound business decisions.

### EBZ2003 ENGINEERING ECONOMY

The subject provides a basic understanding of the economic aspects of engineering applications, elements of costs and costing methods, and the relationship between cost behaviour and profit. You will be expected to analyse different investment alternatives for economic decision making. The subject also discusses using EVA (Economic Value Added) to measure business performance.

### EBZ2005 MARKETING CONCEPTS & STRATEGIES

This subject equips you with a fundamental knowledge of marketing concepts that will help business owners be more aware of the marketing world - the important last mile to carry their finished products and services to the ultimate consumer. It covers analysis of the marketing environment, marketing research, target marketing and the application of the marketing mix of 4P's namely product, price, place and promotion to achieve marketing goals.

### EBZ2006 SERVICE QUALITY & MANAGEMENT

This subject introduces the key concepts and principles of Service Quality and Management. Topics covered include concepts of quality services, essential skills in customer services, principles and strategy of service management, methods for service quality measurements and service recovery.

### EBZ3008 TECHNOPRENEURSHIP

This subject covers the basic fields of technopreneurship. It examines the traits of successful technopreneurs and the basic start-up of new businesses. Through project work, you take the opportunity to conduct field research, identify, evaluate and select viable businesses, and then develop feasible business plans applying the knowledge and tools covered in different topics which include marketing, customer orientation, pricing, communication, financial judgement, managerial importance, service orientation and competitive strategies.

### ECA3002 VIRTUAL REALITY

This subject emphasises the importance of virtual prototyping in manufacturing and ecommerce applications. You will be taught three main areas: modelling, behaviour programming and display systems. You will work on a 3D web page which incorporates an interactive virtual world, standard HTML, text, sound, animation and graphics.

### ECA3003 3D MODELLING

This subject equips you with different techniques and strategies to model 3D objects and generate 2D drawings using Computer-Aided Design software. Fundamental knowledge of solid modelling and creating of proper product drawings will be covered. You will also master the skills of creating assembly models, which will be used in the last part of the course to generate product assembly animation and realistic product rendering.

### ECC1002 NETWORKING FUNDAMENTALS

This subject covers the fundamental principles of data communications essential for the understanding of computer networking. You are taught the basics of data transmission, the Open Systems Interconnection (OSI) model, as well as local area network protocols and technologies.

### ECC1003 WEB DESIGN & DEVELOPMENT

This subject covers the basics of web design and development. It focuses on web page planning, basic design, layout, construction, setup and maintenance of a website. The subject is delivered through a series of hands-on exercises and a group project.

### ECC1004 E-BUSINESS APPLICATION

The subject enables you to develop a dynamic e-Business website. You will learn about online transaction, database foundation, design and prototyping, creating interactive and dynamic web pages, and web application development process.

## ECC2007 NETWORKING INFRASTRUCTURE

This subject covers the basic theories of routing and switching and their applications in the networking environment. It focuses on IP addressing scheme for a large-scaled network, operation of a Wide Area Network (WAN), routing protocols and switching architectures. It provides opportunities for you to design and implement a network.

## ECC2010 MOBILE DEVICE APPLICATIONS DEVELOPMENT

This subject covers the development of applications on mobile and wireless computing platforms. It provides an overview of Mobile Web and Mobile Applications, its importance and benefits. It introduces the technologies and methodologies for their development. This includes the architectures, frameworks, standards, programming languages, design process and tools.

## ECC2011 NETWORK SECURITY FUNDAMENTALS

Network security involves identifying and assessing risks to the computer network, putting in place the systems, processes and control measures to protect information stored and carried in networks. You will be taught both the theoretical and practical aspects of network security, and also be exposed to the various threats and attacks on networks, as well as the counter-measures against these threats.

## ECC3001 INTERNETWORKING TECHNOLOGIES

This subject covers the design and implementation of an enterprise network. You will be taught advanced Internet Protocol (IP) address management techniques and the supporting IP routing methods. You will also learn how to interconnect enterprise networks separated over large geographical area and provide the necessary security mechanisms

## ECC3004 ENTERPRISE WEB APPLICATION

This subject introduces you to the design and creation of a Web-based application. You will learn to develop and implement client/ server applications in a multi-tier environment using various software technologies to generate dynamic web content. The topics covered include JavaServer Pages (JSP), JavaBeans, Java Database Connectivity (JDBC) and XML.

## ECE1001 FUNDAMENTALS OF CLEAN ENERGY

This subject provides you with the knowledge of the changing world economy that relies on primary energy sources to meet its energy demand. The focus is on the renewable energy basics such as solar, hydrogen fuel cell, biomass, wind, tidal, ocean, geothermal and hydropower. The importance of public benefits of renewable energy use and environment impacts of renewable energy technologies will also be discussed.

## ECE2001 ENERGY CONVERSION & STORAGE SYSTEMS

This subject introduces the different energy conversion processes that can be used to harness energy from primary sources such as wind and bio-fuels, and to convert them into more convenient secondary energy forms, such as electrical energy. The different types of storage systems, such as rechargeable batteries, flywheel systems, and ultra-capacitors, as well as their characteristics and applications will also be covered.

## ECE2002 RENEWABLE ENERGY

This subject provides in-depth knowledge of the different types of renewable energy sources, such as, wind, hydroelectric and biomass. The underlying operating principles and the characteristics of each renewable energy sources will be covered. The subject will also evaluate the applications and technologies of these energy sources and discuss their future trends.

## ECE2003 FUEL CELL DESIGN & TESTING

This subject provides you with the knowledge of fuel cell operation, component materials, design and testing. It also covers the various fuel cell system components and their integration issues. You will get to use lab equipment to test and characterise fuel cells based on the properties of the fuel cell component materials used as well as analyse the important factors affecting the performance of fuel cells.

### ECE2004 SOLAR CELL & SYSTEM

This subject introduces the operating principles, design, fabrication and application of solar cells. Topics include semiconductor properties, p-n junction diodes, solar cell design and characterisation, solar cell fabrication process technologies and power systems based on solar cells. The emphasis will be on silicon-based solar cells. The application of solar cells in a standalone and grid-connected power system will also be covered.

### ECE3001 CLEAN ENERGY PROCESS INTEGRATION

This subject provides an integration of the various clean energy manufacturing processes. You will learn about the equipment used and the energy balance models of industrial processes. The system integration of different clean energy sources will be introduced. Other technical aspects such as smart metering and micro-grid will also be covered.

### ECE3003 ENERGY EFFICIENCY & EFFICIENT DRIVE

This subject covers the energy efficiency in different types of facilities and the optimisation of motor driven system to save energy. You will learn the importance of energy efficiency in buildings, power generation, transportation and motor-driven systems found in the industry. Energy efficiency analysis and computation will also be introduced.

### ECS1003 WRITING & ORAL PRESENTATION

In this subject, you will acquire technical writing and oral presentation skills. You will learn how to write and organise technical reports and how to prepare a speech using techniques to deliver an effective speech that holds the attention of your audience. You are expected to conduct research to gather information and widen your perspectives for both the report and oral presentation. the marketing environment, marketing research, target marketing and the application of the marketing mix of 4P's namely product, price, place and promotion to achieve marketing goals.

### ECS1004 INTRODUCTION TO EFFECTIVE COMMUNICATION

This subject introduces the basic skills needed for technical communication in the areas of listening, reading, speaking, writing and research. You will learn to recognise the organisational structure, style and content of formal spoken and written engineering texts. You will also learn to write sentence structures commonly found in engineering texts. In addition, you will learn to produce the linguistic features of spoken Standard English. The subject also introduces the skill of using library resources for research purposes.

### ECS2002 ENGINEERING BUSINESS COMMUNICATION

This subject covers the major elements of successful communication in an engineering-related business domain. It deals primarily with the written and spoken language skills involved in presenting, publicising and promoting an engineering product or service. The subject also covers the functions and requirements of the different media that are used in the communication process. Thus you will work on different communicative activities to apply the tools and strategies of integrated marketing communication.

### ECS2003 ORGANISATIONAL COMMUNICATION

This subject prepares you for written and spoken communication in the world of work, focusing on intra- and inter-organisational communication. Group communication is also emphasised to enhance your sensitivity in communication situations and your awareness of communication dynamics. You will also learn that culture does affect communication within groups and at the organisational level.

### ECS3002 CAREER COMMUNICATION

This subject prepares you for your career by refining the technical writing skills that you have learnt in earlier Communication Skills modules, as well as providing you with the tools for an effective job search. Besides learning how to write a well-structured and coherent technical report for the workplace, you will also enhance your employability. You will learn the critical aspects of a job search, including skills analysis, writing resumes and cover letters, grooming and deportment, and interview skills.

### ECT2001 CIRCUITS & CONTROL SYSTEMS

This subject introduces various concepts involved in the study of circuits and control systems. It provides you with the theories and practical knowledge of transient and steady state response of first and second order circuits, the structure of feedback control systems and stability analysis. The controllers and compensator design techniques used in control systems are also discussed. You will learn all the necessary skills to simulate, interpret and analyse the performance of various control systems and electric circuits.

### ECT2004 INSTRUMENTATION & COMPUTER CONTROL

This subject covers instrumentation and measurements, controller principles, multiple loop control systems and digital control systems. Computer control, various computer control systems such as direct digital control system, distributed control system and fieldbus control system are also covered in detail.

### ECT3002 ANALYTICAL ROBOTICS

This subject introduces various concepts involved in the study of robotic systems. It begins with an introduction to the different types of robotic systems, mechanical forces and the law of motion, and the different types of actuators and sensors, as well as their application in robotics. Basic kinematics is also discussed to determine the pose and orientation of the object in space. Various mobile robot design considerations and embedded system design are also explored to emphasise the application aspects.

### ECT3003 ROBOTIC CONTROL SYSTEMS

This subject focuses on digital control theory and state-space design in robotic applications. You will be introduced to the applications of modern digital design concepts in robotic control systems that will extend your skill and knowledge in state-space design methods, digital system stability, and digital controller techniques. You will also learn to analyse, design and observe the characteristics of motion control systems through lab experiments and assignment projects.

### EDM1001 MODELLING & ANIMATION

This subject provides you with the basic theory and skills for 3D animation production. You will be equipped with an understanding of the fundamentals of how animation software tools work, and gain experience in completing a 3D animation production development cycle.

### EDM1002 FUNDAMENTALS OF DIGITAL MEDIA PROCESSING

This subject equips you with the fundamental knowledge of image, texture and audio editing using media processing techniques. These techniques are necessary basic building blocks in interactive digital media content development. Basic video editing skills will also be taught. The subject emphasises practical-based learning, through which you will acquire the essential knowledge and skills.

### EDM2003 FUNDAMENTAL 3D INTERACTIVE DIGITAL MEDIA

This subject provides you with the knowledge and hands-on experience in creating interactive 3D applications. Topics include 3D object creation, modelling, and scene composition.

### EDM2004 ADVANCED DIGITAL ANIMATION & SPECIAL EFFECTS

This subject equips you with the knowledge and skills in applying advanced tools and techniques in 3D animation. It uses a practice-oriented approach to train you to rig a character and create physically realistic object motion, apply visual effects techniques to create natural environment and phenomena with appropriate lighting and advanced render setting, and create texture on 3D models directly.

### EDM2005 IDM PROJECT

The subject provides you with an opportunity to integrate knowledge learned in previous semesters to develop an Interactive Digital Media (IDM) production through working on a project in a team. Emphasis will be placed on your ability to be creative and work in teams, as well as problem-solving skills. The nature of the project could either be software or hardware, or a combination of both.

### EDM3001 ADVANCED INTERACTIVE DIGITAL MEDIA

The subject provides you with the knowledge and skill to develop interactive 3D digital media for use in numerous fields such as engineering, marketing, education and training. Topics include the use of a virtual reality tool to create behaviour for objects, user interactivity with objects, build customize program, and script for logic workflow.

### EDM3002 3D REAL-TIME VISUALISATION

The subject equips you with the skills and techniques to be competent in creating 3D real-time photorealistic interactive media content. Topics include the use of special rendering techniques, High Dynamic Range Imaging (HDRI) techniques, Low Polygon & High Polygon Modelling, Global Illumination, Texture Baking, and their corresponding methodology in reducing latency in real time 3D scenes.

### EDM3003 INTERACTIVE 3D DISPLAY SYSTEM

The subject provides you with the necessary knowledge of the working principles of 3D display systems such as Stereoscopic Displays and Auto-stereoscopic Displays. Topics include the principles of stereoscopy, different types of 3D displays (3D projectors, stereoscopic monitors, and auto-stereoscopic displays), stereo formats for stereoscopic and auto-stereoscopic displays, 2D to stereoscopic 3D image conversion using depth map, content creations for both display types, and interactivity with stereoscopic content.

### EDR1003 ENGINEERING DRAWING

Engineering drawing is an essential part of engineering design in most engineering curricula. This subject will introduce you to the preparation of two-dimensional mechanical engineering drawings, using both manual drafting and a Computer Aided Design/ Drafting (CAD) software. General methods of dimensioning according to international and local standards will also be introduced.

### EED1001 ELECTRONIC PROTOTYPING

This subject introduces you to the use of hand-tools and standard laboratory equipment for the construction and testing of electronic prototypes. You will also learn to identify basic electronic components and how to use them to build electronic gadgets.

### EED1002 PRINTED CIRCUIT BOARD DESIGN

This subject provides you with the basics in designing a printed circuit board (PCB) through the use of a PCB design software. You will learn the various parts of a PCB and the terminologies used, and understand the various processes involved in the design and fabrication of a PCB.

### EED2005 INTEGRATED PROJECT

This subject provides an opportunity for you to apply the knowledge you have acquired. You will apply the tools, techniques and skills in creative problem solving, research and design, and project management.

### EED2007 MECHATRONICS DESIGN PROJECT

To design a Mechatronics product that fits the needs of end-users, a designer's understanding and application of the underlying principles in industrial product design is needed. This subject provides you with the basic principles in the development of a Mechatronics product design through hands-on experience. You will have opportunities to develop your product idea using a Computer-Aided Design system and having the paper design built through prototyping techniques.

### EED2008 PRODUCT, PROCESS & COMPUTER AIDED DESIGN

This subject provides you with a design-oriented environment in the creative design of products. The five main topics in this subject are: product and process design, design tools, needs and goals, product design specifications and developing concepts. You will also gain essential knowledge in design and process development by working on a semester project.

### EED3009 SPECIAL PROJECT 1

Special Projects 1 and 2 are avenues for you to work on special industrial collaboration projects, R&D projects, or to represent Temasek Polytechnic in relevant competitions or programmes. Through these special electives, you will build and deliver projects in accordance with competition specifications or goals.

### EED3010 SPECIAL PROJECT 2

See Special Project 1 above.

### EED3011 HIGHER ENGINEERING SKILLS 1

Higher Engineering Skills 1 and 2 aim to impart some special design and hands-on skills that will allow you to acquire knowledge and skills that are not normally incorporated into a diploma programme. By taking these Special Elective subjects, you will be trained and equipped with the skills to take part in internal or inter-institutional competitions, or to tackle problems in real life.

### EED3012 HIGHER ENGINEERING SKILLS 2

See Higher Engineering Skills 1 above.

### EEE1001 CIRCUIT ANALYSIS

This subject provides a good foundation in DC and AC network analysis. You will learn the basic principles of electric circuitry and how to apply circuit theorems to analyse DC and AC networks.

### EEE1002 ELECTRONIC DEVICES & CIRCUITS

This subject covers the theory and practical knowledge of electronic devices such as diodes, bipolar junction transistors, field effect transistors and their applications. It also focuses on the fundamentals of operational amplifiers and their applications, and the rudiments of circuit troubleshooting and testing.

### EEE1003 DIGITAL FUNDAMENTALS 1

This subject provides basic knowledge of digital electronics and circuits. Topics include number systems, operations and codes, logic gates, Boolean algebra and logic simplification, combinational logic, functional blocks, latches and flip-flops.

### EEE1004 DIGITAL FUNDAMENTALS 2

This subject builds upon the fundamentals of digital electronics acquired in Digital Fundamentals 1. It introduces the digital concepts of the various building blocks in a computer's digital system. You will acquire the theoretical and practical knowledge of registers, counters, memory devices, and conversions between digital and analogue signals and integrated circuit technologies. Digital troubleshooting techniques are also explored in the laboratory work.

### EEE1005 DIGITAL FUNDAMENTALS

This subject provides a basic knowledge of digital electronics. You will learn the theoretical and practical knowledge of fundamental digital concepts and basic building blocks of digital electronic circuits. Topics covered include number systems, Boolean algebra and combinational logic, sequential logic and memory devices.

### EEE1006 ENGINEERING FUNDAMENTALS

This subject provides a strong foundation in basic engineering concepts, electrical principles, circuit theorems, digital electronics and electronic devices.

### EEE2001 INTEGRATED CIRCUIT APPLICATIONS

This subject covers the applications of common integrated circuits. The fundamental concepts of operational amplifiers and their applications will be taught. You will learn how to use operational amplifiers to design clippers, clampers, comparator circuits and active filters. The applications of the 555 timer and voltage regulators will also be discussed.

### EEE2003 CIRCUITS & SIGNALS

This subject introduces specific circuit configurations and design concepts used in medical equipment, as well as the basic concepts of signal processing. The first part of the subject describes Op amp applications in bio-potential amplifiers, in filter designs and some design aspects of power supply used in medical devices. Topics covered in the signal processing portion include signal filtering, convolution, signal sampling and correlation. Applications of signal processing related to bioelectric signals are used to provide a better understanding of these useful techniques.

### EEE3001 ADVANCED ELECTRONICS

This subject provides the basic concepts of designing and using linear integrated circuits for different functions such as amplifiers and voltage-controlled oscillators. The design of attenuators and filters, and fundamentals of sensors and transducers will be discussed too.

### EEE3004 POWER ELECTRONICS & DRIVES

This subject is an introduction to the study of machines, power semiconductor devices and their applications as power converters and motor drives. Topics covered include basic principles of DC and AC motors, fundamentals of controlled rectifiers and drives, principles of DC choppers and drives, and inverters. The uses of semiconductor devices in power applications and thermal effects on the performance of these devices due to high power will also be discussed.

### EER1001 ELECTRICAL SERVICES FOR FACILITIES

This subject provides the basic theoretical and practical knowledge for the design of electrical distribution and installation in facilities. It also introduces the safety requirements and regulations governing electrical distribution and installation.

### EER2001 ELECTRICAL SYSTEM & POWER DISTRIBUTION

This subject provides an overall operation of a power distribution network in the generation, transmission and distribution of electricity. You will also be trained in the designing of electrical systems (HV and LV) for effective and efficient delivery of electrical energy. These include the design and the sizing of different components such as system earthing, circuit breakers, fuses, cables, transformers, according to their respective industry standards.

### EFM2003 INTEGRATED RESORT MANAGEMENT

This subject provides you with an overview of integrated resorts including the different services provided. The focus will be on management of service areas which include front-end and back-end operations which are so critical in the management of an integrated resort. Resort Life cycle and marketing strategies to sustain resort operations will also be discussed. Other topics include event management, the management of income-generating operations, as well as the importance of establishing a service culture in an integrated resort.

### EFM2004 CONTRACT MANAGEMENT

This subject covers the knowledge of contract management that is aligned to the practices in the real estate industry. You will learn about all aspects of contract management which includes administration, procurement procedures, evaluation of services and products, tenant management, and service delivery.

### EFM3001 SUSTAINABLE FACILITY MANAGEMENT

This subject highlights the roles of Facility Management (FM) in reducing a facility's emission and carbon footprint on a sustainable basis. It will examine the policies and practices that FM should implement to achieve the said goals. More specifically, the subject will describe the framework and strategies for achieving "greener" results from inception, design, construction to operational stage of a building. The subject will also provide an overview of the standards or rating systems that can be used to gauge the attainment of the sustainable goals.

### EGB1001 INTRODUCTION TO GREEN DEVELOPMENT

This subject introduces the concepts, development and trends in the design, systems and management of Green Buildings.

### EGB2001 GREEN BUILDING MODELLING & SIMULATION

This subject covers the theory of passive building design and use of modelling and simulation tools for analysis. It introduces the concept of passive building design for cooling and natural ventilation. Using modelling tools, you will be able to propose building with increase energy efficiency.

### EGB2002AIR CONDITIONING & MECHANICAL VENTILATION

The Air Conditioning and Mechanical Ventilation (ACMV) system is one of the most important systems of a building and represents a significant portion of its total energy consumption. Hence, an understanding of the operating principles of a typical ACMV system is critical to maximising the overall energy efficiency of a building.

### EGB2003 HYDRAULICS & DRIVES

This subject exposes you to the hydraulic and motor-driven systems used in buildings. Starting with the introduction to fundamentals of electric motors, you will be taken through the process of selecting the type and size of motors for different applications. The efficiency of motor-driven systems and motor installation are also explained. The hydraulic portion of this subject includes fundamentals of fluid mechanics (Benoulli's and continuity equations) and losses in fluid flow in pipes.

### EGB3001 GREEN STRATEGIES FOR BUILDING SYSTEMS

This subject equips you with knowledge on the integration techniques for energy efficient building systems. Different strategies such as the carbon management, energy management, automated monitoring and targeting will be applied to an integrated system. These will help in the reduction of energy used, operating costs and ultimately, the carbon footprint.

### EGB3002 GREEN BUILDING MODELLING & SIMULATION

This subject provides an overview of modelling and simulation concepts of a green building. Starting with an introduction to the fundamentals of modelling, you will then be taken through the steps and approaches in selecting and determining the parameters for different buildings.

### EGB3003 TOTAL BUILDING PERFORMANCE

This module provides an overview of the key factors that affect the performance and efficiency of buildings. It introduces the performance mandates of a building and focuses on integrated approaches to meet the building performance criteria. Topics include spatial performance, thermal comfort and evaluation, air quality and acoustic performance, lighting aspects and building integrity performance.

### EMA1001 ENGINEERING MATHEMATICS 1

This subject teaches pre-calculus techniques required for an engineering course. It trains you in engineering problem-solving approaches using the appropriate mathematical tools. Topics such as simultaneous equations, matrices, trigonometric, exponential and logarithmic functions, complex numbers and vectors will be covered.

### EMA1002 ENGINEERING MATHEMATICS 2

The subject introduces the concept of calculus. Differentiation and integration techniques will be covered. These concepts will be used to formulate and solve mathematical problems. Various differentiation techniques (e.g., chain rule, product and quotient rules), and integration techniques (e.g., substitution, use of the mathematical table, integration by parts, partial fractions decomposition) will also be covered.

### EMA2001 ENGINEERING MATHEMATICS 3

This subject introduces ordinary differential equations and approximation using the Maclaurin series and Fourier series. You will learn how to formulate engineering problems using first and second order differential equations and to solve initial value problems using techniques such as Laplace transforms. The application of statistics – Hypothesis Testing – will also be taught.

### EMA3001 HIGHER ENGINEERING MATHEMATICS

The subject introduces mathematical concepts and techniques used in advanced engineering courses. You will learn topics in calculus such as limits and continuity, infinite series, improper integrals, multiple integrals, higher order differential equations, 2D and 3D analytic geometry, and partial differentiation.

## EMC2001 MICROCONTROLLER TECHNOLOGY

This subject provides you with a working knowledge of embedded systems. It exposes you to the basics of microcontrollers. Emphasis will be given on the knowledge of microcontroller architecture, applications and programming. You will acquire knowledge and skills through the development and testing of microcontroller-based systems for real-world applications such as a bank automated queuing system, or a traffic-light and pedestrian crossing control system.

## EMC2004 INTERNET APPLIANCES

This subject covers application development for embedded systems and smart devices. Topics covered include embedded operating system, programming concepts, application development and database for handheld devices. It also covers design and debugging techniques as well.

## EMC2005 COMPUTER INTERFACING

This subject provides the knowledge and skills of interfacing peripherals to the Personal Computer (PC). You will be exposed to various PC interfacing techniques, such as serial, parallel and USB interfacing, computer bus standards and protocols.

## EMC3002 EMBEDDED CONTROL & APPLICATIONS

This subject provides enhanced knowledge of microcontroller-based embedded systems with emphasis on interfacing and applications. You will learn to use the built-in peripherals of the microcontroller and design the software and interfacing circuits to implement embedded applications. You will also work on a group project that uses most of the internal peripherals, programming and interfacing techniques learnt in the subject.

## EMC3004 DATA ACQUISITION SYSTEMS

The subject covers PC-based data acquisition concepts. It encompasses signal conditioning, transducers, virtual instrumentation, signal measurement and data acquisition techniques, as well as interpretation and presentation of acquired data. You will acquire the skills through hands-on experience in installing, configuring and using PC-based data acquisition hardware and software.

## EMD2001 MEDICAL ELECTRONICS

This subject introduces fundamental instrumentation theories for biomedical applications and design requirements for the measurement of bio-signals. Topics include electrodes and transducers, bio-potential measurements, amplifier basics, as well as differential and instrumentation amplifiers. Filter designs, noise and electromagnetic interference issues are also discussed.

## EMD2002 MEDICAL DEVICES

This subject discusses the fundamentals of medical devices generally used in hospitals, such as the electrocardiograph, electroencephalograph, electromyograph, therapeutic devices, as well as life-saving and support devices. The essential principles of safety and reliability of medical devices are also covered.

## EME1002 STATICS & STRENGTH OF MATERIALS

This subject consists of two principal areas: fundamentals of statics and strength of materials. Fundamentals of statics provide an introduction to the basic concepts in statics, whereas strength of materials introduces the methodology for designing structural members subjected to various loading conditions.

## EME2004 PROGRAMMABLE AUTOMATION

This subject provides you with the fundamentals underlying the contemporary manufacturing automation environment. Four main topics are covered in this subject; namely pneumatics, electro-pneumatics, programmable logic controllers and factory automation. You will gain the essential knowledge of the working principles and applications of automation equipment related to the topics covered, followed by an overview of how to automate production processes to achieve quality and high productivity. Both hardware and software links between the main factory automation components are introduced.

## EME2006 ENGINEERING MATERIALS

This subject provides you with an overview of the composition, processing and properties of engineering materials. It covers basic structural materials, including metals, polymers, and composites that are commonly used for engineering applications. You are also introduced to heat treatment process, Non-Destructive Testing (NDT) and various surface treatment processes.

## EME2007 MACHINING TECHNOLOGY

The subject introduces the various manufacturing processes including computer-controlled processes and you get hands-on practice with conventional and Computer Numerical Control (CNC) machines. You will also learn about Computer-Aided Design and Manufacturing (CAD/CAM) system. Safety aspects are emphasised throughout the workshop sessions. You will acquire the fundamental knowledge and skills in designing for the manufacturing sectors such as the tool and die industry.

### EME2008 PRINCIPLES OF DYNAMICS

The application of dynamic systems theory can be seen everywhere in our daily lives, from vehicles moving on the road to planes flying in the air. In this subject, you will learn the fundamental principles of dynamics and apply them to the analyses of bodies in motion. The objective is to present the foundation and applications of dynamics. Main topics covered include Newton's laws of motion, the principle of work and energy, the principle of impulse and momentum, and the motion of projectiles.

### EMF3002 MANUFACTURING LOGISTICS & SIMULATION

This subject covers the concept of logistics in manufacturing, manufacturing planning, purchasing, warehousing, and simulation. PC software will be used to enhance your learning.

### EMF3004 AUTOMATION & MACHINE VISION

This subject comprises two parts: Automation and Machine Vision. In the first part, you are given a basic understanding of the main components of an automatic system, ranging from various types of motor, servo system, sensors and programming techniques. The second part will expose you to the basic principles of machine vision systems, including some methodologies and techniques commonly used in the industry. The fundamental knowledge of the industrial automation, machine vision and their applications are covered.

### EMI2001 SEMICONDUCTOR PHYSICS & DEVICES

This subject presents various concepts related to semiconductor technology. It covers atomic physics, general material science and semiconductor materials, and also includes the physics of p-n junctions, MOS capacitors, MOSFETs and BJTs.

### EMI2002 WAFER FABRICATION PROCESS TECHNOLOGY

This subject provides you with the fundamental principles of wafer fabrication processes in semiconductor technology. There will be hands-on laboratory work, computer simulation sessions, and special projects to enhance learning.

### EMI2003 DIGITAL IC DESIGN & APPLICATIONS

This subject introduces the fundamental techniques of digital IC design. You will learn design rules, layout procedures, device modelling and simulation for combinational and sequential logic circuits. Semiconductor memories and programmable logic arrays will also be discussed.

### EMI2005 IC PACKAGING & FAILURE ANALYSIS

This subject covers various semiconductor assembly processes, process material properties, packaging technologies, integrated circuit failure analysis techniques, reliability physics and failure mechanisms. You will be exposed to various concepts and issues in the IC packaging/assembly processes and failure analysis.

### EMI2007 ANALOGUE IC DESIGN & APPLICATIONS

This subject covers the analysis and design of fundamental analogue integrated circuits. The concepts are reinforced and applied through the use of IC design tools for design entry, simulation and layout. The fundamentals operational amplifiers and their applications are also taught.

### EMI2008 IC PROCESS INTEGRATION

In semiconductor processing, process integration involves various aspects of wafer fabrication such as the flow and sequencing of process steps, isolation technology, interconnect technology, application of test structures for process monitoring and device testing as well as characterisation of basic MOS devices. You will also be exposed to various concepts and issues in the process integration.

### EMI3001 MICROELECTRONICS TEST & MEASUREMENT

This subject focuses on the concepts and applications of automated test systems for integrated circuits. Topics such as industrial standard automated test systems and testing methodologies of various semiconductor components and devices will be covered.

### EMI3002 DISPLAY TECHNOLOGY

This subject covers various aspects of LCD technology including the materials used and the assembly of liquid crystal display optics and liquid crystal cells (LCC). You will learn about thin film transistor and pixel array, as well as LCD equipment and its manufacturing process. Other display technologies will also be covered.

### EMI3004 MATERIALS SCIENCE
This subject focuses on the fundamental scientific principles that govern the behaviour of materials. The multidisciplinary nature of the subject, involving the understanding of the defects in solids, diffusion, properties of materials, failures, metals and polymers will help you in the selection, processing and application of engineering materials.

### EMI3005 CLEANROOM EQUIPMENT & TECHNOLOGY
This subject introduces cleanroom as well as vacuum technology. It includes the classifications of cleanrooms, factors to control the environment and its related facilities, and principles of vacuum pumps and gauges.

### EMI3007 NANOTECHNOLOGY
You will be introduced to the science of nanotechnology, and the tools used to fabricate and characterise nanostructures. The fundamentals of nano-electronics, nano-materials and smart materials will help you to appreciate concepts of nanotechnology. Micro electromechanical Systems (MEMS), Nano electromechanical Systems (NEMS) devices and applications of nanotechnology will also be covered.

### EMI3008 IC LAYOUT & PHYSICAL DESIGN
This subject deals with IC physical design process and analogue layout. Topics covered include IC chip partitioning, floor planning, placement and routing. Clock trees, static timing analysis and power management are also included. Analogue layout will focus on improving yield and device matching.

### EMP3001 MAJOR PROJECT
The Major Project gives you an opportunity to integrate and apply your knowledge in a practical learning situation. Besides research, design and project management skills, the emphasis will also be on innovation, creativity, teamwork and enterprise.

### EPH3001 PRINCIPLES OF PHOTONICS
This subject explores the fundamentals of photonics theory including concepts and application of photonics. It delves into the laws of reflection and refraction, principles of wave optics (including interference, diffraction and polarisation), fundamentals of fibre optic theory, principles of lasers & laser safety, and the basics of holography.

### EPH3002 OPTICAL COMMUNICATIONS
This subject delves into the laws governing transmission of light through fibres, classification of fibres, loss mechanisms and dispersion in fibres, optical modulation, multiplexing and demultiplexing, as well as the procedures used in the design and analysis of an optical communications system.

### EPH3003 OPTICAL DEVICES
This subject equips you with the knowledge and concept of optical devices. It covers the structure and characterisation of coherent and non-coherent optical sources, namely: light emitting diodes and laser diodes, optical detectors, optical amplifiers, passive optical devices, modulators, switches, optical integrated circuits, sensors and photonic devices for imaging, display and storage.

### EPL1003 PROBLEM-SOLVING & PROCESS SKILLS
This subject helps to develop your problem-solving and process skills, by giving you opportunities to exercise these skills through self-reflection, peer sharing and peer feedback. In the process, you will learn how to analyse and synthesise information that you have.

### EPZ1001 INTRODUCTION TO PROCESSES & SYSTEMS
The subject provides you with a basic understanding of the concepts, tools and approaches to business process management as well as the context in which these approaches are made within larger systems of business organisations or entities.

### EPZ2001 ORGANISATIONAL BEHAVIOUR
This subject introduces you to the overview of organisational theory and application relevant to dynamic organisations. It will focus on three levels of analysis: individual, group, and the organisation as a whole. The subject will explore the impact of behaviours and attitudes on others within organisational settings, the dynamics of organisational structure and behaviour as they operate in today's learning organisation and its rapid pace of change.

### EPZ3001 CUSTOMER RELATIONSHIP MANAGEMENT
This subject provides an in-depth view of Customer Relationship Management. It covers the basic concepts of CRM, leading to implementation of strategies within an organisation. Focus will be on using technologies to adopt a customer-focused approach and strengthening customer relationship.

### EQE3X02 QUALITY ENGINEERING

This subject provides an introduction to the concepts and methods in quality engineering. Topics include statistical process control, acceptance sampling, measurement system analysis and total quality management.

### EQM2001 PROCESS MANAGEMENT & INNOVATION

Process Management is the management of business as a series of processes resulting in the creation/improvement of products and services that customers need. This subject provides the understanding of concepts, theories and methods a team leader needs to initiate and carry out process improvement activities. Key topics include process management, analysis, improvement, and innovation.

### ESC1001 CHEMISTRY

This subject provides you with an understanding of the fundamentals of chemistry concepts and applications useful in the bioengineering field. Topics covered include the principles, theories and applications of physical, inorganic and organic chemistry, ranging from atomic structure and electron configuration, stoichiometry, the periodic table, chemical bonding, equilibria, electrochemistry, and thermochemistry to topics of organic chemistry covering the hydrocarbons, haloalkanes, the hydroxy, carbonyl and carboxylic acids compounds. Essential practical sessions on chemical experimentation are also covered.

### ESE1005 COMPUTER PROGRAMMING

This subject introduces you to the concepts of a stored program digital computer. It enables you to apply fundamental concepts in analysing, designing, implementing, debugging and testing programs. At the end of this course, you will be equipped with fundamental programming knowledge and software design techniques to solve problems.

### ESE2004 OBJECT-ORIENTED PROGRAMMING

This subject introduces you to object-oriented (OO) programming using an OO language such as Java. All the important phases of a software development process will also be covered through the use of a modelling language (e.g. Unified Modelling Language (UML)). After developing the necessary skills in the OO language, you will be able to write event-driven Graphical User Interface (GUI) applications.

### ESE2007 SOFTWARE DESIGN PROCESS

This subject equips you with a good understanding of software design and development process. Important phases of the software development process will be covered. More emphasis will be placed on object-oriented software design using UML (Unified Modelling Language), software documentation and testing methodologies in order to gear you towards a more practice-oriented industry.

### ESE2008 NEW MEDIA MARKETING APPLICATIONS

This subject covers the development of new media applications on the Internet. Topics covered include web analytics, Search Engine Optimisation (SEO), server-side programming language, databases, programming language for specific new media platforms and programming concepts. You will be equipped with knowledge to use new Internet media for marketing, and skills to develop applications for these new media using development tools.

### ESE3001 DATABASE MANAGEMENT SYSTEM & DESIGN

This subject focuses on the design and creation of a database, e.g. using the Oracle Database System. Topics covered range from the initial design of the database using modelling tools (Entity-Relationship model using Unified Modelling Language), to the refinement of the models using Normalisation techniques, then finally to the learning of the database programming language, Structured Query Language (SQL). You will apply the techniques learned and demonstrate your learning during group based PBL project.

### ESE3006 ASP.NET WEB PROGRAMMING

This subject focuses on providing appropriate knowledge and skills to develop ASP.NET Web applications on the .NET platform. After an introduction to different .NET related tools and languages, you will be taught to create Web Forms. Data accessing using ADO.NET is then covered followed by the use of web tools to enhance and improve functionality.

### ESE3007 COMPUTER GAME PROGRAMMING

This subject provides you with knowledge of the multidisciplinary nature of game programming and the ability to create your own game programs. It will provide you the opportunity to work through the entire development process, from preparation of 3D avatars and the related animation, to texturing and colouring, and finally the actual implementation of the game. You will be able to stretch your creativity and imagination to the fullest as you work through the course

### ESE3008 WEB SERVICES DEVELOPMENT

In this subject, prevailing standards, technologies and concepts in web services such as Simple Object Access Protocol (SOAP), Web Services Description Language (WSDL) and Universal Description Discovery and Integration (UDDI) are covered. Building, deploying and using web services will also be discussed.

### ESE3009 COMPUTER ARCHITECTURE & OPERATING SYSTEMS

This subject introduces the fundamental design concepts of a typical computer system which forms the system architecture. You will also learn about the components of a computer operating system that support this architecture.

### ESI2001 STUDENT INTERNSHIP PROGRAMME

This subject prepares you for the working world by providing you with opportunities to take responsibility for your own learning and to develop life-long skills such as effective communication and interpersonal skills.

### ESZ1001 SYSTEMS CONCEPTS & TOOLS

This subject provides an overview of systems thinking concepts and systems thinking. Systems thinking is the understanding of how feedback processes can generate patterns of behaviour within organisations and human systems. It includes tools such as "links and loops" and "archetypes". There is also a discussion on the fifth discipline and the learning organisation.

### ESZ1002 QUANTITATIVE METHODS

This subject introduces basic statistical concepts. Topics include descriptive statistics, probability distributions, estimation of population parameter, hypothesis testing, and simple linear regression.

### ESZ2001 DECISION ANALYSIS

This subject provides an introduction to the decision-making process and the models applicable to solve various decision problems. It will cover methods and techniques for decision making such as linear programming, transportation model, network models and decision trees.

### ESZ2002 PROCESS OPTIMISATION & IMPROVEMENT

This subject provides an overview on the concepts of quality improvement and process optimisation. It will establish the fundamental to quality concepts. You will learn how to analyse statistical control results, experimental designs, variations in processes and applying improvement techniques. Practical sessions using software applications will be integrated to enhance your learning.

### ESZ2003 MANAGEMENT SYSTEMS & ASSESSMENT

This subject provides an overview of general management systems used in industries. You will acquire the knowledge and requisite skills in planning a Quality Management System, Environmental Management System as well as conduct a Quality Audit. Practical sessions to set up a simple quality management system, starting from writing a quality procedure to conducting an audit will be carried out.

### ESZ3001 SUPPLY CHAIN MANAGEMENT

This subject covers the concept behind supply chain management in competitive business survival and key strategic drivers that improve supply chain management performance of an enterprise. It also covers the importance of managing inventory, selecting appropriate distributing and transportation network.

### ESZ3002 SYSTEMS MODELLING & SIMULATION

This subject provides an introduction to fundamental concepts of system modelling and simulation. Topics include basic model development, input analysis, modelling and statistical analysis. A simulation software is extensively used as a vehicle to enhance the understanding and practical applications of the subject.

### ESZ3003 SYSTEMS ENGINEERING & MANAGEMENT

This subject equips you with systems engineering management knowledge as well as the skills to be able to apply the knowledge learnt to analyse the systems dynamics, identify opportunities to enhance systems performance, or design solutions for a new system. Skills involving assessing risks and uncertainties of such systems will also be introduced.

### ETW1001 TELECOMMUNICATIONS & SYSTEMS

This subject covers the principles of analogue and digital telecommunications. Topics include amplitude modulation, frequency modulation, amplitude shift keying, frequency shift keying, phase shift keying, sampling, pulse code modulation, and time/frequency division multiplexing. The subject also gives an overview of some current telecommunication systems.

### ETW2001 TELECOMMUNICATION PRINCIPLES

This subject introduces the principles of analogue (AM/FM) radio transmission or reception, and digital transmission. Topics include modulation techniques, the basic operation of radio transmitters and receivers, the types of transmission media and communication network.

### ETW2005 WIRELESS TECHNOLOGY

The subject introduces the basic concepts of mobile communications including radio propagation, multiple access techniques, trunking & traffic and cellular technology. Topics also include existing mobile communication standards e.g. Global System for Mobile communications (GSM), General Packet Radio Service (GPRS) and Universal Mobile Telecommunication Services (UMTS). New technologies for the next generation of wireless communication services are also discussed.

### ETW2007 DIGITAL COMMUNICATIONS

This subject introduces you to the basic principles and techniques employed in digital communications. Topics covered include signal analysis, sampling theorem, pulse code modulation, delta modulation, base-band shaping for data transmission, digital modulation techniques, error control coding, spread spectrum modulation and information theory.

### ETW3001 MOBILE COMMUNICATIONS

This subject provides the principles and fundamentals of how mobile communication systems work. With these, you will be able to keep pace with advancement in mobile communications technologies, such as the 2G, 3G and 4G developments. The subject also introduces mobile radio communications and explains commonly used terminologies and the radio frequency spectrum.

### ETW3010 MULTIMEDIA NETWORK & SERVICES

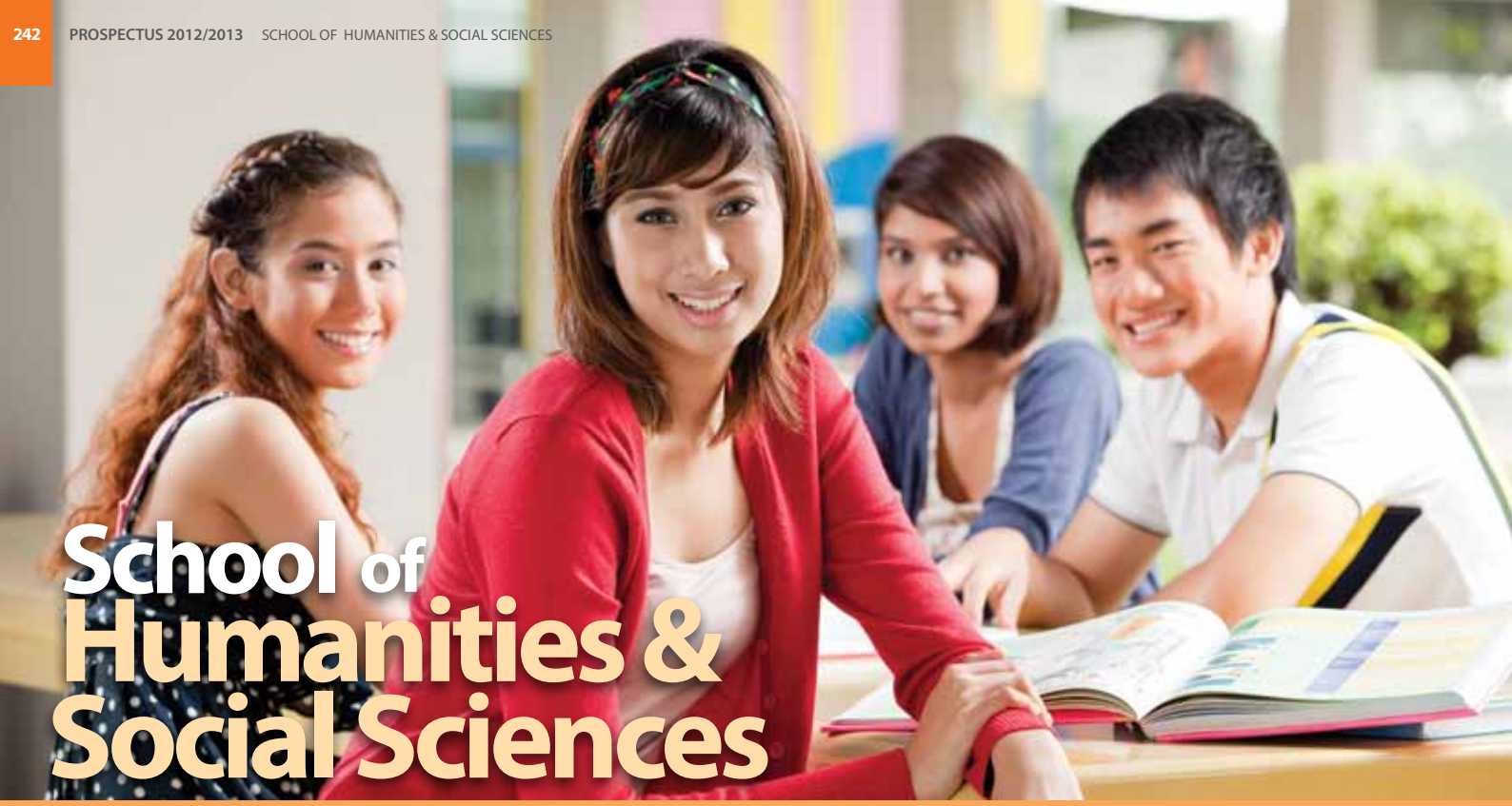
This subject provides a practical systems-oriented view of broadband and broadcasting networks. You will be introduced to the fundamentals of various technologies and architectures, including topics on data services based on cable and ADSL modems, as well as digital audio and video broadcasting. Laboratory sessions will emphasise voiceover-IP and application design for interactive TV and IPTV.

### EWN3001 WIRELESS AREA NETWORK TECHNOLOGIES

This subject equips you with the essential knowledge and hands-on skills for practical wireless area network projects involving the current wireless devices in the industry. You will have opportunities to learn more about technologies such as Wireless Personal Network (WPAN) and Wireless Local Area Network (WLAN) protocols, as well as common wireless devices used today.

### GCD1001/1002/1003 APPLIED PRINCIPLES FOR EFFECTIVE LIVING (APEL)

Applied Principles for Effective Living is TP's Core programme consisting of three subjects, namely APEL 1 (Personal Effectiveness), APEL 2 (Interpersonal Effectiveness) and APEL 3 (Extropersonal Effectiveness). APEL was specially developed for TP students with the aim to help nurture in them the dispositions (i.e., attitudes, skills, knowledge) towards the Principles for Effective Living, hence laying the vital foundation for their lifelong success. The principles introduced in this programme are largely derived from applied psychological studies.



# School of Humanities & Social Sciences

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The establishment of the School of Humanities & Social Sciences (HSS) adds a new dimension to TP's wide spectrum of diploma programmes. The School promotes a broad-based and holistic curriculum that will prepare students to meet the needs and face the challenges of a rapidly changing world.

HSS adopts a multi-disciplinary approach and offers courses with a focus on people-oriented specialisations. It employs a variety of teaching methodologies to facilitate and optimise learning. You will have opportunities to participate in a major project as well as the Student Internship Programme that will enable you to integrate and apply the concepts and skills you have acquired in practical and real-life situations.

HSS graduates will acquire relevant knowledge and develop practical and adaptable skills through a curriculum that comprises diploma core and elective subjects. In addition, the polytechnic-wide core modules on character education and lifelong skills help lay the foundation for the graduates' personal and interpersonal effectiveness. It is the ultimate aim of HSS to help each graduate make a difference in their chosen career. The School has a team of dedicated academic staff from a broad industry background. Their extensive industry knowledge and experience, coupled with many years of curriculum development and teaching experience, help to ensure the quality of the programmes on offer.

# Early Childhood Studies

> *The outlook for job opportunities in the (early childhood care and education) sector has never looked more promising. An estimated 1,400 positions are expected to be created over the next three years. This is good news for passionate and committed individuals who are looking to join the profession, and to play a significant role in grooming the future of Singapore.*
>
> *Mr Chan Chun Sing*
> *Acting Minister, Ministry of Community Development Youth and Sports*
> *Minister of State, Ministry of Information, Communication and the Arts*

Are you someone who wants to spend your days at the 'office' rattling off the alphabet, dipping your fingers in paint and making towers with building blocks? Do you find satisfaction in getting involved in the lives of young children and helping them rise to life's challenges? If you do, then this course is for you.

Led by lecturers with rich industry and early childhood teacher training experience, this course will help you gain an understanding of the principles and practices of early childhood care and education. In addition, the course provides a strong grounding in psychology. You will be equipped with knowledge, skills and attitudes to become a competent early childhood educator. There are also opportunities for exposure to early childhood practices outside Singapore via optional overseas study trips and a blend of global perspectives in the core curriculum.

With a kindergarten set up within the polytechnic campus to support the training of students in this course, you can look forward to authentic learning experiences in a real world early childhood setting. A specially designed observation laboratory also provides opportunities for research.

Scholarships are available for students who have good GCE O Level exam results.

## CAREER OPPORTUNITIES

Graduates from this course can work as early childhood educators or in children-related industries. With further studies and training, a wide variety of options are available in the following areas: child support and family services, child psychology, curriculum specialist, child psychology, writer of children's literature, event planner for children's events, and training of early childhood professionals.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

Note:

* Applicants who are admitted to the course and are keen to register as pre-school teachers after graduation must ensure that they obtain a minimum of B4 in their GCE O Level English Language (EL1) or a minimum band of 6.5 in the International English Language Testing System (IELTS – General Training). Applicants who do not meet the English requirement must ensure that they do so within two years of their registration as pre-school teachers.

* Applicants with foreign qualifications must ensure that the medium of instruction for their formal education is English AND they must have met the minimum English Language requirements of the course as detailed in the note above.

All applicants will also be required to pass a medical examination and be free from physical disability. Whilst not comprehensive, the following list of medical conditions may lead to non-acceptance into the course:

- Active tuberculosis
- Acquired Immune Deficiency Syndrome (AIDS)/ Human Immunodeficiency Virus (HIV)
- Psychiatric condition
- Uncontrolled hypertension
- Legal blindness
- Restricted mobility
- HBsAg positive/ Hepatitis B Carrier
- Uncontrolled epilepsy
- Uncontrolled asthma
- Uncontrolled diabetes
- Profound deafness
- Physical dependence upon mobility equipment

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 80 credit units |
| Elective Subjects | : min 6 credit units |
| Option Subjects | : 12 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 126 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| GCS1001 | Fundamentals of Public Speaking | 1 | 3 |
| GCS1002 | Academic Writing | 1 | 2 |
| GCS3001 | Professional Communication Skills | 3 | 3 |
| GIP3001 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BBT1001 | Computer Systems & Applications | 1 | 4 |
| GEC1002 | Early Years Character Education | 1 | 4 |
| GEC1003 | Early Years Language & Literacy Skills | 1 | 4 |
| GEC1004 | Early Years Numeracy Skills | 1 | 4 |
| GEC1005 | Early Years Environmental Awareness | 1 | 2 |
| GEC1006 | Early Years Creative Expressions & Play | 1 | 6 |
| GEC1007 | Principles & Practices in Early Childhood Care & Education | 1 | 2 |
| GEC2009 | Global Perspectives in Early Childhood Studies | 1 | 4 |
| GPS1001 | Foundation Psychology A | 1 | 4 |
| GPS1002 | Foundation Psychology B | 1 | 4 |
| GPS1015 | Introduction to Educational Psychology | 1 | 4 |
| GEC2001 | Early Years Classroom Management | 2 | 4 |
| GEC2002 | Child Safety, Health & Nutrition | 2 | 3 |
| GEC2003 | Family & Community Collaboration | 2 | 4 |
| GEC2004 | Early Years Curriculum Integrated Project | 2 | 4 |
| GEC2007 | Practicum Experience | 2 | 1 |
| GEC2008 | Creativity & the Arts | 2 | 2 |
| GPS2007 | Developmental Psychology | 2 | 4 |
| GPS2016 | Child Psychology | 2 | 4 |
| GMP3001 | Major Project | 3 | 8 |
| GPS3007 | Psychology of the Exceptional Child | 3 | 4 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Global Studies Option** | | | |
| GEM1011 | Applied Social Research | 1 | 4 |
| GEC1011 | Early Years Global Citizenship | 1 | 4 |
| GEC2010 | Early Years Cross-Cultural Studies | 2 | 4 |
| **Psychology Research Methods Option** | | | |
| GST1001 | Principles of Statistics | 1 | 4 |
| GPS1007 | Research Methods in Psychology A | 1 | 4 |
| GPS2001 | Research Methods in Psychology B | 2 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| GEC1012 | Developing Digital Media for Early Years Education | 1 | 4 |
| GEC1013 | Children's Film & Media | 1 | 3 |
| GEC1014 | Effective Communication Skills for Early Years Practitioners | 1 | 4 |
| GPS1009 | Introduction to Counselling Psychology | 1 | 3 |
| GEC2011 | Aggressive Behaviour & Bullying in Children | 2 | 4 |
| GEC2012 | Children's Literature | 2 | 3 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Gerontological Management Studies

> ***…the curriculum, underpinned by sound domain knowledge on Gerontological Studies and Business Management principles will put your graduates in good stead to serve the specific needs of the emerging silver industry.***
>
> *Mrs Helen Ko*
> *Executive Director*
> *Beyond Age*

Who we have: A new generation of seniors, who are healthier, richer and better educated than their predecessors. They belong to the silver industry that is expected to be worth USD$11 billion by 2015.

Who they need: Graduates with an in-depth understanding of the silver market to support the aspirations of this increasingly significant sector of the population.

If you enjoy working with people, and would like a career in helping our seniors to achieve fulfilling and productive lives, then this is the course for you. As the population ages and people are living longer, there will be a dramatic growth in the opportunities that cater to the silver industry. This course is designed to meet the specific needs of this rapidly growing industry and market group.

The course offers a multi-disciplinary curriculum that is underpinned by a sound knowledge of gerontology with insights from sociology and psychology. You will be equipped to apply such knowledge of ageing issues in a range of business settings.

The course provides you with specialised training in the following areas identified as growing sectors by the silver industry: leisure and travel, financial products and services, and health care and wellness. You will acquire a working knowledge of the relevant industries through practical training and project work.

## CAREER OPPORTUNITIES

The course prepares you for a rewarding career in the emerging silver industry. Careers you can look forward to include being business executives, tourism and leisure management officers, human resource and training executives, marketing executives, investment and financial planning officers, retail executives, programme management officers, managers of retirement villages, sports and wellness consultants, and entrepreneurs. You will also be well-positioned to take on other people-oriented careers that focus on providing products and services to the mature generation.

The scope of jobs available to you will not be limited to the silver industry since the business training provided will be valuable in all business environments.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, applicants must also have sat for at least one of the following subjects: Art/ Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, History, Higher Art, Higher Music, Introduction to Enterprise Development, Literature in English, Literature in Chinese, Literature in Malay, Literature in Tamil, Music, Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 21 credit units |
| Diploma Subjects | |
| Core Subjects | : 73 credit units |
| Elective Subjects | : min 22 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 125 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| GCD1001 | Applied Principles for Effective Living 1 | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 | 1 | 1 |
| GCS1001 | Fundamentals of Public Speaking | 1 | 3 |
| GCS1002 | Academic Writing | 1 | 2 |
| GCS2001 | Interpersonal Communication Skills | 2 | 2 |
| GCS3001 | Professional Communication Skills | 3 | 3 |
| GIP3001 | Student Internship Programme | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ANT1002 | Basic Nutrition & Food | 1 | 4 |
| BAF1007 | Basic Business Finance | 1 | 4 |
| BBS1001 | Principles of Management | 1 | 4 |
| BRM1005 | Marketing Fundamentals | 1 | 4 |
| GEM1008 | Introduction to Gerontology | 1 | 4 |
| GEM1009 | Introduction to Sociology | 1 | 4 |
| GEM1010 | Lifestyle, Ageing & Well-Being | 1 | 4 |
| GEM1011 | Applied Social Research | 1 | 4 |
| GEM1012 | Programme Planning | 1 | 4 |
| GPS1010 | General Psychology | 1 | 4 |
| GST1001 | Principles of Statistics | 1 | 4 |
| GEM2000 | Sociology of Ageing | 2 | 4 |
| GEM2002 | Sociology of Work | 2 | 4 |
| GEM2003 | Aged-Friendly Design | 2 | 3 |
| GEM2004 | Ageing & Illness | 2 | 4 |
| GEM2005 | Contemporary Issues in Ageing Societies | 2 | 4 |
| BMK3012 | Sales Management | 3 | 4 |
| GEM3006 | Major Project | 3 | 6 |

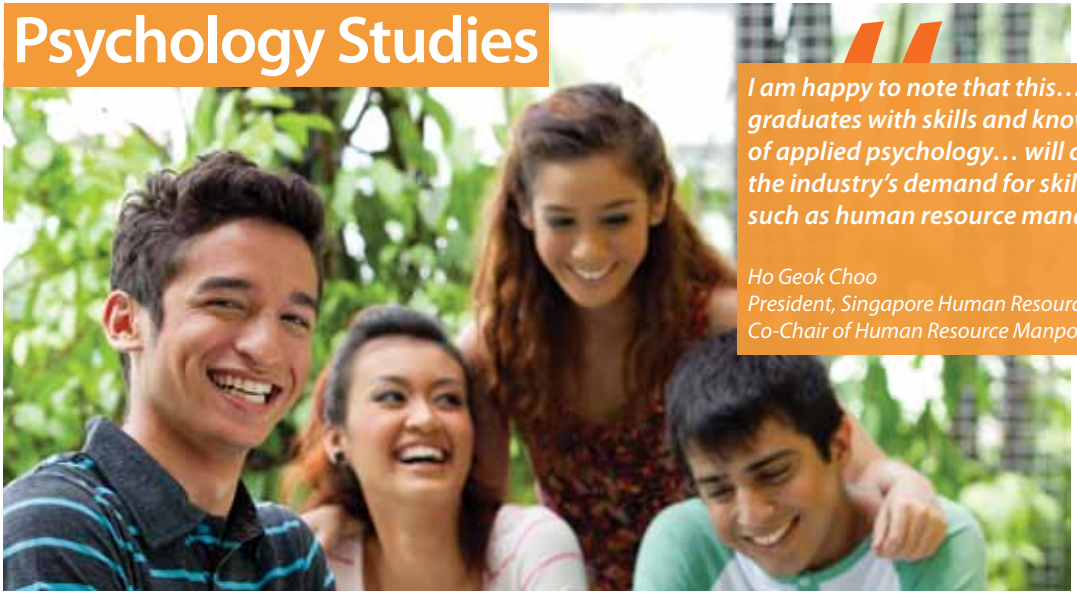
## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ANT2008 | Understanding Nutritional Concerns in the Elderly | 2 | 4 |
| BHT2012 | Travel & Leisure Business | 2 | 4 |
| GEM2007 | Gender Issues in Later Life | 2 | 3 |
| GEM2010 | Sociology of the Family | 2 | 3 |
| GPS2010 | Health Psychology | 2 | 4 |
| **Elective Cluster Subjects - Health & Wellness** | | | |
| GEM2013 | Psychology of Ageing | 2 | 4 |
| GEM2014 | Health Promotion & Active Ageing | 2 | 4 |
| GEM3002 | Aesthetics & Wellness | 3 | 4 |
| **Elective Cluster Subjects - Financial Product & Services** | | | |
| GEM3007 | Insurance & Retirement Planning | 3 | 4 |
| GEM3008 | Investment Basics & Investment Planning for Retirement | 3 | 4 |
| GEM3010 | Financial Planning Ethics & the Silver Client | 3 | 4 |
| **Elective Cluster Subjects - Travel & Leisure** | | | |
| BHT2005 | Event Management | 2 | 4 |
| GEM2015 | Tourism Services & Trends | 2 | 4 |
| GEM2016 | Itinerary Planning & Management | 2 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Psychology Studies



*I am happy to note that this… course, which equips graduates with skills and knowledge from the discipline of applied psychology… will certainly help to address the industry's demand for skilled professionals in areas such as human resource management and development.*

*Ho Geok Choo*
*President, Singapore Human Resources Institute*
*Co-Chair of Human Resource Manpower Skills and Training Council*

Imagine having an edge over others in understanding how people think and what makes them behave the way they do. What if you could be in the business of understanding what motivates people and what makes them tick, whilst enhancing their potential and performance? If you enjoy working with people and see yourself in a career which involves bringing the best out of them, then look no further.

This course will provide you with a broad foundation in the study of human behaviour and mental processes. You will explore a comprehensive range of core topics such as developmental and lifespan psychology, personality, social psychology and much more. You will learn first-hand that psychology is not just a theoretical discipline, and discover that it has many practical and meaningful applications across a wide variety of settings.

You will also be given a choice to specialise in one or more areas of study via elective concentrations that will hone your career skills and let you explore topics of personal interest within and related to the field of psychology. For instance, you may opt for electives in areas such as human capital management, human and social services, or even educational and child psychology.

The unique blend of our broad-based curriculum, the choice of different elective concentrations, and a mixture of hands-on independent and group projects will equip you with the sound knowledge, critical thinking, problem solving and interpersonal skills that are valued by employers today.

## CAREER OPPORTUNITIES

Our graduates are well-poised to enter a variety of exciting career paths in human resource management, consumer research, advertising, marketing, education as well as human and social services.

In addition, you will be well prepared for further studies with advanced standing in renowned universities that will further enhance career opportunities. For example, graduates who aspire to become certified psychologists, psychotherapists, psychoanalysts, social workers, counsellors, and HR managers may pursue higher degrees in related fields or other social science courses.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 7 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, applicants must also have sat for at least one of the following subjects: Art/Art & Design, Business Studies, Combined Humanities, Commerce, Commercial Studies, Economics, Geography, History, Higher Art, Higher Music, Literature in English/Chinese/Malay/Tamil, Music, Principles of Accounts.

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 19 credit units |
| Diploma Subjects | |
| Core Subjects | : 64 credit units |
| Elective Subjects | : min 34 credit units |
| Cross-Disciplinary Subjects | : min 9 credit units |
| Total Credit Units Completed | : min 126 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| GCD1001 | Applied Principles for Effective Living 1 (APEL 1) | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 (APEL 2) | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 (APEL 3) | 1 | 1 |
| GCS1001 | Fundamentals of Public Speaking | 1 | 3 |
| GCS1002 | Academic Writing | 1 | 2 |
| GCS3001 | Professional Communication Skills | 3 | 3 |
| GIP3001 | Student Internship Programme (SIP) | 3 | 8 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BBT1001 | Computer Systems & Applications | 1 | 4 |
| GPS1001 | Foundation Psychology A | 1 | 4 |
| GPS1002 | Foundation Psychology B | 1 | 4 |
| GPS1004 | Industrial & Organisational Psychology | 1 | 4 |
| GPS1005 | Applied Psychology Integrated Project 1 | 1 | 4 |
| GPS1007 | Research Methods in Psychology A | 1 | 4 |
| GST1001 | Principles of Statistics | 1 | 4 |
| GPS2001 | Research Methods in Psychology B | 2 | 4 |
| GPS2002 | Perception & Cognition | 2 | 4 |
| GPS2003 | Physiological Psychology | 2 | 4 |
| GPS2004 | Developmental & Lifespan Psychology | 2 | 4 |
| GPS2005 | Social Psychology | 2 | 4 |
| GMP3001 | Major Project | 3 | 8 |
| GPS3002 | Assessment & Personality | 3 | 4 |
| GPS3004 | Applied Psychology Integrated Project 2 | 3 | 4 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Human & Social Services Elective Concentration** | | | |
| GPS1009 | Introduction to Counselling Psychology | 1 | 3 |
| GPS2010 | Health Psychology | 2 | 4 |
| GPS2015 | Psychology of Addictive Behaviours | 2 | 4 |
| GPS3003 | Abnormal Psychology | 3 | 4 |
| **Educational & Child Psychology Elective Concentration** | | | |
| GPS1009 | Introduction to Counselling Psychology | 1 | 3 |
| GPS1012 | Educational Psychology | 1 | 4 |
| GPS2016 | Child Psychology | 2 | 4 |
| GPS3007 | Psychology of the Exceptional Child | 3 | 4 |
| **Human Capital Management Elective Concentration** | | | |
| BBS2001 | Human Resource Management | 2 | 4 |
| BBS2002 | Recruitment & Human Resource Administration | 2 | 4 |
| BBS2003 | Management of Employee Relations | 2 | 4 |
| BBS3001 | Human Resource Development | 3 | 4 |
| BBS3002 | Performance & Compensation Management | 3 | 4 |
| **General Psychology Electives** | | | |
| GPS1003 | Cross-Cultural Psychology | 1 | 3 |
| GPS2012 | Human Factors Psychology | 2 | 4 |
| GPS2013 | Independent Applied Psychological Studies | 2 | 3 |
| GPS3006 | Special Project | 3 | 4 |
| GPS3008 | Psychology of Criminal Behaviour | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Subject Synopses

## ANT1002 BASIC NUTRITION & FOOD

This subject provides a basic understanding of human nutrition and dietary practices. Topics include an introduction to nutrition and food, carbohydrates, lipids, proteins, energy balance, vitamins, minerals, water, food and its nutritive value and recent advances in nutrition.

## ANT2008 UNDERSTANDING NUTRITIONAL CONCERNS IN THE ELDERLY

This subject provides the basic knowledge of food and nutrients, nutritional requirements and issues pertaining to the elderly. It includes an overview of steps involved in the planning and delivery of nutrition programmes. An introduction to the management of some diet-related diseases common in the elderly will also be covered.

## BAF1007 BASIC BUSINESS FINANCE

This subject provides a general overview of the balance sheet and profit and loss statement of the company. It also provides an understanding of the sources and allocations of funds within a business enterprise, and an appreciation of the financial tools and techniques used by the financial manager in the management of funds and other financial resources.

## BBS1001 PRINCIPLES OF MANAGEMENT

This subject provides an insight into the key functions of management and the practical issues which managers of today face. Aspects of management such as planning, organising, leading, controlling, international management, business ethics and social responsibility will be covered.

## BBS2001 HUMAN RESOURCE MANAGEMENT

This subject emphasises the role of line managers/ supervisors in maximising organisational and employee performance through effective human resource management practices.

## BBS2002 RECRUITMENT & HUMAN RESOURCE ADMINISTRATION

This subject provides the knowledge and requisite skills to support the following major functions of human resource management: manpower planning, recruitment, selection, placement, orientation, employee communication, employee wellness, and computerised human resource information systems.

## BBS2003 MANAGEMENT OF EMPLOYEE RELATIONS

This subject exposes you to labour laws, the industrial relations framework of organisations and how to manage employee relations. You will also be introduced to a range of employee relations programmes and learn how these can contribute to organisational effectiveness.

## BBS3001 HUMAN RESOURCE DEVELOPMENT

This subject provides you with knowledge in the field of human resource development. Topics such as training needs analysis, design, implementation and evaluation of training programmes, and career development will be covered.

## BBS3002 PERFORMANCE & COMPENSATION MANAGEMENT

This subject provides information on the design and implementation of performance and compensation management systems. Topics include performance appraisal, pay for performance, salary and incentives administration.

## BBT1001 COMPUTER SYSTEMS & APPLICATIONS

This subject covers the fundamental concepts in the main hardware components of a computer system. It provides you with an understanding of how these components are set up and how they function together. Current IT trends, mainly in the areas of e-commerce and Internet applications, will be discussed within the core framework of data communications, networks and security issues. Basic theories will be supplemented with hands-on exposure to web page creation and designing, and spreadsheet application.

## BHT2005 EVENT MANAGEMENT

The subject introduces the scope of events management and their application in the context of the tourism industry. From this macro perspective, you will set out to build a foundation in event conceptualisation, development and production covering topics such as marketing of events, human resource management, budgeting and staging.

## BHT2012 TRAVEL & LEISURE BUSINESS

The subject provides you with an overview of the travel and leisure business in the 21st century. Specifically, topics encompassing the components and structure, key dynamics and the environment and issues facing the world's largest business will be covered.

## BMK3012 SALES MANAGEMENT

Selling forms an integral part of the "promotion" component of the marketing mix. This subject provides you with a comprehensive coverage of consultative selling, partnering, value-added selling, sales force automation, contextualised selling in both consumer and non-consumer industries, and time-proven fundamentals in sales management.

## BRM1005 MARKETING FUNDAMENTALS

This subject provides an understanding of the basic concepts and practices of modern marketing. It focuses on the role and tools utilised by marketers in developing the appropriate marketing mix and in the identification of target segments.

## GCD1001/1002/1003 APPLIED PRINCIPLES FOR EFFECTIVE LIVING (APEL)

Applied Principles for Effective Living is TP's Core programme consisting of three subjects, namely APEL 1 (Personal Effectiveness), APEL 2 (Interpersonal Effectiveness) and APEL 3 (Extropersonal Effectiveness). APEL was specially developed for TP students with the aim to help nurture in them the dispositions (i.e., attitudes, skills, knowledge) towards the Principles for Effective Living, hence laying the vital foundation for their lifelong success.

## GCS1001 FUNDAMENTALS OF PUBLIC SPEAKING

This subject aims to help you become confident speakers. It equips you with the techniques to develop, deliver and evaluate speeches appropriate to a variety of contexts, including both impromptu and prepared situations.

## GCS1002 ACADEMIC WRITING

This subject aims to help develop your skills and confidence in writing for academic contexts. It takes you through the stages of the writing process i.e., from planning through the development and production of academic papers.

## GCS2001 INTERPERSONAL COMMUNICATION SKILLS

You will learn to understand and apply the skills of effective communication in a wide variety of contexts and situations. The curriculum covers self-awareness, personal and interpersonal power, attitudes, values and perceptions in communication, verbal and nonverbal strategies, the integration of emotional and intellectual intelligence, dealing with differences and the skill of working collaboratively. This subject provides a solid foundation for counselling and relevant skills to establish strong interpersonal relationships.

## GCS3001 PROFESSIONAL COMMUNICATION SKILLS

This subject aims to hone your communication skills. Topics covered will include handling interviews, meeting skills, interpersonal skills and formal writing skills required in various forms of professional and career writing such as project proposals, application letters, resumes and more.

## GEC1002 EARLY YEARS CHARACTER EDUCATION

This subject equips you with valuable knowledge and skills that nurture interpersonal and intrapersonal skills amongst young children so as to help them become resilient and successful learners.

## GEC1003 EARLY YEARS LANGUAGE & LITERACY SKILLS

This subject helps you develop engaging lessons and activities in order to enhance the learning of English amongst young children.

## GEC1004 EARLY YEARS NUMERACY SKILLS

This subject guides you to develop lessons and activities that enhance effective learning of numeracy amongst young children.

## GEC1005 EARLY YEARS ENVIRONMENTAL AWARENESS

This subject helps you develop lessons that inculcate a sense of understanding of the world in young children. You will learn to develop lessons that will build important process skills amongst young children through engaging activities.

## GEC1006 EARLY YEARS CREATIVE EXPRESSIONS & PLAY

This subject aims to help you nurture young children's creativity through a rich learning environment in art, music, drama, dance, as well as activities involving motor skills. You will learn to develop lessons to provide experiences that will nurture expressiveness, creativity and imagination amongst young children.

## GEC1007 PRINCIPLES & PRACTICES IN EARLY CHILDHOOD CARE & EDUCATION

This subject provides an overview of early childhood care and education in Singapore. You will delve into the various approaches and models for early childhood care and education, as well as the social dynamics of learning in Singapore's early childhood context. In addition, you will also consider appropriate practices within the early childhood context.

## GEC1011 EARLY YEARS GLOBAL CITIZENSHIP

This subject highlights the interconnectedness of the world today through discussions on various global issues (e.g. sustainable development, acceptance of diversity), and explores strategies in developing young children's awareness of what it means to be a responsible global citizen.

## GEC1012 DEVELOPING DIGITAL MEDIA FOR EARLY YEARS EDUCATION

This subject equips you with the skills and knowledge required to develop digital teaching materials to be used in early childhood education settings.

## GEC1013 CHILDREN'S FILM & MEDIA

This subject explores the various types of children's film and media resources. You will explore developmentally-appropriate film and media sources from a variety of genres. Through analysis of selected film and media sources, you will investigate the impact of media on the development and behaviour of young children, as well as their utility value to children's learning and development.

## GEC1014 EFFECTIVE COMMUNICATION SKILLS FOR EARLY YEARS PRACTITIONERS

This subject aims to help you become more knowledgeable and confident in the use of English in various settings. You will gain effective spoken and written communication skills to help you serve as role models of Standard English. (This elective is offered to students who have not obtained a minimum of B4 in the GCE O Level English Language or equivalent).

## GEC2001 EARLY YEARS CLASSROOM MANAGEMENT

This subject aims to impart basic effective teaching strategies in order to manage and guide children's behaviour within the classroom.

## GEC2002 CHILD SAFETY, HEALTH & NUTRITION

This subject helps you understand the early childhood educator's role in providing an environment for the care and safety of children. You will learn to manage areas of young children's nutrition, health, hygiene and safety. In addition, you will also be equipped with basic first aid skills.

## GEC2003 FAMILY & COMMUNITY COLLABORATION

This subject explores the dynamics of families and their role in the development of the child. It also introduces strategies and resources to help strengthen relationships between home, community and centre/kindergarten.

## GEC2004 EARLY YEARS CURRICULUM INTEGRATED PROJECT

This subject provides opportunities to design and develop developmentally appropriate classroom activities. You will learn to create learning programmes and resources to enhance early years learning.

## GEC2007 PRACTICUM EXPERIENCE

This subject provides opportunities for you to observe and keep records of children's behaviour in pre-school and other relevant children-related settings. You will also have opportunities for practical training to apply the concepts and skills acquired in your study.

## GEC2008 CREATIVITY & THE ARTS

The arts develop ways of thinking, foster creative expressions, as well as build bridges across diverse cultures and experiences. Through hands-on sessions, you will have the opportunity to creatively express yourself via artistic forms and more. You will also be encouraged to integrate your learning experiences and to apply them to both your daily life and classroom teaching.

## GEC2009 GLOBAL PERSPECTIVES IN EARLY CHILDHOOD STUDIES

This subject provides opportunities for you to explore research, practices and issues related to early childhood care and education in various parts of the world. The subject will include an optional overseas field trip, allowing for comparative studies to enrich your experience in this area.

## GEC2010 EARLY YEARS CROSSCULTURAL STUDIES

This subject will provide you with a deeper appreciation of how increasing globalisation and living in an environment with diverse cultures influence children's growth and development.

## GEC2011 AGGRESSIVE BEHAVIOUR & BULLYING IN CHILDREN

This subject explores the causes and effects of problem behaviours such as aggression and bullying. You will explore strategies on identifying and helping both the bullies and victims, in order to create a safe environment and reduce long-term effects of aggression and bullying.

## GEC2012 CHILDREN'S LITERATURE

This subject examines literary works for children from various genres, across cultural contexts and time. You will revisit stories that are familiar childhood favourites. Through analysis of themes, plots and characterisation, you will also examine the ways in which literary representations of children and for children have changed.

## GEM1008 INTRODUCTION TO GERONTOLOGY

This subject introduces you to the theoretical perspectives and approaches to the study of ageing from various disciplines. It will examine the causes and consequences of ageing at the level of individuals and populations. This involves investigating the social, physical and mental changes humans undergo as they age, as well as the impact of the elderly population on social, economic and political institutions.

## GEM1009 INTRODUCTION TO SOCIOLOGY

This subject introduces you to the key theoretical perspectives in Sociology. Through these theories, you will examine current and emerging social phenomena. From the systematic study of different social structures e.g. family, work, social control, gender and ethnicity, you will be able to apply sociological concepts to help you explain social life in societies.

## GEM1010 LIFESTYLE, AGEING & WELLBEING

This subject addresses issues relating to ageing and well-being. The concept of the quality of life is also examined. You will examine the significance of social support networks amongst older persons, and its impact on their well-being. The relationship between leisure and healthy ageing, implications of continuous employment and retirement are also covered in this subject.

## GCS1002 ACADEMIC WRITING

This subject aims to help develop your skills and confidence in writing for academic contexts. It takes you through the stages of the writing process i.e., from planning through the development and production of academic papers.

## GEM1011 APPLIED SOCIAL RESEARCH

This subject provides a general understanding of the theory and practice of social science research and presents science as a powerful method of human thinking. The focus is to provide you with the necessary information to understand the importance of research in the field of social science and its applications to various settings. You will learn a systematic way of thinking and knowledge discovery known as scientific inquiry.

## GEM1012 PROGRAMME PLANNING

This subject provides a foundation in programmes conceptualisation, development and production, covering topics such as programme design, programme management, programme evaluation and budgeting, as well as staging of programmes.

## GEM2000 SOCIOLOGY OF AGEING

This subject provides a sociological perspective on the process and experience of human ageing in modern society, while adopting a context-based approach that employs case studies. Topics include the demographic and political impact of ageing societies, historical and cultural perspectives on ageing, and the major theoretical approaches to the study of ageing. Various social policies and institutions that affect ageing will also be examined. These include social policies on health care, housing, retirement, death, living environments and social support for the aged.

## GEM2002 SOCIOLOGY OF WORK

The social dynamics of workplace organisations and the practice of salaried employment in modern industrial societies will be analysed in this subject. In addition, the historical and technological developments that have contributed to contemporary working environments will also be examined, along with the application of major theoretical perspectives on work. Finally, key social policy issues and controversies surrounding the workplace will also be contextualised through the use of local and international case studies.

## GEM2003 AGED-FRIENDLY DESIGN

This subject exposes you to the design process of creating aged-friendly products and services. As the world population ages, it is vital that you be aware of the issues that confront ageing, and at the same time, demonstrate problem solving skills and foresight in tackling social and lifestyle issues. Through field trips and via observation and behavioural studies, you will be enabled to come up with innovative and creative solutions for the ageing generation. (Innovative and original ideas can be considered for commercialisation under the Design for Ageing Centre.)

## GEM2004 AGEING & ILLNESS

This subject provides perspectives and issues relating to illness and growing old. Topics include avoidable illness, health concerns, ageing organ systems, principles of drug therapy, unique aspects of illness presentation, medical ethics, legal issues, community networking, and active maturing.

## GEM2005 CONTEMPORARY ISSUES IN AGEING SOCIETIES

This subject will examine current issues that are evident in ageing societies around the world. You will gain an understanding of the transformations and challenges faced by ageing individuals and the state. The subject will also examine the on-going debates on individual and societal responses to ageing issues. You will also learn about the ageing trends in both developed and developing countries.

## GEM2007 GENDER ISSUES IN LATER LIFE

The various gender-based issues surrounding elderly men and women will be explored. This subject examines the impact of ageing on the gender identity and roles of an ageing person. Special attention is directed to the gender gap in longevity, emerging psychological and physiological issues, the impact of social change on gender relations in families, socioeconomic issues among ageing men and women, and the influence of social policy.

## GEM2010 SOCIOLOGY OF THE FAMILY

The family has remained as a key social unit in societies, and has taken on various forms and meanings over time. You will learn about the dynamic interactions of the family unit with other societal institutions such as the state, religion, education and the media. You will also examine the issues facing the contemporary family. Topics include childcare, employment, marriage, housing and various social policies involving the family.

## GEM2013 PSYCHOLOGY OF AGEING

This subject provides insights into geropsychological concepts and theories relating to the adult's adaption to the third and fourth age. Issues relating to the ageing population, improved longevity, and the changing psychological needs and capabilities of older people are examined.

## GEM2014 HEALTH PROMOTION & ACTIVE AGEING

This subject examines current health promotion practices which enable individuals, carers and the community to manage their health. Theoretical underpinnings of the approaches to health promotion are explored along with the development of programmes incorporating practical examples. Special attention is given to how such practices and approaches support active ageing. Business models and trends related to aspects of health promotion and active ageing are also considered.

## GEM2015 TOURISM SERVICES & TRENDS

This subject provides an overview of the tourism and leisure industry with a focus on the silver market niche. It integrates broad perspectives with the study of the emerging silver tourism industry by examining trends and issues plus the profile of the silver travellers against a backdrop of key tourism services.

## GEM2016 ITINERARY PLANNING & MANAGEMENT

This subject provides knowledge on geography, places of interest, modes of transportation, consumer behaviour and marketing in order for you to plan customised travel itineraries for the silver traveller. Management techniques to enhance customer satisfaction are also discussed. It includes hands-on training on a global distribution system (GDS), e.g. Amadeus, which leads to an industry-recognised certification upon successful completion.

## GEM3002 AESTHETICS & WELLNESS

This subject provides an understanding of the products, services, issues, trends and behaviours of elderly consumers, with the aim to enhance their personal wellness in relation to their quality of life. You will also learn about the workings of the aesthetic and wellness industry, and how to tap into it effectively.

## GEM3006 MAJOR PROJECT

The Major Project is intended to complete your training by providing a real-world experience to integrate and apply your knowledge in a practical learning situation. Besides research, design and project management skills, the emphasis will also be on innovation, creativity, teamwork and enterprise.

## GEM3007 INSURANCE & RETIREMENT PLANNING

This subject provides the key principles and concepts of insurance and retirement planning. It will elaborate on the basic principles of insurance and the key features of the major classes of insurance-related products. It will also highlight sections of the Financial Advisers Act which are essential to insurance and retirement planning.

## GEM3008 INVESTMENT BASICS & INVESTMENT PLANNING FOR RETIREMENT

This subject provides the key principles and concepts of investment basics and investment planning for retirement. It will elaborate on basic investment strategies and the key features of the major classes of investment instruments. It will also highlight sections of the Financial Advisers Act which are essential to investment planning for retirement purpose.

## GEM3010 FINANCIAL PLANNING ETHICS & THE SILVER CLIENT

This subject provides the key principles and concepts of basic financial planning products such as life insurance, endowment insurance and investment-linked policy. It will elaborate on the rules and regulations of the Financial Advisers Act (FFA) and basic underwriting principles that would steer the Financial Adviser towards maintaining a high level of professional ethics.

## GIP3001 STUDENT INTERNSHIP PROGRAMME

This internship programme is a 12-week attachment to relevant organisations that will enable you to link and practice your learning with the real world. You will have opportunities to handle real problems and issues, and apply the concepts and skills that you have acquired in the course of your study.

## GMP3001 MAJOR PROJECT

The major project is intended to complete your training by providing a real-world experience to integrate and apply your knowledge in a practical learning situation. Besides research, design and project management skills, the emphasis will also be on innovation, creativity, teamwork and enterprise.

## GPS1001/1002 FOUNDATION PSYCHOLOGY A / B

These two subjects, Foundation Psychology A and B, provide you with an overall perspective and understanding of psychology as a scientific study of mental processes and human behaviour. Fundamental concepts, theories and methodology in the study of general psychology will be explored to enhance your understanding of the biological, cognitive and social bases of behaviour.

## GPS1003 CROSS-CULTURAL PSYCHOLOGY

This subject raises your awareness of and sensitivity to the influence of cultural variables on the nature and behaviour of individuals, their adaptations to different environments, as well as their relationships with others within and outside their own culture membership. You will examine the impact of culture on a variety of areas, from individual development to socialisation and work.

## GPS1004 INDUSTRIAL & ORGANISATIONAL PSYCHOLOGY

This subject provides you with opportunities to apply psychological knowledge, research methods and intervention strategies within industrial and organisational settings. You will explore both the theoretical and practical aspects of three primary areas, namely personnel, organisational and human factors psychology.

## GPS1005 APPLIED PSYCHOLOGY INTEGRATED PROJECT 1

Psychology is not just a theoretical subject. It holds valuable and practical applications across a wide range of personal, interpersonal and professional settings. This subject allows you to apply psychological techniques and research skills to better understand individuals in an applied setting of your choice.

## GPS1007 RESEARCH METHODS IN PSYCHOLOGY A

This subject builds upon your foundational understanding of statistical concepts and data analysis methods. It equips you with the knowledge, skills and techniques, as well as hands-on experience in the conduct of basic empirical research in psychology and the social sciences.

## GPS1009 INTRODUCTION TO COUNSELLING PSYCHOLOGY

This subject provides opportunities for you to explore the fundamentals of counselling as well as discuss the primary theoretical perspectives and contemporary issues that influence the counselling profession. You will learn helping skills that can be applied to help people lead more effective and well-adjusted lives.

## GPS1010 GENERAL PSYCHOLOGY

This subject provides an introductory perspective and understanding of psychology as a scientific study of mental processes and human behaviour. Fundamental concepts and theories in the study of psychology will be explored to enhance your understanding of the internal and external bases of human behaviour.

## GPS1012 EDUCATIONAL PSYCHOLOGY

This subject provides an overview of psychological principles and the relationship with learning and thinking, instruction, effective teaching pedagogies and classroom management in order to facilitate an optimal environment for human growth and development.

## GPS1015 INTRODUCTION TO EDUCATIONAL PSYCHOLOGY

This subject provides an overview of psychological principles related to teaching, learning and cognition in the context of education. You will learn about how different classroom management techniques and instructional pedagogies can be applied to enhance the learning environment and facilitate human growth and development in educational settings.

## GPS2001 RESEARCH METHODS IN PSYCHOLOGY B

This subject equips you to address more complex research questions using an expanded range of research designs and statistical techniques. You will be given opportunities to apply knowledge, skills and techniques and employ statistical software to analyse and interpret data from a range of psychological experiments.

## GPS2002 PERCEPTION & COGNITION

This subject explores two main thematic areas of human information processing, namely, perception and cognition. You will explore topics such as sensory perception, attention, learning and memory in order to enhance your understanding of how human beings perceive and process information.

## GPS2003 PHYSIOLOGICAL PSYCHOLOGY

This subject explores the relationship between physiological process and human behaviour, with particular emphasis on the function of the human nervous system and sensory systems.

## GPS2004 DEVELOPMENTAL & LIFESPAN PSYCHOLOGY

This subject takes a lifespan perspective by exploring human growth and development from conception, through the critical life-stages, and to the end of the life cycle. You will explore developmental theories and research to help you understand the intricacies of how humans develop throughout the lifespan.

## GPS2005 SOCIAL PSYCHOLOGY

This subject is about the scientific study of the interactions between people and the social contexts they live in. Through exploring real-world social events and situations, you will gain a deeper appreciation of how people's thoughts, emotions and behaviours are influenced by other people.

## GPS2007 DEVELOPMENTAL PSYCHOLOGY

This subject examines theories and methodologies covered in developmental psychology. You will explore and gain a deeper understanding of how people change at each developmental phase as a result of interaction between innate factors and external experiences.

## GPS2010 HEALTH PSYCHOLOGY

This subject examines the impact of mental, emotional and behavioural factors that affect the onset, duration, recovery and prevention of physical illnesses. You will also learn to analyse health and disease issues using psychological principles and techniques in the context of an interrelated and diverse world.

## GPS2012 HUMAN FACTORS PSYCHOLOGY

This subject applies concepts about human perceptual and cognitive behaviour, abilities and limitations to enhance our understanding of human interaction with systems, technology and products in various applied settings and industries. Through practical applications, you will apply this knowledge to improve work performance and human-machine interactions.

## GPS2013 INDEPENDENT APPLIED PSYCHOLOGICAL STUDIES

This subject builds upon your foundational skills in information literacy and research methods. You will be given the opportunity to explore an area of interest. In so doing, you will be further exposed to concepts and theories in psychology beyond what is offered through the range of subjects within the Psychology Studies course.

## GPS2015 PSYCHOLOGY OF ADDICTIVE BEHAVIOURS

This subject discusses the psychological and social aspects behind addictive habits. You will explore how and why an individual engages in physical addictions (e.g., alcohol and drugs) and psychologically compulsive behaviours (e.g., gambling).

## GPS2016 CHILD PSYCHOLOGY

This subject focuses on the major issues related to the physical, cognitive and psychosocial development of a child. You will gain knowledge and understanding of why children think and behave the way they do, as well as apply theoretical understanding on nurturing the development of young children.

## GPS3002 ASSESSMENT & PERSONALITY

This subject introduces the principles and techniques of psychological assessment. Underlying many psychological assessments is a theoretical position about personality. The subject examines how aspects of personality are theoretically operationalised and measured to enhance our understanding of relationships between personality theories and assessment. This hands-on subject provides opportunities to explore the application of tests in varied settings.

## GPS3003 ABNORMAL PSYCHOLOGY

This subject explores concepts and issues surrounding abnormal behaviour and illnesses. You will explore major theories on how physiology, cognition, developmental, social and other issues influence behaviour. You will also be provided with an overview of intervention methodologies and techniques commonly used in the treatment of maladaptive behaviours and psychological disorders.

## GPS3004 APPLIED PSYCHOLOGY INTEGRATED PROJECT 2

This subject builds on skills and experience gained from earlier project work-related subjects. More opportunities will be provided for you to explore the various fields in psychology and apply psychological knowledge in greater depth.

## GPS3006 SPECIAL PROJECT

This subject builds upon your foundation in research and statistical methods, as well as prior experiences in conceptualising and conducting psychological research studies. You will get the opportunity to be involved in industry-related research projects and hone a number of core competencies in the study of psychology such as psychological measurement, data preparation and analysis, and the communication of research findings.

## GPS3007 PSYCHOLOGY OF THE EXCEPTIONAL CHILD

This subject focuses on individual differences in children. You will explore areas such as the emotional, social and learning characteristics of individuals who are exceptional, and gain a deeper understanding of the issues that impact the lives and behaviour of these individuals.

## GPS3008 PSYCHOLOGY OF CRIMINAL BEHAVIOUR

This subject focuses on raising awareness of the theoretical, psychological and developmental perspectives on criminal behaviour. In addition, it examines the psychological factors that relate to crime on a general level, specific offences and also specific offender and victim groups. You will also learn to evaluate the contribution of psychology to the explanation of criminal behaviour in a multidisciplinary framework.

## GST1001 PRINCIPLES OF STATISTICS

The use of empirical evidence and statistical analysis is crucial in the field of social sciences (e.g., psychology, sociology and education). This subject provides you with a basic understanding and use of statistical concepts in data analysis. Concepts such as descriptive and inferential statistics will be introduced.

# School of Informatics & IT

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Look around and you will notice the tremendous influence of Information Technology in our lives. You see IT in the mobile apps that people are downloading, in the eLearning lessons you go through, in the security applications that protect our computers, and in the digital games that you play. Indeed IT is all around us and here at the School of Informatics & IT, you will learn how to leverage on IT to improve business processes, ensure efficiency and enrich lives. Through our courses, you will receive a strong foundation in IT and an understanding of specialised areas like analytics, financial services, forensics, digital media, cyber security and more. You will learn to harness the power of IT to make a difference in the world around you.

As a leader in the field of IT education, we are recognised as a progressive School, providing the widest range of courses. We nurture IT professionals who can contribute confidently to any organisation they join. Our emphasis on developing problem-solving and thinking skills helps us to cultivate intelligent individuals who are independent, analytical and able to respond effectively to the needs of people and organisations. Communication skills and teamwork are also emphasised because these are key attributes for people working in a global economy.

Through our Student Internship Programme, you will have the chance to gain real life work experience in either local or overseas companies, organisations or research institutes. In fact, in your final year you can be attached to an organisation for up to 9 months as an intern. Such extensive experience will groom you well for the challenges of the workplace and give you an edge when you seek employment.

There are many exciting opportunities for you to develop your talents and skills, so that you can adapt to and meet the demands of a fast changing world. To help you excel and discover your potential, you will have the chance to participate in enrichment programmes which include national and international competitions, as well as research attachments to universities.

Participation in local and global community projects is something we strongly encourage. There are many opportunities for you to be involved in social outreach projects to help those in need and make a difference in the lives of others.

After three years, you will graduate with the confidence, qualities and skills to add value to the organisations you join.

To ensure that our curriculum remains relevant to the industry, we work closely with employers and universities to maintain quality, industry relevance and high academic standards. An advisory committee, comprising leading industry professionals from a range of companies such as Avaya, Cisco Systems, the Infocomm Development Authority of Singapore, IBM, Microsoft and SAS provides advice to the School on its strategic direction and development to ensure that the courses we offer prepare you well for the future.

Many of our students move on from a diploma to a degree through a smooth process made possible by the numerous advanced standing arrangements we have with local and overseas universities.

# Specialist Centres

### TP-AVAYA UNIFIED COMMUNICATIONS CENTRE

Established in collaboration with Avaya, this facility is equipped with the latest IP-Telephony and Unified Communications (UC) equipment to facilitate engagement in industry projects and to train students in the design, development and implementation of IP-based business communication systems, Voice-Over-Internet Protocol (VoIP) and Unified Communications (UC) applications.

### TP-BUSINESS OBJECTS BUSINESS INTELLIGENCE CENTRE

Established in collaboration with Business Objects, an SAP company, this centre helps to facilitate engagement in industry projects. It hosts Business Objects Business Intelligence suite of software that enables students to learn the processes of data integration, query and reporting, online analytical processing, and statistical analysis to help companies make better decisions.

### TP GREEN DATA CENTRE

Designed for maximum energy efficiency and minimum environmental impact, the Green Data Centre (GDC) enables IT applications and services, as well as computing resources to be centrally stored, managed and disseminated, without compromising on energy consumption. This Green Data Centre is the first Cisco Unified Computing System (UCS) deployed in South East Asia. It has received the Green Data Centre Certification from the Singapore Environment Council.

### TP-HP SOFTWARE QUALITY ASSURANCE CENTRE

Established in collaboration with Hewlett-Packard Singapore Pte Ltd, this centre is equipped with the latest HP Quality Assurance software for in-house and industry projects. It also employs the latest methodologies and best practices to develop core competencies in software quality assurance.

### TP-IBM CENTRE FOR IT SECURITY

Established on an IBM security framework, this centre provides training to students in the most current IT security industry and technology trends, simulating a real life work environment. It also promotes industry collaboration by enabling students and staff to undertake relevant industry projects, research and development involving information security technology.

## TP-IBM IT SERVICE MANAGEMENT CENTRE

Established in collaboration with IBM Singapore, this centre functions as a real-time learning enterprise that provides students with a holistic environment in which theory is put into practice as they focus on managing IT Systems, providing IT solutions to clients, monitoring service performance levels and adopting best practices that meet industry standards. The Centre is based on the IBM IT Services Framework which includes IBM's portfolio of products and practices to provide an integrated hands-on training on IT service management.

## TP-MICROSOFT DIGITAL MEDIA SOLUTIONS CENTRE

Established in collaboration with Microsoft, this special digital media centre has been designed to meet the needs of industry for manpower and solutions in Interactive Digital Media. It focuses on the areas of solutions exploration, development, testing, review and proof of concept. Students and staff gain competency in the latest Microsoft technologies and are able to engage with industry on projects that relate to interactive media and game development.

## TP-THOMSON REUTERS FINANCIAL RISK MANAGEMENT CENTRE

Established in collaboration with Thomson Reuters and equipped with Reuters Financial software, premium financial information terminals and a fully integrated front-to-back solutions facility, this centre provides students with the unique opportunity to learn in a live financial market environment that familiarises them with investment banking and risk management operations.

## HUMAN COMPUTER INTERACTION CENTRE

The Human Computer Interaction (HCI) Centre was set up to train students in user-centered design, and to provide usability consultancy services to the industry. The HCI Centre is equipped with a complete set of facilities and equipment to support usability consultants in the requirement, design & test phases of a software product development lifecycle. We have a state-of-the-art eye tracker system to support us in usability evaluations. This system is able to record the eye movements of users. This non-invasive system provides further insight into the user experience. The results of the usability evaluation help developers to refine the interface, so as to improve the overall user experience.

## CENTRE FOR DIGITAL SECURITY & INVESTIGATIONS

This centre has been set up in collaboration with the Singapore Infocomm Technology Security Authority (SITSA). It creates a realistic environment to train students in three key security areas: incident response, monitoring and audit, as well as digital artefact analysis. Here, our students get the opportunity to work on real security incidents and simulated attacks. They also receive training in monitoring and identifying patterns of security attacks, correlate the incidents and trends to better predict and manage potential security incidents, and perform auditing and analysis of digital artefacts such as malware and mobile security.

## TP-SAS BUSINESS INTELLIGENCE & ANALYTICS CENTRE

Established in collaboration with SAS Institute, this centre provides the latest infrastructure, facilities, software, and datasets to facilitate students' learning of comprehensive business intelligence and analytics skill sets in a data-rich environment. This centre is capable of supporting the end-to-end business analytics life cycle, and focuses on areas such as business intelligence, data mining, web analytics, social media analytics and predictive analytics. It also promotes industry collaboration and capability building by enabling students and staff to undertake relevant industry projects, and conduct applied research and development in advanced analytics.

# Business Intelligence & Analytics - *NEW!*

> ***As a market leader in business analytics software & services, we see a strong demand for professionals trained in analytics, business, IT and project management skills to help businesses make smarter decisions. This course will help prepare students well to meet this global demand, and help to position Singapore as a business analytics competency centre for Asia.***
>
> *Mr Bill Lee*
> *Managing Director*
> *SAS Institute Pte Ltd*

To run a successful business, you must understand customer needs, preferences and purchasing trends. You need to know what's available in the market, what's selling well, and what your competitors are up to. Yes, that's right - you need to gather intelligence and analyse it to propose smart business strategies. In essence, you will be the thinker behind successful businesses. If you like mathematics and statistics, have a knack for spotting trends among seemingly unrelated facts, and want to help businesses do better and compete more effectively, then take up this course which will position you for an exciting and rewarding career.

In this course, you will learn to:

- apply knowledge from the areas of business, analytics, IT and Project Management to help propose business solutions that can help companies to succeed;
- gather information from a wide variety of sources, including social media platforms and websites in order to analyse consumer interests and plot trends;
- use project management skills to manage business analytics projects and deliver timely information and insights to customers and decision makers.

You will also undertake projects that equip you with real-world working experience which will provide you the important business domain knowledge that you require as a professional in this field. Furthermore, you will have opportunities to obtain industry-recognised professional certifications and enjoy exciting opportunities for internship in either local or overseas companies where you will gain valuable skills, working with diverse people in a real work environment.

Upon completing the course, you can further your studies at local or overseas universities, leveraging on the advanced standing arrangements that we have.

## CAREER OPPORTUNITIES

Graduates can expect good employment prospects across many industries such as government, financial and banking institutions and consulting firms as business intelligence analysts, business analytics specialists, business analytics tech consultants, CRM analysts, data mining specialists, data warehousing specialists, web & social media analysts and research analysts.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any three other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, applicants must also have sat for one of the following subjects: Additional Combined Science, Additional Science, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Human & Social Biology, Integrated Science, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants with complete Colour Appreciation Deficiency are not eligible to apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 21 credit units |
| Diploma Subjects | |
| Core Subjects | : 87 credit units |
| Elective Subjects | : 8 credit units |
| Cross-Disciplinary Subjects | : 9 credit units |
| Total Credit Units Completed | : 125 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCS1001 | Effective Interpersonal Communication | 1 | 2 |
| CCS1002 | Communication in the Workplace | 1 | 2 |
| CCS1003 | Information Literacy for Effective Communication | 1 | 2 |
| CCS1004 | The Essentials of Persuasive Presentations | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 | 1 | 1 |
| CSI3001 | Student Internship Programme | 3 | 10 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BBS1001 | Principles of Management | 1 | 4 |
| BRM1005 | Marketing Fundamentals | 1 | 4 |
| CFI1C03 | Business Process Management | 1 | 4 |
| CFI1C07 | Database Information Systems | 1 | 4 |
| CIA1C01 | Quantitative Analysis I | 1 | 3 |
| CIA1C02 | Quantitative Analysis II | 1 | 3 |
| CIA1C03 | Analytics Research Methodologies | 1 | 4 |
| CID1C08 | Introduction to Human Computer Interaction | 1 | 3 |
| CIT1C05 | Problem Solving & Programming | 1 | 4 |
| CIT1C08 | Fundamentals of Business Information Systems | 1 | 4 |
| CFI2C03 | IT Project Management | 2 | 4 |
| CGE2C10 | Data Structures & Algorithms | 2 | 4 |
| CIA2C01 | Data Warehouse Modelling | 2 | 4 |
| CIA2C02 | Data Analytics & Presentation | 2 | 4 |
| CIA2C03 | Enterprise Customer Relationship Management IT Systems | 2 | 4 |
| CIA2C04 | Business Intelligence Concepts & Techniques | 2 | 4 |
| CIA2C05 | Data Mining Concepts & Techniques | 2 | 8 |
| CIA2C06 | Business Intelligence Applications | 2 | 4 |
| CIA2C07 | Predictive Analytics | 2 | 4 |
| CIA2C08 | Systems Analysis & Design | 2 | 4 |
| CMP3103 | Major Project | 3 | 10 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CIA2E01 | Text & Social Media Analytics | 2 | 4 |
| CIA2E02 | Data Governance | 2 | 4 |
| CIA2E03 | IT Service Management | 2 | 4 |
| CIA2E04 | Cloud Computing | 2 | 4 |
| CIT3P51 | Web Analytics | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Cyber & Digital Security

> *This course brings significant value to Singapore's drive towards achieving a secure world-class cyber environment. As we become ever-increasingly interconnected, it is critical that we develop a skilled network of security professionals to prepare for a new era of security to enable a deeper level of e-trade and e-commerce.*
>
> *Janet Ang*
> *Managing Director*
> *IBM Singapore*

Viruses, trojans and hackers – these are some of the dangers lurking on the Internet, crippling government and business operations and leading to financial losses. Developing counter measures against them requires creative problem solving skills and talent. Highly skilled Information Security Professionals with strong technical foundation and creativity are vital in battling such cyber threats. If you aspire to be in this highly regarded profession, then join this exciting course.

In the first year, you will master IT and security fundamentals such as programming essentials, networking and basic IT security strategies. At our TP-IBM Centre for IT Security, you will use state-of-the-art facilities for hands-on practice in conducting vulnerability assessments of computer and application systems using ethical hacking tools and implementing intrusion prevention solutions to defend and protect the systems.

In your second year, you will master competencies ranging from network, system and application security to biometric technologies such as fingerprint scans. Additionally, you will learn the legal aspects of IT and security standards for performing IT security management and audit.

In your final year, attachment to local and overseas IT security companies allows you to apply your knowledge and skills, integrating what you have learned to information security projects and real-life situations.

You will be taught by lecturers with strong IT security experience who are Certified Information Systems Security Professionals (CISSP). They will prepare you to attain highly sought after professional certifications in networking, open source technology and information security. These include the Cisco Certified Network Associate (CCNA) and RedHat Certified System Administrator/ Engineer (RHCSA/RHCE).

A significant number of our graduates pursue degrees in both local and overseas universities after completing this course, leveraging on advanced standing arrangements that we have with these institutions.

## CAREER OPPORTUNITIES

You can expect good employment opportunities with local and multinational businesses, governments, financial and banking institutions, and consulting firms as IT security specialists/ auditors, network and systems specialists, as well as IT security product developers and solutions providers.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any two other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, applicants must also have sat for one of the following subjects: Additional Combined Science, Additional Science, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Human & Social Biology, Integrated Science, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants with complete Colour Appreciation Deficiency are not eligible to apply for this course.*

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 21 credit units |
| Diploma Subjects | |
| Core Subjects | : 87 credit units |
| Elective Subjects | : 8 credit units |
| Cross-Disciplinary Subjects | : 9 credit units |
| Total Credit Units Completed | : 125 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCS1001 | Effective Interpersonal Communication | 1 | 2 |
| CCS1002 | Communication in the Workplace | 1 | 2 |
| CCS1003 | Information Literacy for Effective Communication | 1 | 2 |
| CCS1004 | The Essentials of Persuasive Presentations | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 | 1 | 1 |
| CSI3001 | Student Internship Programme | 3 | 10 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCD1C01 | Basic IT Security | 1 | 4 |
| CCD1C02 | Enterprise Networking | 1 | 4 |
| CFI1C07 | Database Information Systems | 1 | 4 |
| CIC1C05 | Computer Architecture | 1 | 4 |
| CIC1C06 | Data Communications & Networking | 1 | 4 |
| CID1C08 | Introduction to Human Computer Interaction | 1 | 3 |
| CIT1C05 | Problem Solving & Programming | 1 | 4 |
| CIT1C06 | Object-Oriented Programming | 1 | 4 |
| CMA1C01 | Computing Mathematics 1 | 1 | 3 |
| CMA1C02 | Computing Mathematics 2 | 1 | 3 |
| BLM2007 | Legal Aspects of IT | 2 | 4 |
| CCD2C01 | Internetworking Security | 2 | 4 |
| CCD2C02 | Security Application Development | 2 | 4 |
| CCD2C03 | Ethical Hacking & Intrusion Prevention | 2 | 4 |
| CCD2C04 | Forensics in Digital Security | 2 | 4 |
| CCD2C05 | IT Security Management & Audit | 2 | 4 |
| CCD2C06 | Servers Administration & Security | 2 | 4 |
| CCD2C07 | Secure Web Applications | 2 | 8 |
| CIM2C06 | Database Administration & Security | 2 | 4 |
| CMP3601 | Major Project | 3 | 10 |

## Diploma Subjects - Elective Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCD2E01 | Identity & Authentication Technologies | 2 | 4 |
| CCD2E02 | Applied Cryptography in E-Services | 2 | 4 |
| CFI2C03 | IT Project Management | 2 | 4 |
| CFI2E01 | IT Outsourcing | 2 | 4 |
| CFI2E02 | Introduction to IT Systems in Banking | 2 | 4 |
| CIM2E01 | Healthcare Informatics | 2 | 4 |
| CIT2E05 | Technology & Innovation | 2 | 4 |
| CIT2E06 | Manufacturing & Logistics Business Informatics | 2 | 4 |
| CMC2E04 | Tourism Informatics | 2 | 4 |
| CMC2E06 | VOIP System & Application | 2 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

> ***With the exponential rise in cyber crimes and attacks, digital forensics is an essential and critical skill that is required to systematically identify and prosecute 'cyber-criminals'. It is a growing industry that will demand professional investigative resources.***
>
> *Shirley Wong*
> *Managing Director*
> *BT Frontline Technologies Pte Ltd*

# Digital Forensics

Digital Forensics involves the analysis of evidence from digital devices that can be used to prosecute criminals who have stolen information, and hacked into computers and network systems. The increase in cybercrimes has led to a huge demand for digital forensics specialists who can assist in criminal investigations and homeland security. If you have an analytical and inquisitive mind, join us to become a Computer Forensics Investigator. You will learn to seize, secure, examine and reconstruct digital evidence to unravel the mystery behind a criminal incident one byte at a time.

This course equips you with a broad knowledge of IT, psychology and criminal law, and in-depth knowledge of forensic techniques in retrieving digital evidence from computers, images and networks. In the first year, you will master IT fundamentals such as programming and acquire basic knowledge of psychology to understand the motivation behind criminal activities.

In your second year, you will learn to collect, preserve and analyse different file systems, digital media, applications and networks for digital evidence in our state-of-the-art facilities. You will learn malware detection and auditing techniques to govern information systems. Additionally, you will learn the legal aspects of reporting and presenting digital evidence for a court-of-law.

In the final year, you will be attached to organisations such as Interpol, Singapore Police Force and KPMG for internships that allow you to integrate and use knowledge in real-life situations.

Our lecturers are well qualified with industry experience and certifications such as the Global Information Assurance Certification (GIAC) Certified Forensic Analyst (GCFA). You too will have the opportunity to attain professional certifications in networking, open source and digital forensics.

You can further your studies by choosing from a range of courses at local or overseas universities, leveraging on the advanced standing arrangements that we have.

## CAREER OPPORTUNITIES

You can expect to work in financial institutions, government/ law enforcement agencies and consulting firms in positions such as digital forensic analysts/ researchers and IT security analysts/ auditors.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 6 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any two other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Human & Social Biology, Integrated Science, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science(Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants with complete Colour Appreciation Deficiency are not eligible to apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 21 credit units |
| Diploma Core Subjects | : 95 credit units |
| Cross-Disciplinary Subjects | : 9 credit units |
| Total Credit Units Completed | : 125 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCS1001 | Effective Interpersonal Communication | 1 | 2 |
| CCS1002 | Communication in the Workplace | 1 | 2 |
| CCS1003 | Information Literacy for Effective Communication | 1 | 2 |
| CCS1004 | The Essentials of Persuasive Presentations | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 | 1 | 1 |
| CSI3001 | Student Internship Programme | 3 | 10 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCD1C01 | Basic IT Security | 1 | 4 |
| CCD1C02 | Enterprise Networking | 1 | 4 |
| CDF1C01 | Introduction to Digital Forensics | 1 | 3 |
| CFI1C07 | Database Information Systems | 1 | 4 |
| CIC1C05 | Computer Architecture | 1 | 4 |
| CIC1C06 | Data Communications & Networking | 1 | 4 |
| CIT1C10 | Programming Essentials 1 | 1 | 4 |
| CIT1C11 | Programming Essentials 2 | 1 | 4 |
| CMA1C01 | Computing Mathematics 1 | 1 | 3 |
| GEN1016 | Introduction to Psychology of Deviant Behaviour | 1 | 3 |
| BLM2008 | Criminal Procedure for Forensic Analysts | 2 | 4 |
| CCD2C05 | IT Security Management & Audit | 2 | 4 |
| CCD2C06 | Servers Administration & Security | 2 | 4 |
| CCD2C07 | Secure Web Applications | 2 | 8 |
| CCD2E02 | Applied Cryptography in E-Services | 2 | 4 |
| CDF2C01 | Digital File Systems | 2 | 4 |
| CDF2C02 | Digital Media Forensics | 2 | 4 |
| CDF2C03 | Network Security and Forensics | 2 | 4 |
| CDF2C04 | Investigation Methodology and Techniques | 2 | 4 |
| CDF2C05 | Application Forensics | 2 | 4 |
| CDF3C01 | Incident Response & Management | 3 | 4 |
| CMP3901 | Major Project | 3 | 10 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Financial Business Informatics

> *With dual skills in IT banking processes and a keen knowledge of key financial systems, students from this course will be able to support investment banking and risk management operations as well as contribute as business analysts skilled in the banking domain. The training these students receive in Thomson Reuters products, including the fully integrated front to back office solutions, enables them to help customers become more efficient and equips them to lead in the evolution of the global financial market.*
>
> *Edward Haddad*
> *Head of Major Accounts, Asia*
> *Thomson Reuters*

In the local and global financial services and banking industry, there is demand for professionals who possess information technology skills and a sound understanding of business processes. Such techno-strategists, with their dual skills, are sought after because they can contribute significantly to the organisations they join.

This course equips you with the knowledge and skills to be technically and financially savvy. You can choose between two possible options of study: Finance or Banking. You will learn how banks and financial institutions are structured to operate in the global financial markets.

In your final year, you will get hands-on experience through attachments to banks and financial institutions. This will also provide you with the opportunity to use the knowledge you have acquired in your first two years and pick up important people skills so that you develop sensitivity to the needs of clients and organisations.

Upon completing the course, many of our students move on to undertake degree programmes in local or overseas universities, leveraging on the advanced standing arrangements we have with them. In addition, many of our top alumni secured scholarships for university studies.

## CAREER OPPORTUNITIES

With unique dual skills in the finance and banking domain and IT, you are well-positioned for careers in financial institutions, and business/IT consulting firms. You can look forward to jobs as financial systems consultants, investment analysts or financial products settlements specialists.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on “Admission and Requirements”. For international students, please refer to the section on “Information for International Students”.

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any two other subjects, excluding CCA | Grades 1 - 6 |

To be eligible for selection, applicants must also have sat for at least one of the following subjects: Additional Combined Science, Additional Science, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Human & Social Biology, Integrated Science, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 21 credit units |
| Diploma Subjects | |
| Core Subjects | : 75 credit units |
| Option Subjects | : 20 credit units |
| Cross-Disciplinary Subjects | : 9 credit units |
| Total Credit Units Completed | : min 125 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCS1001 | Effective Interpersonal Communication | 1 | 2 |
| CCS1002 | Communication in the Workplace | 1 | 2 |
| CCS1003 | Information Literacy for Effective Communication | 1 | 2 |
| CCS1004 | The Essentials of Persuasive Presentations | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 | 1 | 1 |
| CSI3001 | Student Internship Programme | 3 | 10 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BAF1007 | Basic Business Finance | 1 | 4 |
| CFI1C01 | Quantitative Analysis | 1 | 4 |
| CFI1C02 | Core Financial Businesses | 1 | 4 |
| CFI1C03 | Business Process Management | 1 | 4 |
| CFI1C04 | Systems Analysis | 1 | 4 |
| CFI1C06 | Information Systems & Office Fundamentals | 1 | 3 |
| CFI1C07 | Database Information Systems | 1 | 4 |
| CFI1C08 | Financial Economics | 1 | 4 |
| CID1C08 | Introduction to Human Computer Interaction | 1 | 3 |
| CIT1C05 | Problem Solving & Programming | 1 | 4 |
| CIT1C09 | Web Programming | 1 | 4 |
| CFI2C02 | Business Intelligence Systems | 2 | 4 |
| CFI2C03 | IT Project Management | 2 | 4 |
| CFI2C04 | Quality & Service Management | 2 | 4 |
| CFI2C07 | Commercial Off-The-Shelf Implementation | 2 | 3 |
| CFI3C01 | Risk & Governance | 3 | 4 |
| CFI3C02 | Wealth Management | 3 | 4 |
| CMP3801 | Major Project | 3 | 10 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Finance Option** | | | |
| BAF2006 | Fundamentals of Investment | 2 | 4 |
| CFI2P14 | Foreign Exchange & Money Market Processing | 2 | 4 |
| CFI2P15 | Fixed Income & Equity Securities Processing | 2 | 4 |
| CFI2P16 | Derivatives & Structured Products Processing | 2 | 4 |
| CFI2P17 | Portfolio Performance Management | 2 | 4 |
| **Banking Option** | | | |
| CFI2P24 | Retail Banking Processing | 2 | 4 |
| CFI2P25 | Customer Relationship Management Systems | 2 | 4 |
| CFI2P26 | Private Banking | 2 | 4 |
| CFI2P27 | Corporate Banking Processing | 2 | 4 |
| CFI2P28 | Credit Risk Management | 2 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Game & Entertainment Technology

> *Temasek Polytechnic has an excellent industry relations programme which allows their students to gain relevant working experiences through their long term partnership between the school and partners. Their students coming to the industry exhibit a strong work ethic which enables them to overcome the differences between academia and industry.*
>
> *Sunny Koh*
> *Studio Head*
> *Personae Studios L.L.P.*

This is possibly the most thrilling time for the video games industry with Singapore growing in status as a hub for the most exciting game companies. Video game companies which have produced many of the world's best games have set up offices here alongside other renowned video game publishers and development studios, complementing Singapore's strategy to be a leader in the Interactive Digital Media landscape.

Any person can play a video game; but to successfully develop a game that excites, engages, and educates an audience requires skill. These include skills in concept – such as digital storyboarding, production – including 2D/3D animation, and publication – involving the business of video games.

Our subjects allow you to have a strong understanding of and experience in the various aspects of the game production pipeline, giving you a firm grasp of the end-to-end process in developing a successful game.

Our lecturers, several of whom have worked on some of the world's best-selling video game titles, specialise in various areas of game production. They will help you acquire the skills to create your games from the initial stages of concept development and design, through to programming and the final stages of publishing a game.

To give you a head start in the industry, you will work on a Major Project to develop a showcase portfolio. Some of our students' projects include commercially available iPhone games, as well as games for local companies and organisations such as the Ministry of Education. You will also have the chance to be attached to leading game developers, overseas companies and universities for your internship.

Upon your graduation, you can further your studies at local and overseas universities which we have good advanced standing arrangements with.

## CAREER OPPORTUNITIES

You will graduate with the skills to fill the following types of positions: game designers, graphics software developers, game content developers, game programmers, mobile game developers and game visual effects specialists.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any two other subjects excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must have also sat for at least one of the following subjects: Additional Combined Science, Additional Science, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Human & Social Biology, Integrated Science, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants with complete Colour Appreciation Deficiency are not eligible to apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 21 credit units |
| Diploma Subjects | |
| Core Subjects | : 81 credit units |
| Option Subjects | : 12 credit units |
| Cross-Disciplinary Subjects | : 9 credit units |
| Total Credit Units Completed | : 123 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCS1001 | Effective Interpersonal Communication | 1 | 2 |
| CCS1002 | Communication in the Workplace | 1 | 2 |
| CCS1003 | Information Literacy for Effective Communication | 1 | 2 |
| CCS1004 | The Essentials of Persuasive Presentations | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 | 1 | 1 |
| CSI3001 | Student Internship Programme | 3 | 10 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CFI1C07 | Database Information Systems | 1 | 4 |
| CGE1C01 | Introduction to Computer Games | 1 | 4 |
| CGE1C06 | Game Design | 1 | 4 |
| CGE1C08 | Object-Oriented Game Programming | 1 | 4 |
| CIC1C05 | Computer Architecture | 1 | 4 |
| CID1C09 | Visualisation & Digital Techniques | 1 | 4 |
| CID1C13 | Game Interface & Interaction Design | 1 | 4 |
| CIT1C05 | Problem Solving & Programming | 1 | 4 |
| CMA1C01 | Computing Mathematics 1 | 1 | 3 |
| CGE2C04 | Introduction to Game AI | 2 | 4 |
| CGE2C06 | Game Development | 2 | 3 |
| CGE2C07 | 3D Game Texturing, Lighting & Animation | 2 | 4 |
| CGE2C09 | Software Engineering | 2 | 4 |
| CGE2C10 | Data Structures & Algorithms | 2 | 4 |
| CGE2C12 | Game Modelling | 2 | 4 |
| CGE2C14 | Game Development Project | 2 | 3 |
| CGE2C15 | Game Math & Physics | 2 | 4 |
| CGE3C04 | Game QA & Testing | 3 | 3 |
| CGE3C05 | The Business of Computer Games | 3 | 3 |
| CMP3701 | Major Project | 3 | 10 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Advanced Game Development Option** | | | |
| CGE2E02 | Graphics Programming | 2 | 4 |
| CGE2P11 | Advanced Game AI | 2 | 4 |
| CGE3C02 | Mobile Game Programming | 3 | 4 |
| **3D Game Design & Development Option** | | | |
| CGE2P21 | Advanced Game Modelling | 2 | 4 |
| CGE2P22 | Advanced Game Design | 2 | 4 |
| CGE3P21 | Game Engine Scripting | 3 | 4 |
| **3D Game Visual Effects Option** | | | |
| CGE2P31 | 3D Digital Compositing | 2 | 4 |
| CGE2P32 | 3D Effects Programming | 2 | 4 |
| CGE3P31 | 3D Game Effects | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Interactive Media Informatics

> ***Students from this course demonstrated diligence, enthusiasm and excellent technical competence when they interned at our company. Beyond their passion for work, we valued their ideas and creativity for multimedia projects. We are pleased to note that the course has been revised to include the Digital Advertising option to further develop student's capability in this domain.***
>
> *Caroline Lim*
> *Managing Director*
> *Pepper (MNC Advertising Agency)*

Advertising drives industries. Because of advertising, we know about the latest tech gadgets like iPads, and the latest must-watch blockbuster movies. They have evolved from traditional print advertisements to digital advertisements on televisions, mobile phones and smart screens. Similarly, the field of education has also been transformed by digital media. Students learn by playing video games, exploring online courseware, and using digital devices like iPhones and motion-trackers to interact with the world around them. This course equips you with the skills to use digital media creatively for advertising, education and a host of other purposes.

You will acquire knowledge and skills in IT and digital media design and development. You will have the option of specialising in creating rich media for the web or developing educational games and applications.

In the Digital Advertising Option, you will apply the core skills of 3D and digital media in the Digital Advertising industry. You will be introduced to the digital advertising market and learn how different tools and skills could be used in the advertising industry. In the Edumatics Option, you will learn to use interactive media for teaching and to create training packages that excite and engage learners.

You will work on hands-on projects for local and overseas companies during your internship. Upon graduation, you would have developed a portfolio to help you embark on a career in the booming digital advertising or education industries.

With our advanced standing arrangements with various universities, you will be on the fast track to a degree. Like our past students, you may also secure scholarships to further your studies and enhance your career prospects.

## CAREER OPPORTUNITIES

You will graduate with core competencies in IT, animation, multi-media and interaction design. You can look forward to jobs as digital media executives, webmasters, web designers/ developers, Internet application developers, interface designers, educational game developers and educational technologists.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any two other subjects excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must have also sat for at least one of the following subjects: Additional Combined Science, Additional Science, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Human & Social Biology, Integrated Science, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 21 credit units |
| Diploma Subjects | |
| Core Subjects | : 80 credit units |
| Option Subjects | : 12 credit units |
| Cross-Disciplinary Subjects | : 9 credit units |
| Total Credit Units Completed | : min 122 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCS1001 | Effective Interpersonal Communication | 1 | 2 |
| CCS1002 | Communication in the Workplace | 1 | 2 |
| CCS1003 | Information Literacy for Effective Communication | 1 | 2 |
| CCS1004 | The Essentials of Persuasive Presentations | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 | 1 | 1 |
| CSI3001 | Student Internship Programme | 3 | 10 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CFI1C07 | Database Information Systems | 1 | 4 |
| CID1C02 | Web Design | 1 | 4 |
| CID1C04 | Multimedia Project 1 | 1 | 4 |
| CID1C09 | Visualisation & Digital Techniques | 1 | 4 |
| CID1C10 | Motion & Sound | 1 | 4 |
| CID1C12 | Animation Programming | 1 | 4 |
| CID1C14 | Motion Graphics and Effects | 1 | 4 |
| CID1C15 | Introduction to 3D | 1 | 4 |
| CID1C16 | Content Management System | 1 | 4 |
| CIT1C05 | Problem Solving & Programming | 1 | 4 |
| CMA1C01 | Computing Mathematics 1 | 1 | 3 |
| CID2C03 | Human Computer Interaction | 2 | 4 |
| CID2C05 | Multimedia Project 2 | 2 | 4 |
| CID2C07 | Interactivity & Interface Design | 2 | 4 |
| CID2C08 | Interactive Programming | 2 | 4 |
| CID2C09 | Mobile Media Application Development | 2 | 3 |
| CID2C10 | 3D Production Foundation | 2 | 4 |
| CIT2P28 | Web Application Development | 2 | 4 |
| CMP3502 | Major Project | 3 | 10 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Digital Advertising Option** | | | |
| CID2P42 | Rich Media Application Development | 2 | 4 |
| CID2P43 | New Media Strategy & Analytics | 2 | 4 |
| CID2P44 | Introduction to Digital Marketing | 2 | 4 |
| **Edumatics Option** | | | |
| CGE2P41 | Game Design | 2 | 4 |
| CID2P35 | Introduction to General Pedagogical Approaches for Learning | 2 | 4 |
| CID2P37 | Building Learning Activities | 2 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Information Technology

> *I have seen how the students in this course have benefited from the academic rigour of their broad-based curriculum. It has enabled them to emerge national champions in the software design category of the Imagine Cup competition over a period of three years in 2008, 2010 and 2011. Indeed, they have demonstrated a keen understanding of using IT to solve real world problems and I am confident that this diploma course will continue to groom outstanding IT professionals for the industry.*
>
> *Jessica Tan*
> *Managing Director*
> *Microsoft Singapore*

Do you enjoy solving problems? Are you passionate about creating solutions and making them work for people? Information Technology is all about creating innovative software solutions for people and businesses through the use of technologies. Join us and be part of this dynamic and exciting industry.

This course equips you with in-depth software implementation skills to effectively lead, define, design and implement business solutions in various key sectors such as government, education, banking, finance, sales and marketing.

You have three options of study in this course:

- Business Analytics Option: focuses on analysing and interpreting data and converting them into useful insights for developing strategies for the organisation;
- Project Management Option: focuses on teaching you the knowledge and skills needed to manage IT projects;
- Enterprise Systems Option: focuses on customising and integrating established business software solutions with other new or legacy systems.

In your final year, you will integrate the knowledge that you have acquired to complete a major project. You will also be attached to either a local or overseas company as an intern.

This course has an established track record of producing highly successful students who have won top positions in national and international IT software applications and development competitions. Many of our graduates have also gone on to pursue both undergraduate and postgraduate degrees in local and overseas universities, with a significant number receiving attractive scholarships to further their studies.

## CAREER OPPORTUNITIES

With a broad-based education in IT, your employment prospects are excellent. You will be able to fill positions as IT business analysts, application developers and systems analysts in government organisations, software houses, large multinational corporations, financial institutions. You could also join consultancy firms to work in areas such as project management, software design, development and consultancy. You can also be a successful technopreneur.

## APPLICATION

Apply during the Joint Admissions Exercise following the release of the GCE O Level results. For other categories of local applicants, please refer to the section on "Admission and Requirements". For international students, please refer to the section on "Information for International Students".

## MINIMUM ENTRY REQUIREMENTS

| | |
|---|---|
| English Language (EL1)* | Grades 1 - 7 |
| Mathematics (E or A) | Grades 1 - 6 |
| Any two other subjects excluding CCA | Grades 1 - 6 |

To be eligible for selection, you must have also sat for at least one of the following subjects: Additional Combined Science, Additional Science, Biology, Chemistry, Combined Science, Computer Studies, Creative 3-D Animation, Design & Technology, Engineering Science, Food & Nutrition, Fundamentals of Electronics, General Science, Human & Social Biology, Integrated Science, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry), Science (Physics, Chemistry, Biology).

**Sijil Pelajaran Malaysia (SPM)/Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
| TP Core Subjects | : 21 credit units |
| Diploma Subjects | |
| Core Subjects | : 83 credit units |
| Option Subjects | : 12 credit units |
| Cross-Disciplinary Subjects | : 9 credit units |
| Total Credit Units Completed | : min 125 credit units |

# Course Structure

## TP Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCS1001 | Effective Interpersonal Communication | 1 | 2 |
| CCS1002 | Communication in the Workplace | 1 | 2 |
| CCS1003 | Information Literacy for Effective Communication | 1 | 2 |
| CCS1004 | The Essentials of Persuasive Presentations | 1 | 2 |
| GCD1001 | Applied Principles for Effective Living 1 | 1 | 1 |
| GCD1002 | Applied Principles for Effective Living 2 | 1 | 1 |
| GCD1003 | Applied Principles for Effective Living 3 | 1 | 1 |
| CSI3001 | Student Internship Programme | 3 | 10 |

## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CFI1C07 | Database Information Systems | 1 | 4 |
| CIC1C05 | Computer Architecture | 1 | 4 |
| CIC1C06 | Data Communications & Networking | 1 | 4 |
| CID1C02 | Web Design | 1 | 4 |
| CID1C08 | Introduction to Human Computer Interaction | 1 | 3 |
| CIT1C05 | Problem Solving & Programming | 1 | 4 |
| CIT1C06 | Object-Oriented Programming | 1 | 4 |
| CIT1C08 | Fundamentals of Business Information Systems | 1 | 4 |
| CMA1C01 | Computing Mathematics 1 | 1 | 3 |
| CMA1C02 | Computing Mathematics 2 | 1 | 3 |
| CGE2C09 | Software Engineering | 2 | 4 |
| CGE2C10 | Data Structures & Algorithms | 2 | 4 |
| CGE2C11 | Object-Oriented Analysis & Design | 2 | 4 |
| CIT2C11 | Enterprise Solutions & Entrepreneurship | 2 | 4 |
| CIT2C12 | Advanced Data Structures & Algorithms | 2 | 4 |
| CIT2C13 | Business Systems & Processes Integration | 2 | 4 |
| CIT2C14 | Enterprise Web Development & Testing | 2 | 4 |
| CIT2P32 | Enterprise Security & Application Management | 2 | 4 |
| CIT2P44 | Dynamic Web Application Development | 2 | 4 |
| CMP3102 | Major Project | 3 | 10 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Business Analytics Option** | | | |
| CFI2C02 | Business Intelligence Systems | 2 | 4 |
| CMA2P51 | Quantitative Techniques | 2 | 4 |
| CIT3P51 | Web Analytics | 3 | 4 |
| **Project Management Option** | | | |
| CFI2C03 | IT Project Management | 2 | 4 |
| CFI2E01 | IT Outsourcing | 2 | 4 |
| CIT3P71 | IT Governance & Service Management | 3 | 4 |
| **Enterprise Systems Option** | | | |
| CIT2P61 | Enterprise Business Processes & Systems | 2 | 4 |
| CIT2P62 | IT & Supply Chain Management | 2 | 4 |
| CIT3P61 | IT & Customer Relationship Management | 3 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Mobile & Network Services

> ***Homes, schools, financial institutions, businesses, shopping and recreational outlets are all becoming wired up with ultra-high speed networks, leading to a demand for professionals who can create innovative applications and services. Graduates from the course would have acquired the skills to create a difference in this area, to provide valuable network management support to our clients.***
>
> *Irving Tan*
> *Managing Director (Singapore & Brunei)*
> *Cisco Systems (USA) Pte Ltd*

In recent years, there has been rapid growth in the use of networking tools such as YouTube, Facebook and Skype all over the world. Mobile devices such as iPhones and Android phones are also fast replacing personal desktop computers. These have resulted in higher demands for more powerful mobile applications and a more robust mobile network infrastructure. The demands for an improved network and Internet speeds for a richer user experience have created boundless opportunities in this exciting industry.

This course grooms you to become an expert in network systems. It offers two options of study, Mobile Solutions and IT Service Management (ITSM). You will learn to develop applications for various purposes on the latest mobile phone platforms. You will also be trained in the best practices and use state-of-the-art tools from ITSM industry giants in our new TP-IBM IT Service Management centre, which is the first 'live' centre in an institution in Asia to offer real-life ITSM practice.

You will have a chance to work with companies such as Avaya, Cisco Systems and IBM on projects. Our Student Internship Programme also allows you to gain valuable experience and exposure which prepares you as a professional.

To provide you an edge when you graduate, the course also prepares you for professional certifications such as the Avaya Certified Associate (ACA), Cisco Certified Network Associate (CCNA), IT Infrastructure Library (ITIL), awarded by Avaya, Cisco Systems and IBM respectively.

Our advanced standing arrangements with local and overseas universities also enable you to move on from a diploma to a degree easily to further your studies.

## CAREER OPPORTUNITIES

Upon successful completion of the course, you can enter a variety of challenging and rewarding careers as network administrators/ engineers, computer systems and server administrators, wireless systems specialists, associate infrastructure analysts, customer support engineers, IT customer service executives, IT operations specialists and mobile system development specialists.

## APPLICATION

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**Sijil Pelajaran Malaysia (SPM)/ Unified Examination Chinese (UEC) holders must have a minimum of grade 6 for the relevant English Language subject (e.g. Bahasa Inggeris).*

*Note: Applicants with complete Colour Appreciation Deficiency are not eligible to apply for this course.*

## GRADUATION REQUIREMENTS

| | |
|---|---|
| Cumulative Grade Point Average | : min 1.0 |
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## Diploma Subjects - Core Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
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| CID1C08 | Introduction to Human Computer Interaction | 1 | 3 |
| CIT1C05 | Problem Solving & Programming | 1 | 4 |
| CIT1C06 | Object-Oriented Programming | 1 | 4 |
| CMA1C01 | Computing Mathematics 1 | 1 | 3 |
| CMA1C02 | Computing Mathematics 2 | 1 | 3 |
| CMC1C03 | Introduction to Wireless Technologies | 1 | 4 |
| CCD2C06 | Servers Administration & Security | 2 | 4 |
| CGE2C10 | Data Structures & Algorithms | 2 | 4 |
| CMC2C10 | Server Side Software Development | 2 | 4 |
| CMC2C11 | Mobile & Wireless Networking | 2 | 4 |
| CMC2C12 | Converged Networking | 2 | 8 |
| CMC2C13 | Network Management | 2 | 4 |
| CMC2P23 | Internetworking Technologies | 2 | 4 |
| CMC3P22 | Mobile & Wireless Security | 3 | 4 |
| CMP3402 | Major Project | 3 | 10 |

## Diploma Subjects - Option Subjects

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| **Mobile Solutions Option** | | | |
| CGE2C11 | Object-Oriented Analysis & Design | 2 | 4 |
| CMC2P11 | Mobile System Development | 2 | 4 |
| CMC2P31 | Mobile Usability Design | 2 | 4 |
| **IT Service Management Option** | | | |
| CCD2C05 | IT Security Management & Audit | 2 | 4 |
| CMC2P41 | IT Infrastructure Management | 2 | 4 |
| CMC2P42 | IT Service Desk Management | 2 | 4 |

## Cross-Disciplinary Subjects

Students are required to obtain a minimum of 9 credit units from the list of Cross-Disciplinary Subjects.

# Subject Synopses

## BAF1007 BASIC BUSINESS FINANCE

This subject provides you with a general overview of the balance sheet and profit and loss statement of the company. It also provides a basic understanding of the sources and allocation of funds within a business enterprise, and an appreciation of some of the financial tools and techniques used by the financial manager in the management of funds and other financial resources.

## BAF2006 FUNDAMENTALS OF INVESTMENT

This subject provides a framework for understanding and analysing securities, and covers the key institutional features and theories of investment. Topics covered include the investment environment, return and risk in an investment setting, common stocks, fixed-income securities and alternative investments.

## BBS1001 PRINCIPLES OF MANAGEMENT

This subject provides you with an insight into the key functions of management and the practical issues which managers of today face. Aspects of management such as planning, organising, leading, controlling, international management, business ethics and social responsibility will be covered.

## BLM2007 LEGAL ASPECTS OF IT

This subject covers at an introductory level the law which is relevant to the information technology industry, and which an IT professional will be likely to apply in the course of his work or business.

## BLM2008 CRIMINAL PROCEDURE FOR FORENSIC ANALYSTS

This subject provides professionals in the computer forensics industry with an understanding of criminal procedure in Singapore. It also covers the law relating to computers.

## BRM1005 MARKETING FUNDAMENTALS

This subject provides you with an understanding of the basic concepts and practices of modern marketing. It focuses on the role and the tools utilised by marketers in developing the appropriate marketing mix and in the identification of target segments.

## CCD1C01 BASIC IT SECURITY

This subject covers basic elements on the topic of IT security, reviews operational planning and practices, and provides a foundation for discussion and implementation of security strategies to minimise operational risks in an organisation. You will understand the theoretical, practical and ethical aspects of basic IT security.

## CCD1C02 ENTERPRISE NETWORKING

This subject covers the enterprise wired and wireless networking concepts. Basic theories of routing and switching, wireless architecture and their applications in an enterprise network environment will be discussed. You will learn the knowledge and skills to design, install and configure small to medium-sized wired and wireless networks.

## CCD2C01 INTERNETWORKING SECURITY

This subject introduces you to internetworking security technologies, including Wide Area Network (WAN) and remote access, and the security techniques from host to Internet security. You will learn how to secure both wired and wireless access over an internetwork.

## CCD2C02 SECURITY APPLICATION DEVELOPMENT

This subject introduces security applications that are used in the industry today. You will learn about the technologies and industry trends behind the security applications. You will also learn about technologies such as biometrics and encryption. You will be equipped with the skills and knowledge to analyse and critique security applications in terms of their usability as well as their ability to secure IT and other systems. At the end of the module, you will design and develop a security application based on a given problem situation, using appropriate methods, tools and techniques.

## CCD2C03 ETHICAL HACKING & INTRUSION PREVENTION

This subject discusses threats on the Internet and provides an understanding of how a cyber-attacker will penetrate a network. It equips you with the principles and practices of preventing such attacks, discussing threats such as malicious codes, website defacing and hacking, illegal access to unauthorised information, privacy violations, distributed denial of services and cyber terrorism. You will acquire knowledge of potential threats, various penetration strategies and methods, and the respective counter measures. You will also learn the principles of creating a secure network design.

## CCD2C04 FORENSICS IN DIGITAL SECURITY

This subject aims to develop digital forensics practitioners who are able to investigate and draw conclusions based on evidence found, using various techniques and tools to conduct liturgical and non-liturgical investigations. It covers the concept and techniques required to discover and investigate evidence from various digital storage devices. Topics include using common tools and commercial toolsets for extraction and analysis of digital evidence. Network traffic capture and analysis will also be discussed and investigated for the tracing of specific information and source of attacks.

## CCD2C05 IT SECURITY MANAGEMENT & AUDIT

This subject aims to familiarise you with the various IT security policies processes and procedures, as well as best practices in industry and government. You will learn about the associated standards for risk management and the management of IT security. You will also learn how to plan, execute, report and follow up on an information security management system audit.

## CCD2C06 SERVERS ADMINISTRATION & SECURITY

This subject covers the concept and techniques required to configure and administer a typical networked server using common operating systems in the industry. Topics include installation of a server system, configuration of devices, disks and file systems with security configuration of Local Area Network (LAN) and Wide Area Network (WAN) environments. Administering of key server services, using various tools and system scripting to monitor and analyse its performance and security will be discussed and applied. The subject also covers the concepts of encryption methodology, Public Key Infrastructure, key distribution and authentication.

## CCD2C07 SECURE WEB APPLICATIONS

This subject focuses on secure web application design and development. It discusses the inherent threats and vulnerabilities of web applications and the corresponding countermeasures. In addition, it includes industry best practices such as OWASP (Open Web Application Security Project), Top Ten (web application vulnerabilities), as well as security in SDLC (Software Development Life Cycle). You will be required to include these guidelines and concepts when designing and developing secure web applications.

## CCD2E01 IDENTITY & AUTHENTICATION TECHNOLOGIES

This subject covers basic elements of identification and authentication in IT security. It provides a foundation for the discussion of basic concepts and security standards used in an authentication framework. You will learn about the implementation of authentication mechanisms in relation to strategies to minimise identity thefts in an Internet-enabled society. You will understand the principles and phases of authentication, and learn theoretical and practical aspects of technologies available for identification and authentication.

## CCD2E02 APPLIED CRYPTOGRAPHY IN E-SERVICES

This subject covers the application of cryptography with reference to certain theoretical principles, and provides an understanding of the underlying cryptographic requirements for various electronic services (e-services) such as government e-services, online transactions, smartcard and other authentication devices.

## CCS1001 EFFECTIVE INTERPERSONAL COMMUNICATION

This subject introduces you to the principles of effective interpersonal communication. You will learn to consider the message, audience, purpose and strategy in all communicative acts. You will also learn the appropriate conventions to observe in social interaction and how to engage in and sustain conversations.

## CCS1002 COMMUNICATION IN THE WORKPLACE

This subject focuses on the use of appropriate and effective skills in the workplace. You will be trained in job search and job interview skills. The range of writing includes effective memos, emails and business letters. Tasks will be set for you to acquire skills to manage conflicts and meetings in the workplace. You will be taught to consider the message, audience, purpose and strategy in all aspects of communication.

## CCS1003 INFORMATION LITERACY FOR EFFECTIVE COMMUNICATION

This subject introduces you to research process skills to enable you to plan, prepare and present reports in written and oral form. You will learn to consider the message, audience, purpose and strategy when preparing reports and oral presentations.

## CCS1004 THE ESSENTIALS OF PERSUASIVE PRESENTATIONS

This subject deals with the general principles of persuasion. You will be taught persuasive strategies to write a proposal and convince an audience about an idea, product or service. You will also be taught to consider the message, audience, purpose and strategy in written and oral presentations.

## CDF1C01 INTRODUCTION TO DIGITAL FORENSICS

This subject introduces the principles of using digital evidence in forensic investigations and how this may lead to liturgical or non-liturgical proceedings.

## CDF2C01 DIGITAL FILE SYSTEMS

This subject introduces the principles of the most common media types and file systems found in operating systems and other digital media types.

## CDF2C02 DIGITAL MEDIA FORENSICS

With the pervasive use of digital devices, digital forensics analysts are investigating their use in a wide variety of cases. You will learn how to forensically acquire, preserve and examine the commonly used digital devices on a computer.

## CDF2C03 NETWORK SECURITY & FORENSICS

Network equipment and system, such as Web proxies, firewalls, intrusion detection systems, routers and even switches, provides data sources that contain evidence that can be used to solve a security incident. You will first learn how these equipment and systems are typically used to implement network security in an organisation. Subsequently, you will learn how to monitor, capture and analyse traffic and logs from the different network data sources to understand attacks and trace suspect activities.

## CDF2C04 INVESTIGATION METHODOLOGY & TECHNIQUES

This subject aims to give you a sound understanding of the relationship between developments in digital technologies and criminal behaviour. Through case studies, you will learn that many applications use data files, alter the operating systems' configurations, and generate network traffic. You will explore, analyse and correlate events across multiple data sources, and use a wide variety of tools relevant to the collection, preservation and presentation of digital evidence.

## CDF2C05 APPLICATION FORENSICS

This subject covers the investigation of applications such as web browsers, word processors and stand-alone executables as well as Internet applications such as emails and social networking websites in the context of digital forensics. These applications may be used for illegitimate means or to introduce malicious software into a computer system. In these cases, digital forensic analysis would be carried out to determine the source and extent of the damage.

## CDF3C01 INCIDENT RESPONSE & MANAGEMENT

This subject discusses the policies, guidelines and procedures for incident handling. You will learn the roles and responsibilities and how to assist an organisation to develop procedures to proactively manage incidents, review existing security policies to mitigate recurrence of threats. You will learn how to write and present incident response policies and reports.

## CFI1C01 QUANTITATIVE ANALYSIS

This subject equips you with the skills to formulate, analyse and interpret data. You will be able to evaluate quantitative information that is presented in various formats. In particular, you will be exposed to methods of data analysis that are useful in business environments. Apart from the fundamental concepts of statistical analysis, you will also learn to use statistical software to analyse data.

## CFI1C02 CORE FINANCIAL BUSINESSES

This subject covers treasury and core banking processes as well as their supporting systems and technologies that are used to meet strategic, operational and regulatory requirements.

## CFI1C03 BUSINESS PROCESS MANAGEMENT

This subject helps you to understand the concepts of information and processes in businesses, and apply them to model, analyse and streamline processes in organisations. It will cover business functions and processes, process modelling and analysis techniques, process management technologies, as well as train you on a systematic approach to streamline and automate business processes.

## CFI1C04 SYSTEMS ANALYSIS

This subject introduces the theory and practice of systems analysis in the problem definition, requirements analysis and logical design phases of an application project life cycle. It will enable you to undertake, in a methodical manner, the analysis of a given problem situation, to produce a definition of user requirements and to design an appropriate information system from the requirement specifications, using appropriate methods, tools and techniques.

## CFI1C06 INFORMATION SYSTEMS & OFFICE FUNDAMENTALS

This subject introduces the information systems framework and the critical role of the use of Information Technology in business as well as the ethical issues arising from the use of IT. It also introduces you to the essential office skill set that professionals working in the financial services industry would require.

## CFI1C07 DATABASE INFORMATION SYSTEMS

This subject will introduce you to the fundamental concepts of relational database systems and the techniques of designing relational databases. It will also equip you with the necessary skills to formulate queries and use simple Web forms for information system development.

## CFI1C08 FINANCIAL ECONOMICS

This subject will provide an understanding of the major aspects of financial intermediation, the national economy, and the overall financial environment. It will introduce the basics of economic theory and include examples of the application of economics to banking and finance.

## CFI2C02 BUSINESS INTELLIGENCE SYSTEMS

This subject introduces you to the concepts and techniques of turning raw data from various sources into information to help companies better manage their performance. You will also examine data mining and data warehousing concepts and business intelligence application principles.

## CFI2C03 IT PROJECT MANAGEMENT

This subject helps you understand how successful IT projects are effectively managed so that projects are completed on time, within budget and meet customers' needs. It will introduce you to the key processes from project initiation to project closure. Topics covered included project planning, project monitoring and control, project scope management, project time management, project cost management, project human resource management, project quality management, project risk management, and project implementation and closure.

## CFI2C04 QUALITY & SERVICE MANAGEMENT

This subject introduces you to the concepts of service level agreements (SLAs) and operational level agreements (OLAs), and the content of these agreements. You will also learn incident management, problem management, change management and configuration management. It will equip you with the knowledge to manage IT solution providers and outsourcing companies to deliver the expected service levels for the organisation.

## CFI2C07 COMMERCIAL OFF-THE-SHELF IMPLEMENTATION

This subject introduces you to the various commercial application software packages typically used by organisations. It also exposes you to the different methods, tools and techniques used to aid in the selection, implementation and integration of vendor packages to meet business information requirements.

## CFI2E01 IT OUTSOURCING

This subject introduces the global trend in IT outsourcing. The topics that are covered in this subject include the rationale for outsourcing, the different types of outsourcing, development of the Request for Proposal (RFP) and the Service Level Agreement (SLA), as well as Contract and Service Management. You will also learn about the risks and legal issues associated with outsourcing. It will equip you with the knowledge to manage IT solution providers and outsourcing companies to deliver the expected levels of service for the organisation.

## CFI2E02 INTRODUCTION TO IT SYSTEMS IN BANKING

This subject provides an overview of the various IT systems and processes used in banking institutions. Topics covered include the roles and functions of key banking institutions, input and output technologies, interbank settlement systems, e-banking, customer relationship and marketing systems, and security implementations and issues related to IT systems.

## CFI2P14 FOREIGN EXCHANGE & MONEY MARKET PROCESSING

This subject provides you with a working knowledge of the execution, control and management of the processes involved in foreign exchange and money market processing and familiarises you with the relevant application systems.

## CFI2P15 FIXED INCOME & EQUITY SECURITIES PROCESSING

This subject helps you understand the underlying trades from the start to the final settlement. It will also introduce settlement risks related to these trades.

## CFI2P16 DERIVATIVES & STRUCTURED PRODUCTS PROCESSING

This subject helps you understand the various types of financial derivatives and structured products that are currently available in the global market, such as futures, options, swaps and other derivative products. It looks at the concepts of prime brokerage and collateral management, and their applicability to the various financial products and the processes involved. It will also cover deal processing and trade settlement of related products using financial application systems.

## CFI2P17 PORTFOLIO PERFORMANCE MANAGEMENT

This subject introduces portfolio theory and the various models of portfolio management applied by organisations today. It will also cover technical analysis and industry-company analysis using current tools and techniques.

## CFI2P24 RETAIL BANKING PROCESSING

This subject covers credit application processing, credit decision making, closing documentation preparation and loan servicing processing. In addition, common retail payment and collections systems will also be introduced.

## CFI2P25 CUSTOMER RELATIONSHIP MANAGEMENT SYSTEMS

This subject introduces the concept of customer life cycle in banks, and the customer acquisition, customer retention and relationship development processes. You will also learn how effective customer relationship management strategies and customer relationship management systems can help banks to optimise customer profitability.

## CFI2P26 PRIVATE BANKING

This subject provides an overview of the investment products available and creates an understanding of the characteristics and risks associated with different financial products. In addition, credit application processing, evaluation and monitoring will also be introduced.

## CFI2P27 CORPORATE BANKING PROCESSING

This subject introduces the fundamentals of commercial lending, which will include banking services and facilities offered, and understanding of the different industry segments and organisation structure of corporate clients. Topics on loan processing, loan structuring, cash flow analysis and loan documentation will be covered.

## CFI2P28 CREDIT RISK MANAGEMENT

This subject introduces the principle concepts of credit risk analysis. Topics covered will include methods used to evaluate and quantify credit risk as well as risk profiling of borrowers, through the use of credit risk management systems and credit rating systems. In addition, practices used to create a sound credit environment and ways to improve the credit evaluation process will also be introduced.

## CFI3C01 RISK & GOVERNANCE

This subject introduces the Monetary Authority of Singapore (MAS) regulations and risk management guidelines for financial institutions. Topics covered include the MAS Act, internal controls for risk management, credit risk management, market risk management, operational risk management, technology risk management, and audit considerations.

## CFI3C02 WEALTH MANAGEMENT

This subject introduces the financial planning concepts and techniques used in designing a portfolio that meets the varied needs of high net worth individuals and business owners. Topics covered include the wealth management advisory process, investment and portfolio management, client relationship management, investment fund products and other financial products like life assurance and taxation issues.

## CGE1C01 INTRODUCTION TO COMPUTER GAMES

This subject introduces you to the different aspects of games and game development. It also provides you with an overview of the necessary tools required to efficiently complete content creation in game projects. The subject teaches you to design a game of moderate complexity and describe the components of a game system. It also covers the skill sets required to build the components of a game.

## CGE1C06 GAME DESIGN

The subject emphasises the use of game design to improve ideas before and during implementation. It covers various aspects of game design, from initial target audience, player behaviour and attitude to aspects affecting implementation within the actual video game. By examining various successful video games within different genres, you will learn to include a variety of attributes in your video games such as motivation for the player and being able to generate re-playability.

## CGE1C08 OBJECT-ORIENTED GAME PROGRAMMING

The subject covers the pointer-based object-oriented game programming language required for game applications. Concepts, practical exercises and assignments will be taught in the context of game development in order to equip you with the necessary skills to develop programs for games.

## CGE2C04 INTRODUCTION TO GAME AI

This subject introduces the skills to use introductory Artificial Intelligence (AI) concepts which are crucial to games development. It emphasises techniques such as Decision Making and Navigation for the application of Artificial Intelligence within game development. The subject covers basic AI techniques to give game characters the appearance of intelligent movement and decision making, as well as the implementation of AI techniques in a suitable programming language.

## CGE2C06 GAME DEVELOPMENT

This subject provides you with the knowledge to develop graphical interactive games through the use of existing game libraries. It covers game development techniques such as sprite management, collision detection, the game loop and motion control in relation to frame rate. Events to handle interactivity from mouse and keyboard as well as techniques to include media such as sound and image will also be taught.

## CGE2C07 3D GAME TEXTURING, LIGHTING & ANIMATION

This subject introduces fundamental knowledge in the advanced animation, lighting and texturing techniques for game development. It focuses on advanced techniques such as animation blocking, key lighting for in-game assets as well as shading and texture networks. You will learn the various considerations for lighting and texturing in relation to implementation on a game engine as well as importing animated assets into 3D game engines.

## CGE2C09 SOFTWARE ENGINEERING

This subject provides an overview of the entire software life cycle from development to deployment and finally maintenance of a software project. Topics such as software development paradigms, software process metrics, change management, software quality assurance and the fundamentals of project management will be covered.

## CGE2C10 DATA STRUCTURES & ALGORITHMS

This subject introduces you to fundamentals of recursion and data structures in solving problems using a programming language. The subject aims to help you learn various methods of storing and manipulating data to solve problems with the help of linked lists, trees, stacks and queue data structures. You will also learn the fundamentals of searching techniques and sorting algorithms.

## CGE2C11 OBJECT-ORIENTED ANALYSIS & DESIGN

This subject introduces you to object-oriented analysis and design (OOAD). It aims to teach both the theoretical and practical aspects of conducting problem analysis and software design using object-orientation and the use case approach. The Unified Modelling Language (UML) is used as the basic notation. Topics covered include object-oriented analysis and object-oriented design. A suitable CASE tool will be used to capture the various OOAD artefacts in a manner that is easy to communicate, review, implement, and evolve.

## CGE2C12 GAME MODELLING

This subject will introduce 3D modelling techniques specific to the Game Production Pipeline used within the video game environment and development. It covers basic modelling and texturing concepts as well as commonly used practices and methodologies for game based modelling.

## CGE2C14 GAME DEVELOPMENT PROJECT

This subject allows you to integrate and apply Game Production Pipeline techniques which are for basic casual game development. You will build up basic game play and development which integrates common practice in the industry for the development of 2D or casual game development. You will be introduced to interactive application tools that aid you in your game development. You will learn the different industry roles in teams to design develop and present your solutions.

## CGE2C15 GAME MATH & PHYSICS

You will learn about the mathematical fundamentals underlying many concepts in games, such as geometry, trigonometry, vectors and matrices. You will then build upon what you have learnt and proceed to learn about physics concepts such as Newton's Laws of Motion and Forces and Energy, that will enable you to simulate realistic motion in games.

## CGE2E02 GRAPHICS PROGRAMMING

This subject provides you with an introduction to the theory and practice of 2D and 3D computer graphics for game development. You will gain fundamental knowledge for programming computer graphics in game development. The subject introduces concepts such as colour display, illumination, selection, and feedback through development of an interactive computer graphics application. It also covers advanced computer graphics concepts such as blending and texture mapping. It will equip you with relevant knowledge in computer graphics programming for games development.

## CGE2P11 ADVANCED GAME AI

In this subject you will build on what has been introduced in IGAI. You will also be introduced to more advanced artificial intelligence (AI) topics such as goal-orientated action planning, basic terrain analysis and agent memory techniques. When you complete this subject, you will have a greater knowledge on how to take your game character behave intelligently and what being an AI programmer involves.

## CGE2P21 ADVANCED GAME MODELLING

This subject presents you with the techniques used in today's game industry. You will be exposed to various techniques and tools such as level of detail (LOD) and collision mesh creation, lighting, UV unwrapping, tile-able textures and normal maps. These techniques and the use of appropriate tools will be essential knowledge for advanced 3D game based modelling techniques.

## CGE2P22 ADVANCED GAME DESIGN

This subject delves further into the topics from the original Game Design Subject and takes you further. You will be required to comprehend, critique, analyse and evaluate levels throughout development from paper-based to actual implementation.

## CGE2P31 3D DIGITAL COMPOSITING

This subject helps you gain fundamental knowledge for visual effects in the Game Production Pipeline. You will be introduced to general visual effects principles and techniques used in current 3D game development titles. You will be able to visualise and generate effects for in-game and cut scenes, and be able to work with industry standard software to integrate visual effects into 3D game engines.

## CGE2P32 3D EFFECTS PROGRAMMING

This subject on covers advanced effects programming (shader network programming / MEL scripting, expressions, node-based programming and graphics programming) concepts for game development. You will be able to program special effects for in-game scenes and learn how to work with various 3D tools and utilise programming techniques to implement visual effects.

## CGE2P41 GAME DESIGN

This subject introduces the mechanisms of game design and the concept of a game project software production cycle. It covers players' behaviour and examines how the successful design of various game genres and mixed-mode game playing can leverage on the basic instincts of players to motivate them and generate game re-playability.

## CGE3C02 MOBILE GAME PROGRAMMING

With mobile devices becoming more popular, game companies are investing heavily in mobile games that can communicate across various platforms and operating systems. This subject equips you with programming knowledge and skills to develop mobile games into the common mobile devices currently available in the market.

## CGE3C04 GAME QA & TESTING

This subject covers the essential elements of game testing and quality assurance. It presents you with the knowledge of various testing procedures at different stages of the development cycle, depending on the disciplines involved. You will learn basics such as troubleshooting and debugging, not only within the programming environment but also within a design and art context for game development. The appropriate methodologies involved in the final stages before a game is released or published will be taught.

## CGE3C05 THE BUSINESS OF COMPUTER GAMES

This subject introduces the value chain in the computer game industry, touching on console manufacturers, game publishers, distributors, retailers and consumers. The subject also covers the role of marketing, intellectual property rights and business models in the game business.

## CGE3P21 GAME ENGINE SCRIPTING

This subject introduces you to the particular requirements of designing individual levels within a video game. You will review existing level designs from popular games to learn what makes them so successful, as well as what makes a level balanced, fun and playable for both single and multi-players. You will learn how to design and implement your own level designs from paper design through to deployment in an actual game world.

## CGE3P31 3D GAME EFFECTS

This subject provides you with fundamental knowledge on advanced principles for compositing in a game development project. You will be able to composite and work with 3D special effects technologies such as motion capture, stereoscopic cameras and green screen rigs.

## CIA1C01 QUANTITATIVE ANALYSIS I

This subject provides you with a firm foundation in basic statistics. You will be equipped with the skills to formulate, analyse and interpret data. Basic statistical concepts with emphasis on data analysis and presentation, frequency distributions, probability theory, probability distribution, statistical inference and hypothesis testing will be covered. You will be able to evaluate quantitative information that is presented in various formats. In particular, you will be exposed to methods of data analysis that enable you to make better informed decisions.

## CIA1C02 QUANTITATIVE ANALYSIS II

This subject provides you with an understanding of statistical methods and theories for making business decisions. Linear regression and correlation will be covered to allow you to analyse the relationship between variables. You will also learn to use analysis of variance and chi-squared tests to make comparisons of two or more data sets.

## CIA1C03 ANALYTICS RESEARCH METHODOLOGIES

This subject introduces you to the various methods that are used by analytics professionals to collect and transform data. You will learn to define a data collection problem and employ relevant data research processes, taking into account the ethical issues involved. A survey of analytics applications and software tools that can be used for data collection will be covered.

## CIA2C01 DATA WAREHOUSING MODELLING

This subject gives detailed coverage to the topic of data modelling techniques for data warehousing. The process for data warehousing modelling, including the steps required before and after the actual modelling step, will be discussed. Detailed coverage of modelling techniques will be presented in an evolutionary way through a gradual expansion of the content of the actual data model. This subject will also cover other important aspects of data warehousing that affect or are affected by the modelling process, such as architecting the warehouse and populating it. Guidelines for selecting an appropriate data modelling tool will also be presented.

## CIA2C02 DATA ANALYTICS & PRESENTATION

This subject introduces you to the process and techniques of analysing data and presenting analysed data using analytics software applications. You will learn how to employ relevant statistical modelling and analysis techniques to analyse and convert data into useful information. You will also learn how to prepare and present reports on data analysis to support managerial decision making.

## CIA2C03 ENTERPRISE CUSTOMER RELATIONSHIP MANAGEMENT IT SYSTEMS

This subject introduces you to IT systems used by enterprises to support customer relationship management. The subject will also cover concepts of customer life cycle in organisations, and processes related to customer acquisition, customer retention and relationship development. You will learn how to use IT systems to analyse customer profiles and use customer relationship management strategies and management systems to help organisations optimise customer profitability.

## CIA2C04 BUSINESS INTELLIGENCE CONCEPTS & TECHNIQUES

This subject introduces you to concepts and techniques of turning raw data from various sources into information to help companies better manage their performance. You will learn to integrate data and organise the data into analytical reports that serve to increase the business intelligence quotient of an organisation. You will also examine data mining and data warehousing concepts in the context of business intelligence applications.

## CIA2C05 DATA MINING CONCEPTS & TECHNIQUES

This subject introduces you to the concepts and techniques of exploring data and deriving useful knowledge patterns from the data to help companies gain business insights for decision making. You will apply the concepts using data mining tools to analyse data and transform the data into useful information.

## CIA2C06 BUSINESS INTELLIGENCE APPLICATIONS

This subject examines how business intelligence (BI) is used to align businesses to rapid changes in the global economy. Various BI applications will be studied to understand the impact of BI on organisational performance, and the lack thereof. This subject also introduces several emerging technologies and trends that are likely to have major impacts on the development and use of BI applications. You will also discuss ethical and legal issues of BI implementation.

## CIA2C07 PREDICTIVE ANALYTICS

This subject covers predictive modelling techniques and how these techniques are used to analyse historical and transactional data to predict future trends and behaviour patterns. You will examine the use of predictive analysis in support of business intelligence and decision making. You will also study various data mining applications including text mining and web mining.

## CIA2C08 SYSTEMS ANALYSIS & DESIGN

This subject introduces you to the theory and practice of systems analysis and design in the problem definition, requirements analysis and logical design phases of an application project life cycle. You will be able to undertake, in a methodical manner, the analysis of a given problem situation, to produce a definition of user requirements and to design an appropriate information system from the requirement specifications, using appropriate methods, tools and techniques.

## CIA2E01 TEXT & SOCIAL MEDIA ANALYTICS

This subject introduces you to the use of software tools and processes to analyse textual data and social media for analytical insight. You will learn to perform appropriate information retrieval, pattern recognition and association analysis to spot trends and sentiments expressed in unstructured text and social media platforms.

## CIA2E02 DATA GOVERNANCE

This subject introduces you to data governance as a quality control discipline for assessing, managing, using, improving, monitoring, maintaining, and protecting organisational information. You will learn about concepts such as data quality, data management, data policies, business process management, and risk management surrounding the handling of data in an organisation.

## CIA2E03 IT SERVICE MANAGEMENT

This subject introduces you to IT Service Management in an organisation. You will learn concepts on managing information technology (IT) systems centred on the customer's perspective of IT's contribution to the business, using relevant and appropriate standards and methods adopted by industry.

## CIA2E04 CLOUD COMPUTING

This subject introduces you to the concepts and techniques of cloud computing. You will learn cloud computing's characteristics, architectures, impact on system design and grasp the potential of cloud computing for IT initiatives.

## CIC1C05 COMPUTER ARCHITECTURE

This subject introduces the architecture and organisation of the digital components of computer systems. Topics include operating systems, data representation, digital logic, central processing unit (CPU), memory, input/output interfacing, and the organisation of these subsystems into any modern computer system. The module begins with the standard Von Neumann Model, followed by contemporary architectural concepts.

## CIC1C06 DATA COMMUNICATIONS & NETWORKING

This subject concerns the exchange of data among workstations in a networked environment. You will be taught both the theoretical and practical aspects of data communications and networking. Topics include Open Systems Interconnect (OSI) reference model, Transmission Control Protocol/Internet Protocol (TCP/IP) networking model, data communications hardware and software, internetworking and their associated standards.

## CID1C02 WEB DESIGN

This subject will cover the basic characteristics of multimedia elements and the underlying technologies behind text, graphics, animation, audio and video. You will learn to use multimedia and web authoring tools to create a multimedia website based on sound design principles.

## CID1C04 MULTIMEDIA PROJECT 1

This subject focuses on the application of appropriate concept development techniques and the integration of design systems for a multimedia project. It explores how new media tools can be leveraged upon for such projects.

## CID1C08 INTRODUCTION TO HUMAN COMPUTER INTERACTION

This subject encompasses concepts, theories, applications of human-computer interaction, as well as various usability evaluation paradigms. You will be introduced to the fundamentals of cognitive psychology, principles of human computer interaction and user-centred design methodology.

## CID1C09 VISUALISATION & DIGITAL TECHNIQUES

This subject provides you with an understanding of the importance of visualisation, storyboarding, as well as digital processes and techniques. It also equips you with the ability to use drawing and storyboarding techniques to generate ideas and transform them to digital form. This subject emphasises drawing as a form of expression as well as a way to increase visual literacy. You will learn to create effective visuals using appropriate digital tools and techniques. It covers the fundamental concept and design systems for digital media production.

## CID1C10 MOTION & SOUND

This subject introduces the production technologies and process that make up a time-based media. It aims to look at the underpinning concepts and theory behind sound and motion as you learn to combine these two forms of media – the aural and the visual, for an appropriate target audience. You will be required to conceptualise, plan and implement digital media projects that aim to illustrate emotional qualities through motion and sound technologies, and finally deliver the projects in a variety of digital formats.

## CID1C12 ANIMATION PROGRAMMING

This subject introduces object-oriented programming concepts through the development of interactive, animated applications. Principles of interactivity and animation application development are used to reinforce the object-oriented approach towards software design. You will specialise in the areas of web-based and 3D animation, both of which require skills in programming. Animation Programming provides a context of animation principles and problem-solving to enable you to view programming as an essential part of the informatics-based animation process.

## CID1C13 GAME INTERFACE & INTERACTION DESIGN

This subject covers the key concepts of user interface design principles, processes, techniques and technologies for designing effective game interfaces. The consideration of human factors in the context of game interface production and evaluation are also covered.

## CID1C14 MOTION GRAPHICS & EFFECTS

The subject covers the key concepts and processes of screen-based design, compositing and visual effects. These include the technical concepts underlying digital colour theory and compositing, the basic motion graphics and visual effects workflow, and the use of common techniques such as particle effects, layering of media assets, and the animation of these assets using keyframes and animation curves. Elements of cinematography related to visual effects will also be covered. You will also be introduced to the fundamentals of persuasion and communication design in the context of new media.

## CID1C15 INTRODUCTION TO 3D

This 3D modeling part of the subject covers the modeling of original 3D assets, the analysis of complex objects in terms of primitive shapes, the manipulation of 3D mesh components according to basic topology rules, and the application of materials and textures to 3D objects. The animation part of the subject covers the creation of animation sequences, the application of the twelve principles of animation, planning for timing and spacing, the use of appropriate animation tools, and the generation of automated animation along a path.

## CID1C16 CONTENT MANAGEMENT SYSTEM

This subject covers the various aspects of CMS such as benefits, trends, requirement, features available and constraints for the implementation of websites. Furthermore, the subject will also cover CMS sercurity and the extension of CMS capability and features.

## CID2C03 HUMAN COMPUTER INTERACTION

This subject covers the concepts, theories and applications of human computer interaction. It also covers the user centred design methodology and the various usability evaluation paradigms.

## CID2C05 MULTIMEDIA PROJECT 2

This subject provides you with the knowledge and hands-on practice to build flexible and dynamic interactive multimedia applications. It also covers the design issues and technologies for developing interactive multimedia applications for a variety of platforms.

## CID2C07 INTERACTIVITY & INTERFACE DESIGN

This subject will cover various interface design principles and concept visualisation techniques. It will also cover the design of effective information architecture and navigation schemes.

## CID2C08 INTERACTIVE PROGRAMMING

Principles of interactivity development are covered to reinforce the object-oriented approach towards software design. The design and development phases of an interactive multimedia project will also be covered so that you will be equipped with the knowledge and skills to implement an interactive multimedia application.

## CID2C09 MOBILE MEDIA APPLICATION DEVELOPMENT

This subject provides you with the understanding of Principles of interactivity, concepts of interface design and best practices of usability design for mobile platform. They are covered to reinforce the impact of usability on mobile applications. In addition, the design and development phases of an interactive mobile application project will also be covered so that you will be equipped with the knowledge and skills to implement an interactive mobile application.

## CID2C10 3D PRODUCTION FOUNDATION

This subject covers the realities of team-based production environments. You will be required to work in a team to produce a short animation clip and to appreciate the various roles within a production pipeline.

## CID2P35 INTRODUCTION TO GENERAL PEDAGOGICAL APPROACHES FOR LEARNING

This subject will give you a foundation in learning pedagogy. You will be introduced to general pedagogical approaches in learning and their role in learning. The subject will cover major principles of pedagogy and how they are applied in learning for both traditional and emerging learning environments. Key pedagogic concepts and terminology will also be introduced to enable you to develop and implement learning activities.

## CID2P37 BUILDING LEARNING ACTIVITIES

You will be taught the process and principles involved in building learning activities for a variety of environments, and work on a proposed learning activity. This subject covers the principles of implementing, testing, documenting and evaluating interactive digital learning materials to meet the needs of a proposal.

## CID2P42 RICH MEDIA APPLICATION DEVELOPMENT

The subject will cover rich media concepts at an advanced level, and the development of rich Internet applications using appropriate development tools. Principles of interactivity, streaming media implementation and performance issues will also be emphasised.

## CID2P43 NEW MEDIA STRATEGY & ANALYTICS

The subject covers concepts related to new media platforms and strategies and techniques to engage the digital consumer. Analytics relating to new media deployment will also be covered so you will be equipped with the knowledge and skills on important issues such as customer behaviour, traffic building and tracking, and user experience.

## CID2P44 INTRODUCTION TO DIGITAL MARKETING

This subject introduces you to the world of digital marketing in the areas of how it is to be harnessed and used it to achieve the success of businesses. You will also learn how to choose online marketing channels in order to get products and services to market. The subject will explore areas such as search marketing, affiliate marketing, email marketing and digital marketing strategies.

## CIM2C06 DATABASE ADMINISTRATION & SECURITY

This subject focuses on the importance of managing data to support critical organisational functions. It examines the exploitation of database vulnerabilities and in particular, focuses on enterprise database installation, creation and administration, user administration, audit system, database backup and recovery, as well as disaster recovery.

## CIM2E01 HEALTHCARE INFORMATICS

This subject introduces the concepts of healthcare informatics. It teaches key principles, methods, and applications necessary for personnel to provide access to timely, complete, accurate, legible and relevant healthcare information. In addition, you are introduced to healthcare information system standards and the security of healthcare information systems. The main focus of the subject is the application of information systems to various activities within healthcare organisations.

## CIT1C05 PROBLEM SOLVING & PROGRAMMING

This subject introduces you to the fundamentals of problem solving and programming. These skills are taught through programming constructs as well as simple object-oriented concepts.

## CIT1C06 OBJECT-ORIENTED PROGRAMMING

This subject introduces you to an object-oriented programming paradigm. An object-oriented programming language is used to teach object-oriented concepts. The subject aims to help you learn the principles and rationale behind an object-oriented approach to programming. It also intends to help you learn how to develop object-oriented applications using an object-oriented programming language.

## CIT1C08 FUNDAMENTALS OF BUSINESS INFORMATION SYSTEMS

This subject helps you to understand the role of information systems in various business domains, the concepts of information and processes in businesses, and evaluates the ethical and social issues related to IT. It also explores the roles, professional practice, ethical obligations and developmental paths of IT professionals. In addition, you will be introduced to the psychological and social aspects of how people interact and communicate. This will provide a basic foundation to understanding how IT may be used to enrich the lives of people.

## CIT1C09 WEB PROGRAMMING

This subject covers the concept of web programming, development of form-based web applications and data driven applications. It also covers the creation of web pages and session and state management.

## CIT1C10 PROGRAMMING ESSENTIALS 1

This subject introduces the principles of programming. It covers the application of programming to problems that require structured thinking. Topics covered include a variety of data types, elementary flow control and simple structures.

## CIT1C11 PROGRAMMING ESSENTIALS 2

This subject introduces you to the principles and rationale behind an object-oriented approach to programming. Topics covered include objects and classes, array of objects, composition, file input and output, inheritance and polymorphism. An object-oriented programming language is used to teach object-oriented concepts.

## CIT2C11 ENTERPRISE SOLUTIONS & ENTREPRENEURSHIP

This subject covers the foundations of entrepreneurship such as entrepreneurial process and styles, and introduces commonly used enterprise solutions and E-business concepts and models. The subject also covers the development of a business plan.

## CIT2C12 ADVANCED DATA STRUCTURES & ALGORITHMS

This subject introduces you to the principles of advanced data structures. Topics covered include analysis of algorithms, recursive algorithms, algorithmic design, advanced sorting and algorithms on data structures such as trees, graphs, and heaps. A programming language is used to teach the data structure concepts.

## CIT2C13 BUSINESS SYSTEMS & PROCESSES INTEGRATION

This subject covers the concepts and implementation of business systems and processes integration solutions. You will acquire knowledge on intra and inter organisational integration, data integration methods, message oriented integration techniques and Service-Oriented Architecture based enterprise integration. You will use a development tool to design and implement solutions to integrate business systems and processes in order to improve business efficiency and effectiveness.

## CIT2C14 ENTERPRISE WEB DEVELOPMENT & TESTING

This subject introduces you to the principles of Web 2.0 technologies, web services and testing of enterprise web applications. Topics covered include client-side scripting, Web 2.0 Application Programming Interfaces, web services and web testing techniques. An Integrated Development Environment will be used to design, implement, test and deploy an enterprise web application that incorporates Web 2.0 technologies, web services and databases.

## CIT2E05 TECHNOLOGY & INNOVATION

This subject provides you with the understanding of how companies employ innovation to secure competitive advantage in the marketplace. You will learn a systematic approach to incorporating the process of innovation in organisations, the importance of intellectual property laws to protect innovation and the process of transforming new technology into a new product or service in the marketplace

## CIT2E06 MANUFACTURING & LOGISTICS BUSINESS INFORMATICS

This subject provides you with the skills to exploit information technology to support the growing needs of the manufacturing and logistics sectors. It focuses on developing your skills to analyse, implement and maintain IT applications to support industry-specific requirements. A common Enterprise Resource Planning (ERP) system (such as mySAP) will be used to enhance this learning. The knowledge acquired will enable you to gain greater competence in applying IT solutions to achieve business process excellence.

## CIT2P28 WEB APPLICATION DEVELOPMENT

This subject covers the fundamentals of web programming for developing and deploying data driven web applications. Technological and design issues of web-based application development will be discussed in this subject to provide a strong foundation in the web programming paradigm.

## CIT2P32 ENTERPRISE SECURITY & APPLICATION MANAGEMENT

The subject will cover topics on security threats, industry practices, methods to evaluate and ensure good security practices in application development.

## CIT2P44 DYNAMIC WEB APPLICATION DEVELOPMENT

This subject covers the concepts and implementation of dynamic web-based applications. Topics covered include designing web pages and implementation of the business and data layers of a web application. Technological and design issues of web-based application development will also be discussed.

## CIT2P61 ENTERPRISE BUSINESS PROCESSES & SYSTEMS

This subject gives an overview of the key business processes of an enterprise. It introduces concepts of enterprise production, business and intra-company processes, and components in financial, management accounting and business information warehouses via an enterprise system. Effective planning and managing of resources through better visibility and decision making, and improving customer service and partner collaboration across the supply chain via the system will also be discussed.

## CIT2P62 IT & SUPPLY CHAIN MANAGEMENT

This subject covers topics such as procurement automation and streamlining, production planning, manufacturing execution and inventory management. You will use a common Enterprise Resource Planning (ERP) system to plan the integration of supply chain components.

## CIT3P51 WEB ANALYTICS

This subject covers topics such as clickstream analysis, outcome metrics, competitive intelligence analysis, emerging analytics e.g. on Social Web and analysis techniques. You will make use of a web analytics vendor's tools to carry out some of the primary tasks that web analysts perform.

## CIT3P61 IT & CUSTOMER RELATIONSHIP MANAGEMENT

This subject covers concepts in Customer Relationship Management (CRM) and in the application and implementation of CRM technologies. Topics covered include CRM strategy and implementation in B2C/ B2B contexts, CRM information warehouse, data mining techniques in CRM and key components of a CRM system such as operational, analytical and collaborative CRM.

## CIT3P71 IT GOVERNANCE & SERVICE MANAGEMENT

This subject covers concepts in IT governance and service management. Topics covered include IT governance models and frameworks, IT governance competencies and service management standards and best practices.

## CMA1C01 COMPUTING MATHEMATICS 1

This subject equips you with the ability to use mathematics and mathematical processes as tools for developing algorithms in computing and other real-life applications. It also serves to help you develop confidence and competence in reasoning, proof and induction. This subject introduces you to the fundamental concepts of mathematics needed for the other core computing subjects.

## CMA1C02 COMPUTING MATHEMATICS 2

This subject equips you with the ability to use mathematics and mathematical processes as tools for developing algorithms in computing and other real-life applications. It also serves to help you develop confidence and competence in analysing numerical information, and translating practical problems into workable computer applications. You will be introduced to the fundamental concepts of mathematics needed for the other core computing subjects.

## CMA2P51 QUANTITATIVE TECHNIQUES

This subject equips you with the fundamental concepts of statistics to organise, summarise, analyse, interpret, present and draw conclusions based on data. You will learn to illustrate the concept of sampling distribution, calculate interval estimates, perform hypothesis testing and analysing relationships between variables. In particular, you will be exposed to methods of data analysis that are useful in business environments. You will also learn to use statistical software to analyse data.

## CMC1C03 INTRODUCTION TO WIRELESS TECHNOLOGIES

Wireless technologies represent a rapidly emerging area of growth and importance in providing ubiquitous access for individuals and enterprises. At the same time, the pervasiveness of wireless technologies has also given rise to social and ethical issues. This subject introduces the basic concepts of wireless networking and the applications of wireless technologies in different domains. Issues arising from the use of wireless technologies will be discussed.

## CMC2C10 SERVER SIDE SOFTWARE DEVELOPMENT

This subject equips you with the knowledge and skills to develop and deploy scalable server-side software. You will be able to develop the backend modules which provide services to the heterogeneous desktop and mobile clients. This subject focuses on creating an understanding of event driven programming, and business and data access objects development in a client-server architecture.

## CMC2C11 MOBILE & WIRELESS NETWORKING

This subject covers the various concepts and principles in mobile communication and wireless networking. Basic theories on mobile and wireless architecture and their applications will be discussed. You will also learn how to secure, troubleshoot and analyse wireless systems.

## CMC2C12 CONVERGED NETWORKING

This subject provides a broad overview of the concepts, design, security and implementation of a converged network. You will also be introduced to topics on Voice-over-Internet-Protocol (VoIP) implementation, IP telephony principles and related protocols, internetworking devices and application services development.

## CMC2C13 NETWORK MANAGEMENT

This subject covers the concepts of network management principles and practices. You will learn the techniques of operating, administrating, maintaining, and provisioning of networked systems. Topics include OSI network management model, wired and wireless network operation management, deployment and upgrades of wired and wireless network and configuration of network resources for performance.

## CMC2E04 TOURISM INFORMATICS

This subject focuses on developing your skills to understand the issues encountered in the tourism industry and to propose IT solutions to address them. Topics covered include introduction to tourism, IT systems in tourism, and IT solutions for the tourism industry.

## CMC2E06 VOIP SYSTEM & APPLICATION

This subject covers the concept, design and implementation of Voice-over-Internet Protocol (VoIP) over traditional telephony. It gives an overview of the public telephone network, the facilities such as PBX switching used commonly by enterprise. The subject focuses on the trend towards technology convergence where a single network can be used to support different types of traffic: data, audio and video. It also explains how various technologies have made convergence possible and then narrows to focus on VoIP, its functional requirements and the implementation of a VoIP network.

## CMC2P11 MOBILE SYSTEM DEVELOPMENT

You will learn about the challenges and capabilities provided by mobile computing devices. You will also learn about the major mobile device platforms, and the tools and techniques for developing software applications for selected mobile platform(s), including applications that utilise the connectivity and other capabilities of mobile devices.

## CMC2P23 INTERNETWORKING TECHNOLOGIES

This subject covers internetworking technologies and protocols for enterprise network environments. Concepts in network scalability, scalable routing/ switching technologies and protocols are also taught.

## CMC2P31 MOBILE USABILITY DESIGN

Usability is one of the main factors in influencing the adoption of mobile devices and services for individuals and enterprises. This subject covers the dominant design in mobile user interfaces, and examines some widely acclaimed mobile and wireless products with good usability design. Usability testing to assess the ease of use of a mobile device or other personal communication devices is also covered.

## CMC2P41 IT INFRASTRUCTURE MANAGEMENT

This subject introduces the concept and framework of IT Service Management, and the 12 ITIL (IT Infrastructure Library) processes used in implementing and operating enterprise IT infrastructure systems.

## CMC2P42 IT SERVICE DESK MANAGEMENT

This subject introduces the concept and framework of IT Service Desk Management, and the ITIL (IT Infrastructure Library) processes and functions used in supporting and operating IT service desks.

## CMC3P22 MOBILE & WIRELESS SECURITY

This subject equips you with the ability to design, plan and deploy security measures for a wireless networked environment. It examines several techniques and systems that are used to provide security and privacy for both mobile (cellular) and wireless networks.

## CMP3102 MAJOR PROJECT

In this subject, you apply the skills and knowledge in Software Engineering, acquired from the various Diploma in IT subjects and in business domain electives, to a project. You will analyse, design, develop, implement and test viable and working information systems and solutions. You will be required to work in teams to manage your project development, and to present and demonstrate your systems. You will learn to handle problems and difficulties inherent in project work where teamwork and co-operation are important success factors. Concurrently, you will acquire new knowledge in technology and new skills in project management, problem solving, communication and interpersonal skills which will serve you well as you embark on your careers as IT professionals.

## CMP3103 MAJOR PROJECT

This subject involves the integration of knowledge and skills acquired from the various subjects in the course. It helps you develop a practical understanding of the products, methodologies, processes, systems, project management and presentation skills needed for business intelligence and analytics application projects. You will work in a team to develop, present and demonstrate a solution to a problem. This provides an avenue for you to experience group work and the problems and difficulties inherent in project work where teamwork and co-operation are important success factors.

## CMP3402 MAJOR PROJECT

This subject involves the integration of knowledge and skills acquired from the various subjects in the Mobile & Network Services curriculum. It fosters a practical understanding of mobile and network services, systems development methodology, advanced mobile application programming, mobile software testing, quality assurance, project management, and presentation skills.

## CMP3502 MAJOR PROJECT

This subject provides you with an opportunity to apply knowledge and skills acquired in the course to a project. You will apply the various interactive media programming environments and paradigms illustrated during the course of study. You will undergo the entire process of project development using an appropriate methodological framework, and are expected to demonstrate creativity and analytical processes.

## CMP3601 MAJOR PROJECT

This project involves the integration of knowledge and skills developed from the various subjects in the course. It helps you develop a practical understanding of development methodology, programming and design techniques, evaluation processes, project management and presentation skills for security related systems projects. You are required to work in teams and present and demonstrate your solutions and products.

## CMP3701 MAJOR PROJECT

This subject helps you integrate and apply the knowledge and skills acquired from the various subjects in the Game & Entertainment Technology curriculum. It helps you develop a practical understanding of game development methodology, programming and design techniques, quality assurance, project management and presentation skills. You will work in teams to present the solutions you create and demonstrate the products you develop.

## CMP3801 MAJOR PROJECT

The Major Project involves the integration of knowledge and skills developed from the various subjects in the course. It helps you develop a practical understanding of the products, methodologies, processes, systems, project management and presentation skills needed for the financial information systems projects. You will work in a team to develop, present and demonstrate your solution to a problem. This provides an avenue for you to experience group work and the problems and difficulties inherent in project work where teamwork and co-operation are important success factors.

## CMP3901 MAJOR PROJECT

This project involves the integration of knowledge and skills developed from the various subjects in the course. It helps you develop a practical understanding of development methodology, programming and design techniques, evaluation processes, project management and presentation skills for security or forensics related systems projects. You will be required to work in teams and present and demonstrate your solutions and products.

## CSI3001 STUDENT INTERNSHIP PROGRAMME

The Student Internship Programme exposes you to an industry environment and is an integral part of the curriculum. Immersion in a real working environment will enhance your understanding of the application of IT in an organisation, and provide an opportunity for you to grow into responsible professionals. You will be expected to show sensitivity to the needs of your clients and organisations as you apply and integrate the knowledge and skills acquired in IT and domain areas to the work you are assigned. You will also be expected to demonstrate independence, initiative, creativity, strong conceptual thinking, technical proficiency and sensitivity to the needs of clients.

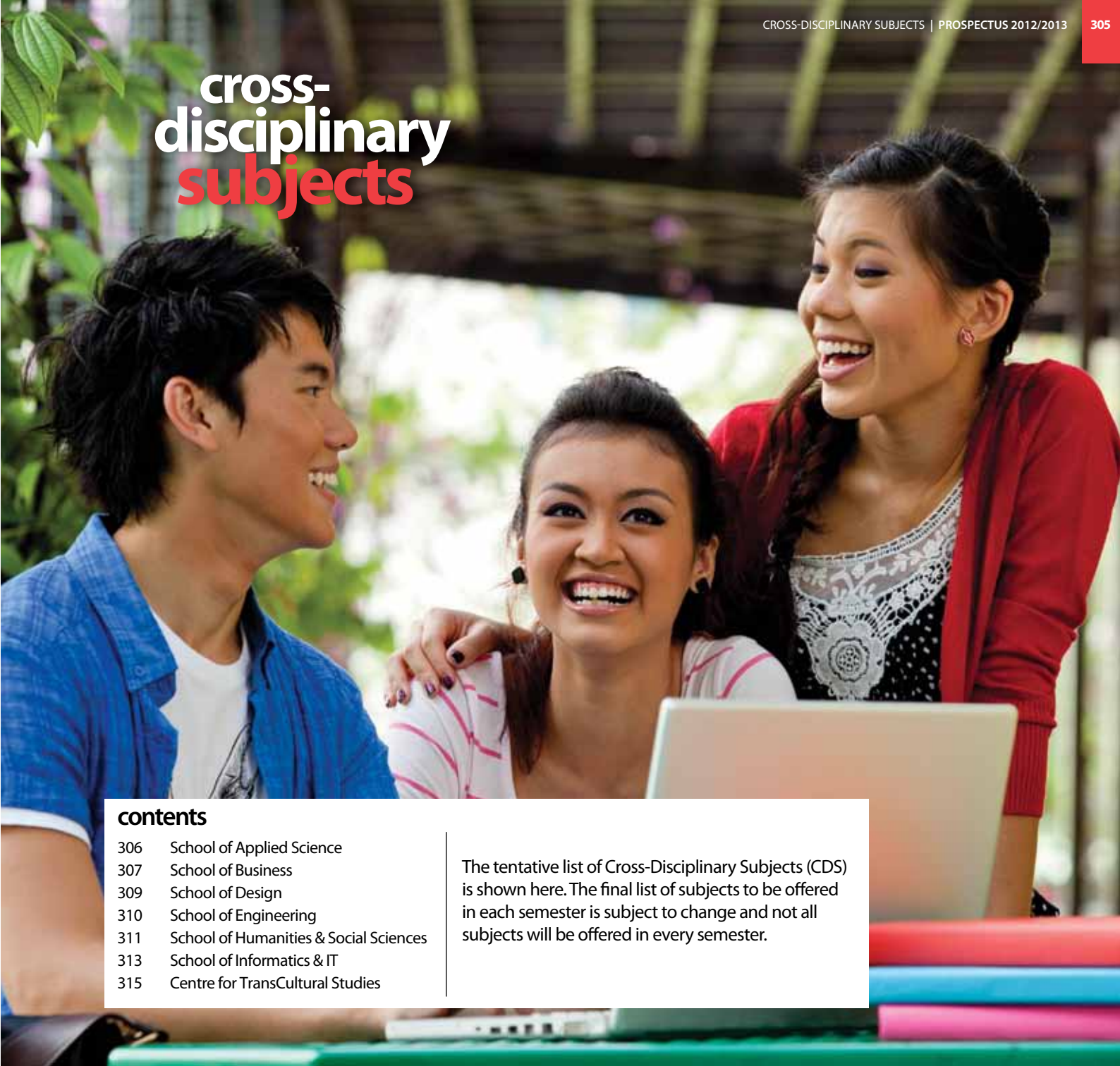
## GCD1001/1002/1003 APPLIED PRINCIPLES FOR EFFECTIVE LIVING

Applied Principles for Effective Living is TP's Core programme consisting of three subjects, namely APEL 1 (Personal Effectiveness), APEL 2 (Interpersonal Effectiveness) and APEL 3 (Extropersonal Effectiveness). APEL was specially developed for TP students with the aim to help nurture in them the dispositions (ie, attitudes, skills, knowledge) towards the Principles for Effective Living, hence laying the vital foundation for their life-long success. The principles introduced in this programme are largely derived from applied psychological studies.

## GEN1016 INTRODUCTION TO PSYCHOLOGY OF DEVIANT BEHAVIOUR

This subject introduces you to the theoretical and psychological perspectives of human behaviour. It will examine the psychological factors that relate to deviance and crime on a general level with specific focus on offences conducted with the assistance and use of digital and computer technology. Through this subject, you will be able to appreciate the contribution of psychology and apply it to an investigative process model.

# cross-disciplinary subjects



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The tentative list of Cross-Disciplinary Subjects (CDS) is shown here. The final list of subjects to be offered in each semester is subject to change and not all subjects will be offered in every semester.

# School of Applied Science

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| ABM1X01 | Human Health & Diseases | 1 | 3 |
| ABT1X01 | Environmental Science | 1 | 3 |
| ABT1X02 | Life Sciences & You | 1 | 3 |
| ACE1X01 | Industrial Safety | 1 | 3 |
| ACE1X02 | Water Technology | 1 | 3 |
| ACH1X01 | Chemistry in Life | 1 | 3 |
| AFS1X01 | Food Hygiene | 1 | 3 |
| AMB1X01 | Discovering the Human Body | 1 | 3 |
| AMB1X02 | Microorganisms & You | 1 | 3 |
| ANT1X01 | Basics of Nutrition | 1 | 3 |
| ANT1X02 | Science in Cuisine | 1 | 3 |
| APH1X01 | Introduction to OTC Medication | 1 | 3 |

## Subject Synopses

### ABM1X01 HUMAN HEALTH & DISEASES

This subject is designed to provide the fundamental and up-to-date information on human health and diseases. It covers the common non-infectious and infectious diseases as well as their diagnoses, prevention and treatment.

### ABT1X01 ENVIRONMENTAL SCIENCE

This subject examines the effects of human activities on the environment using science to examine these effects. It is interdisciplinary in nature and encompasses areas of science, physical geography and ecology along with aspects of the social sciences.

### ABT1X02 LIFE SCIENCES & YOU

This subject is designed to create an awareness of the life sciences, its applications and impact on the lives of people. It will cover the current developments in the different areas of the life sciences as well as the related legal, social, moral and ethical issues and implications.

### ACE1X01 INDUSTRIAL SAFETY

This subject is designed to create awareness of the importance of industrial safety. Topics will include machinery safety, hazards of fire and explosion, material handling, personal protection equipment and the legislation concerning safety.

### ACE1X02 WATER TECHNOLOGY

This subject examines water as an essential for life. It highlights the sources of water in nature, the technology in processing water including wastewater, quality of water in terms of chemical, physical and microbiological standards and uses of water in everyday life. The subject will be taught via lectures, tutorials and practicals.

### ACH1X01 CHEMISTRY IN LIFE

This subject brings to you an awareness of the impact of chemistry, ranging from colours and plastics to drugs that are encountered in our everyday life.

### AFS1X01 FOOD HYGIENE

This subject introduces the importance of food safety and the practices that prevent food borne illnesses. It covers the sources of potential food borne hazards, various aspects of safe food handling during purchasing, food preparation and storage as well as personal hygiene.

### AMB1X01 DISCOVERING THE HUMAN BODY

This subject illustrates the basic understanding of human anatomy and physiology. It explains how physiological processes lead to the normal functioning of the human body.

### AMB1X02 MICROORGANISMS & YOU

This subject offers you an opportunity to discover the world of microorganisms. It unfolds the relationship between man and microorganisms, ie., bacteria, viruses, protozoa, fungi and algae.

### ANT1X01 BASICS OF NUTRITION
This subject examines the role and importance of various nutrients in relation to the well-being of the human body. It covers food sources of these nutrients, the Healthy Diet Pyramid and food labelling.

### ANT1X02 SCIENCE IN CUISINE
This subject emphasises the principles of science in food preparation. It covers the properties of key components in food and the changes it undergoes during food preparation.

### APH1X01 INTRODUCTION TO OVER-THE-COUNTER (OTC) MEDICATION
This subject provides you with an overview of over-the-counter (OTC) medication and equips you with an understanding of responsible and proper self-medication for common minor ailments.

# School of Business

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| BAF1005 | Basic Financial Accounting | 1 | 3 |
| BAF1006 | Basic Finance | 1 | 3 |
| BBS1003 | Managing Human Resources | 1 | 3 |
| BBS1004 | Fundamentals of Management | 1 | 3 |
| BBS1005 | Fundamentals of Entrepreneurship | 1 | 3 |
| BBT1004 | Basics of E-Business | 1 | 3 |
| BCM1010 | Introduction to Mass Communication | 1 | 3 |
| BCM1011 | Business Chinese & PRC Culture | 1 | 3 |
| BCS1006 | Academic Research & Writing Skills | 1 | 3 |
| BEC1003 | Introductory Economics | 1 | 3 |
| BHT1015 | Event Planning | 1 | 3 |
| BHT1016 | Fundamentals of Hospitality & Tourism Business | 1 | 3 |
| BLM1005 | Introduction to the Law of Singapore | 1 | 3 |
| BLO1003 | Introduction to Logistics & Supply Chain Management | 1 | 3 |
| BLO1005 | Basic Calculus for Business | 1 | 3 |
| BMK1002 | Service Quality | 1 | 3 |
| BMK1003 | Introduction to Marketing | 1 | 3 |

## Subject Synopses

### BAF1005 BASIC FINANCIAL ACCOUNTING
This subject provides you with an understanding of the general framework of the accounting discipline. You will learn basic knowledge of accounting concepts including preparing, understanding and analysing accounting records and simple financial reports for small and medium-sized enterprises. You will have opportunities to apply the knowledge to real world situations.

### BAF1006 BASIC FINANCE
This subject equips you with a basic understanding of financial management, various sources and application of funds of a typical business and some basic techniques to assist in long-term financial decision-making. You will have opportunities through various learning methods such as group discussions and research assignments to apply the knowledge to real world situations.

### BBS1003 MANAGING HUMAN RESOURCES
This subject equips you with an understanding of the human resource management functions ranging from employee induction, people development, performance appraisal, rewards and benefits, change management, team management to discipline and grievance handling. You will also have an appreciation of the current trends in the field of human resource management.

## BBS1004 FUNDAMENTALS OF MANAGEMENT

This subject equips you with the basic understanding of key management functions of planning, organising, leading and controlling. You will also gain an understanding of the impact of the key environmental factors on business, the importance of corporate social responsibility, business ethics and international management.

## BBS1005 FUNDAMENTALS OF ENTREPRENEURSHIP

This subject equips you with the basic understanding of entrepreneurship and an appreciation of issues relating to the setting up of new businesses. You will be able to develop basic, sound business strategies to create viable business plans through the understanding of issues relating to market analysis, customers, marketing mix, staffing and basic financial projections.

## BBT1004 BASICS OF E-BUSINESS

This subject provides a basic understanding of the issues in e-business relating to the planning, organising and development of e-business websites. Practical design, development and implementation considerations in e-business websites will be illustrated through hands-on activities. Besides electronic marketing imperatives, security, e-payment systems, legal and ethical issues and future trends will also be discussed.

## BCM1010 INTRODUCTION TO MASS COMMUNICATION

This subject provides you with an understanding of the media scene. You will learn about mass communication concepts, history, and the advancement of the media industry. The subject also looks at ethical issues, mass media law, and the implications of media on society.

## BCM1011 BUSINESS CHINESE & PRC CULTURE

Conducted in Mandarin, this subject offers a glimpse of China's history and geography, its socio-political system, economic reform achievements and problems, and development trends. It highlights opportunities and challenges for international businesses in China's economic transformation. It also discusses the effect of traditional values on business practices and etiquette in China today. You will also learn business conversation and correspondence in Chinese.

## BCS1006 ACADEMIC RESEARCH & WRITING SKILLS

This subject exposes you to the rigours of academic writing. It focuses on the writing process, structure of essays, idea development, and evaluation and use of resources. You will also be required to submit literature reviews and an academic essay.

## BEC1003 INTRODUCTORY ECONOMICS

This subject equips you with basic microeconomic concepts and the necessary analytical skills for understanding the business environment. You will apply concepts such as the demand and supply model, elasticity, pricing strategies and growth strategies to the day-to-day business decision-making of individuals and firms. You will also learn problem-solving and process skills that will allow you to understand how economic variables affect business decision-making.

## BHT1015 EVENT PLANNING

This subject provides a broad understanding of the event planning, organising and staging process. You will be given opportunities to appreciate the diverse nature of the event industry through fieldwork and research on related areas. The subject will also develop your process and problem-solving skills, as well as your ability to interact and communicate effectively with others.

## BHT1016 FUNDAMENTALS OF HOSPITALITY & TOURISM BUSINESS

This subject provides a broad understanding of the hospitality and tourism business by examining the origin of travel and how it has evolved into the biggest industry in the world. The dynamic tourism growth is understood within the framework of demand for and supply of travel services, tourism distribution and trends. The importance of sustainable tourism is underscored by a discussion on tourism impact and the concept of carrying capacity. You will work in groups or individually and have opportunities to appreciate the productive nature of the business and develop an understanding of how tourism can bring about both intended and unintended consequences on people and the environment.

## BLM1005 INTRODUCTION TO LAW OF SINGAPORE

This subject provides a basic knowledge of the legal system and laws of Singapore. You will learn about the sources of Singapore law and how it is made. It also aims to equip you with a general understanding of the fundamental principles of criminal law, family law, the law of tort, the law of contract and civil and criminal procedures.

## BLO1003 INTRODUCTION TO LOGISTICS & SUPPLY CHAIN MANAGEMENT

This subject gives a basic understanding of business logistics and supply chain management. You will have opportunities to apply some of the basic techniques acquired to manage real-life problems faced in the industry.

### BLO1005 BASIC CALCULUS FOR BUSINESS

This subject serves as a foundation subject, designed for students who do not have a background in O Level Additional Mathematics. It will introduce you to the basic concepts of algebra and functions, differentiation and integration. Techniques of problem solving in business and economics applications will also be covered.

### BMK1002 SERVICE QUALITY

This subject equips you with the knowledge, skills and mind-set of productivity and service quality. It provides an integrated approach for you to learn the various aspects of customer service. This subject places emphasis on practical applications of concepts through role-play, case studies and experiential games. You will be given the opportunity to apply productivity and service quality concepts in a group project.

### BMK1003 INTRODUCTION TO MARKETING

This subject provides an understanding of the basic concepts of marketing. It focuses on the tools used by marketers to develop the appropriate marketing mix involving product, promotion, price and place; and includes key topics such as environmental forces and market segmentation. You will learn how to market a company's products and services successfully.

# School of Design

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| DAD1900 | 20th Century Fashion | 1 | 3 |
| DAD1909 | Basic Digital Textile Creation | 1 | 3 |
| DED1907 | Creating Tropical Gardens | 1 | 3 |
| DIA1902 | Human Environment Planning | 1 | 3 |
| DIM1906 | Ideation | 1 | 3 |
| DMV1908/ DMV1911 | Appreciating Local Cinema | 1 | 3 |
| DPD1901 | Freehand Drawing | 1 | 3 |
| DPS1903 | Design In Culture | 1 | 3 |
| DVC1905 | Colour & Composition | 1 | 3 |

## Subject Synopses

### DAD1900 20TH CENTURY FASHION

This subject introduces you to the evolution of fashion in the 20th century. You will explore different fashion looks and styles, trends and silhouettes. Influences from international fashion designers in the fashion industry will also be introduced.

### DAD1909 BASIC DIGITAL TEXTILE CREATION

The subject introduces you to the basic knowledge and skills required for designing textile print traditionally and digitally. Since software application is integral to the creative process, you will use Adobe Photoshop and Illustrator as design tools. You will learn to design motifs and patterns, apply colours and reproduce them to create all over repeats, border repeats or mono prints. You will create a collection developed around a theme or concept for apparel textile or home furnishings

### DED1907 CREATING TROPICAL GARDENS

This subject provides you with an understanding of what encompasses a tropical garden or a green space. You will learn about the different types of green spaces, both outdoor and indoor, the fundamentals of a garden and its basic components. You will also be taught the steps on how to create a garden, the characteristics of essential tropical plants generally grown and what it takes to grow and maintain one's own green space.

### DIA1902 HUMAN ENVIRONMENT PLANNING

This subject deals with issues affecting the human environment. This includes the fundamentals in planning and utilisation of an environment to fit human characteristics and capabilities.

### DIM1906 IDEATION

This subject introduces you to some idea generation, analysis and synthesis techniques within a problem-solving framework. Through these techniques, you will explore and develop fluidity of thought as well as an analytical mind. The subject also introduces visual literacy through which you develop your personal visual language to communicate a great variety of concepts. You will also develop and demonstrate your aesthetic awareness and design sensibility.

### DMV1908/ DMV1911 APPRECIATING LOCAL CINEMA

This subject introduces you to the films that have been produced by local filmmakers and a brief history of the film industry in Singapore. You will be taught how to identify the major genres, various styles and techniques of the different filmmakers and analyse the elements which make their films popular and accepted by local audiences. At the end of the subject, you will be able to critically watch a local film and better appreciate the messages that the film conveys.

### DPD1901 FREEHAND DRAWING

This module emphasises drawing through observation, using basic drawing media. It provides experiences gained from exploring and viewing the physical environment and development of the drawn image. The drawing sessions will be generally based on freehand drawing, placing special demands on seeing/ perception (eyeballing), scale, composition and perspective.

### DPS1903 DESIGN IN CULTURE

This subject introduces the factors behind cultural formation, and explores human expression in its various forms. It explores human behaviour and production, and some key issues in social development such as geography, history, politics, psychology and gender. Through an examination of objects and artefacts, from early tribal rites and rituals to contemporary fashion and trends, you will develop an awareness and appreciation of culture in shaping societies' needs, wants and desires.

### DVC1905 COLOUR & COMPOSITION

This subject introduces basics in colour and composition theories and their application in art and design. It provides an appreciation of such basic theories by understanding the role of primary colours as a catalyst to how colour schemes are derived, and how they are applied in two and three-dimensional compositions.

# School of Engineering

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| EPL1X01 | Problem Solving Techniques | 1 | 3 |
| EBZ2X01 | Management of Enterprise | 2 | 3 |
| EPM2X01 | Introduction to Project Management | 2 | 3 |

## Subject Synopses

### EPL1X01 PROBLEM SOLVING TECHNIQUES

Innovation involves a change that ultimately results in a useful product or process. It requires creative problem-solving and effective communication skills. In this subject, you will be taught the process skills for teamwork development, good communication, brainstorming and creative thinking. Applying the knowledge of mathematics and the sciences, this subject emphasises the use of creativity to solve practical real-life problems.

### EBZ2X01 MANAGEMENT OF ENTERPRISE

This subject is designed to equip you with basic concepts and techniques which are essential for starting up and running a small enterprise. It describes the entrepreneurial traits and the various methods and legal forms needed for setting up an enterprise. The business tools of marketing, finance and human resource management are explained. You will have the opportunity to apply your knowledge in the creation of a business plan based on an original business idea.

### EPM2X01 INTRODUCTION TO PROJECT MANAGEMENT

This subject covers the important aspects of planning the various activities of a project, allocating necessary resources, calculating the project costs, and implementing and controlling the progress of the project until completion. Software will be used in the subject to enhance your learning.

# School of Humanities & Social Sciences

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| GEN1001 | Psychology of Creativity | 1 | 3 |
| GEN1004 | Music: Expressions & Applications | 1 | 3 |
| GEN1007 | Understanding Art | 1 | 3 |
| GEN1008 | Understanding Theatre | 1 | 3 |
| GEN1011 | Cross-Cultural Psychology | 1 | 3 |
| GEN1014 | Introduction to Counselling Psychology | 1 | 3 |
| GEN1901 | Entrepreneurship Project: Interdisciplinary Approach | 1 | 3 |
| GEN1902 | Innovation Principles & Practice | 1 | 3 |
| GEN1904 | Basics of e-Entrepreneurship | 1 | 3 |
| GEN1905 | Social Entrepreneurship | 1 | 3 |
| GLA1002 | Creative Writing | 1 | 3 |
| GLA1005 | Fundamentals of Public Speaking | 1 | 3 |
| GLA1007 | Introduction to English Phonetics | 1 | 3 |
| GSS1003 | Introduction to Psychology | 1 | 3 |
| GSS1004 | Introduction to Sociology | 1 | 3 |
| GSS1005 | Leadership & Character | 1 | 3 |

## Subject Synopses

### GEN1001 PSYCHOLOGY OF CREATIVITY

This subject explores and reviews approaches to creativity. It covers the psychological components of the creative process and the application of creativity in fields such as business, science, technology, arts, humanities and social sciences. The subject will culminate in a major creativity project that will provide opportunities for you to apply the techniques learnt throughout the subject.

### GEN1004 MUSIC: EXPRESSIONS & APPLICATIONS

This subject provides an insight into music and its applications in various fields. The first part of the subject introduces you to the basic elements of music (eg, pitch, rhythm, melody, harmony and instruments) and musical styles from different time periods ranging from the Middle Ages to the modern day. In the second part of the subject, you will explore the role and functions of music in relation to various areas such as film, theatre, commerce and technology.

### GEN1007 UNDERSTANDING ART

This subject provides the knowledge and skills to understand visual art and its relevance to society and culture. It engages in issues such as the nature of art, how art is analysed and evaluated, processes of art-making, various forms and mediums and the place of art in our lives. In addition, you will be introduced to art experiences as you create your own works and learn to express yourself through art.

### GEN1008 UNDERSTANDING THEATRE

This subject provides the basic knowledge and skills to understand the dramatic arts and its relevance to society and culture. It covers topics such as the origins and purpose of theatre, the various forms of western and eastern theatre and the skills required of a performer. In addition, you will be introduced to theatre experiences as you create your own performance works individually and in groups.

### GEN1011 CROSS-CULTURAL PSYCHOLOGY

This subject gives you a better understanding of how different cultural settings influence the way people think, behave, value and perceive things. It will raise awareness and create sensitivity on how culture shapes and influences a variety of areas ranging from individual development to socialisation and work.

### GEN1014 INTRODUCTION TO COUNSELLING PSYCHOLOGY

This subject is provides you with a general introduction to the field of Counselling Psychology. You will have opportunities to explore the fundamentals of counselling and counselling process as well as discuss the primary theoretical perspectives and contemporary issues that influence the counselling profession. You will be equipped with basic helping skills that you can apply by helping people around you.

## GEN1901 ENTREPRENEURSHIP PROJECT: INTERDISCIPLINARY APPROACH

This subject engages you in a project that has entrepreneurship perspectives and objectives. In working through the project, you will develop entrepreneurship process skills, and ultimately create a potential/ proposed business entity.

## GEN1902 INNOVATION PRINCIPLES & PRACTICE

The subject equips you with knowledge and skills to apply principles of innovation to solve problems/ issues. It helps you identify common characteristics of innovative people and environment, propose business ideas through innovative thinking processes and make enhancements or redesign a product/ service/ process using a systematic approach.

## GEN1904 BASICS OF E-ENTREPRENEURSHIP

This subject introduces you to the basic concepts of e-entrepreneurship and examines the wealth of Internet applications available to create an e-business. It helps you identify opportunities to set up, manage and develop the business using the most efficient and cost-effective online means. The concepts and processes in using e-Testing are also implemented in this subject.

## GEN1905 – SOCIAL ENTREPRENEURSHIP

The subject involves understanding of various enterprise start-ups in a social environment in contrast with an all-for-profit business venture. It comprises knowledge of social enterprise works and would encourage enterprising students to create a social impact for societies. Students will also study opportunities and challenges in working and communicating with beneficiaries of social communities and propose business ideas to achieve a triple bottom-line objectives – Profit, People, Planet.

## GLA1002 CREATIVE WRITING

This subject introduces the techniques in the creative writing process that enables you to stretch beyond your basic writing ability. It also covers the various types of literary works as well as their characteristics and engages you in the entire writing process.

## GLA1005 FUNDAMENTALS OF PUBLIC SPEAKING

This subject aims to help you become a confident speaker. It equips you with the techniques to develop, deliver and evaluate speeches appropriate to a variety of contexts, including both impromptu and prepared situations.

## GLA1007 INTRODUCTION TO ENGLISH PHONETICS

This subject presents an introduction to the sounds of spoken English. It also covers other pronunciation features such as stress and intonation, and introduces you to phonemic transcription. The main varieties of spoken English will also be examined in relation to the pronunciation features studied.

## GSS1003 INTRODUCTION TO PSYCHOLOGY

This subject introduces the five major areas of psychology: cognitive (learning and memory), developmental (intelligence and personality), physiological (motivations, emotions and stress), social (conformity, authority, friends and groups) and abnormal (disorders and treatment). By the end of this subject, you should be able to understand yourself and others better.

## GSS1004 INTRODUCTION TO SOCIOLOGY

This subject introduces basic sociological perspectives in human behaviour. You will have the opportunity to examine current social issues, and develop an analytical mind. Topics include deviance and crime, social class, culture, social interaction, ethnic relations, globalisation, family and gender issues.

## GSS1005 LEADERSHIP & CHARACTER

This subject covers the various aspects and principles of leadership. You will examine the lives and character traits of well-known leaders. The subject will be useful to those who want to understand what makes a good and moral leader and aspire to be such a leader.

# School of Informatics & IT

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| CCD1X01 | Introduction to Cyber Security | 1 | 3 |
| CGE1X01 | Introduction to Digital Game Development | 1 | 3 |
| CIC1X02 | Web Publishing | 1 | 3 |
| CIC1X03 | Introduction to Human Computer Interaction | 1 | 3 |
| CID1X01 | Effective E-Learning Development | 1 | 3 |
| CID1X02 | Introduction to Digital Tools & Techniques | 1 | 3 |
| CIM1X01 | Effective Internet Research | 1 | 3 |
| CIT1X06 | Discovering the Virtual Globe | 1 | 3 |
| CIT1X07 | Starting an Online Auction Business | 1 | 3 |
| CMA1X01 | Calculus & Analytic Geometry | 1 | 3 |
| CMA1X02 | Basic Statistics | 1 | 3 |
| CMA1X06 | The Powerful Art of Storytelling | 1 | 3 |
| CMA1X07 | Styles & Issues in Writing for the New Media | 1 | 3 |
| CMA1X08 | Literacies for the Digital Age | 1 | 3 |
| CMC1X01 | VOIP Made Simple | 1 | 3 |

## Subject Synopses

### CCD1X01 INTRODUCTION TO CYBER SECURITY

This subject introduces you to the basic elements on the topic of cyber security, and provides insights to common systems vulnerabilities and strategies to mitigate the security risks in existing systems. Basic information on security law and computer ethics will be covered.

### CGE1X01 INTRODUCTION TO DIGITAL GAME DEVELOPMENT

This subject provides you with the basic understanding of how to create a computer game. You will learn how to design and develop a 2D game using an integrated development environment (IDE) software. You will also be introduced to gaming history, the gaming industry and major game publishers. Game development concepts such as game design, game architecture and computer animation will also be covered.

### CIC1X02 WEB PUBLISHING

This subject introduces you to multimedia development for the World Wide Web. Topics include web media, such as graphics, audio, video and animation, and a web publishing methodology.

### CIC1X03 INTRODUCTION TO HUMAN COMPUTER INTERACTION

This subject covers the concepts, theories, application of human-computer interaction, as well as various usability evaluation paradigms. You will be introduced to the fundamentals of cognitive psychology, principles of human-computer interaction and user-centred design methodology.

### CID1X01 EFFECTIVE E-LEARNING DEVELOPMENT

This subject aims to develop your awareness of the e-learning development workflow, which includes the phases of planning, development, implementation and evaluation. You will use the knowledge acquired to apply e-learning principles to the design and development of an e-learning package.

### CID1X02 INTRODUCTION TO DIGITAL TOOLS & TECHNIQUES

This subject provides an understanding of the importance of digital media processes and techniques. It equips you with the ability to use digital equipment for various production methods and explores the use of various design systems (e.g., Corporate Identity, Grid Structure, Golden Section and Colour systems) to create effective visual presentations. It will enable you to create effective visuals using appropriate tools and techniques. The subject covers the fundamental concept and design systems for digital media production.

## CIM1X01 EFFECTIVE INTERNET RESEARCH

With the phenomenal information explosion brought about by Internet technologies, the ability to effectively search and critically evaluate information resources on the Internet becomes an important skill. This subject aims to provide you with practical experience of using the Internet to search for quality information and use evaluation tools for research purposes. Topics covered include categories of Internet resources, Internet search facilities, evaluation of Internet resources, referencing, Internet ethics and intellectual property issues.

## CIT1X06 DISCOVERING THE VIRTUAL GLOBE

This subject will cover how to customise a virtual globe using photographs and 3D models. The issues and trends in using virtual globes will also be explored.

## CIT1X07 STARTING AN ONLINE AUCTION BUSINESS

This subject equips you with basic entrepreneurship know how to start your own online auction business. Upon completing this subject, you would be able to buy and sell effectively in an online auction site.

## CMA1X01 CALCULUS & ANALYTIC GEOMETRY

This subject provides you with a firm foundation in mathematics so as to better prepare you for higher education. Topics include functions and graphs, trigonometry, differentiation and integration.

## CMA1X02 BASIC STATISTICS

This subject provides you with a firm foundation in mathematics so as to better prepare you for higher education. Topics covered include basic statistics, general ideas of sampling methods, central limit theorem, confidence intervals and hypothesis testing.

## CMA1X06 THE POWERFUL ART OF STORYTELLING

This subject aims to create awareness of how powerful stories are and how to tell an engaging story. You will learn about the role of stories in society and explore the value of stories in communication. You will learn how to tell a story, displaying sensitivity to the purpose and audience of your stories.

## CMA1X07 STYLES & ISSUES IN WRITING FOR THE NEW MEDIA

This subject equips you with the knowledge and skills to write web content effectively for new media such as personal and corporate websites, weblogs and such. You will learn about common web user behaviours and how they affect the way language and texts are used and structured in order to create impact on the web. You will also learn to display sensitivity to the purpose and audience of your texts. In addition, you will explore various social issues and responsibilities related to communicating through the new media.

## CMA1X08 LITERACIES FOR THE DIGITAL AGE

This subject equips you with an understanding of what constitutes literacy in the digital age. It will provide you with the essential critical skills to analyse and evaluate how interaction and meaning-making is achieved, and in particular, it will examine the literacies expected when communicating on the Internet or through channels such as instant messaging, blogs, wikis, virtual communities and such. You will also have opportunities to create or co-construct meaning through the use of new media.

## CMC1X01 VOIP MADE SIMPLE

The use of Internet Protocol (IP) Telephony services like MSN Messenger, Skype, Google Talk and AOL Instant Messenger is growing daily. Through this subject, you will understand how IP Telephony is used and its various functions such as chat services, video conferencing, video surveillance, home and office automation, and many others. This subject provides an introduction to IP Telephony and Voice-over-IP. You will learn about its benefits and challenges, as well as the applications and services that it offers. Upon completion, you would be able to think about new ways of using IP Telephony.

# Centre for TransCultural Studies

| SUBJECT CODE | SUBJECT | LEVEL | CREDIT UNITS |
|---|---|---|---|
| TCB1008 | Introduction to Language & Culture (Italian) | 1 | 3 |
| TCS1001 | Introduction to Language & Culture (French) | 1 | 3 |
| TCS1002 | Introduction to Language & Culture (Japanese) | 1 | 3 |
| TCS1003 | Understanding Expressions of Culture | 1 | 3 |
| TCS1005 | Plugging into the China Connections – History & Translation | 1 | 3 |
| TCS1006 | World Issues | 1 | 3 |
| TCS1007 | Perspectives on China – An Introduction | 1 | 3 |
| TCS1009 | Transnational Studies | 1 | 3 |
| TCS1011 | Contemporary Issues - Global Perspectives | 1 | 3 |
| TCS1101 | Contemporary French | 1 | 3 |
| TCS1102 | Essential Japanese | 1 | 3 |
| TCS1105 | Plugging into the China Connections – Project | 1 | 3 |
| TCV1004 | Global Citizenship | 1 | 3 |
| TCV1205 | Plugging into the China Connections – Attachment in China | 1 | 3 |

## Subject Synopses

### TCB1008 INTRODUCTION TO LANGUAGE & CULTURE (ITALIAN)

This subject covers the basic concepts and linguistic forms of the Italian language. You will learn how to introduce yourself, talk about your family, work and daily activities as well as communicate effectively in various Italian-speaking situations. In addition, you will also explore the key aspects of the culture of the Italian community.

### TCS1001 INTRODUCTION TO LANGUAGE & CULTURE (FRENCH)

You will learn how to introduce yourself, talk about your family, work and daily activities as well as communicate effectively in various French-speaking situations (in a café, at the hotel reception, in a shop, etc). The subject also explores the key aspects of French culture.

### TCS1002 INTRODUCTION TO LANGUAGE & CULTURE (JAPANESE)

This subject covers basic Japanese oral communication skills in situations where you exchange greetings, do shopping and describe daily activities. It also highlights key aspects of the Japanese culture, values and mind-set.

### TCS1003 UNDERSTANDING EXPRESSIONS OF CULTURE

This subject highlights the value of cultural diversity. It introduces you to the different perspectives on culture. It also covers the role of culture in effective cross-cultural communication. You will get opportunities to immerse yourself in cultural activities, explore and appreciate the richness of culture, and discuss cultural issues.

### TCS1005 PLUGGING INTO THE CHINA CONNECTIONS – HISTORY & TRANSLATION

This subject equips you with a foundation in China's history and culture as a precursor to developing basic English-Chinese bilingual translation and interpreting skills to function effectively in the business and financial environment.

### TCS1006 WORLD ISSUES

Want to know more about the "who, what, where, when, why and how" of significant world issues and how these issues can affect Singapore and you? This subject will keep you attuned to the causes, effects, solutions and challenges of what is happening around you in the world.

## TCS1007 PERSPECTIVES ON CHINA – AN INTRODUCTION

This subject introduces you to the different facets of Chinese society to help you gain a better understanding of China and its people. You will learn more about China's major classical legacies, its geography, its intricate political culture, its growing economy, the strategic principles of its foreign relations, its rich and diverse culture, and the psyche of its people.

## TCS1009 TRANSNATIONAL STUDIES

This subject enables you to acquire cross-cultural skills and knowledge targeted at preparing you for life in the globalised workplace. You are expected to complete a two-week residential stay at the Glocal Connect Village (GCV) located at Temasek Green, our on-campus apartments. The GCV experience will provide opportunities for international and local students to interact and be engaged in a range of intercultural learning experiences together.

The subject is also offered during term vacation when lessons are conducted intensively. A highly subsidised fee of $100 is chargeable per student for the Residential Stay and an Intercultural Awareness Profile.

## TCS1011 CONTEMPORARY ISSUES – GLOBAL PERSPECTIVES

This subject provides an opportunity for you to study how current and contemporary issues have implications both at global and national levels. Topics covered include culture and society, leadership and political systems, defence and national stability. These topics will present avenues for the development of individual voice and confidence. Largely experiential in nature, it will be driven by multiple approaches such as study trips, field visits, movies, discussions, and presentations.

## TCS1101 CONTEMPORARY FRENCH

This subject builds on Introduction to Language and Culture (French). It is based on everyday life situations which tourists and professionals typically encounter with French-speakers, whether in France or in a French-speaking environment. You will learn the vocabulary, language patterns and culture to equip you to better communicate in spoken and written French.

## TCS1102 ESSENTIAL JAPANESE

This subject builds on Introduction to Language and Culture (Japanese) and focuses on the subtleties of the Japanese language. Grammar will be reinforced and you will build up your vocabulary in the Japanese language. You will also learn to read and write Japanese characters.

## TCS1105 PLUGGING INTO THE CHINA CONNECTIONS – PROJECT

This subject provides hands-on practice as a follow up to Plugging into the China Connections – History & Translation. You will apply the knowledge and skills you have acquired for the production of specific collateral or deliverables to meet project requirements.

## TCV1004 GLOBAL CITIZENSHIP

This subject highlights the interconnectedness of the world today through discussions on various global issues, bringing about an awareness of what it means to be a global citizen. An overseas trip will be included for you to better understand the issues raised during classroom sessions.

## TCV1205 PLUGGING INTO THE CHINA CONNECTIONS – ATTACHMENT IN CHINA

This is an attachment programme in China where you are given the opportunity to be placed in commercial or governmental bodies, or educational institutions to apply what you have learnt as well as learn how to function effectively in the China environment.

# admission & requirements

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## GENERAL INFORMATION ON APPLICATION

- All applications are to be submitted online or using the prescribed application form.
- Duplicate/Multiple applications submitted under the same admission exercise, in any particular intake, will be rendered invalid and rejected.
- Applicants are personally responsible for providing accurate and complete information in their application. Applications which contain inaccurate, false or missing information will be rendered invalid. Students who are admitted on such basis will be asked to withdraw from their course of study.
- Acceptance of an application does not imply any commitment to admit an applicant.

# Application Procedures

Depending on the qualification obtained, applicants are invited to apply through the respective admissions exercises shown below:

| Qualification | Singapore-Cambridge GCE O Level | | |
|---|---|---|---|
| Types of admissions exercises | Joint Admissions Exercise (JAE)^ | Joint Polytechnic Special Admissions Exercise (JPSAE) - Special Talents (Academic & CCA Special Talents) %^ | Direct Polytechnic Admission (DPA) Exercise |
| Who may apply | **Singaporeans (SC) or Singapore Permanent Residents (SPR)**<br>- GCE O Level results (2011 or earlier)<br>- Current JC student or Singapore Cambridge A Level students seeking admission based on GCE O Level results<br><br>**Foreign Students**<br>- from a government, government-aided or independent school (excluding private schools) with 2011 GCE O Level results | Singaporeans (SC) or Singapore Permanent Residents (SPR), foreign students (from a government, government-aided or independent school) with 2011 GCE O Level results.<br><br>Candidates should also demonstrate one of the following:<br>- Strong passion or aptitude through work attachments<br>- Sustained involvement in course-related projects<br>- Outstanding performance in competitions<br>- Outstanding talents/ achievements in leadership, community service, entrepeneurship, sports, and arts. | **Singaporeans (SC) or Singapore Permanent Residents (SPR)**<br>- registered to sit for the GCE O Level examinations in the year of the DPA exercise<br><br>**Foreign Students must have**<br>- enrolled in government, government-aided or independent schools<br>- registered to sit for the GCE O Level examinations in the year of the DPA exercise |
| When to apply | Five calendar days from the release of the GCE O Level exam results<br><br>Refer to www.moe.gov.sg and press release in the media | Five calendar days starting from the release of the GCE O Level examination results<br><br>Refer to www.polytechnic.edu.sg/jpsae upon release of GCE O Level results for latest information | Around July<br><br>Refer to www.moe.gov.sg for press release and www.polytechnic.edu.sg/dpa for latest information |
| How to apply | Apply online at www.moe.gov.sg/education/admissions/jae | Apply online at www.polytechnic.edu.sg/jpsae | Apply online at www.polytechnic.edu.sg/dpa |

| Qualification | Singapore-Cambridge GCE O Level | | |
|---|---|---|---|
| Entry Requirements | Refer to section on "Eligibility & Entry Requirements" and the respective school sections on the Minimum Entry Requirements and JAE Information Booklet available at www.moe.gov.sg/education/admissions/jae for the prevailing cut-off points. | | |
| Expected release of posting results | About two weeks after the JAE application period.<br><br>Please refer to the Joint Admissions Exercise information booklet or the www.moe.gov.sg/education/admissions/jae for the latest information. | About two weeks after the JPSAE application period.<br><br>Please refer to www.polytechnic.edu.sg/jpsae for the latest information.<br><br>Applicants may check their posting results at www.polytechnic.edu.sg/jpsae | In August.<br><br>Please refer to www.polytechnic.edu.sg/dpa for the latest information.<br><br>Applicants may check their posting results at www.polytechnic.edu.sg/dpa |
| Application Enquiries | Ministry of Education Customer Service Centre: 6872 2220<br>Email: contact@moe.edu.sg | Email: help-jpsae@polytechnic.edu.sg | Email: help-DPA@polytechnic.edu.sg |
| Others | | | Applicants accepted into DPA are expected to participate in TP's 8-week Polytechnic Preparatory Programme (PPP).<br><br>Information on the PPP can be found at www.tp.edu.sg/home/admissions/adm_exercise/dpa |

% Applicants applying through JPSAE are also advised to submit their application through JAE.

^ This section should be read in conjunction with the JAE booklet and joint-polytechnic website at www.polytechnic.edu.sg.

## Diploma in Consumer Science & Technology (CST)

- Applicants are required to apply directly under the Home Economics Teacher Training Scheme at the Ministry of Education (1 Buona Vista Drive, Singapore 138675).
- Information on the application period and procedure can be found at www.moe.gov.sg/careers/teach/applying/o-levels/.
- For enquiries, please contact the Ministry of Education Customer Service Centre at 6872 2220/ contact.MOE@moe.edu.sg.

| Qualification | Singapore-Cambridge GCE O Level holders | Integrated Programme (IP) leading to International Baccalaureate (IB) or Singapore-Cambridge GCE A Level | Singapore-Cambridge GCE A Level holders |
|---|---|---|---|
| Types of Admissions Exercises | Direct Admissions Exercise (DAE – Local Qualification) | | |
| Who may apply | **Singapore-Cambridge GCE O Level** holders who missed the English Language requirement but have obtained distinctions in both Maths and relevant subjects.<br><br>Foreign students from private schools with Singapore-Cambridge GCE O Level results (2011 or earlier).<br><br>Current or ex-polytechnic students seeking re-admission. | **Students on Integrated Programme (IP) leading to International Baccalaureate (IB) certificates or Singapore Cambridge GCE A Level**<br>- completed the equivalent of Secondary 4 or higher | **Singapore-Cambridge GCE A Level holders**<br>who are seeking admission to the following full-time diploma courses of 2.5-year duration:<br>• Biotechnology<br>• Business<br>• Chemical Engineering<br>• Computer Engineering<br>• Electronics<br>• Mechatronics<br>• Media & Communication Technology<br>• Microelectronics<br><br>**Singapore-Cambridge GCE A Level holders** who are seeking admission to three-year full-time diploma courses but missed the JAE. |
| When to apply | **April Intake:**<br>Five calendar days starting from the release of the GCE O Level examination results<br><br>**October Intake:**<br>In August (refer to www.tp.edu.sg for application dates) | | GCE A Level holders - five calendar days from the release of the Singapore-Cambridge GCE A Level examination results |
| How to apply | Apply online at www.tp.edu.sg/home/admissions/adm_apply | Application form can be downloaded at www.tp.edu.sg/home/admissions/adm_exercise | Apply online at www.tp.edu.sg/home/admissions/adm_apply |
| | Supporting documents are to be sent by post, fax (6783 3031) or scanned and emailed to admissions@tp.edu.sg by the stipulated closing date, after the application has been submitted online.<br><br>Applications without the supporting documents will be deemed incomplete and will not be processed. | | |

| Qualification | Singapore-Cambridge GCE O Level holders | Integrated Programme (IP) leading to International Baccalaureate (IB) or Singapore-Cambridge GCE A Level | Singapore-Cambridge GCE A Level holders |
|---|---|---|---|
| Entry Requirements | Refer to section on "Eligibility & Entry Requirements" and the respective school sections on the Minimum Entry Requirements and JAE Information Booklet available at www.moe.gov.sg/education/admissions/jae for the prevailing cut-off points. | | |
| Expected release of posting results | Before course commencement<br><br>Applicants may check their application status online at: www.tp.edu.sg/home/admissions/adm_status | | |
| Application Enquiries | Temasek Polytechnic Registrar's Office/ Admissions:<br>Email: admissions@tp.edu.sg<br>Tel : +65 6788 2000<br>Fax: +65 6783 3031 | | |
| Others | | | Applicants with good grades in the relevant subjects at their Singapore-Cambridge GCE A Level may apply and be granted subject exemption on a subject by subject basis.<br>This is only applicable to applicants who have already accepted the course offered and enrolled at the polytechnic.<br><br>Eligible students seeking exemptions may refer to school website or consult the school advisors or Course Manager for application details during orientation. |

| Qualification | ITE Certificates | |
|---|---|---|
| Types of Admissions Exercises | Joint Polytechnic Admissions Exercise (JPAE) | |
| Who may apply | Holders of relevant Higher NITEC | Holders of relevant NITEC |
| | Final semester ITE students of relevant Higher NITEC/NITEC certificate | |
| When to apply * | End February<br><br>Refer to www.polytechnic.edu.sg/jpae for the latest information | |
| How to apply | Apply online at www.polytechnic.edu.sg/jpae | |
| Entry Requirements | Refer to www.polytechnic.edu.sg/jpae and the section on "Minimum Entry Requirements for ITE Certificate Holders - Higher National ITE Certificate (Higher NITEC)" | Refer to www.polytechnic.edu.sg/jpae and the section on "Minimum Entry Requirements for ITE Certificate Holders - National ITE Certificate (NITEC)" |
| Expected release of posting results | Early April<br><br>Applicants may check their posting results at www.polytechnic.edu.sg/jpae | |
| Application Enquiries | Email: help-JPAE@polytechnic.edu.sg | |
| Others | Applicants with good grades in the relevant subjects at their ITE Higher NITEC qualification may apply and be granted subject exemption on a subject by subject basis. This is only applicable to applicants who have already accepted the course offered and enrolled at the polytechnic.<br><br>Eligible students seeking exemptions may refer to school website or consult the school advisors or Course Manager for application details during orientation. | |

* For October intake
- ITE Certificate Holders will apply through Direct Admission Exercise (DAE).
- Only selected courses are available for application.
- Information on the application period and procedure can be found at www.tp.edu.sg/home/admissions/adm_exercise/dae_intake_oct.

| Qualification | Malaysia UEC | Malaysia SPM/STPM | IGCSE | All other Foreign Qualifications |
|---|---|---|---|---|
| Types of Admissions Exercises | Direct Admissions Exercise (DAE – Foreign Qualifications) | | | |
| Who may apply | Holders of UEC | Holders of SPM/STPM | Holders of IGCSE | Holders of foreign qualifications |
| When to apply | Application Period:<br><br>April Intake<br>Mid December to Early January *;<br>1 September to 15 October<br><br>October Intake<br>1 March to 15 April | Application Period:<br><br>April Intake<br>Mid March to End March *;<br>1 September to 15 October<br><br>October Intake<br>1 March to 15 April | Application Period:<br><br>April Intake<br>End January to Early February *;<br>1 September to 15 October<br><br>October Intake<br>1 March to 15 April | Application Period:<br><br>April Intake<br>1 September to 15 October<br><br>October Intake<br>1 March to 15 April |
| How to apply | Refer to the following link for application procedures: www.tp.edu.sg/home/admissions/is.htm | | | |
| | All required documents are to be submitted by post or in person **within the dates specified in the website.** | All required documents are to be submitted by post or in person **within the dates specified in newspaper advertisement or website.** | All required documents are to be submitted by post or in person **within the dates specified in the website.** | All required documents are to be submitted by post or in person **within the dates specified in the website.** |
| | Applications without the supporting documents will be deemed incomplete and will not be processed. | | | |
| Entry Requirements | Refer to Information for International Students at www.tp.edu.sg/admissions/is.htm | | | |
| Expected release of posting results | Before course commencement<br><br>Applicants may check their application status online at www.tp.edu.sg/home/admissions/adm_status.htm | | | |
| Application Enquiries | Temasek Polytechnic<br>International Students Office<br>email: isohotline@tp.edu.sg<br>Tel: +65 6780 5970<br>Fax: +65 6789 4409 | | | |

Note: *Applicable to students who are currently awaiting for the release of their results. Dates will be adjusted depending on the release date of examination results.

# Eligibility & Entry Requirements

## ELIGIBILITY

To be considered for admission to a course, applicants will have to:

- meet the minimum entry requirements for the course.
- be certified physically and mentally fit to pursue the course. Please refer to the section on "Other Information" for more details.
- attend interviews and undergo any aptitude or other tests, when requested.
- be able to produce the original documents, when requested.

## MINIMUM ENTRY REQUIREMENTS FOR SINGAPORE-CAMBRIDGE GCE O LEVEL QUALIFICATION HOLDERS

Applicants with a Singapore-Cambridge GCE O Level qualification will be ranked according to their aggregate score of the following GCE O Level subjects:

- English Language (EL)
- 2 relevant subjects (R2) and
- 2 other best subjects (B2)

Applicants must obtain 26 points or better for the net ELR2B2 aggregate score (including CCA Bonus Points) and meet the minimum entry requirements of the respective course. Applicants may combine their GCE O Level results of up to two sittings.

Aggregrate type and the relevant subject lists are available in the JAE information booklet at www.moe.gov.sg/education/admissions/jae.

Details on the minimum entry requirements of the respective courses can be found under the section on course information or at the Ministry of Education website, www.moe.gov.sg/education/admissions/jae. Applicants are advised to read the section on the minimum entry requirements in conjunction with the section on Posting Procedure and Annex A – Posting of Applicants and Aggregate Type in the JAE information booklet.

## MINIMUM ENTRY REQUIREMENTS FOR SINGAPORE-CAMBRIDGE GCE A LEVEL QUALIFICATION HOLDERS

Applicants with Singapore-Cambridge GCE A Level qualification who apply for the courses below and meet the minimum entry requirements will be eligible for exemptions and complete their course in 2.5 years:

- Biotechnology
- Business
- Chemical Engineering
- Computer Engineering
- Electronics
- Mechatronics
- Media & Communication Technology
- Microelectronics

Details on the minimum entry requirements of the above courses can be found at the respective Schools' sections of the prospectus.

Singapore-Cambridge A Level certificate holders may also apply for other 3-year diploma courses using their Singapore-Cambridge GCE O Level results. Please refer to the "Minimum Entry Requirements for Singapore-Cambridge GCE O Level Qualification Holders" for more information.

## MINIMUM ENTRY REQUIREMENTS FOR ITE CERTIFICATE HOLDERS

ITE certificate holders with the relevant Higher NITEC/ NITEC may seek admission to TP's full-time diploma courses.
Please refer to the respective tables in the following pages for the list of acceptable ITE certificates for application to the courses.

# Higher National ITE Certificate (Higher NITEC)

Applicants will be ranked according to their academic Grade Point Average (GPA) for admission to the various full-time courses.

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| BS81 | Early Childhood Education | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Early Childhood Studies | 3.5 | - | ④ |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| BS82 | Banking Services | Accounting & Finance | 3.0 | - | |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| BS83 | Hospitality Operations | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Culinary & Catering Management | 3.0 | - | |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Gerontological Management Studies | 3.0 | - | |
| | | Hospitality & Tourism Management | 3.0 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Leisure & Resort Management | 3.0 | - | |
| | | Mobile & Network Services | 2.5 | - | ① |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| BS84 | Business Studies (Event Management) | Accounting & Finance | 3.0 | - | |
| | | Apparel Design & Merchandising | 2.5 | - | ② |
| | | Business Information Technology | 2.5 | - | ① |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Business/ Logistics & Operations Management/ Marketing | 3.0 | - | ♦ |
| | | Culinary & Catering Management | 3.0 | - | |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Gerontological Management Studies | 3.0 | - | |
| | | Hospitality & Tourism Management | 3.0 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Law & Management | 3.0 | - | # |
| | | Leisure & Resort Management | 3.0 | - | |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Moving Images | 2.5 | - | ② |
| | | Retail Management | 3.0 | - | |
| BS85 | Business Studies (Accounting)/ Accounting | Accounting & Finance | 3.0 | - | |
| | | Business Information Technology | 2.5 | - | ① |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Business/ Logistics & Operations Management/ Marketing | 3.0 | - | ♦ |
| | | Culinary & Catering Management | 3.0 | - | |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Hospitality & Tourism Management | 3.0 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Law & Management | 3.0 | - | # |
| | | Leisure & Resort Management | 3.0 | - | |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Retail Management | 3.0 | - | |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| BS86 | Business Studies (Administration/ Secretarial) | Accounting & Finance | 3.0 | - | |
| | | Business Information Technology | 2.5 | - | ① |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Business/ Logistics & Operations Management/ Marketing | 3.0 | - | ♦ |
| | | Culinary & Catering Management | 3.0 | - | |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Hospitality & Tourism Management | 3.0 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Law & Management | 3.0 | - | # |
| | | Leisure & Resort Management | 3.0 | - | |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Retail Management | 3.0 | - | |
| BS87 | Business Studies (Logistics)/ Integrated Logistics Management | Accounting & Finance | 3.0 | - | |
| | | Business Information Technology | 2.5 | - | ① |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Business/ Logistics & Operations Management/ Marketing | 3.0 | - | ♦ |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Gerontological Management Studies | 3.0 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Law & Management | 3.0 | - | # |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Retail Management | 3.0 | - | |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| BS88 | Business Studies (E-Commerce)/ Business-Information Technology | Accounting & Finance | 3.0 | - | |
| | | Business Information Technology | 2.5 | - | ① |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Business/ Logistics & Operations Management/ Marketing | 3.0 | - | ♦ |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Gerontological Management Studies | 3.0 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Retail Management | 3.0 | - | |
| BS89 | Business Studies (Sports Management) | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| BS90 | Business Studies (Service Management) | Accounting & Finance | 3.0 | - | |
| | | Business Information Technology | 2.5 | - | ① |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Business/ Logistics & Operations Management/ Marketing | 3.0 | - | ♦ |
| | | Culinary & Catering Management | 3.0 | - | |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Gerontological Management Studies | 3.0 | - | |
| | | Hospitality & Tourism Management | 3.0 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| BS90 | Business Studies (Service Management) | Law & Management | 3.0 | - | # |
| | | Leisure & Resort Management | 3.0 | - | |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Retail Management | 3.0 | - | |
| BS92 | Visual Merchandising | Retail Management | 3.0 | - | |
| IT21 | Electro-Mechanical Engineering | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mechatronics/ Aerospace Engineering | 2.5 | - | ★③ |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Product & Industrial Design | 2.5 | - | ②③ |
| IT22 | Mechatronics Engineering | 3D Interactive Media Technology | 2.5 | - | ② |
| | | Aerospace Electronics | 2.5 | - | ②③ |
| | | Aerospace Engineering | 2.5 | - | ②③ |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Business Process & Systems Engineering | 2.5 | - | |
| | | Clean Energy | 2.5 | - | ① |
| | | Computer Engineering | 2.5 | - | |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Electrical & Electronic Engineering Programme | 2.5 | - | ★ |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Green Building & Sustainability | 2.5 | - | |
| | | Infocomm & Network Engineering | 2.5 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mechatronics/ Aerospace Engineering | 2.5 | - | **★③ |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| IT22 | Mechatronics Engineering | Mobile & Network Services | 2.5 | - | ① |
| | | Product & Industrial Design | 2.5 | - | ②③ |
| IT31 | Electrical Engineering | Aerospace Electronics | 2.5 | - | ②③ |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Clean Energy | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Electrical & Electronic Engineering Programme | 2.5 | - | ★ |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Green Building & Sustainability | 2.5 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mechatronics/ Aerospace Engineering | 2.5 | - | ★③ |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Product & Industrial Design | 2.5 | - | ②③ |
| IT41 | Electronics Engineering/ Industrial Electronics Engineering | 3D Interactive Media Technology | 2.5 | - | ② |
| | | Aerospace Electronics | 2.5 | - | ②③ |
| | | Aerospace Engineering | 2.5 | - | ②③ |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Business Process & Systems Engineering | 2.5 | - | |
| | | Clean Energy | 2.5 | - | ① |
| | | Computer Engineering | 2.5 | - | |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Electrical & Electronic Engineering Programme | 2.5 | 3.5 | ** ★ |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Green Building & Sustainability | 2.5 | - | |
| | | Infocomm & Network Engineering | 2.5 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| IT41 | Electronics Engineering/ Industrial Electronics Engineering | Mechatronics/ Aerospace Engineering | 2.5 | 3.5 | ** ★③ |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Product & Industrial Design | 2.5 | - | ②③ |
| IT51 | Mechanical & Electrical Engineering Design/ Mechanical & Electrical Drafting & Design | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Green Building & Sustainability | 2.5 | - | |
| | | Information Technology | 2.5 | - | |
| | | Integrated Facility Management | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mechatronics/ Aerospace Engineering | 2.5 | - | ★③ |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Product & Industrial Design | 2.5 | - | ②③ |
| IT52 | Mechanical Engineering | 3D Interactive Media Technology | 2.5 | - | ② |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Green Building & Sustainability | 2.5 | - | |
| | | Information Technology | 2.5 | - | |
| | | Integrated Facility Management | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mechatronics/ Aerospace Engineering | 2.5 | - | ★③ |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Product & Industrial Design | 2.5 | - | ②③ |
| IT54 | Mechanical Engineering Drawing & Design | Mechatronics/ Aerospace Engineering | 2.5 | - | ★③ |
| | | Product & Industrial Design | 2.5 | - | ②③ |
| IT55 | Manufacturing Engineering | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| IT55 | Manufacturing Engineering | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mechatronics/ Aerospace Engineering | 2.5 | - | ★③ |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Product & Industrial Design | 2.5 | - | ②③ |
| IT56 | Information Technology | 3D Interactive Media Technology | 2.5 | - | ② |
| | | Business Information Technology | 2.5 | - | ① |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Computer Engineering | 2.5 | - | |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Infocomm & Network Engineering | 2.5 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Design | 2.5 | - | ② |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Moving Images | 2.5 | - | ② |
| IT57 | Wireless Technology | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Infocomm & Network Engineering | 2.5 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| IT58 | Biotechnology/ Biochemical Technology | Applied Food Science & Nutrition | 2.5 | - | |
| | | Baking & Culinary Science | 2.5 | - | |
| | | Biomedical Science | 2.5 | - | ② |
| | | Biotechnology | 2.5 | - | |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Pharmaceutical Science | 2.5 | - | |
| IT59 | Chemical Technology | Applied Food Science & Nutrition | 2.5 | - | |
| | | Baking & Culinary Science | 2.5 | - | |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Chemical Engineering | 2.5 | - | |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| IT60 | Marine & Offshore Technology/ Marine Offshore Engineering | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| IT61 | Network Security Technology | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Infocomm & Network Engineering | 2.5 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| IT62 | Paradamic & Emergency Care | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Gerontological Management Studies | 3.0 | - | |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| IT63 | Game Design & Development | 3D Interactive Media Technology | 2.5 | - | ② |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Design | 2.5 | - | ② |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| | | Moving Images | 2.5 | - | ② |
| | | Product & Industrial Design | 2.5 | - | ②③ |

| ITE Code | ITE Qualification (Higher NITEC/ ITC/ CBS) | Courses | Min GPA for Entry to | | Refer to footnote |
|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | |
| IT64 | Business Information Systems | Business Information Technology | 2.5 | - | ① |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| IT65 | Leisure & Travel Operations | Culinary & Catering Management | 3.0 | - | |
| | | Gerontological Management Studies | 3.0 | - | |
| | | Hospitality & Tourism Management | 3.0 | - | |
| | | Leisure & Resort Management | 3.0 | - | |
| IT66 | Security System Integration | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Cyber & Digital Security | 2.5 | - | ① |
| | | Digital Forensics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Game & Entertainment Technology | 2.5 | - | ① |
| | | Information Technology | 2.5 | - | |
| | | Interactive Media Informatics | 2.5 | - | ② |
| | | Mobile & Network Services | 2.5 | - | ① |
| IT69 | Information Systems Quality | Business Information Technology | 2.5 | - | ① |
| | | Business Intelligence & Analytics | 2.5 | - | ① |
| | | Financial Business Informatics | 2.5 | - | |
| | | Information Technology | 2.5 | - | |

# Notes:

♦ The first year in T01 (Business/Logistics & Operations Management/Marketing) is common to all students and they will opt for one of the diploma courses (i.e. Business, Logistics & Operations Management, or Marketing) at the end of Year 1.

\# Applicants applying for T09 (Law & Management) must also possess at least a B4 grade in English Language (EL1) in the GCE O Level/ SPM examinations.

★ The first semester in the following courses is common to all students and they will opt for one of the diploma courses at the end of Semester 1 or 2.

T05 - Aerospace Electronics, Electronics, Media & Communication Technology, Computer Engineering, or Microelectronics

T06 - Aerospace Engineering or Mechatronics

Students opting for T50 (Aerospace Electronics) or T51 (Aerospace Engineering) must ensure that they satisfy the requirements as stated in the footnotes under the respective courses (i.e. T50 and T51).

** There is no direct Level 2 entry for Aerospace Electronics and Aerospace Engineering diploma courses.

① Applicants with complete Colour Appreciation Deficiency are not eligible to apply.

② Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply.

③ For safety reasons, applicants applying for these courses must ensure that they do not suffer from medical conditions such as epilepsy or hearing impairment.

④ Applicants must ensure that they do not suffer from medical conditions as listed in “Other Requirement”. Those who do not satisfy this requirement may not be accepted into the course of study.

# National ITE Certificate (NITEC)

Applicants must have a Grade Point Average (GPA) of 3.5 or above (inclusive of CCA bonus points) and will be ranked according to their GPA for admission to the various 3 years full-time courses. In addition, applicants must also have sat for the Singapore GCE N or O Level examination.

| ITE Code | ITE Qualification (NITEC/NTC Grade 2-COM) | Courses | Refer to footnote |
|---|---|---|---|
| NT21 | Architectural Drafting/ Building Drafting (Architectural) | Environment Design | ②⑤ |
| | | Interior Architecture & Design | ② |
| | | Product & Industrial Design | ②③ |
| | | Retail & Hospitality Design | ② |
| NT23 | Civil & Structural Drafting/ Building Drafting (Civil & Structural) | Product & Industrial Design | ②③ |
| NT24 | Electronics/ Electronics Servicing/ Electronics (Computer & Networking)/ Electronics (Instrumentation)/ Electronics (Mobile Devices)/ Electronics (Wireless LAN) | Aerospace Electronics | ②③⑤ |
| | | Business Intelligence & Analytics | ① |
| | | Clean Energy | ① |
| | | Computer Engineering | |
| | | Cyber & Digital Security | ① |
| | | Electrical & Electronic Engineering Programme | ★ |
| | | Game & Entertainment Technology | ① |
| | | Green Building & Sustainability | |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mechatronics/ Aerospace Engineering | ★③ |
| | | Mobile & Network Services | ① |
| NT25 | Electro-Mechanical Servicing/ Mechatronics/ Mechatronics (Automation Technology)/ Mechatronics (Equipment Assembly)/ Mechatronics (Medical Technology) | Business Intelligence & Analytics | ① |
| | | Clean Energy | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mechatronics/ Aerospace Engineering | ★③ |
| | | Mobile & Network Services | ① |

| ITE Code | ITE Qualification (NITEC/NTC Grade 2-COM) | Courses | Refer to footnote |
|---|---|---|---|
| NT26 | Electrical Fitting & Installation/ Electrical Installation & Servicing/ Electrical Technology/ Electrical Technology (Installation & Servicing) | Business Intelligence & Analytics | ① |
| | | Clean Energy | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Green Building & Sustainability | |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mobile & Network Services | ① |
| NT27 | Electrical Power & Machines/ Electrical Technology (Power & Control)/ Electrical Technology (Power & Machines) | Business Intelligence & Analytics | ① |
| | | Clean Energy | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Green Building & Sustainability | |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mobile & Network Services | ① |
| NT30 | Maintenance Fitting/ Mechanical Servicing/ Mechanical Technology | Product & Industrial Design | ②③ |
| NT32 | Precision Machining/ Precision Engineering (Machining) | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mechatronics/ Aerospace Engineering | ★③ |
| | | Mobile & Network Services | ① |
| NT37 | Precision Engineering (Injection Mould)/ Precision Engineering (Press Tool)/ Precision Engineering (Tool & Mould)/ Precision Tooling/ Tool & Die-Making | Mechatronics/ Aerospace Engineering | ★③ |
| | | Product & Industrial Design | ②③ |

| ITE Code | ITE Qualification (NITEC/NTC Grade 2-COM) | Courses | Refer to footnote |
|---|---|---|---|
| NT39 | Chemical Process Technology/ Chemical Process Technology (Biologics)/ Chemical Process Technology (Petrochemicals)/ Chemical Process Technology (Pharmaceuticals)/ Chemical Process Technology (Process Instrumentation) | Chemical Engineering | |
| NT40 | Info-Communications Technology | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Infocomm & Network Engineering | |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mobile & Network Services | ① |
| NT41 | Multimedia Technology | 3D Interactive Media Technology | ② |
| | | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Infocomm & Network Engineering | |
| | | Information Technology | |
| | | Interactive Media Design | ② |
| | | Interactive Media Informatics | ② |
| | | Mobile & Network Services | ① |
| | | Moving Images | ② |
| | | Product & Industrial Design | ②③ |
| NT43 | Mechanical-Electrical Drafting | Product & Industrial Design | ②③ |
| NT44 | Digital Media Design/ Digital Media Design (Interactive Media) | 3D Interactive Media Technology | ② |
| | | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Information Technology | |
| | | Interactive Media Design | ② |
| | | Interactive Media Informatics | ② |

| ITE Code | ITE Qualification (NITEC/NTC Grade 2-COM) | Courses | Refer to footnote |
|---|---|---|---|
| NT44 | Digital Media Design/ Digital Media Design (Interactive Media) | Mobile & Network Services | ① |
| | | Moving Images | ② |
| | | Product & Industrial Design | ②③ |
| | | Visual Communication | ② |
| NT46 | Product Design | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Environment Design | ②⑤ |
| | | Game & Entertainment Technology | ① |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Interior Architecture & Design | ② |
| | | Mobile & Network Services | ① |
| | | Product & Industrial Design | ②③ |
| | | Retail & Hospitality Design | ②⑤ |
| NT47 | Communications Technology | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Electrical & Electronic Engineering Programme | ★ |
| | | Game & Entertainment Technology | ① |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mobile & Network Services | ① |
| NT48 | Precision Engineering (Aerospace) | Aerospace Engineering | ②③ |
| | | Mechatronics/ Aerospace Engineering | ★③ |
| | | Product & Industrial Design | ②③ |
| NT52 | Digital Animation | 3D Interactive Media Technology | ② |
| | | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mobile & Network Services | ① |
| | | Moving Images | ② |

| ITE Code | ITE Qualification (NITEC/NTC Grade 2-COM) | Courses | Refer to footnote |
|---|---|---|---|
| NT52 | Digital Animation | Product & Industrial Design | ②③ |
| | | Visual Communication | ② |
| NT53 | Aerospace Technology | Aerospace Engineering | ②③ |
| | | Mechatronics/ Aerospace Engineering | ★③ |
| | | Game & Entertainment Technology | ① |
| NT54 | Digital Media Design (Digital Video Effects) | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Information Technology | |
| | | Interactive Media Design | ② |
| | | Interactive Media Informatics | ② |
| | | Mobile & Network Services | ① |
| | | Moving Images | ② |
| | | Visual Communication | ② |
| NT56 | Digital Audio and Video Production | 3D Interactive Media Technology | ② |
| | | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mobile & Network Services | ① |
| | | Moving Images | ② |
| | | Visual Communication | ② |
| NT57 | Security Technology | Business Intelligence & Analytics | ① |
| | | Cyber & Digital Security | ① |
| | | Game & Entertainment Technology | ① |
| | | Information Technology | |
| | | Interactive Media Informatics | ② |
| | | Mobile & Network Services | ① |
| NT59 | Aerospace Avionics | Aerospace Electronics | ②③⑤ |
| | | Computer Engineering | |
| | | Electrical & Electronic Engineering Programme | ★ |

| ITE Code | ITE Qualification (NITEC/NTC Grade 2-COM) | Courses | Refer to footnote |
|---|---|---|---|
| NT61 | Facility Technology (Landscaping Services) | Environment Design | ②⑤ |
| NT62 | Machine Technology | Mechatronics/ Aerospace Engineering | ★③ |
| NT64 | Medical Manufacturing Technology | Mechatronics/ Aerospace Engineering | ★③ |
| NT65 | Space Design (Architecture) | Environment Design | ②⑤ |
| | | Interior Architecture & Design | ② |
| | | Product & Industrial Design | ②③ |
| | | Retail & Hospitality Design | ② |
| NT66 | Space Design (Interior & Exhibition) | Environment Design | ②⑤ |
| | | Interior Architecture & Design | ② |
| | | Product & Industrial Design | ②③ |
| | | Retail & Hospitality Design | ② |
| NT67 | Aerospace Machining Technology | Mechatronics/ Aerospace Engineering | ★③ |
| NT68 | Laser & Tooling Technology | Mechatronics/ Aerospace Engineering | ★③ |

## Notes:

★ The first semester in the following courses is common to all students and they will opt for one of the diploma courses at the end of Semester 1 or 2.

T05 - Aerospace Electronics, Electronics, Media & Communication Technology, Computer Engineering, or Microelectronics

T06 - Aerospace Engineering or Mechatronics

Students opting for T50 (Aerospace Electronics) or T51 (Aerospace Engineering) must ensure that they satisfy the requirements as stated in the footnotes under the respective courses (i.e. T50 and T51).

① Applicants with complete Colour Appreciation Deficiency are not eligible to apply.

② Applicants with partial or complete Colour Appreciation Deficiency are not eligible to apply.

③ For safety reasons, applicants applying for these courses must ensure that they do not suffer from medical conditions such as epilepsy or hearing impairment.

⑤ Those with a grade point average (GPA) of <3.5 but > 3.0 may be considered. If shortlisted, they are required to attend and pass an interview with portfolio review.

### MINIMUM ENTRY REQUIREMENTS FOR HOLDERS OF OTHER QUALIFICATION

Please refer to the section on "Information for International Students – Minimum Entry Requirements".

# Other Requirement

### MEDICAL FITNESS

Applicants offered admission are required to undergo a pre-enrolment medical examination. Applicants must be certified mentally and physically fit by a medical practitioner registered with the Singapore Medical Council to pursue their course of study at the point of enrolment and before course commencement. Those who are unable to complete or fulfill the requirements of the pre-enrolment medical examination will be deemed as unfit to pursue the course of study. Such applicants, if enrolled, will be advised to withdraw.

### COLOUR APPRECIATION DEFICIENCY

Applicants with partial or complete colour appreciation deficiency are not eligible to apply for the following courses:

| Applied Science | Engineering |
|---|---|
| Biomedical Science | Aerospace Electronics |
| **Design** | Aerospace Engineering |
| Apparel Design & Merchandising | Biomedical Informatics & Engineering |
| Environment Design | 3D Interactive Media Technology |
| Interactive Media Design | **Informatics & IT** |
| Interior Architecture & Design | Interactive Media Informatics |
| Moving Images | |
| Product & Industrial Design | |
| Retail Hospitality Design | |
| Visual Communication | |

Applicants with complete colour appreciation deficiency are not eligible to apply for the following courses:

| Applied Science | Informatics & IT |
|---|---|
| Veterinary Technology | Business Intelligence & Analytics |
| **Business** | Cyber & Digital Security |
| Business Information Technology | Digital Forensics |
| **Engineering** | Game & Entertainment Technology |
| Clean Energy | Mobile & Network Services |

## EPILEPSY OR HEARING IMPAIRMENT

Applicants with medical conditions such as epilepsy or hearing impairment are not eligible to apply for the following courses:

| Design | Engineering |
|---|---|
| Product & Industrial Design | Aerospace Electronics |
| | Aerospace Engineering |
| | Mechatronics |

## REQUIREMENT FOR EARLY CHILDHOOD STUDIES COURSE

Applicants offered a place in the Early Childhood Studies course must also be free from physical disabilities. Whilst not comprehensive, the following medical conditions may lead to non-acceptance into the course:

- Active tuberculosis
- Acquired Immune Deficiency Syndrome (AIDS) / Human Immunodeficiency Virus (HIV)
- HBsAg positive / Hepatitis B Carrier
- Legal Blindness
- Mobility restricted
- Physical dependence upon mobility equipment
- Profound deafness
- Psychiatric condition
- Uncontrolled asthma
- Uncontrolled diabetes
- Uncontrolled epilepsy
- Uncontrolled hypertension

# Other Information

## CCA BONUS POINTS

Applicants who are active in their school's co-curriculum activities will receive bonus points. The CCA bonus points can be used to improve their ELR2B2 aggregate/ GPA ranking for admission consideration.

| Qualification | Type of Bonus Points | No. of Bonus Points Awarded |
|---|---|---|
| GCE O Level | Grades of A1 – A2<br>Grades of B3 – C6 | 2 points<br>1 point |
| ITE Certificate | Grade A<br>Grade B<br>Grade C<br>Grade E | 0.20 point<br>0.15 point<br>0.10 point<br>0.05 point |

## NS – DEFERMENT FOR FULL-TIME POLYTECHNIC DIPLOMA STUDIES

Male Singaporeans and Singapore PRs who are NS-liable are eligible for deferment for polytechnic diploma studies if they do not exceed the deferment cut-off age of 19 years old (for Secondary 4 Express Stream students) or 20 years old (for Secondary 5 Normal Stream students) as at 1 January of the course commencement year.

Those graduating from Institute of Technical Education from December 2011 and who are above 21 years old as at 1 January of the course commencement year may also apply for deferment from NS to pursue the diploma studies at the polytechnic. Approval for deferment is given on a case by case basis.

For further details, please visit **www.ns.sg** or contact the NS Call Centre at tel: 1800-3676767/ email: contact@ns.sg.

## RESERVATION OF PLACE FOR NSMEN

The Polytechnic will reserve a place for successful male applicants who are unable to obtain approval to defer or be disrupted from their Singapore full-time National Service (NS) to join the current intake.

Reservation of a place is only applicable to male Singaporeans and Singapore PRs who are required to serve NS and are admitted to a polytechnic course for the first time.

## ENROLMENT

Successful applicants will expect to receive an enrolment package. Applicants are to confirm acceptance of the course by the given deadline and submit the required enrolment documents to complete the enrolment.

# information for international students

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Temasek Polytechnic provides our students with an excellent academic experience with a strong practical orientation that gets you ready for the industry. Our international students thrive in our caring environment, while enjoying a comprehensive range of state-of-the-art academic facilities and co-curricular activities.

**The International Students Office coordinates the recruitment of international students and organises immersion and cultural programmes to facilitate your smooth transition to life in Singapore and at TP. We endeavour to enhance your learning experience by creating a home away from home and offering a series of services to help you adapt and adjust to life in Singapore. Our ESP approach aims to meet your Emotional, Social and Practical needs throughout your experience as a member of the TP Family.**

The Temasek Polytechnic International Students (TPIS) interest group provides a platform for social and cross-cultural experiences for international and local students. It holds regular activities and events to promote cross-cultural awareness and friendship, providing you with opportunities to share your rich cultural background with others through food, songs and dances, fashion shows and exhibitions.

The Global Connect Club (GCC) interest group further enhances social integration, promotes better integration and understanding between international students and local students.

Temasek Polytechnic was awarded the Singapore Tourism Board's inaugural Singapore Education Awards for "Best Host of International Students Studying in Singapore" in 2007. We were given the award for our contribution to the well-being of international students and our provision of an inviting, intellectually stimulating environment for their learning and integration into the local community. TP was also one of the finalists for this award in 2008.

Our staff, Ms Boey Suit Yim, was the winner of "Friend of International Students" category at the Singapore Education Awards 2009. This award honours an individual who has made exceptional contributions to the well-being of the international student community in Singapore. The recipient is recognised for her commitment, service and dedication in making Singapore a welcoming place for all international students, thereby contributing to the development of Singapore as a premier education hub.

# Application for Admission and Fees

Please refer to the sections on "Admission and Requirements" and "Tuition Fee Information" for details. The International Students application form is available online at www.tp.edu.sg/home/admissions/is.htm (available two weeks before the application period) or you can write to:

*International Students Office*
International Relations & Industry Services Department
Temasek Polytechnic
21 Tampines Avenue 1
Singapore 529757

## TUITION FEE AND TUITION GRANT SCHEME

International students on the three-year full-time subsidised diploma programme are eligible to apply and opt for the Tuition Grant (TG) with the Ministry of Education. Upon the completion of the execution of the Tuition Grant Agreement, the students are eligible for the TG and pay subsidised tuition fee. Two sureties, who can be of any nationality but must be above 21 years of age and not declared bankrupt, are required for execution of the Tuition Grant Agreement. You will be contractually obliged to work in Singapore for three years upon graduation. Details on the execution of Tuition Grant Agreement are available in the enrolment package.

Students who choose to opt out of the TG or opt for the TG but did not complete the execution of the Tuition Grant Agreement will have to pay full fees.

The fees payable consist of the tuition fee, TG and other fees and are payable in two semesters per academic year.

The subsidised tuition fee for Academic Year 2012/2013 is S$5,880 (subject to change).

## OTHER FEES

Besides the tuition fee, other fees for Academic Year 2012/2013 come to S$162 (subject to change).

## GROUP HOSPITALISATION AND SURGICAL INSURANCE (GHSI)

The cost of hospitalisation in Singapore is high for international students. TP has arranged a GHSI policy for all full-time international students to help defray part of the hospitalisation costs in Singapore. It is a compulsory fee payable by all full-time international students and the premium, ranging from S$40 to S$50, is subject to change without prior notice. The policy covers hospitalisation expenses due to illness and/ or accidental injuries except the list of exclusions as stated by insurer. This fee is one of the fee components for other fees and is billed together with the tuition fee.

All fees are payable during your course of study, including the semester when you are on your Student Internship Programme (SIP).

# Minimum Entry Requirement

The minimum requirement for admission into a three-year full-time diploma programme is a College or High School Certificate, equivalent to the Singapore-GCE O level certificate. The list of acceptable international qualifications is as follows:

| Country | Entry Qualification |
|---|---|
| Australia | • New South Wales (Higher School Certificate)<br>• Northern Territory (South Australian Certificate of Education - Northern Territory - Year 12)<br>• Queensland (Queensland Certificate of Education - Year 12)<br>• South Australia (South Australian Certificate of Education Record of Achievement)<br>• Tasmania (Tasmanian Certificate of Education - Higher School Certificate, Year 12)<br>• Victoria (Victorian Certificate of Education - Year 12)<br>• Western Australian (Western Australian Certificate of Education) |
| Bangladesh | • Higher Secondary Certificate (HSC) / Intermediate Certificate |
| Brunei | • GCE O Level |
| Canada | • Alberta (General High School Diploma)<br>• British Columbia (Senior Secondary Graduation Diploma)<br>• Manitoba (High School Graduation Diploma)<br>• New Brunswick (High School Graduation Diploma)<br>• Newfoundland (High School Graduation Diploma)<br>• NW Territories (General High School Diploma)<br>• Nova Scotia (High School Completion Certificate)<br>• Ontario (Ontario Secondary School Diploma)<br>• Prince Edward Island (High School Graduation Diploma)<br>• Quebec (High School Diploma/Diplome d'Etudes Secondaires (DES)/ Secondary Grade V Certificate)<br>• Saskatchewan (Secondary Graduation Diploma)<br>• Yukon Territory (Senior Secondary Graduation Diploma) |
| China | • National College Entrance Examination (NCEE), also known as 'Gao Kao' |
| Hong Kong | • Hong Kong Certificate of Education Examination (HKCEE)<br>• Hong Kong Advanced Level Examination (HKALE) |
| India | • Indian Certificate of Secondary Education (ICSE) Standard 10/12 awarded by the Council for the Indian School Certificate Exam<br>• All India Secondary School Exam (CBSE) Standard 10/12 awarded by the Central Board of Secondary Education<br>• Secondary School Leaving Certificate (SSLC) Standard 10/12 awarded by the Tamil Nadu Board of Secondary School Leaving Certificate Exam<br>• All Anglo-Indian School Leaving Certificate Standard 10/12 awarded by the Board of Anglo-Indian School leaving Certificate Examination, Tamil Nadu<br>• Matriculation Examination Certificate Standard 10/12 awarded by the Board of Matriculation, Tamil Nadu<br>• Secondary School Leaving Certificate (SSLC) Standard 10/12 awarded by the Maharashtra State Board<br>• Secondary School Leaving Certificate (SSLC) Standard 10/12 awarded by the Kerala State |
| Indonesia | • National Final Examinations (SMA, SMU Ebtanas OR UAN) |

| Country | Entry Qualification |
|---|---|
| Korea | • College Scholastic Ability Test (CSAT) |
| Malaysia | • Sijil Pelajaran Malaysia (SPM) / Sijil Tinggi Pesekolahan Malaysia (STPM)<br>• Unified Examination Certificate (UEC) Qualifications |
| Myanmar | • Basic Education High School Examination Certificate (B.E.H.S) / Matriculation - (Standard 10) |
| Nepal | • Proficiency Certificate (previously known as the Intermediate Examination) |
| Pakistan | • Intermediate / Higher Secondary School Certificate (HSC) |
| Philippines | High School Diploma / Certificate with<br>• National Secondary Assessment Test (NSAT)<br>OR<br>• High School Final Year results<br>OR<br>• National Career Assessment Examination (NCAE) |
| Sri Lanka | • Sri Lanka General Certificate of Education (Ordinary Level) |
| Thailand | • Mathayom 6 (M6)<br>• MAW 6 – Grade 12 |
| UK | • General Certificate of Secondary Education (GCSE) |
| USA | • High School Graduation Diploma<br>• Year 12 |
| Vietnam | • 'Bang Trung Hoc Pho Thong' (commonly known as 'Bang Tu Tai' or 'Baccalaureate') |
| Others | • International General Certificate of Secondary Education (IGCSE)<br>• International Baccalaureate (IB) Diploma |

## Note:

1. Candidates applying for design courses are required to submit their portfolio together with their application.
2. Shortlisted applicants may be required to attend interviews and/ or take an entrance test upon request by the polytechnic.
3. Results should be submitted with information on the subjects' maximum scores and grading scheme/ scale.

# Other Information

## TUITION FEE LOAN

Only full-time subsidised international students are eligible to apply for financial schemes. Tuition Fee Loan is one of the financial schemes available. Details on the application of Tuition Fee Loan are available in the enrolment package.

## IMMIGRATION MATTERS (STUDENT'S PASS / VISA)

You are required to have a valid Student's Pass and Visa (if applicable) during your course of study in TP. You will receive the information on how to apply for your Student's Pass in your enrolment package.

Once your online application is approved by the Immigration & Checkpoints Authority of Singapore (ICA), we will send you the In-Principle Approval (IPA) letter. The IPA letter will serve as a temporary visa for you to enter Singapore.

## ACCOMMODATION

Most international students choose to stay near the campus to minimise the travelling time needed to and from the campus and home. You can rent a room from a local family. You may also be expected to pay in advance for rental and a security deposit. Where possible, you should make prior arrangement for your accommodation before you arrive in Singapore.

## FINANCES

Your family should have sufficient finances to support your three-year course of study and stay in Singapore. You are advised to make sure that you have sufficient funds to maintain a minimum standard of living. You may attempt to supplement your income through part-time work. However, this should not be relied upon as the only source of finance. Part-time work must be done outside of school hours and co-curricular activities, and it must not affect your academic performance.

The following is a general guideline of estimated expenses in Singapore for planning purposes.

| Item | Monthly in S$ | Yearly in S$ |
|---|---|---|
| **Accommodation** (1 person per room.) | 500 - 700 | 6,000 - 8,400 |
| **Food** | 300 - 400 | 3,600 - 4,800 |
| **Public Transport** (Cost varies. You can apply for the Student EZ-Link Card to travel on public transport at a concession rate.) | 50 - 100 | 600 - 1,200 |
| **Books** (Cost varies depending on diploma enrolled.) | - | 250 - 500 |
| **Class Fund** | - | 50 - 200 |
| **Personal Expenses** (Cost varies depending on individual spending habits.) | 30 -100 | 360 - 1,200 |
| **Hospitalisation & Surgical Insurance** (The premium is subject to review and change.) | - | 40 - 50 |
| **Total** (Estimated) | 880 - 1,300 | 10,900 - 16,350 |

Your living expenses are estimated to be between S$880 to S$1,300 per month or between S$10,900 to S$16,350 per year. These costs may vary with individual lifestyles. It is important that you should be able to support yourself financially during your course of study and stay in Singapore.

# financing your studies

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# Tuition Fee Information

## TUITION FEE FOR FULL-TIME DIPLOMA COURSES

The Tuition Fee* for Academic Year 2012/2013 for all full-time diploma courses and payable in two semesters per academic year is $2,200 for Singapore Citizens, $3,680 for Singapore Permanent Residents and $5,880 for International Students.

**All currency is in Singapore dollars and subject to change. Students will be notified prior to enrolment.*

## TUITION GRANT SCHEME

The Tuition Grant (TG) Scheme was introduced by the Government to subsidise the high cost of tertiary education in Singapore. The TG Scheme is currently open to students enrolled for full time subsidised diploma courses (subject to guidelines under existing Ministry of Education (MOE) Tuition Grant policy). In exchange for Government subsidy received under TG scheme, all non-Singaporeans (including Singapore Permanent Residents) are required to sign a TG Agreement in which they will be contractually obliged to work in Singapore for a minimum period of three years upon graduation.

## RESERVED PLACES FOR NATIONAL SERVICEMEN

Male students may be offered vacancies before enlistment to National Service. For such cases, these students shall pay Tuition Fee rates applicable to the academic year in which the vacancy has been offered.

## OTHER FEES

Besides Tuition Fee, Other Fees are payable once every academic year by all full-time students. Orientation fee applies to new students in April intake only. All full-time International Students are also required to pay for the Group Hospitalisation and Surgical Insurance which is to assist them in paying part of the medical cost in Singapore hospitals.

## STUDENT GROUP PERSONAL ACCIDENT INSURANCE

All full-time students are covered by the Student Group Personal Accident Insurance Policy. This scheme provides insurance coverage for accidents sustained by students. The annual insurance premium is part of the total fees payable at the start of each academic year.

# Summary of Fees for Full-Time Subsidised Diploma Courses

(For Singapore citizen students who are eligible and opt for tuition grant subsidy)

| Fee Item | AY 2012/2013 (S$) | Semester 1 (S$) | Semester 2 (S$) |
|---|---|---|---|
| **Tuition Fee** | **2,200.00** | **1,100.00** | **1,100.00** |
| Tuition Fee with GST | 2,354.00 | 1,177.00 | 1,177.00 |
| GST subsidy on Tuition Fee | (154.00) | (77.00) | (77.00) |
| **Tuition Grant** | **13,900.00** | **6,950.00** | **6,950.00** |
| Tuition Grant with GST | 14,873.00 | 7,436.50 | 7,436.50 |
| GST subsidy on Tuition Grant | (973.00) | (486.50) | (486.50) |
| **Other Fees** | **122.00** | **122.00** | **0.00** |
| Examination fee | 32.10 | 32.10 | 0.00 |
| GST subsidy on Examination Fee | (2.10) | (2.10) | 0.00 |
| GPA Insurance fee | 3.00 | 3.00 | 0.00 |
| Sports & Wellness fee | 25.00 | 25.00 | 0.00 |
| Miscellaneous fee | 26.50 | 26.50 | 0.00 |
| Orientation fee | 10.50 | 10.50 | 0.00 |
| Application fee # | 7.00 | 7.00 | 0.00 |
| Students' Union fee | 20.00 | 20.00 | 0.00 |
| **TOTAL Fee Chargeable** | **16,222.00** | **8,172.00** | **8,050.00** |
| **Tuition Grant Awarded** | **(13,900.00)** | **(6,950.00)** | **(6,950.00)** |
| **Fees Payable** | **2,322.00** | **1,222.00** | **1,100.00** |

## Please note that fees are subject to change.

Tuition Grant and Fees, except Student Union fee, are inclusive of GST.

# This fee is charged for applications other than JAE Application. The Polytechnic will collect $7 or $10 on behalf of MOE for JAE Application or JAE Amendment fees respectively from the student where appropriate.

# Summary of Fees for Full-Time Subsidised Students

(For Singapore permanent resident students who are eligible and opt for tuition grant subsidy)

| Fee Item | AY 2012/2013 (S$) | Semester 1 (S$) | Semester 2 (S$) |
|---|---|---|---|
| **Tuition Fee** | **3,680.00** | **1,840.00** | **1,840.00** |
| Tuition Fee with GST | 3,937.60 | 1,968.00 | 1,968.00 |
| GST subsidy on Tuition Fee | (257.60) | (128.80) | (128.80) |
| **Tuition Grant** | **13,900.00** | **6,950.00** | **6,950.00** |
| Tuition Grant with GST | 14,873.00 | 7,436.50 | 7,436.50 |
| GST subsidy on Tuition Grant | (973.00) | (486.50) | (486.50) |
| **Other Fees** | **122.00** | **122.00** | **0.00** |
| Examination fee | 32.10 | 32.10 | 0.00 |
| GST subsidy on Examination Fee | (2.10) | (2.10) | 0.00 |
| GPA Insurance fee | 3.00 | 3.00 | 0.00 |
| Sports & Wellness fee | 25.00 | 25.00 | 0.00 |
| Miscellaneous fee | 26.50 | 26.50 | 0.00 |
| Orientation fee | 10.50 | 10.50 | 0.00 |
| Application fee # | 7.00 | 7.00 | 0.00 |
| Students' Union fee | 20.00 | 20.00 | 0.00 |
| **TOTAL Fee Chargeable** | **17,702.00** | **8,912.00** | **8,790.00** |
| **Tuition Grant Awarded** | **(13,900.00)** | **(6,950.00)** | **(6,950.00)** |
| **Fees Payable** | **3,802.00** | **1,962.00** | **1,840.00** |

## Please note that fees are subject to change.

Tuition Grant and Fees, except Student Union fee, are inclusive of GST.

# This fee is charged for applications other than JAE Application. The Polytechnic will collect $7 or $10 on behalf of MOE for JAE Application or JAE Amendment fees respectively from the student where appropriate.

# Summary of Fees for Full-Time Subsidised Students

(International students who are eligible and opt for tuition grant subsidy)

| Fee Item | AY 2012/2013 (S$) | Semester 1 (S$) | Semester 2 (S$) |
|---|---|---|---|
| **Tuition Fee** | **5,880.00** | **2,940.00** | **2,940.00** |
| Tuition Fee with GST | 6,291.60 | 3,145.80 | 3,145.80 |
| GST subsidy on Tuition Fee | (411.60) | (205.80) | (205.80) |
| **Tuition Grant** | **13,900.00** | **6,950.00** | **6,950.00** |
| Tuition Grant with GST | 14,873.00 | 7,436.50 | 7,436.50 |
| GST subsidy on Tuition Grant | (973.00) | (486.50) | (486.50) |
| **Other Fees** | **162.00** | **162.00** | **0.00** |
| Examination fee | 32.10 | 32.10 | 0.00 |
| GST subsidy on Examination Fee | (2.10) | (2.10) | 0.00 |
| GPA Insurance fee | 3.00 | 3.00 | 0.00 |
| Sports & Wellness fee | 25.00 | 25.00 | 0.00 |
| Miscellaneous fee | 26.50 | 26.50 | 0.00 |
| Orientation fee | 10.50 | 10.50 | 0.00 |
| GHS Insurance (IS) | 40.00 | 40.00 | 0.00 |
| Application fee # | 7.00 | 7.00 | 0.00 |
| Students' Union fee | 20.00 | 20.00 | 0.00 |
| **TOTAL Fee Chargeable** | **19,942.00** | **10,052.00** | **9,890.00** |
| **Tuition Grant Awarded** | **(13,900.00)** | **(6,950.00)** | **(6,950.00)** |
| **Fees Payable** | **6,042.00** | **3,102.00** | **2,940.00** |

## Please note that fees are subject to change.

Tuition Grant and Fees, except Student Union fee, are inclusive of GST.

# This fee is charged for applications other than JAE Application. The Polytechnic will collect $7 or $10 on behalf of MOE for JAE Application or JAE Amendment fees respectively from the student where appropriate.

# Summary of Fees for:

(a) Students who are not eligible for tuition grant subsidy; OR

(b) Singapore permanent resident/foreign students who are eligible for tuition grant subsidy but choose to opt out of tuition grant (TG) scheme

| Fees | Semester 1 (S$) | | | Semester 2 (S$) | | |
|---|---|---|---|---|---|---|
| | Singapore Citizen Student (S$) | Singapore Permanent Resident Student (S$) | International Student (S$) | Singapore Citizen Student (S$) | Singapore Permanent Resident Student (S$) | International Student (S$) |
| Tuition Fee + Other Fees | 1,301.10 | 2,092.90 | 3,309.90 | 1,177.00 | 1,968.80 | 3,145.80 |
| Tuition Grant | 7,436.50 | 7,436.50 | 7,436.50 | 7,436.50 | 7,436.50 | 7,436.50 |
| **Fee Payable** | **8,737.60** | **9,529.40** | **10,746.40** | **8,613.50** | **9,405.30** | **10,582.30** |

## Please note that fees are subject to change.

Tuition Grant and Fees, except Student Union fee, are inclusive of GST.

# Payment of Fees

## PAYMENT THROUGH INTER-BANK GIRO (IBG)

IBG is an easy and convenient way for students to pay fees to, or receive payment from the Polytechnic. Such transactions between students and the Polytechnic can be effected through their or their parent's / guardian's savings or current account with any of the IBG participating banks. New students will receive one IBG application form for fee deduction and fee payable (where applicable) in their enrolment package by post.

Please submit completed IBG form to the Polytechnic for processing. The Polytechnic will submit it to the relevant bank for approval. For successful applicants, students will be informed of the amount and date of GIRO deduction prior to deduction from the approved GIRO bank account. Please maintain sufficient funds in the bank account before GIRO deduction date.

## PAYMENT BY CHEQUE

Cheques must be crossed and made payable to "Temasek Polytechnic". Kindly ensure that the cheques have been clearly and properly drawn up and that sufficient funds are maintained in the bank accounts. Please state the student's name, admission number and the contact number on the reverse side of the cheque. **Post–dated cheques are not acceptable.**

## LATE FEE

A late fee of $15 shall be imposed if fees are not paid by the due date as stipulated on the tax invoice, or as advised by the Finance & Administration Department.

## ISSUANCE OF RECEIPTS

Receipts are issued for payments made personally at the Finance & Administration Department @ One-Stop Service Centre. For cheque payments received by post, receipts shall be issued upon request.

## CHARGING POLICY ON WITHDRAWAL FROM OR DEFERMENT OF COURSE OF STUDY

Students who have enrolled and wish to withdraw from or defer their course must submit the prescribed withdrawal forms or deferment application, duly completed, to the Registrar. The effective date of withdrawal or deferment will be determined by the Registrar after all the formalities stated on the withdrawal form/deferment application have been complied with.

Before the effective date of withdrawal or deferment, students will still be deemed to be active students of the Polytechnic and liable to pay fees, regardless of their attendance for the semester.

The fees payable by withdrawn or deferred students will be computed as follows:

| Effective date of Withdrawal Fee Payable | Fee Payable |
|---|---|
| i) Before the start and up to first day of the semester | $50.00 for administration fee (for new students only) |
| ii) Within the 1st week of the semester | 25% of Tuition Fee + Other Fees (excluding<br>100% of Sports & Wellness fee, Exam fee and Miscellaneous fee) |
| iii) After the 1st week of the semester | 100% of Tuition Fee + Other Fees |

# Financial Schemes Available for Full-Time Diploma Courses

The following schemes are available for payment of Tuition Fee:

i) Tertiary Tuition Fee Subsidy (TTFS) for Malays;
ii) Central Provident Fund (CPF) Education Scheme; and
iii) Tuition Fee Loan Scheme.

Other Fees must be paid by using the student's own funds e.g. Cash, NETS, CashCard or IBG.

However, they are allowed to use funds in their Post Secondary Education Account (PSEA) to settle both Tuition Fee and Other Fees.

## TERTIARY TUITION FEE SUBSIDY (TTFS) FOR MALAYS

For details on eligibility, please refer to the Yayasan Mendaki's website at: http://www.mendaki.org.sg/.

## POST SECONDARY EDUCATION ACCOUNT (PSEA)

Students may apply to use their own or their siblings' PSEA for payment of Tuition Fee and Other Fees charged by the Polytechnic, subject to terms and conditions governing the PSEA set by Ministry of Education (MOE). Students have to complete the standing order forms which are available from MOE's website and submit the completed form to the Polytechnic by the deadline set by the Polytechnic.

## CENTRAL PROVIDENT FUND (CPF) EDUCATION SCHEME

Full-time subsidised students who are eligible and opt for Tuition Grant scheme may use CPF funds to pay the Tuition Fee. Students can apply either to use their own or their parents' CPF savings, subject to rules stipulated by the CPF Board. They can either apply online at CPF Board website or submit the completed manual CPF application form to the Polytechnic by the stipulated deadline. Further enquiries may be made at CPF Board (Education Scheme Section) or its branches.

The CPF Board will process the application and inform the CPF account holders of the outcome of the application. For successful applicants, the CPF Board will pay the Tuition Fee, deducted from the CPF member's Ordinary Account, directly to the polytechnic. The CPF members may request a CPF statement from CPF Board to verify the amount deducted.

## TUITION FEE LOAN SCHEME

Full-time subsidised students who are eligible and opt for Tuition Grant scheme can apply for Tuition Fee Loan of up to 75 percent of the Tuition Fee through DBS Bank. Interest will be charged on the outstanding loan upon graduation or withdrawal from the course, whichever is earlier. Details of the scheme are given in the scheme application forms which are available at Finance & Administration Department @ One-Stop Service Centre.

# Scholarships and Bursaries

## SCHOLARSHIPS

Through generous donations from organisations, philanthropic foundations and individuals, TP has been able to offer a wide range of scholarships to eligible students. Most cover tuition and miscellaneous fees while some may cover living or even laptop allowance.

The number of scholarships given out each year varies, depending on the number of qualifying students. Most scholarships are bond-free but some require the students to serve internship with the company during the course of their studies.

Please visit www.tp.edu.sg/home/admissions/scholarship for more details.

## BURSARIES

Bursaries are awarded to students who require financial assistance to continue their studies at TP. There are several bursary schemes available for such students. Please visit www.tp.edu.sg/home/admissions/schemes for details.

# Joint Polytechnic-Singapore Armed Forces Diploma Sponsorship/ Military Domain Expert Scheme (MDES) Study Award (Diploma)

## SPONSORSHIP OF COURSES

The Singapore Armed Forces (SAF) is offering the above sponsorships to GCE O Level school leavers who would like to pursue a three-year full-time diploma course. The courses available for sponsorship in each Service are as follows:

| Service | | |
|---|---|---|
| ARMY | NAVY | AIR FORCE |
| All courses are available for sponsorship | All courses are available for sponsorship | **All Aeronautical, Aerospace, Electronics, Electrical, Mechanical Mechatronics, Computer, Manufacturing, Info-Tech and Digital related engineering courses.** |

## ELIGIBILITY

*Academic Requirements*

The academic requirements for the above courses are the same as those stated in this prospectus.

*Other Requirements*

Applicants must be:

a. Singapore Citizens (PR must be citizen upon contract signing);

b. At least 16½ years old;

c. Medically fit.

Selection for admission is based on merit and shall be at the sole discretion of Temasek Polytechnic.

## TERMS OF SERVICE AND BENEFITS

Applicants can choose to serve in the Army, Navy or Air Force as Combat, Service Specialists or Military Experts.

Successful applicants will serve a minimum of five years for males (inclusive of full-time NS) and four years for females.

Tuition and other compulsory fees required by the polytechnic will be paid by the SAF. Trainees will be paid a monthly allowance of $1,300 for Combat Specialists/ Military Experts, $1,150 for Engineering/ Technical/ Operational-Technical Specialists and $1,000 for Service Specialists throughout the three-year course at the polytechnic. A study bonus of $1,200 is payable upon successful completion of each semester in one sitting.

## CAREER PROSPECTS

| | Joint Polytechnic - Singapore Armed Forces Diploma Sponsorship |
|---|---|
| ARMY | **Combat Specialist**<br>As a Combat Specialist, you form the backbone of the organisation, taking on multifaceted roles that provide the capabilities for the organisation to function effectively. In peacetime, you will hone your skills as well as train and motivate the men and women under your charge. Should the need arise you will lead troops into battle. As an Instructor, you will pass on your experience and expertise to help groom future specialists.<br><br>**Service Vocation Specialist**<br>You ensure that our forces are adequately supplied to maintain operational readiness. Well trained in the latest IT and logistics management systems, you will purchase, monitor and deliver a wide range of supplies to our troops. So whether you are maintaining a stockpile of essential supplies or distributing them, your job is an incredibly important one. Our supply chain management system is renowned and as part of the logistics team, you contribute to the efficiency of our organisation. |
| AIR FORCE | **Aircrew Specialist**<br>As an Aircrew Specialist, you will work on board RSAF's advanced helicopters and transport aircraft. You will be in the thick of the action and armed with the skills to take on search-and-rescue missions, life-saving operations, deployment of troops to the frontline, and delivery of crucial supplies to fighting forces. You will have opportunities to go overseas for training and detachments.<br><br>**Air Defence Systems Specialist**<br>As an Air Defence Systems Specialist, you are the 'Air Defender' of our airspace. You'll be trained to operate advanced air defence weapon systems such as the I-Hawk, RBS 70, Mistral and SPYDER-SR. You will also be able to service all electronic components of the air defence weapon systems. |

| | MDES Study Award (Diploma) |
|---|---|
| ARMY | **Military Domain Expert**<br>As a Military Domain Expert, you are groomed to deepen your expertise in technical and other selected areas of specialisation within the organisation. The specialisation areas available are intelligence, engineering, ammunition engineering and medical. You can look forward to comprehensive development courses and academic upgrading opportunities that will allow you to gain an edge over your counterparts in the private sector. |
| NAVY | **Naval Warfare System Expert (Electronics)**<br>As a Naval Warfare System Expert (Electronics), you are the eyes and ears on board our Navy vessels. Apart from performing vital roles in maintaining combat readiness at all times, you are your shipmates' greater peace of mind.<br><br>**Naval Warfare System Expert (Electrical & Control Systems)**<br>As a Naval Warfare System Expert (Electrical & Control Systems), you are in charge of the ship's electrical system, a crucial component which enables vessels to be out at sea.<br><br>**Naval Warfare System Expert (Marine Systems)**<br>As a Naval Warfare System Expert (Marine Systems), you specialise in marine propulsion systems, electro-hydraulic equipment, refrigeration and air conditioning systems, ventilation systems, freshwater generators, compressed air systems and pollution control systems. |
| AIR FORCE | **Air Force Engineer (Maintenance)**<br>As an Air Force Engineer (Maintenance), you will work with a team of professionals on the latest aviation and weapon systems, maintain and service sophisticated combat aircraft, electronics and communication systems. Gain expertise in avionics, aircraft propulsion systems, structures, aviation instruments and more.<br><br>**Air Operations & Systems Expert**<br>As an Air Operations & Systems Expert, you will get to master the advanced technology that enables air operations. You will work in an information and knowledge-rich operational environment, supported by complex state-of-the-art Surveillance Sensors, Advanced Networks and Command, Control & Communication Systems. You are a critical player in the 3rd Generation Air Force. |

## CAREER ADVANCEMENT

After acquiring sufficient skills in the respective specialist fields, graduates will be eligible for professional upgrading to higher vocational levels corresponding to higher appointments. Those with outstanding performance, leadership qualities and management abilities may also be converted to Officers.

## APPLICATION PROCEDURE

Applicants are requested to apply **PERSONALLY after the release of the GCE O Level examination results** at:

SAF Careers Centre
3 Depot Road #01-66
Singapore 109680

All applications to this Scheme are independent of those applied through the Ministry of Education's Joint Admissions Exercise (JAE). You are therefore advised to apply for courses under the JAE **in addition** to your application to the SAF Careers Centre. For enquiries, please contact the SAF Careers Centre at the following telephone numbers:

| | | |
|---|---|---|
| Army | : | 1800 - 6872769 |
| Navy | : | 1800 - 2780000 |
| Air Force | : | 1800 - 2701010 |

In summary, the Joint Polytechnic-SAF Diploma Sponsorship Scheme (JPSDS) and MDES Study Award (Diploma) allow you to study for a diploma course of your choice and be financially independent at the same time. Also, once you obtain your diploma, your future will be secure with an exciting and challenging career awaiting you in the Singapore Armed Forces.

# HOME Award (Polytechnic)

The HOME Award (Polytechnic) sponsors successful applicants for a three-year full-time diploma course in any of the five local polytechnics. The Award is also open to existing polytechnic students as well as students who are waiting for admission to the local polytechnics. Upon graduation, successful recipients will pursue a career with either the Home Affairs Uniformed Services (HUS) or Immigration and Checkpoints Authority (ICA) in the following departments:

- Central Narcotics Bureau (CNB)
- Immigration and Checkpoints Authority (ICA)
- Singapore Civil Defence Force (SCDF)
- Singapore Police Force (SPF)
- Singapore Prison Service (SPS)

## TIERS

There are two tiers to the HOME Award (Polytechnic):

The HOME Merit Award (Poly)

This offers an annual allowance of $12,000, payment of tuition and compulsory fees and a study bonus of $1,200 per semester if the student passes all modules in that semester.

The HOME Study Award (Poly)

This offers an annual allowance of $2,400, payment of tuition and compulsory fees and a study bonus of $1,200 per semester if the student passes all modules in that semester.

***Eligibility Criteria***

Applicants must meet the following eligibility criteria:

- Singapore Citizen;
- Good O Level/Nitec/Higher Nitec results;
- Already gained admission (or likely to secure a place) in a local polytechnic in any discipline;
- Medically and physically fit (i.e. have at least a "Pass" for NAPFA);
- A strong interest in Home Team careers.

## ENTRY RANK UPON GRADUATION

Upon graduation, recipients would be appointed to the Junior Officer Scheme of Service on the prevailing entry rank and starting salary for diploma holders.

## BOND

All recipients would be required to fulfil a bond of four years.

## NATIONAL SERVICE (NS) LIABILITY

Male recipients who have yet to serve their NS may choose one of the five departments listed above. However, for those who have chosen SPF or SCDF, they would be required to serve as regular officers for a period of five years under the Minimum Term of Engagement (MTE) in order to be deemed as having completed their NS obligations. The bond period of four years would run concurrently with the five-year MTE period.

For males who choose to go to CNB, ICA or SPS instead of SPF or SCDF, they would be required to serve out their NS obligations first before commencing their four-year bond with the particular Home Team department of their choice.

## APPLICATION PROCEDURE

Interested applicants may apply online for the HOME Award (Polytechnic) at: www.mha.gov.sg/homeaward

The application window is from 1 March 2012 to 14 May 2012, and supporting documents should be submitted within the next seven working days (from the point of application) to the following address:

**Ministry of Home Affairs**
**Home Team Career Centre**
**New Phoenix Park**
**28 Irrawaddy Road**
**Singapore 329 560**

Interested applicants who have queries or require further clarification may call the Home Team Career Centre (HTCC) at 6478 7225 / 6478 7126.

In summary, as a member of the Home Team, successful applicants will have the unique opportunity to play their part in keeping Singapore safe and secure in dealing with real-life safety and security challenges facing Singapore. With the HOME Award (Polytechnic), you will not only be given the opportunity to realise your dream career, but will also be allowed to study for a diploma/course of your choice and be financially independent at the same time.

# furthering your education

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# Universities offering Advanced Standing

The following is a list of institutions and professional bodies that have collaborations and advanced standing arrangements with Temasek Polytechnic.

## AUSTRALIA

- Australian Maritime College
- Australian International Hotel School
- Bond University
- Blue Mountains International Hotel Management School Australia
- Central Queensland University
- Charles Darwin University
- Charles Sturt University
- Curtin University of Technology
- Deakin University
- Edith Cowan University
- Flinders University
- Griffith University
- James Cook University
- International College of Hotel Management
- La Trobe University
- Macquarie University
- Monash University
- Murdoch University
- Queensland University of Technology
- RMIT University
- Swinburne University of Technology
- The Australian National University
- The University of Adelaide
- The University of Melbourne
- The University of New South Wales
- The University of Newcastle
- The University of Queensland
- The University of Sydney
- The University of Western Australia
- University of Ballarat
- University of Canberra
- University of New England
- University of South Australia
- University of Southern Queensland
- University of the Sunshine Coast
- University of Tasmania
- University of Technology, Sydney
- University of Western Sydney
- University of Wollongong
- William Angliss Institute

## CANADA

- Fairleigh Dickinson University
- Ryerson University
- University of Lethbridge

## CHINA

- Jilin College of the Arts

## IRELAND

- Athlone Institute of Technology
- Carlow Institute of Technology

## ITALY

- Domus Academy

## NEW ZEALAND

- Auckland University of Technology
- Lincoln University
- Massey University
- The University of Auckland

## SINGAPORE

- National University of Singapore
- Nanyang Technological University
- SIM University
- Singapore Institute of Technology - Culinary Institute of America
- Singapore Institute of Technology - Digipen Institute of Technology
- Singapore Institute of Technology – University of Glasgow
- Singapore Institute of Technology - Newcastle University (UK)
- Singapore Institute of Technology - Technical University of Munich
- Singapore Institute of Technology - University of Nevada, Las Vegas
- Singapore Management University
- Singapore University of Technology and Design

## SWITZERLAND

- Ecole Hoteliere Lausanne
- University of Applied Sciences Northwestern Switzerland
- Les Roches International School of Hotel Management

## UNITED KINGDOM

- Anglia Ruskin University
- Aston University
- Birmingham City University
- Brunel University
- Cardiff University
- City University
- Coventry University
- Durham University
- Glasgow Caledonian University
- Heriot-Watt University
- IFS School of Finance
- London Metropolitan University
- Loughborough University
- Middlesex University
- Manchester Metropolitan University
- Newcastle University
- Northumbria University
- Nottingham Trent University
- Oxford Brookes University
- Queen Mary, University of London
- Queen's University Belfast
- Regent's Business School London
- Royal Holloway, University of London

- Staffordshire University
- The University of Edinburgh
- The University of Manchester
- University of Aberdeen
- University of Abertay Dundee
- University of Bath
- University of Birmingham
- University of Bradford
- University of Brighton
- University of Bristol
- University of Central Lancashire
- University of Dundee
- University of East Anglia
- University of Essex
- University of Exeter
- University of Glasgow
- University of Greenwich
- University of Huddersfield
- University of Kent
- University of Leeds
- University of Leicester
- University of Lincoln
- University of Liverpool
- University of Nottingham
- University of Reading
- University of Salford
- University of Sheffield
- University of Southampton
- University of Strathclyde
- University of Sunderland
- University of Surrey
- University of Sussex
- University of the West of England, Bristol
- University of the West of Scotland
- University of Ulster
- University of Wales, Swansea
- University of Warwick
- University of York
- York St John University

## UNITED STATES OF AMERICA

- Linfield College
- University of Oregon

## PROFESSIONAL BODIES IN SINGAPORE

- Accounting and Corporate Regulatory Authority
- Agri-Food & Veterinary Authority of Singapore
- Board of Architects Singapore
- Civil Aviation Authority of Singapore
- Ministry of Health Optometrists and Opticians Board, Singapore
- Ministry of Law, Singapore
- Professional Engineers Board, Singapore
- Singapore Dental Council
- Singapore Institute of Surveyors and Valuer
- Singapore Nursing Board
- Singapore Nutrition and Dietetics Association
- Singapore Medical Council
- Singapore Pharmacy Council
- Singapore Physiotherapy Association

**Note:** *While every effort is made to ensure the accuracy and currency of the information, you are advised to check with the relevant institutions and professional bodies before deciding on an institution of choice. As a general rule, most universities in the United States that do not enter into institutional agreements with TP on advanced standing, would still welcome applications from our graduates and evaluate each application to grant the appropriate level of advanced standing where possible*

# Continuing Education and Training

## PROFESSIONAL DEVELOPMENT CENTRE

The Professional Development Centre (PDC) at TP is committed to the practical re-skilling and professional development of adult learners. It offers both certificated and public run courses and also conducts customised training programmes for organisations. Courses offered are in the areas of:

- Aviation Management
- Business Management
- Design
- Engineering
- Entrepreneurship
- Financial Management
- Hospitality & Tourism Management
- Human Resource Management
- International Business
- IT and Info-communication
- Life Sciences
- Marketing & Communication
- Para-Legal Studies
- Personal Development
- Security & Safety Management
- Supply Chain Management

To help adult learners acquire valuable knowledge and develop relevant skills to meet the challenges in a dynamic technology-driven economy, the following part-time courses are also offered:

- Diploma in Early Childhood Care & Education – Teaching (DECCE-T)
- Diploma in Engineering (Aerospace)
  Diploma in Legal Executive Studies
- Diploma in Police Studies & Security Studies
- Diploma in Security & Fire Safety Studies
- Specialist Diploma in Biopharmaceutical Technology
- Specialist Diploma in Environment & Water Technology
- Specialist Diploma in Hospitality & Tourism Management
- Specialist Diploma in Interactive Edutainment
- Specialist Diploma in Semiconductor Technology
- Specialist Diploma in Accounting and Finance
- Advanced Diploma in Police Studies

In response to the Singapore Workforce Skills Qualification (WSQ) System initiated by the Singapore Workforce Development Agency (WDA), TP has launched WSQ which comprises the industry sectoral framework. The modules are designed to professionalise the industry and enhance labour market flexibility and skills portability in growing industry with high demand of skilled workers and professionals.

## SECURITY INDUSTRY INSTITUTE

The Security Industry Institute (SII) is jointly established by Temasek Polytechnic and the Singapore Workforce Development Agency (WDA). It was set up in September 2007 to offer nationally recognised and comprehensive professional security training and placement for security personnel.

SII, the appointed Continuing Education and Training (CET) centre for the security industry, aims to enhance the security industry's professional image, quality of training, operating standards and employability of the workforce through various skills upgrading initiatives.

SII offers three levels of Security WSQ qualification and conducts customised training programmes for organisations. The levels of Security WSQ offered are:

1. Certificate in Security Operations
2. Advanced Certificate in Security Supervision
3. Diploma in Security Management

SII will also serve as a career service centre that partners with industry players to provide professional employment assistance and career guidance for job seekers and workers in the security industry.

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# Board of Governors

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Deputy CEO
ST Engineering Ltd

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President's Office
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**Mr Low Cheaw Hwei**
Global Creative Director, Consumer Lifestyle
Philips Electronics Singapore Pte Ltd/Philips Design

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**Mr Alex Siow**
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Business Excellence & Systems Technology
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**Mr Zee Yoong Kang**
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# Administration Committee

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DSTA

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Electronics/Media & Communication Technology/Computer Engineering/ Microelectronics
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Common Engineering Programme
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Principal Photographer
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Interactive and Digital Media Institute
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IDA

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**Mr Bill Lee**
Managing Director
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**Mr Steve Lee**
Chief Information Officer/
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Changi Airport Group Singapore (Pte) Ltd

**Dr Leong Mun Kew**
Chief, Strategic IT Management Practice
Institute of Systems Science
National University of Singapore

**Mr Stephen Lim**
Chief Executive Officer
SQL View Pte Ltd

**Mr Alex Siow**
Senior Vice President
Business Excellence & Systems Technology
StarHub Ltd

**Mr Irving Tan**
Managing Director, Singapore & Brunei
Cisco Systems (USA) Pte Ltd

**Ms Jessica Tan**
Managing Director
Microsoft Singapore Pte Ltd

**Ms Pamela Tham**
Country Director
Avaya Singapore Pte Ltd

**Mr Christopher Thompson**
Advisor to the Board of Directors
Abu Dhabi Media Zone Authority

**Ms Shirley Wong Swee Ping**
Managing Director
BT Frontline Technologies Pte Ltd

# Senior Management

**Mr Boo Kheng Hua**
Principal & CEO

**Mr Khoo Keng Gie, Edmond**
Deputy Principal
Director, School of Design
Director, Centre for Character & Leadership Education

**Mrs Lay-Tan Siok Lie**
Deputy Principal
Director, School of Engineering
Director-in-charge, Innovation & Entrepreneurship
Covering Director, Professional Development Centre

**Mrs Lily Teo**
Senior Director, Corporate Services
Director, Finance & Administration

**Ms Sharon Soh**
Registrar

**Dr Lee Chee Wee**
Director, School of Applied Science

**Mr Daniel Yeow**
Director, School of Business

**Mr Lim Chong Jin**
Joint-Director, School of Design
Creative Director

**Mr Ben Lim**
Director, School of Humanities & Social Sciences

**Mrs Lee-Lim Sok Keow**
Director, School of Informatics & IT

**Ms Magdalene Chai**
Director, Human Resource & Staff Development

**Mr Ken Soh**
Director, Computer & Information Systems

**Mrs Esther Ong**
Director, Library & Information Resources

**Mrs Sally Chew**
Director, International Relations & Industry Services
Director, Centre for TransCultural Studies
Director-in-charge, Legal Matters

**Mr Albert Yeo**
Director, Strategic & Quality Development

**Mr Chan Kah Guan**
Director, Planning & Development

**Mr Ho Thim Seng**
Director, Estates & Facilities Management

**Mr Brendan Wong**
Director, Corporate Communications

**Dr Moira Lee**
Director, Learning Academy
Director, Temasek Centre for Problem-Based Learning

**Mr Raymond Teo**
Director, Student & Alumni Affairs

**Mr George Yap**
Director, Entrepreneurship Centre
Director, Projects

**Ms Janet Lyn**
Director, Internal Audit

# Academic Directors and Course Managers

## *School of Applied Science*

### DIRECTOR

**Dr Lee Chee Wee**
BSc, MSc, PhD

### DEPUTY DIRECTORS

Academic Development
**Dr Kho Choon Joo**
MA, MSc, PhD

Capability Development
**Dr Ong Seng Poon**
BSc (Hons), MSc, PhD, DipEd

Student Development
**Mrs Tay-Chan Su Chin**
BSc (Hons), MBA

### ASSISTANT DIRECTORS

Technology Development
**Dr Chan Pek Sian Diana**
BSc (Hons), PhD

**Dr Ting Dor Ngi**
BEng (Hons), PhD, MBA

### COURSE MANAGERS

Applied Food Science & Nutrition
Consumer Science & Technology
**Mrs Tay-Chan Su Chin**
BSc (Hons), MBA

Baking & Culinary Science
**Ms Petrina Lim**
BSc (Hons), MSc

Biomedical Science
**Dr Kho Choon Joo**
MA, MSc, PhD

Biotechnology
**Dr Quek Hung Hiang**
BSc, PhD

Chemical Engineering
**Mr Lim Teng Kuan**
BSc (Hons), MBA

Pharmaceutical Science
**Mr Tay Boon Keat**
BEng (Hons), MSc

Veterinary Technology
**Dr Chan Pek Sian Diana**
BSc (Hons), PhD

## School of Business

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BBA, MBA (NUS)

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**Mrs Lai-Low Sock Cheng**
BSc, Post GD in Systems Analysis, MBA

**Ms Khoo Sor Hwa**
BBA (Hons)

COURSE MANAGERS
Accounting & Finance
**Mrs June Yeo-Chiang**
BAcc (Hons)

Business
**Dr Sim Heng Chye, Matthew**
BE (1st Class Hons) (UQ), MBA (NUS), Ph.D. (UniSA)

Business Information Technology
**Mr Benedict Fernandez**
BEng, Post GD in KE, MAIDT

Business Studies Grouping
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BA, DipEd, MSocSc

Culinary & Catering Management
**Mr Tan Hsien Wei**
BSc (HRTA), HDip in HM

Communications & Media Management
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MA (Communication Management), BA, GDMM

Hospitality & Tourism Management
**Ms Choi Hoi San**
BA (Commerce), CHA (Chartered Hotel Administrator)

Law & Management
**Mr Looi Kwok Peng**
LLB (Hons), Advocate & Solicitor FSIArb

Leisure & Resort Management
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Logistics & Operations Management
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BA, MSc

Marketing
**Ms Sue Lou**
BA, Grad Dip M, Dip Visual Com, MA (Communication Management)

Retail Management
**Mr Samuel Tan**
MBA, BBA, Dip Vis Com

Hospitality & Tourism Business
**Mr Yong Kit Mun**
B Eng (Hons), MBA

## School of Design

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BEcons (Hons)

JOINT DIRECTOR
**Mr Lim Chong Jin, PPA (G)**
BCD

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BA (Hons), English Language

**Mr Darryl David**
BA (Hons), MBA, MPA

COURSE MANAGERS
Apparel Design & Merchandising
**Ms Christine Foong**
Dip, SIAD (Fashion & Textile Design)

Retail & Hospitality Design
**Ms Aida Khalid**
BA (A.S), B Arch

Interactive Media Design
Visual Communication
**Mr Soh Yong Hern**
BFA (Hons), Graphic Design

Interior Architecture & Design
Environment Design
**Ms Tia Boon Sim**
MSc (Pratt), B.Arch (Hons)

Moving Images
**Ms Yvonne Tang**
BA (Econs.), MSc. (Finance), MA (Film Studies)
MA (Producing TV)

Product & Industrial Design
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AIC, Dip, MA, MSc

Foundation Studies
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Contextual Studies
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**Mr Khoo Hock**
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**Mr See Kok Kee, William**
BEng (Hons)

**Mr Wong Kia Ngee**
BEng (EE) (Hons), MSc (Elect Eng)

**Mr Yong Fook Joo**
BEng (EE), MSc (IT)

SENIOR MANAGERS
**Mrs Ng-Tia Too Lam, Patricia**
BEng (Hons)

**Mr Teo Sze Cheng**
BEng (Mech), MInfoMgt

**Dr Yin Choon Meng**
PhD, BEng (Hons)

COURSE MANAGERS
3D Interactive Media Technology
Media & Communication Technology
**Mr Yan Seow Chiang**
BSc (EE), MTelEng, MIEEE

Aerospace Electronics
Computer Engineering
Electronics
**Mrs Ng-Tia Too Lam, Patricia**
BEng (Hons)

Aerospace Engineering
Mechatronics
**Mr Yue Keng Mun**
BEng (Hons), MSc (ME)

Aviation Management & Services
**Mr Paul Yap**
BCom (Hons)

Biomedical Informatics & Engineering
**Mdm Soh Lay Kuan**
MEngSc, BSc(Eng), MBA

Business Process & Systems Engineering
Engineering Business Option
**Mr Chia Sie Yong**
BEng (Hons), MSc (ISE)

Clean Energy
Microelectronics
**Mr Wong Cho Loo**
BSc (Hons), MBA

Electrical & Electronic Engineering Programme
Common Engineering Programme
**Mr Chang Hark Loong**
MSc (Elect Eng), MIEE

Green Building & Sustainability
Integrated Facility Management
**Mr Teo Sze Cheng**
BEng (Mech), MInfoMgt

Info-Communications
Infocomm & Network Engineering
**Dr Yin Choon Meng**
PhD, BEng (Hons)

## School of Humanities & Social Sciences

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MBA (Distinction), MEd, BSc (Hons)

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Projects & Technology
**Mr Ang Teck Hua** (Director/ Centre for Child Study)
MEd (Ed Psych) (Merit), BComp

Student Development & Outreach
**Mrs Tan-Eng Mui Hong**
MA (HRD), BA (Hons) Psych

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Administration & Academic Support
**Mrs Pearl Chong-Lee**
MHRM, BComm (Hons)

COURSE MANAGERS

Early Childhood Studies
**Dr Karunawathie Marthenis**
EdD, BECS (Hons), Dip (ECCE)

Gerontological Management Studies
**Mr Terence Leong**
MA (Aging Svc Mgt), MSocSci, BSocSci (Hons), BA

Psychology Studies
**Ms Elizabeth Tan**
BSc (Psy), BA (Hons), Dip Ed

## School of Informatics & IT

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**Ms Mak Yoke Lai, Mandy**
BSc (CS), MSc (CS)

ASSISTANT DIRECTOR

**Dr Eng Pin Kwang**
BSc (Comp & Info Sc), MSc (CS), PhD (CS)

COURSE MANAGERS

Business Intelligence & Analytics
**Mr Oh Chin Lock**
BSc (Hons) (Comp & Info Sc)

Cyber & Digital Security
**Ms Mak Yoke Lai, Mandy**
BSc (CS), MSc (CS)

Digital Forensics
**Ms Mak Yoke Lai, Mandy**
BSc (CS), MSc (CS)

Financial Business Informatics
**Ms Cheng Huey Chen**
BSc (Hons), MSc

Game & Entertainment Technology
**Mr Jonathan Pillai**
BA (Hons) Multimedia

Interactive Media Informatics
**Mr Choy Hoe Yun, Peter**
M. App. Sc.

Information Technology
**Dr Eng Pin Kwang**
BSc (Comp & Info Sc), MSc (CS), PhD (CS)

Mobile & Network Services
**Mr Chin Siew Min, Benny**
BEng (Hons) (CE), MSc (Emb Sys)

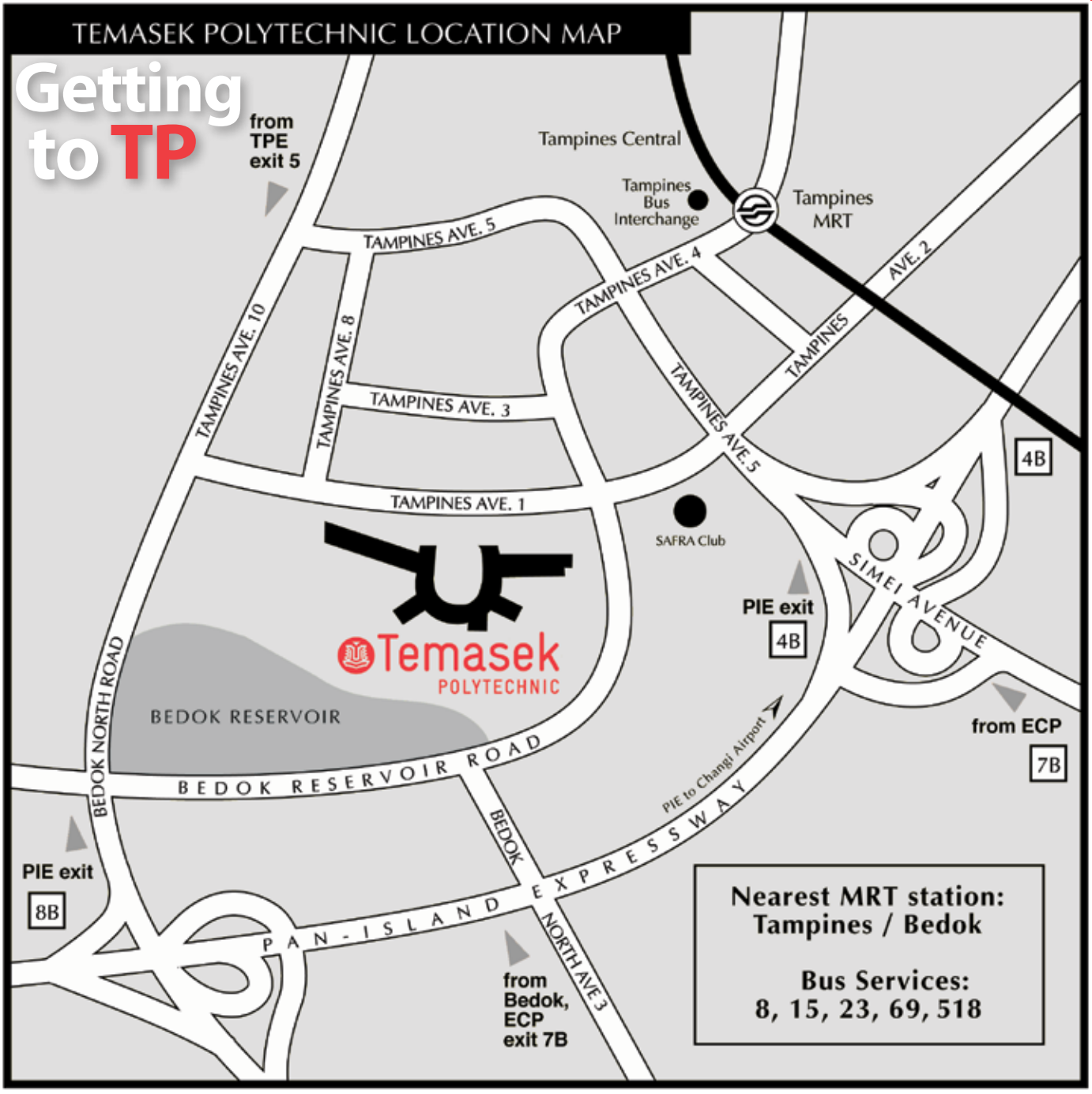
# academic calendar 2012/2013

## Semester 1

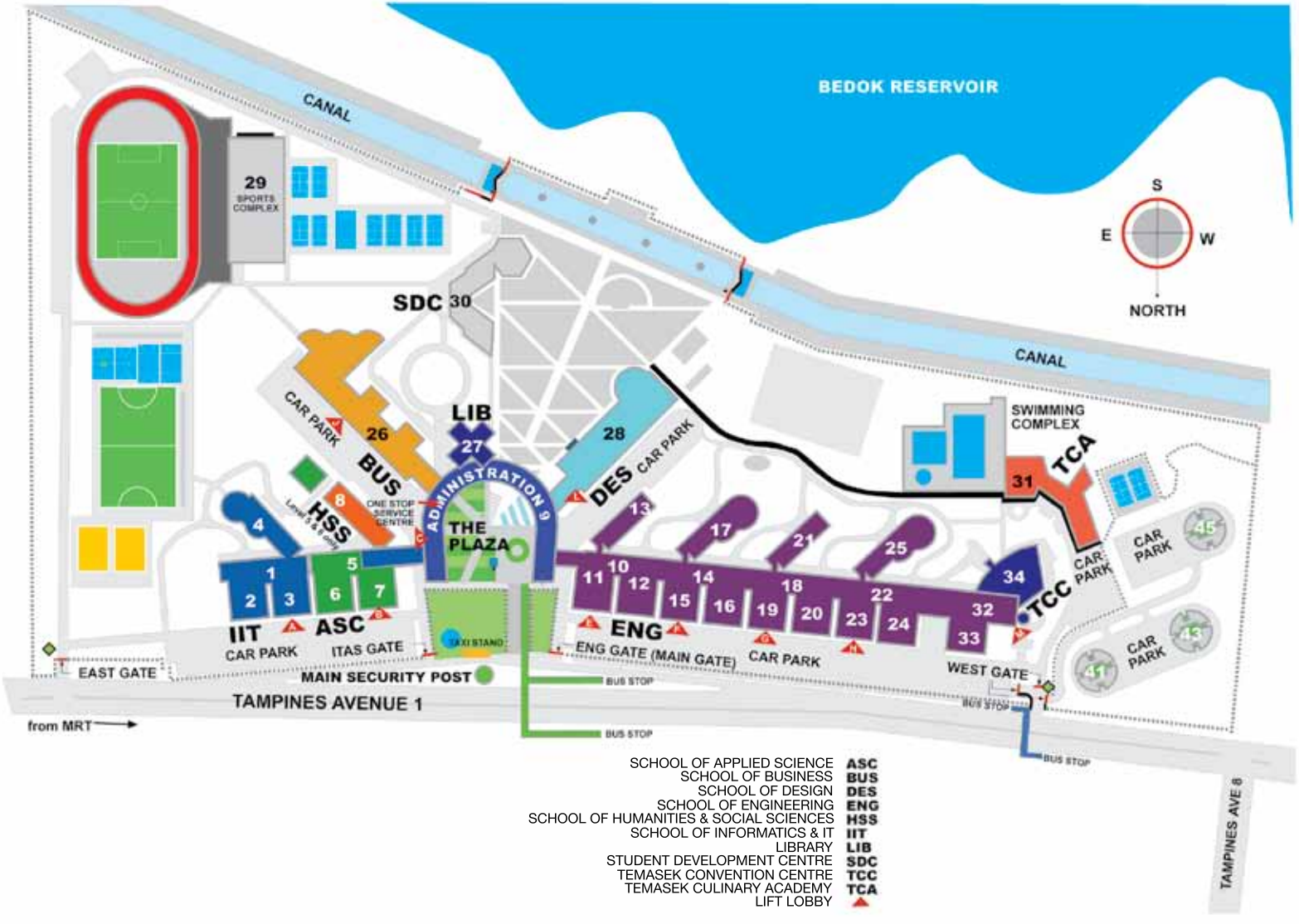
| | |
|---|---|
| **Term 1** | **Mon, 23 Apr 2012 – Fri, 8 Jun 2012** |
| Break | Sat, 9 Jun 2012 – Sun, 24 Jun 2012 |
| **Term 2** | **Mon, 25 Jun 2012 – Fri, 17 Aug 2012** |
| Study | Sat, 18 Aug 2012 – Thu, 23 Aug 2012 |
| **Semestral Examinations** | **Fri, 24 Aug 2012 – Fri, 7 Sep 2012** |
| Vacation | Sat, 8 Sep 2012 – Sun, 21 Oct 2012 |
| **Supplementary Assessments/ Examinations** | **Fri, 14 Sep 2012 – Fri, 28 Sep 2012** |

## Semester 2

| | |
|---|---|
| **Term 3** | **Mon, 22 Oct 2012 – Fri, 14 Dec 2012** |
| Break | Sat, 15 Dec 2012 – Tue, 1 Jan 2013 |
| **Term 4** | **Wed, 2 Jan 2013 – Fri, 15 Feb 2013** |
| Study | Sat, 16 Feb 2013 – Thu, 21 Feb 2013 |
| **Semestral Examinations** | **Fri, 22 Feb 2013 – Fri, 8 Mar 2013** |
| Vacation | Sat, 9 Mar 2013 – Sun, 21 Apr 2013 |
| **Supplementary Assessments/ Examinations** | **Fri, 15 Mar 2013 – Fri, 29 Mar 2013** |


TEMASEK POLYTECHNIC LOCATION MAP
Getting to TP
from TPE exit 5
Tampines Central
Tampines Bus Interchange
Tampines MRT
TAMPINES AVE. 5
TAMPINES AVE. 4
TAMPINES AVE. 10
TAMPINES AVE. 8
TAMPINES AVE. 3
TAMPINES AVE. 5
TAMPINES
AVE. 2
TAMPINES AVE. 1
SAFRA Club
4B
SIMEI AVENUE
PIE exit
4B
Temasek POLYTECHNIC
BEDOK RESERVOIR
BEDOK NORTH ROAD
BEDOK RESERVOIR ROAD
PIE to Changi Airport
from ECP
7B
BEDOK
EXPRESSWAY
PIE exit
8B
PAN-ISLAND
NORTH AVE 3
from Bedok, ECP exit 7B
Nearest MRT station:
Tampines / Bedok
Bus Services:
8, 15, 23, 69, 518

# Campus Map




| | |
|---|---|
| SCHOOL OF APPLIED SCIENCE | ASC |
| SCHOOL OF BUSINESS | BUS |
| SCHOOL OF DESIGN | DES |
| SCHOOL OF ENGINEERING | ENG |
| SCHOOL OF HUMANITIES & SOCIAL SCIENCES | HSS |
| SCHOOL OF INFORMATICS & IT | IIT |
| LIBRARY | LIB |
| STUDENT DEVELOPMENT CENTRE | SDC |
| TEMASEK CONVENTION CENTRE | TCC |
| TEMASEK CULINARY ACADEMY | TCA |
| LIFT LOBBY | ▲ |

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# Notes