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1 Bachelor of Engineering (Computer Engineering) Programme

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1.1 Overview

[Jointly offered by Faculty of Engineering and School of Computing]

The Departments of Computer Science and Electrical & Computer Engineering jointly offer a Bachelor of Engineering in Computer Engineering (CEG) programme.

The Computer Engineering programme produces graduates with a solid and balanced foundation in both hardware and software skills required to create computing systems. A uniquely multidisciplinary programme, CEG transcends the traditional boundary of computer science and electrical engineering. The CEG programme has been designed based on the Conceive-Design-Implement-Operate framework that places much emphasis on teamwork and aims to develop mature individuals who can work effectively in teams and communicate professionally. A major thrust of this programme is to train students to be technically competent to design-build-and-operate complex value-added computing systems in a modern team-based engineering environment. Graduates will have the opportunity to consolidate this experience through a unique year-long industrial attachment, and through overseas work and/or learning experience. Graduates will be able to attain significant knowledge and abilities in key technologies for real-time embedded systems, computer networking and wireless communication systems, medical imaging and information systems, intelligent control systems, and many others. In the workplace, computer engineers span a wide range of skills introducing intelligence into every conceivable device — from the smart phones and MP3 players to massive industrial control systems. They create the electronic systems in a modern car containing dozens of computing systems communicating through a network. They connect the physical world with cyberspace to enhance everything from entertainment to healthcare and the environment.

The educational objectives of the BEng (Computer Engineering) programme is to graduate students who, 5 years after their graduation,

- are technically competent to solve complex problems in computer engineering and can adapt effectively in a fast changing environment
- are able to critically think, analyse and make decisions that give due consideration to global issues in business, ethics, society and the environment
- are able to communicate effectively, act with integrity, and have the inter-personal skills needed to engage in, lead, and nurture diverse teams
- are committed to lifelong learning, resourceful, resilient and can embrace global challenges and opportunities to make a positive impact in society.

The success of the CEG programme is assessed through the following student learning outcomes:

- a. **Engineering Knowledge:** apply the knowledge of mathematics, natural science, engineering fundamentals, and an engineering specialisation to the solution of complex engineering problems
- b. **Problem Analysis:** identify, formulate, research literature, and analyse complex engineering

problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences

- c. **Design/development of Solutions:** design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations
- d. **Investigation:** conduct investigations of complex problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions
- e. **Modern Tool Usage:** create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations
- f. **The Engineer and Society:** apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and consequent responsibilities relevant to the professional engineering practice
- g. **Environment and Sustainability:** understand the impact of the professional solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for the sustainable development
- h. **Ethics:** apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice
- i. **Individual and Team Work:** function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings
- j. **Communication:** communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions
- k. **Project Management and Finance:** demonstrate knowledge and understanding of the engineering and management principles and economic decision-making, and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments
- l. **Life-long Learning:** recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change
- m. **Specific Programme Criteria for Computer Engineering:** have knowledge of probability and statistics, differential and integral calculus, discrete mathematics, basic sciences, computer science, and engineering sciences for the analysis and design of complex electrical and electronic devices, software, and systems containing hardware and software components.

Accreditation of engineering academic programmes is a key foundation for the practice of engineering at the professional level. The BEng (Computer Engineering) programme undergone a re-accreditation exercise by the Engineering Accreditation Board (EAB) of Singapore in 2013 and is currently accredited for students graduating from the programme up to AY2017/18. The programme will be undergoing re-accreditation in the third quarter of 2018. Via the accreditation from the EAB, all signatories in the Washington Accord recognise the substantial equivalence of our programmes in satisfying the academic requirements for the practice of engineering at the professional level. This means that our graduates can be accepted for engineering practice in the countries that are part of the Washington Accord. Signatories in the Washington Accord include Canada, USA, UK, Hong Kong, New Zealand, Australia and others.

1.2 Degree Requirements

Students in the BEng (Computer Engineering) programme are required to complete a minimum of 160 MCs with a CAP ≥ 2.0 to graduate. In the first stage of the programme, students will receive a broad-based training that seeks to establish a strong foundation in mathematics, information sciences, and computing. In the second stage, students will enrol in core modules that focus on fundamental knowledge in electrical and computer engineering. These core modules provide the essential foundation for a variety of focused technical areas in CEG. During their senior years of study, students may choose from a wide variety of electives to enable them to focus in certain fields of CEG. Throughout their programme, they are also expected to broaden their views by reading some general education modules. The complete structure of the programme is specified in Table 1.

TABLE 1: SUMMARY OF CEG MODULAR REQUIREMENTS AND CREDITS

MODULAR REQUIREMENTS		MCS
University Level Requirements		20
General Education Modules (GE) (5 modules, each of 4 MCs) • Human Cultures • Quantitative Reasoning • Thinking and Expression • Singapore Studies • Asking Questions		20
Unrestricted Elective Modules		32
English (ES1000 and/or ES1103) [#]		4
Programme Requirements		108
CG2023	Signals and Systems	4
CG2027	Transistor-level Digital Circuits	2
CG2028	Computer Organization	2
CG2271	Real-time Operating Systems	4
CS1010	Programming Methodology	4
CS1231	Discrete Structures	4

MODULAR REQUIREMENTS		MCS
CS2040C	Data Structures & Algorithms	4
CS2101	Effective Communication for Computing Professionals	4
CS2113T	Software Engineering & Object-Oriented Programming	4
EE2026	Digital Design	4
EE4204	Computer Networks	4
EG2401A	Engineering Professionalism	2
MA1508E	Linear Algebra for Engineering	4
MA1511	Engineering Calculus	2
MA1512	Differential Equations for Engineering	2
ST2334	Probability & Statistics	4
CG3207 Computer Architecture OR CS3230 Design and Analysis of Algorithms		4
Industrial Attachment		10
CEG Project Modules:		
CG1111	Engineering Principles and Practice I	6
CG1112	Engineering Principles and Practice II	6
CG4002	Computer Engineering Capstone Project	8
CEG Technical Electives:		
Elective Modules from Table 2 to satisfy the breadth and depth requirements of the BEng (CEG) programme		20
Total		160

For students who have not passed or have been exempted from the Qualifying English Test at the time of admission to the university.

Students may focus in one of the following concentrations – Communications & Networking, Embedded Computing, Large-Scale Computing, Intelligent Systems, Interactive Digital Media and System-on-a-Chip Design – by taking the electives in these concentrations. The modules in each concentration are

categorised as breadth or depth modules. A breadth module enables students to achieve a broad understanding of concepts in the particular concentration. A depth module is a higher-level module that provides greater depth and coverage in the particular concentration. The list of technical electives in the various concentrations is given in Table 2.

TABLE 2: LIST OF TECHNICAL ELECTIVES IN THE VARIOUS CONCENTRATIONS

COMMUNICATIONS & NETWORKING		
Breadth	CS2107	Introduction to Information Security
	CS3103	Computer Networks Practice
	CS3230	Design & Analysis of Algorithms
	CS3235	Computer Security
	EE3131C	Communication Systems
Depth	CS4222	Wireless Networking
	CS4226	Internet Architecture
	CS4236	Cryptography Theory & Practice
	CS4238	Computer Security Practice
	EE4210	Network Protocols and Applications

EMBEDDED COMPUTING		
Breadth	CG3207	Computer Architecture
	CS2107	Introduction to Information Security
	CS2108	Introduction to Media Computing
	CS3103	Computer Networks Practice
	CS3211	Parallel and Concurrent Programming
	CS3218	Multimodal Processing in Mobile Platforms
	CS3230	Design & Analysis of Algorithms
	CS3235	Computer Security
Depth	CS4222	Wireless Networking
	CS4223	Multi-Core Architectures
	CS4238	Computer Security Practice
	EE4210	Network Protocols and Applications
	EE4218	Embedded Hardware System Design
	EE4415	Integrated Digital Design
	EE4704	Introduction to Computer Vision and Image Processing

LARGE-SCALE COMPUTING		
Breadth	CG3207	Computer Architecture
	CS2102	Database Systems
	CS2107	Introduction to Information Security
	CS3210	Parallel Computing
	CS3211	Parallel and Concurrent Programming
	CS3230	Design & Analysis of Algorithms
	CS3235	Computer Security
Depth	CS3223	Database Systems Implementation
	CS4211	Formal methods for Software Engineering
	CS4221	Database Application Design and Tuning
	CS4223	Multi-Core Architectures
	CS4224	Distributed Databases
	CS4231	Parallel & Distributed Algorithms
	CS4345	General-Purpose Computation on GPU
	EE4210	Network Protocols and Applications
	EE4218	Embedded Hardware System Design

INTELLIGENT SYSTEMS		
Breadth	CS3240	Interaction Design
	CS3243	Introduction to Artificial Intelligence
	CS3244	Machine Learning
	EE3331C	Feedback Control Systems
	EE3731C	Signal Processing Methods

INTELLIGENT SYSTEMS		
Depth	CS4244	Knowledge-based systems
	CS4246	AI Planning and Decision Making
	CS4248	Natural Language Processing
	EE4212	Computer Vision
	EE4305	Introduction to Fuzzy/Neural Systems
	EE4307	Control Systems Design & Simulation
	EE4308	Advances in Intelligent Systems and Robotics
	EE4704	Introduction to Computer Vision and Image Processing

INTERACTIVE DIGITAL MEDIA		
Breadth	CS2108	Introduction to Media Computing
	CS3240	Interaction Design
	CS3241	Computer Graphics
	CS3242	3D Modelling and Animation
	CS3247	Game Development
	CS3249	User Interface Development
	EE3731C	Signal Processing Methods

INTERACTIVE DIGITAL MEDIA		
Depth	CS4240	Interaction Design for Virtual and Augmented Reality
	CS4243	Computer Vision and Pattern Recognition
	CS4247	Graphics Rendering Techniques
	CS4249	Phenomena and Theories of Human-Computer Interaction
	CS4347	Sound and Music Computing
	CS4351	Real-Time Graphics
	EE4212	Computer Vision
	EE4604	Biological Perception in Digital Media
	EE4704	Introduction to Computer Vision and Image Processing

SYSTEM-ON-A-CHIP DESIGN		
Breadth	CG3207	Computer Architecture
	EE3408C	Integrated Analog Design
Depth	CS4223	Multi-Core Architectures
	EE4218	Embedded Hardware System Design
	EE4407	Analog Electronics
	EE4415	Integrated Digital Design
	EE4505	Power Semiconductor Devices & ICs

The rules are as follows: To achieve depth, CEG students (from 2017/18 intake & after) need to read a minimum of 12 MCs of depth electives. All technical electives must add up to at least 20 MCs. Students may read breadth electives to achieve exposure to various facets of CEG. These modules may come from any of the concentrations. Students will have to ensure that they have read any prerequisite modules to read the selected depth modules. This may have an impact on the selection of breadth modules.

As an additional note, other modules hosted by CS or ECE may be used to fulfil CEG Technical Elective (TE) requirements. Generally, a level 3000 module will count as CEG TE Breadth, while a level 4000 will count as CEG TE Depth.

1.3 Recommended Semester Schedule

Please refer to ceg.nus.edu.sg/students/studyschedule.html for the recommended study schedule.

1.4 Relevant website

For more information, please refer to ceg.nus.edu.sg.

2 Bachelor of Environmental Studies Programme

2.1 [Overview of programme](#)

2.2 [Admission requirements](#)

2.3 [Exiting the programme](#)

2.4 [Relevant website](#)

2.1 Overview of programme

[jointly offered by Faculty of Arts & Social Sciences and Faculty of Science, with participation from Faculty of Engineering, Faculty of Law, School of Design & Environment, NUS Business School, Yong Loo Lin School of Medicine, Lee Kuan Yew School of Public Policy and Saw Swee Hock School of Public Health]

The Bachelor of Environmental Studies (BES) is a 4-year direct Honours degree programme offered jointly by the Faculty of Science and the Faculty of Arts and Social Sciences with participation from Faculty of Engineering, Faculty of Law, School of Design and Environment, NUS Business School, Yong Loo Lin School of Medicine, Lee Kuan Yew School of Public Policy and Saw Swee Hock School of Public Health. NUS recognises that the environmental issues that are presented to the world today are global, complex and interconnected. There is a compelling need for new educational models such as the BES to nurture graduates who can think broadly and deeply so as to effectively address the societal and scientific needs for understanding complex environmental issues. At NUS, we hope to continue to be the preferred choice of top students in Singapore and around the world by always putting ourselves at the forefront of innovative education.

2.2 Admission requirements

Students with an aptitude and passion for environmental issues are welcome to apply for direct admission into the Bachelor of Environmental Studies (BES) if they meet the following minimum criteria:

- Good H1 pass or equivalent in Mathematics
- Good H2 pass or equivalent in either Biology or Chemistry

Students who do not meet the above-stated criteria but have a keen interest for the BES may be interviewed for suitability for the programme.

Admission will be on a competitive basis.

2.3 Exiting the programme

Environmental Studies is a 4-year programme and the BES with Honours degree will be awarded to candidates who completed 160 MCs and performed well throughout the course, as determined by their cumulative average point (CAP of at least 3.0). Those who do not qualify for an Honours degree will be awarded a BES degree.

2.4 Relevant website

Further information on the programme is available at: www.envstudies.nus.edu.sg

3 Master of Science in Business Analytics

[jointly offered by the School of Computing and School of Business]

The Master of Science in Business Analytics (MSBA) is jointly offered by School of Computing and NUS Business School. This programme aims to develop students into Business Analytics specialists and professional consultants by imparting both a strong methodological and technical foundation in analytics technology, and knowledge in applying analytics to different domains in various vertical industries. Currently, these verticals are: Big-data analytics technologies, Consumer analytics, Finance & Risk analytics, Healthcare analytics and Statistical modelling.

The programme is designed with the principle of embedding BA education deeply in the university, with the intention to invite domain experts from relevant faculties in NUS to participate by offering BA-related subjects for multiple industries. The management and execution of the programme is conducted in collaboration with IBM under NUS Business Analytics Centre, which promotes analytics education, research and development.

3.1 [Degree Requirements](#)

3.2 [Relevant Website](#)

3.1 Degree Requirements

3.1.1 [Structure of Programme](#)

3.1.2 [Duration of Programme](#)

3.1.3 [Admission Requirements](#)

3.1.4 [Graduation Requirements](#)

3.1.1 Structure of Programme

Students are required to complete five *essential modules* and a one-year professional consulting *capstone project*, as well as to complete elective modules from at most two *vertical sectors*.

The *essential modules* build a cross-disciplinary foundation for business analytics, enabling students to engage in rigorous inquiry within and beyond assumed disciplinary borders. These modules are each of 4 modular credits. They are:

- DSC5103– Statistics
- BDC5101 – Deterministic Operations Research
- BT5110 – Data Management and Warehousing
- BT5152 – Decision Making Technology for Business
- DCS5101 – Analytics in Managerial Economics

Business Analytics Capstone Project

The project has 12 modular credits. It investigates, analyzes and provides solutions to real-world business analytic problems. It enables students to become constructive and responsible members of a community and global citizens, with an appreciation of real-world analytics problems, and the skill set required to offer sound solutions. Students are required to attend a series of industry seminars, and classes in developing their project management and communication skills. A major activity in this project is a three-month internship between May and August.

Elective Modules in Vertical Sectors

Students are required to take three elective modules from *at most* two vertical sectors. The *vertical sectors* provide students with a deep understanding of different analytic techniques required for different vertical industry sectors. Importantly, building on the knowledge, concepts and skills imparted from the essential modules, the elective modules from selected verticals will enable students to become BA specialists who can apply relevant BA techniques and tools in specific vertical domains, as well as innovate, devise and refine new BA techniques and tools appropriate to solving complex or emerging BA issues and problems.

The *vertical sectors* offered in this academic year are given below:

- Big-data analytics techniques (offered mainly by School of Computing)
- Consumer data analytics (offered jointly by School of Computing and NUS Business School)
- Financial and risk analytics (offered mainly by NUS Business School)
- Healthcare analytics (offered mainly by Saw Swee Hock School of Public Health)
- Statistical modelling (offered by Faculty of Science)

3.1.2 Duration of Programme

The duration of the programme is 12 months for full-time candidature or 24 months for part-time candidature.

3.1.3 Admission Requirements

The candidate must possess:

- A bachelor degree with good honours classification in computing, engineering, science, mathematics, statistics, business or economics, or
- A bachelor degree in computing, engineering, science, mathematics, statistics, business or economics, with 2 years of industry experience.

Either a GRE test or a GMAT test is required for admission, except for graduates from local universities – NUS, NTU, SMU and SUTD – with degrees in Computing, Engineering, Science, Mathematics, Statistics, Business or Economics.

Strong quantitative analysis ability (as evidenced by either a superior GRE/GMAT quantitative section score or good grades in Mathematics modules taken in the above-listed local universities) will be emphasized.

3.1.4 Graduation Requirements

Candidates must achieve a final CAP of 3.0 (average grade of B-) to graduate, otherwise their candidature will be terminated.

3.2 Relevant Website

Please visit <http://msba.nus.edu/> or direct your enquiries via email to: msba@nus.edu.sg

4 University Town College Programme

The University Town College Programme (UTCP) is a residential programme offered at College of Alice & Peter Tan, Residential College 4, and Tembusu College. Designed as a more coherent delivery of general education, the UTCP emphasises multidisciplinary learning and active small-group learning. Students from different disciplines, cultures, and nationalities are put together in each class, which helps them to assimilate and synthesise cross-disciplinary knowledge, facilitating multi-perspectival thinking.

Through its multidisciplinary curriculum, the UTCP will help students develop effective communications and strong writing skills, critical thinking skills, and intellectual breadth and rigour to tackle the complex, inter-related challenges confronting the world today. A host of informal learning activities, such as talks by distinguished visitors, as well as social and sporting activities, complements the formal curriculum.

4.1 [Admission Requirements](#)

4.2 [Programme Requirements](#)

4.3 [UTCP and Fulfilment of Graduation Requirements](#)

4.4 [Relevant website](#)

4.1 Admission Requirements

Incoming freshmen may apply for the UTCP concurrently with or after their NUS application. Admission into the UTCP is contingent upon the acceptance of an offer to pursue an undergraduate degree programme in NUS.

For select semesters, a small number of current undergraduates may be admitted as part of the senior intake. The senior admissions exercise is not applicable to:

- Students enrolled or previously enrolled in the UTCP at College of Alice & Peter Tan, Residential College 4 and Tembusu College;
- Students enrolled or previously enrolled in the University Scholars Programme; and
- Students enrolled or previously enrolled in Ridge View Residential College Programme.

Interested applicants should submit an online application via the [Joint Residential College Application System](#). Shortlisted candidates will be invited for an interview. You will be assessed based on your essay(s) and interview, in addition to your academic achievements and co-curricular experiences.

In your application you may indicate your preference, if any, for either College of Alice & Peter Tan, Residential College 4 or Tembusu College, but your eventual placement (if selected) may be different.

Only one application may be submitted per Academic Year.

4.2 Programme Requirements

Students admitted as part of the Semester 1 UTCP freshman intake will be offered a two-year residency in either [College of Alice & Peter Tan](#), [Residential College 4](#) or [Tembusu College](#), during which you should complete the [UTCP curriculum](#) comprising five modules: a Junior Seminar and Ideas & Exposition 1 typically in the first year, as well as two Senior Seminars (one with a Singapore Studies focus) and Ideas & Exposition 2 typically in the second year. Alternative learning pathways are designed for students from Law, Medicine, Dentistry, and selected programmes with curricular restrictions (e.g. Nursing, Music, and Joint Degree Programmes) to still read modules as part of the residential college experience.

Students admitted as part of the Semester 1 UTCP senior intake will be offered a one-year residency in either College of Alice & Peter Tan, Residential College 4 or Tembusu College, during which they should read one module with their College.

4.3 UTCP and Fulfilment of Graduation Requirements

Students from faculties in the modular system are required to complete five General Education (GE) modules under the NUS GE curriculum. For cohorts admitted from AY2016/2017 onwards, students who complete the UTCP are exempted from four of the five modules of the GE curriculum. This means that four UTCP modules will be read in place of the GE modules and the fifth UTCP module is taken as an Unrestricted Elective (UE) or Faculty requirements (if applicable).

The university requires all undergraduates (with the exception of Law, Medicine, Dentistry and Nursing) to complete the GER1000 Quantitative Reasoning (QR) module. This is the fifth GE module, and serves to complete the GE requirement for UTCP students. This module will be pre-allocated for you to read in your first or second semester.

Students who do not have the opportunity to complete the UTCP may seek exemptions from certain GE pillars based on the UTCP modules read to date, subject to the GE Committee's approval.

In some instances, Ideas & Exposition modules may be read in lieu of other writing / communication modules offered by the Centre for English Language Communication, which are graduation requirements for selected Faculties. Notwithstanding, each I&E module may only count towards either Faculty requirements or University Level Requirements but not double-counted towards both.

UTCP Module	Graduation Requirement to Fulfil	Module to Substitute
Ideas & Exposition 1 (UTW1001x*) OR Ideas & Exposition 2 (UTW2001x*)	Engineering: Critical Thinking and Writing requirement	ES1531
	Art and Social Sciences: Writing, Expression and Communication requirement	FAS1101
	Science (except Pharmacy and Environmental Studies): Faculty writing requirement	SP1541

**x represents a letter suffix which denotes the topic of the Ideas & Exposition module*

Students whose programmes do not have University Level Requirements (namely Law, Medicine, Dentistry, Nursing, and students on Joint Degree Programmes with overseas universities) should check with their respective programme administrators on how or whether the UTCP modules may be classified for graduation.

4.4 Relevant website

For more information, please visit <http://utown.nus.edu.sg/>.

For more information on the Colleges offering the UTCP,
visit <http://capt.nus.edu.sg/>, <http://rc4.nus.edu.sg/>, and <http://tembusu.nus.edu.sg/>

5 Ridge View Residential College Programme

Ridge View Residential College (RVRC) offers a unique living-learning experience to Year One students. The only residential college that is located at the centre of the Kent Ridge campus, the RVRC curriculum offers an integrated and multidisciplinary focus on sustainability, communication competencies, and workplace readiness.

This two-year residential programme offers constant and close interaction with fellow residents, student fellows, seniors and faculty, through formal classroom settings and informal community living. Students are presented with ample opportunities for exchange of ideas with industry players and prominent individuals from the public and private sectors, through dialogues, industry visits and project mentorship programmes. Besides a competent grasp of subject matter, this enhances a student's clarity, confidence and work readiness.

The RVRC living-learning experience contributes to the overall development of an undergraduate – academically, socially, personally and professionally. Students are exposed to co-academic and community enhancement programmes, and assured of space to experiment with different ideas and experiences through a diversified platform which complement their academic experience at their respective faculties and schools. By expanding competencies, students begin to explore academic, career and lifelong alternatives.

5.1 [Admission Requirements](#)

5.2 [Programme Requirements](#)

5.3 [RVRC and Fulfilment of Graduation Requirements](#)

5.4 [Relevant website](#)

5.1 Admission Requirements

Incoming freshmen may apply for the RVRC Programme concurrently with or after their NUS application. Admission into the RVRC Programme is contingent upon the acceptance of an offer to pursue an undergraduate degree programme in NUS. It is also subject to the condition that incoming freshmen fulfil the university requirement on English language qualifications. Specifically, incoming students who do not possess the necessary English language qualifications are required to sit for the [Qualifying English Test \(QET\)](#). Students must obtain either a Band 2 or Band 3 for the QET to be admitted to RVRC.

RVRC admits incoming Year One students from the NUS Business School, Faculty of Arts & Social Sciences, Faculty of Engineering, Faculty of Science, School of Computing, and School of Design & Environment. Students from other Faculties/Schools will be considered for admission on a case-by-case basis, with consideration for their ability to fulfil the RVRC Programme requirements.

Interested applicants should submit an online application via the [Joint Residential College Application System](#). Selected students will be invited to attend an interview.

Only one application may be submitted per Academic Year.

5.2 Programme Requirements

The RVRC experience is anchored and distinguished by its integrated inter-disciplinary curriculum. Each year is centred around three themes – *sustainability, communication and workplace readiness* in the first year; and *resilience, respect and reflection* in the second year.

In the FIRST year of residency, every student admitted into the RVRC Programme is required to complete three year-long academic modules. These three modules are:

1. GEQ1917 Understanding and Critiquing Sustainability
2. ES1601 Professional and Academic Communication*
3. WR1401 Workplace Readiness

**Students who are required to read ES1103 in Semester 1 (based on Qualifying English Test (QET) results) will read ES1601 in Semester 2.*

The modules include two compulsory co-academic components which provide experiential learning and real-world application.

In addition to the modular requirements, all first year students enrolled in RVRC must participate in the following compulsory college-level activities:

1. the RVRC Coastal Cleanup
2. two college-level industry engagements: 1 industry leader dialogue and 1 industry visit
3. two community service actions

Certification for the first year is achieved by fulfilment of all the above academic, co-academic and college level activities.

In the SECOND year, students at RVRC are required to choose from a basket of non-modular learning opportunities called Forums.

Certification for the second year is achieved by fulfilment of participation in a forum in each of the three pillars of Respect, Resilience and Reflection.

5.3 RVRC and Fulfilment of Graduation Requirements

GEQ1917 (formerly GEM1917) fulfils the 'Asking Questions' pillar, which is one of the five General Education modules required of all undergraduates. RVRC students who have read and completed this module would have satisfied the "Asking Questions" pillar.

ES1601 can be taken in lieu of the compulsory writing and/or communication module(s) in Faculty of Arts and Social Sciences (FAS1102), Faculty of Science (SP1541), Faculty of Engineering (ES1531), NUS Business School (ES2002 or MNO2706), School of Computing (CS2101 or IS2101) and School of Design and Environment (ES2007D). For students in the Architecture, Industrial Design, Project and Facilities Management, Environmental Studies and Pharmacy degree programmes, it qualifies as an Unrestricted Elective Module.

5.4 Relevant website

For more information on RVRC, please visit <http://rvrc.nus.edu.sg>.

6 Double Degree Programmes

Introduction

A Double Degree consists of a combination of two separate degrees from two discipline areas in the same Faculty or in two different Faculties. Except for certain prohibited combinations, as identified by the Faculties, all other combinations of double degree programmes will be allowed. There are specially designed double degrees developed by Faculties, as well as double degree combinations put together by students. In the latter situation, the degree requirements are specified in section 2.2.5 of Part I of the Bulletin.

- 6.1 [Double Honours Degree in Economics and Law](#)
- 6.2 [Double Degree in Communication & New Media and Business Administration/Business Administration \(Accountancy\)](#)
- 6.3 [Double Degree in Economics and Business Administration / Business Administration \(Accountancy\)](#)
- 6.4 [Double Degree in Computer Science / Information Systems and Business Administration / Business Administration \(Accountancy\)](#)
- 6.5 [Double Degree in Computer Science and Mathematics / Applied Mathematics](#)
- 6.6 [Double Degree in Engineering and Economics](#)
- 6.7 [Double Degree in Engineering and Business Administration / Business Administration \(Accountancy\)](#)
- 6.8 [Double Degree in Law and Life Sciences](#)
- 6.9 [Double Degree in Business and Law](#)
- 6.10 [Bachelor of Arts \(with Honours\) and Bachelor of Law \(Honours\)](#)
- 6.11 [Double Degree in Master of Laws and Master in Public Administration/Public Policy](#)
- 6.12 [Double Degree in Master of Business Administration and Master in Public Administration/Public Policy](#)
- 6.13 [Double Degree in Master of Business Administration and Master of Science in Real Estate](#)
- 6.14 [The NUS-Renmin Master of Science in Real Estate – Master in Business Administration Double Degree Programme](#)

6.1 Double Honours Degree in Economics and Law

[Bachelor of Social Sciences (Honours) in Economics and Bachelor of Laws (Honours)]

6.1.1 [Overview of Programme](#)

6.1.2 [Admission Requirements](#)

6.1.3 [Exiting the Programme](#)

6.1.4 [Relevant website](#)

6.1.1 Overview of Programme

The Double Honours Degree in Economics and Law is offered by the Faculty of Arts and Social Sciences and Faculty of Law, leading to both the degrees of B.Soc.Sci. (Hons.) and LL.B. (Hons.).

Economics and Law are, in some areas, complementary disciplines. Increasingly, experts will use methodologies from the two disciplines. Scholars and practitioners of the two fields have been actively examining the places where they meet. For example, most Corporate Law subjects in top law schools now include economic analysis, and economists working on public policy, such as competition policy, require a working knowledge of the supporting legal infrastructure.

Singapore is a regional centre for legal services, and a lot of our international legal work involves commercial, corporate and financial law. This means there is — and will continue to be — a demand for lawyers with a strong background in economics, as well as for economists trained in law. Likely future employers are: some law firms, large commercial banks, and institutions such as the Monetary Authority of Singapore, the Media Development Authority, the Infocomm Development Authority and the Competition Commission of Singapore.

The programme includes the core of our Economics and Law degrees, as well as some other modules to allow students to explore beyond those areas.

6.1.2 Admission Requirements

Students may be admitted to the programme, on a competitive basis, via a dual-entry system:

1. By direct application with relevant GCE 'A' Level or equivalent qualifications. Shortlisted applicants will be required to undergo a written test and interview;
2. By application at the end of their first year in the Faculty of Law or first year of Faculty of Arts and Social Sciences. Students in the top 50% of their LL.B. class and Economics Majors with a CAP of 4.0 and above will be invited to apply. Shortlisted applicants will be required to undergo a written test and/or interview.

Applicants to the double degree programme must meet the admission requirements of both Faculties.

Detailed information on the admission requirement is available at

<http://www.nus.edu.sg/prog/econlaw/admiss.html>

6.1.3 Exiting the Programme

If FASS is the home faculty, students must either maintain a CAP of 3.75 for the B.Soc.Sci. (Hons) or remain in the top half of the Law cohort. If Law is the home faculty, students must remain in the top half of the Law cohort or maintain a CAP of 3.25 for the B.Soc.Sci. (Hons). Those who fall below in both degrees for two consecutive semesters will be required to leave the programme. Direct entry students will have the choice of degree into which they exit. Later entry students will exit into their home faculty.

This DDP continuation rule is not applicable once students' total cumulative modular credits exceeds 160 MCs.

Students who do not qualify for the FASS Honours Thesis will graduate with LLB (Hons) and BA, if all other conditions are met.

Students leaving the programme on their own accord will be advised on how to use modules taken towards their single BA or B.Soc.Sci. (Hons) degree (Economics) or the Law degree.

6.1.4 Relevant website

For more information, please visit: <http://www.nus.edu.sg/prog/econlaw>

6.2 Double Degree in Communication & New Media and Business

6.2.1 [Overview of Programme](#)

6.2.2 [Admission Requirements](#)

6.2.3 [Exiting the Programme](#)

6.2.4 [Relevant website](#)

6.2.1 Overview of Programme

[Bachelor of Social Sciences (Honours) and Bachelor of Business Administration (Honours/non-Honours); Bachelor of Social Sciences (Honours) and Bachelor of Business Administration (Accountancy) (Honours/non-Honours);

Bachelor of Arts and Bachelor of Business Administration (Honours); Bachelor of Arts and Bachelor of Business Administration (Accountancy) (Honours)]

The major for the Faculty of Arts and Social Sciences degree is Communications and New Media

Overview of Programme

The DDP in Communication and New Media (CNM) and Business is jointly offered by the Faculty of Arts and Social Sciences (FASS) and the NUS Business School (BIZ).

In today's global environment, the dividing line separating communications and media studies, and business becomes increasingly vague. Graduates from communications and media programmes are often expected to perform tasks that entail business training — e.g., market analysis, marketing campaigns, while business graduates are expected to know how to effectively communicate with a company's public, manage a crisis or chart out technology trends.

Likewise, in today's converging media environment, communication professionals are expected to have a broad range of knowledge and creative skills, from critical thinking and excellent writing to the ability to create publications, websites and other interactive environments.

The programme aims to enrich students' experience and prepare them for this converging field by combining modules from both CNM and NUS Business School.

CNM will be offering modules in three areas, namely new media studies, communication management and interactive media. Students will be exposed to subjects such as political economy, globalisation of media, creation of news content, management of information, structure of the new media industry and how gaming and other forms of interactive media/digital entertainment fit into the greater economic environment of the new media industry. On the business aspect, NUS's Business programme will prepare students for managerial leadership in the global economy. Its broad-based curriculum benefits from the comprehensive academic breadth and intellectual intensity of the University.

Articulate students that embrace technology will find good fit in this CNM and Business double degree programme that promises to nurture an attractive breed of media-savvy business professionals.

6.2.2 Admission Requirements

Students will be admitted to the programme only if they meet the requirements of both the Faculty of Arts and Social Sciences (FASS) and NUS Business School.

Students may be admitted to the programme in one of the following ways:

1. Direct application by students with relevant GCE 'A' Level, Polytechnic or equivalent qualifications (*not applicable for Accountancy programme**); OR
2. Application by students at the end of the first year of study in the FASS or NUS Business School if they meet the minimum CAP requirement. Students further along in their programme may be admitted on an exceptional basis.

FASS students who plan to enrol in this programme after the first year are strongly encouraged to read two Business modules to enable them to better understand the Business programme. Similarly, Business students who plan to enrol in this programme are strongly encouraged to read two CNM module (including NM1101E). Current students have to apply to the programme through their respective Faculty/School. The application will be forwarded to the partnering School/Faculty if the original Faculty/School approves the application.

The minimum Cumulative Average Point (CAP) requirement for consideration to the programme is 3.75. The applicant will also need to meet the minimum prevailing admission criteria of both Faculty/School, that is, the applicant must have:

- A minimum grade of 'C6' in GCE 'AO' Level or H2 Mathematics, or GCE 'O' Level Additional Mathematics, or otherwise demonstrated equivalent preparation.

The applicant's non-academic activities may be considered, and the applicant may have to attend an interview.

**There is no direct admission for double-degree programmes with Business Administration (Accountancy). Non-business students must obtain at least B+ for ACC1701X Accounting for Decision Makers and preferably also ACC2706 Managerial Accounting, in order to be considered for late-entry admission after their first year of study.*

6.2.3 Exiting the Programme

Students can choose to withdraw, or may be asked to withdraw from the programme if they fail to meet requirements. Students who withdraw from the programme are permitted to work instead for a single degree in their original home Faculty/School. Modular Credits completed in the programme will be counted towards the fulfilment of the degree requirements of the home Faculty/School, subject to the normal limits of the Faculty/School curriculum.

A student who does not maintain a CAP of 3.75 in modules contributing to the original degree, and/or a CAP of 3.25 for the second degree for any two consecutive semesters will be required to withdraw from the DDP by withdrawing from the second degree programme. For details, please refer to the [DDP Framework and Guidelines](#).

This DDP continuation rule is not applicable once students' total cumulative modular credits exceeds 160 MCs.

6.2.4 Relevant website

Further information on the programme is available at: <http://nus.edu/prog/bizcnm/>

6.3 Double Degree in Economics and Business Administration / Business Administration (Accountancy)

6.3.1 [Overview of Programme](#)

6.3.2 [Admission Requirements](#)

6.3.3 [Exiting the Programme](#)

6.3.4 [Relevant website](#)

6.3.1 Overview of Programme

*[Bachelor of Social Sciences (Honours) and Bachelor of Business Administration (Honours/non-Honours);
Bachelor of Social Sciences (Honours) and Bachelor of Business Administration (Accountancy)
(Honours/non-Honours);*

*Bachelor of Arts and Bachelor of Business Administration (Honours); Bachelor of Arts and Bachelor of
Business Administration (Accountancy) (Honours)]*

The major for the Faculty of Arts and Social Sciences degree is Economics

Overview of Programme

The double degree programme integrates and synergises the strengths of the two disciplines of Economics and Business. Business is multi-disciplinary and imparts the necessary skill set for meeting the challenges of the business world, while Economics, being a science of choice, imparts the skill set for problem-solving. The two are therefore complementary and inextricably interwoven.

Both combinations of economics and business is to nurture business-savvy professionals with an edge in economics.

6.3.2 Admission Requirements

Students will be admitted to the programme only if they meet the requirements of both the Faculty of Arts and Social Sciences (FASS) and NUS Business School.

Students may be admitted to the programme in one of the following ways:

1. Direct application by students with relevant GCE 'A' Level (*not applicable for Accountancy programme**); OR
2. Application by students at the end of the first year of study in the FASS or NUS Business School if they meet the minimum CAP requirement. Students further along in their programme may be admitted on an exceptional basis.

FASS students who plan to enrol in this programme after the first year are strongly encouraged to read two Business modules to enable them to better understand the Business programme. Similarly, Business students who plan to enrol in this programme are strongly encouraged to read two Economics modules (including EC1101E). Current students have to apply to the programme through their respective Faculty/School. The application will be forwarded to the partnering School/Faculty if the original Faculty/School approves the application.

The minimum Cumulative Average Point (CAP) requirement for consideration to the programme is 3.75. The applicant will also need to meet the minimum prevailing admission criteria of both Faculty/School, that is, the applicant must have:

- A minimum grade of 'C6' in GCE 'AO' Level Mathematics or GCE 'O' Level Additional Mathematics, or otherwise demonstrated equivalent preparation.

The applicant's non-academic activities may be considered, and the applicant may have to attend an interview.

**There is no direct admission for double-degree programmes with Business Administration (Accountancy). Non-business students must obtain at least B+ for ACC1701X Accountancy for Decision Makers and preferably also ACC2706 Managerial Accounting, in order to be considered for late-entry admission after their first year of study.*

6.3.3 Exiting the Programme

Students can choose to withdraw, or may be asked to withdraw from the programme if they fail to meet requirements. Students who withdraw from the programme are permitted to work instead towards the single degree in their original home Faculty/School. Modular Credits completed in the programme will be counted towards the fulfilment of the degree requirements of the home Faculty/School, subject to the normal limits of the Faculty/School curriculum.

A student who does not maintain a CAP of 3.75 in modules contributing to the original degree, and/or a CAP of 3.25 for the second degree for any two consecutive semesters will be required to withdraw from the DDP by withdrawing from the second degree programme. For details, please refer to [DDP Framework & Guidelines](#).

This DDP continuation rule is not applicable once students' total cumulative modular credits exceeds 160 MCs.

6.3.4 Relevant website

Further information on the programme is available at: <http://www.nus.edu.sg/prog/bizecon/index.html>

6.4 Double Degree in Computer Science / Information Systems and Business Administration / Business Administration (Accountancy)

6.4.1 [Overview of Programme](#)

6.4.2 [Admission Requirements](#)

6.4.3 [Exiting the Programme](#)

6.4.4 [Relevant website](#)

6.4.1 Overview of Programme

[Bachelor of Computing (Computer Science/Information Systems) (Honours) and Bachelor of Business Administration (Honours/non-Honours); and Bachelor of Computing (Computer Science/Information Systems) (Honours) and Bachelor of Business Administration (Accountancy) (Honours/non-Honours)]

The programme is jointly offered by the NUS School of Computing and NUS Business School. It aims to leverage on the advantage of NUS being a comprehensive university, which enables students to fully develop their potential by pursuing multidisciplinary programmes.

Business Administration and Computer Science/ Information Systems are complementary areas of knowledge which are becoming inextricably interwoven. Our various communications with the IT industry have revealed a strong demand among employers for graduates with both computer science/information systems knowledge and in-depth understanding of business domains.

The Double Degree programme in Computer Science and Business Administration (including Accountancy) meets such a demand through its emphasis on developing both the core computing skills and business skills of students. It will enable students to apply computational considerations to all aspects of business practice, thereby complementing their business skills and introducing a new analytic dimension to the understanding of organisational behaviour, finance and accounting, marketing, economics, and business law, among others.

The Double Degree programme in Information Systems and Business Administration (including Accountancy) meets a similar demand. It will enable students to practise the management and implementation of information systems, enhanced with complementing business skills and knowledge in areas such as organisational behaviour, finance & accounting, marketing, operations management, economics, and business law, among others.

Both combinations of business and computing/ information systems programmes will develop business-savvy IT professionals as well as technology-minded business leaders for the marketplace. The programme is designed so that students may complete it within a reasonable time-frame of five years.

The options offered to students are:

- a. BBA (Hons)/BComp (CS) (Hons)
- b. BBA (Hons)/BComp (IS) (Hons)
- c. BBA (Acc Hons)/BComp (CS) (Hons)
- d. BBA (Acc Hons)/BComp (IS) (Hons)
- e. BComp (CS) (Hons)/BBA
- f. BComp (IS) (Hons)/BBA
- g. BComp (CS) (Hons)/BBA (Acc)

h. BComp (IS) (Hons)/BBA (Acc)

Programmes (a) to (d) are double-honours degree programmes, while (e) to (h) are single-honours degree programmes available only to students whose home faculty is the School of Computing.

6.4.2 Admission Requirements

Students will be admitted to the DDP only if they meet the requirements of both the NUS School of Computing (SOC) and NUS Business School (BIZ).

Students may be admitted to the DDP in one of the following ways:

1. Direct application through the University's admissions exercise with relevant GCE 'A' Level or equivalent qualifications (*not applicable for Accountancy programme**).

Applicants must satisfy one of the following two criteria:

- GCE 'A' Level applicants: Pass in either GCE 'A' Level or H2 Mathematics
- Polytechnic applicants: Accredited diploma or Grade 'A2' in GCE 'O' Level Elementary Mathematics or Grade 'B4' in GCE 'O' Level Additional Mathematics

2. Application at the end of the first year of study in BComp (Hons) in CS or IS, or BBA/BBA (Acc)* if CAP criteria is met. Interested students are strongly encouraged to complete at least one module from the second degree in Business/Computing before considering to apply for the double-degree programme.

**There is no direct admission for double degree programmes with Business Administration (Accountancy). Non-business students must obtain at least B+ for ACC1701X Accounting for Decision Makers and preferably also ACC2706 Managerial Accounting, in order to be considered for late-entry admission after their first year of study.*

6.4.3 Exiting the Programme

For students admitted to NUS from AY2014/15:

A student who does not maintain a CAP of 3.75 in modules contributing to the original degree, and/or a CAP of 3.25 for the second degree for any two consecutive semesters will be required to withdraw from the DDP by withdrawing from the second degree programme. Students may also choose to withdraw from the programme by informing their home faculty.

6.4.4 Relevant website

Please refer to: <http://nus.edu.sg/prog/bizsoc/>

6.5 Double Degree in Computer Science and Mathematics / Applied Mathematics

6.5.1 [Overview of Programme](#)

6.5.2 [Admission Requirements](#)

6.5.3 [Programme Requirements](#)

6.5.4 [Grading and Degree Requirements](#)

6.5.5 [Exiting the Programme](#)

6.5.6 [Relevant website](#)

6.5.1 Overview of Programme

[Bachelor of Computing (Computer Science) (Honours) and Bachelor of Science (Mathematics/Applied Mathematics) (Honours/non-Honours)]¹

Targeted at students with good results or special talent in mathematics or computing, this programme seeks to groom them into graduates who will be at ease with tackling multifaceted computational problems in industry such as complex scheduling or taking interactive digital media to the next phase.

This programme celebrates and leverages the synergistic relationship between computer science and mathematics that is apparent in many ways. Emphasising quality over quantity, admission to the programmes will be highly selective in their admission, and students must maintain consistently good results to remain in the programmes.

Students may choose from one of two specialisations: algorithms and computation, and multimedia modelling.

Algorithms and Computation

Graduates with this specialisation will be at the forefront of solving myriad complex computational problems, in both industry and research. They will apply their advanced learning in the principles and practice of computer science to tackle industry needs in complex scheduling, network optimisation, physical simulation, software reliability, etc. Their advanced knowledge in algorithmic design will also enable them to adapt to a wide variety of computing fields. The specialisation covers areas such as: computational complexity, cryptography, algorithmic graph theory and combinatorics, randomness in computing, parallel and distributed computation, machine learning, applications of logic, algorithmic algebra, coding theory, etc.

Multimedia Modelling

Graduates with this specialisation will be in the vanguard of interactive digital media (IDM) technology. They will apply their mathematical logic and learning in networking and multimedia technologies to develop more realistic animation, and better special effects, and generate a more immersive experience in virtual reality that engages the various human senses more fully. Graduates with this specialisation will find their niche in high-end technology companies in the IDM sector, as well as in the field of research. The specialisation covers areas such as Numerical PDE, 3D Differential Geometry, Computational Geometry, Game Development, etc.

Each specialisation comprises advanced modules from both the Department of Mathematics and the Department of Computer Science.²

Note 1:

Students in the other Bachelor of Computing programmes, except B.Comp. (Computer Science), may wish to design special Double-degree programme with B.Sc. (Mathematics) or B.Sc. (Applied Mathematics) under the guidance of the Undergraduate Offices of both School of Computing and Faculty of Science.

Note 2:

The list of modules will be updated regularly by the committee overseeing the double-degree programmes.

MODULES IN “ALGORITHMS AND COMPUTATION”

MODULE CODE	MODULE TITLE	MCS
MA3205	Set Theory	4
MA3218	Applied Algebra	4
MA3219	Computability Theory	4
MA3233	Combinatorics and Graphs II	4
MA3252	Linear and Network Optimisation	4
MA4207	Mathematical Logic	4
MA4235	Topics in Graph Theory	4
MA4254	Discrete Optimisation	4
MA4261	Coding and Cryptography	4
MA4270	Data Modelling and Computation	4
MA5219	Logic and Foundation of Mathematics I	4
MA5220	Logic and Foundation of Mathematics II	4
CS3234	Logic and Formal Systems	4
CS3236	Introduction to Information Theory	4
CS4212	Compiler Design	4
CS4231	Parallel and Distributed Algorithms	4
CS4232	Theory of Computation	4

MODULE CODE	MODULE TITLE	MCS
CS4234	Optimisation Algorithms	4
CS4236	Cryptography Theory and Practice	4
CS5215	Constraint Processing	4
CS5230	Computational Complexity	4
CS5232	Formal Specification and Design Techniques	4
CS5234	Combinatorial and Graph Algorithms	4
CS5236	Advanced Automata Theory	4
CS5237	Computational Geometry and Applications	4
CS5238	Advanced Combinatorial Methods in Bioinformatics	4
CS5330	Randomized Algorithms	4

MODULES IN “MULTIMEDIA MODELLING”

MODULE CODE	MODULE TITLE	MCS
MA3220	Ordinary Differential Equations	4
MA3227	Numerical Analysis II	4
MA3229	Introduction to Geometric Modelling	4
MA3236	Nonlinear Programming	4
MA3264	Mathematical Modelling	4
MA4221	Partial Differential Equations	4
MA4230	Matrix Computation	4
MA4255	Numerical Methods in Differential Equations	4
MA4268	Mathematics for Visual Data Processing	4
MA4270	Data Modelling and Computation	4
MA4271	Differential Geometry of Curves and Surfaces	4

MODULE CODE	MODULE TITLE	MCS
MA5233	Computational Mathematics	4
MA5242	Wavelets	4
CS3218	Multimodal Processing in Mobile Platforms	4
CS3241	Computer Graphics	4
CS3242	3D Modelling and Animation	4
CS3247	Game Development	4
CS4242	Social Media Computing	4
CS4243	Computer Vision and Pattern Recognition	4
CS4350	Game Development Project	4
CS4247	Graphics Rendering Techniques	4
CS4248	Natural Language Processing	4
CS4347	Sound and Music Computing	4
CS5237	Computational Geometry and Application	4
CS5240	Theoretical Foundations in Multimedia	4
CS5241	Speech Processing	4
CS5246	Text Processing on the Web	4
CS5249	Audio in Multimedia Systems	4
CS5342	Multimedia Computing and Applications	4
CS5343	Advanced Computer Animation	4

6.5.2 Admission Requirements

The double honours degree programme follows a dual-entry system:

1. Direct admission through university admission exercise: <http://www.nus.edu.sg/oam>

Applicants must satisfy one of the following two criteria:

- I. Grade A in either GCE 'A' Level/H2 Level/IB Higher Level Mathematics or GCE 'A' Level Further Mathematics, and a good grade at GCE 'A' Level/H2 Level/IB Higher Level in either Computing or Physics or Chemistry or Biology or Physical Science.
- II. Demonstrated special talents in Mathematics and/or Computing (e.g., Mathematics and/or Informatics Olympiad awards, etc.)

If the candidate meets criterion I, no interview will be required.

2. Admissions on the completion of first-year studies in B.Comp. (Hons.) or B.Sc. (Hons.).

Candidates will be assessed on the merits of their first-year results. Interested students should contact the programme administrator on receipt of their results.

6.5.3 Programme Requirements

Students may pursue either a double honours or a single honours programme. Briefly, students pursuing one of the specialisations must obtain at least 32 MCs (for double honours programme) or 28 MCs (for single honours programme) from modules offered under the respective specialisation. Furthermore, students pursuing a double honours programme with specialisation must complete an integrated honours project, which will be jointly supervised by faculty members from the Department of Computer Science and the Department of Mathematics.

6.5.3.1 [BComp \(Hons\) – BSc \(Hons\) Double Honours Programmes](#)

6.5.3.2 [BComp \(Hons\) – BSc Single Honours Programmes](#)

6.5.3.3 [Integrated Honours Project](#)

6.5.3.1 BComp (Hons) - BSc (Hons) Double Honours Programmes

The double honours programme requires students to take a total of 200 MCs and 200 MCs for B.Comp. (Hons.) — B.Sc. (Hons.) (Math.) and B.Comp. (Hons.) — B.Sc. (Hons.) (Appl.Math.) degrees respectively. These programmes consist of the following:

1. Bachelor of Computing — Honours in Computer Science (128 MCs)
BComp students normally take 160 MCs to fulfil the University Level Requirements (ULR), Programme requirements, and Unrestricted Electives. Under this programme, 32 MCs would be waived under double degree rules. The 32 MCs will come from the Unrestricted Electives.
2. Bachelor of Science — Honours in Mathematics (128 MCs)
BSc students in the four-year B.Sc. degree programme normally take 160 MCs to fulfil the University Level Requirements (ULR), Faculty and Major Requirements, and Unrestricted Electives. Under this programme, 32 MCs would be waived under double degree rules. The 32 MCs will come from the Unrestricted Electives.
3. Bachelor of Science — Honours in Applied Mathematics (128 MCs)
BSc students in the four-year B.Sc. degree programme normally take 160 MCs to fulfil the University Level Requirements (ULR), Faculty and Major Requirements, and Unrestricted Electives. Under this programme, 32 MCs would be waived under double degree rules. The 32 MCs will come from the Unrestricted Electives.

The details are set out in Tables A and B respectively.

TABLE A: BCOMP (COMPUTER SCIENCE) - BSC (HONS) (MATHEMATICS) DOUBLE HONOURS PROGRAMMES

DOUBLE HONOURS DEGREE REQUIREMENTS	MCS REQUIREMENT
(A) University Level Requirement	20 MCs
(B) BComp Programme Requirements [#]	72 MCs
Computer Science Foundation and IT Professionalism Modules	36 MCs (+ 12 MCs to be satisfied by common modules)
Computer Science Breadth & Depth Modules	32 MCs (+ 12 MCs to be satisfied by common modules)
Mathematics and Science Modules [#]	4 MCs (+ 12 MCs to be satisfied by common modules)
(C) BSc Programme Requirements [†]	72 MCs
Faculty Requirements Modules*	12 MCs (+ 4 MCs to be satisfied by CS1010)

DOUBLE HONOURS DEGREE REQUIREMENTS	MCS REQUIREMENT
Mathematics Modules [†]	60 MCs (+ 32 MCs to be satisfied by common modules)
(D) Common Modules ^(Tables 1 & 2)	36 MCs
Total	200 MCs

* BSc (Hons) Faculty Requirements:

1. CS1010 Programming Methodology (4 MCs)

2. 12 MCs from two distinct subject groups excluding 'Computing Sciences' and Mathematical & Statistical Sciences'

Students without A-level or H2 Mathematics are required to complete the bridging module MA1301/X as part of the Unrestricted Electives. Please refer to:

<http://www.comp.nus.edu.sg/cugresource/per-cohort/dhp-cs-maths/cs-maths-h17-18/> for details.

† Please refer to: <http://ww1.math.nus.edu.sg/undergraduates.aspx?file=UP-AM> for details.

TABLE B: BCOMP (COMPUTER SCIENCE) - BSC (HONS) (APPLIED MATHEMATICS) DOUBLE HONOURS PROGRAMMES

DOUBLE HONOURS DEGREE REQUIREMENTS	MCS REQUIREMENT
(A) University Level Requirement	20 MCs
(B) BComp Programme Requirements [#]	72 MCs
Computer Science Foundation and IT Professionalism Modules	36 MCs (+ 12 MCs to be satisfied by common modules)
Computer Science Breadth & Depth Modules	32 MCs (+ 12 MCs to be satisfied by common modules)
Mathematics and Science Modules	4 MCs (+ 12 MCs to be satisfied by common modules)
(C) BSc Programme Requirements [†]	72 MCs
Faculty Requirements Modules*	12 MCs (+ 4 MCs to be satisfied by CS1010)
Mathematics Modules [†]	60 MCs (+ 32 MCs to be satisfied by common modules)
(D) Common Modules ^(Tables 1 & 2)	36 MCs

DOUBLE HONOURS DEGREE REQUIREMENTS		MCS REQUIREMENT
Total		200 MCs

* BSc (Hons) Faculty Requirements:

1. CS1010 Programming Methodology (4 MCs)
2. 12 MCs from two distinct subject groups excluding 'Computing Sciences' and 'Mathematical & Statistical Sciences'

Students without A-level or H2 Mathematics are required to complete the bridging module MA1301/X as part of the Unrestricted Electives. Please refer to:

<http://www.comp.nus.edu.sg/cugresource/per-cohort/dhp-cs-maths/cs-maths-h17-18/> for details.

† Please refer to: <http://ww1.math.nus.edu.sg/undergraduates.aspx?file=UP-AM> for details.

6.5.3.2 BComp (Hons) - BSc Single Honours Programmes

The proposed single honours programmes require students to take a total of 180 MCs (including 8 MCs of Unrestricted electives).

These programmes consist of the following:

1. Bachelor of Computing — Honours in Computer Science (128 MCs)
BComp students normally take 160 MCs to fulfil the University Level Requirements (ULR), Programme requirements, and Unrestricted Electives. Under this programme, 32 MCs would be waived under double degree rules. The 32 MCs will come from the Unrestricted Electives.
2. Bachelor of Science — non-Honours in Mathematics (92 MCs)
BSc students in the three-year BSc degree programme normally take modules of 120 MCs to fulfil University Level Requirements (ULR), Faculty and Major Requirements, and Unrestricted Electives Requirements. Under this programme, 28 MCs will be waived under double degree rules. The 28 MCs will come from Unrestricted Electives.
3. Bachelor of Science — non-Honours in Applied Mathematics (92 MCs)
BSc students in the three-year B.Sc. degree programme normally take modules of 120 MCs to fulfil the University Level Requirements (ULR), Faculty and Major Requirements, and Unrestricted Electives Requirements. Under this programme, 28 MCs will be waived under double degree rules. The 28 MCs will come from Unrestricted Electives.

The details are set out in Tables C and D respectively.

TABLE C: BCOMP (COMPUTER SCIENCE) - BSC (MATHEMATICS) SINGLE HONOURS PROGRAMME

DOUBLE HONOURS DEGREE REQUIREMENTS	MCS REQUIREMENT
(A) University Level Requirement	20 MCs
(B) BComp Programme Requirements [#]	84 MCs
Computer Science Foundation and IT Professionalism Modules	36 MCs (+ 12 MCs to be satisfied by common modules)
Computer Science Breadth & Depth Modules	44 MCs
Mathematics and Science Modules	4 MCs (+ 12 MCs to be satisfied by common modules)
(C) BSc Programme Requirements [†]	48 MCs
Faculty Requirements Modules*	8 MCs (+ 4 MCs to be satisfied by CS1010)
Mathematics Modules [†]	40 MCs (+ 20 MCs to be satisfied by common modules)

DOUBLE HONOURS DEGREE REQUIREMENTS	MCS REQUIREMENT
(D) Common Modules ^(Tables 1 & 2)	24 MCs
Total	180 MCs (including 4 MCs of UEs)

* BSc Faculty Requirements:

1. CS1010 Programming Methodology (4 MCs)
2. 8 MCs from two distinct subject groups excluding 'Computing Sciences' and 'Mathematical & Statistical Sciences'

Students without A-level or H2 Mathematics are required to complete the bridging module MA1301/X as part of the Unrestricted Electives. Please refer to:

<http://www.comp.nus.edu.sg/cugresource/per-cohort/ddp-cs-maths/cs-maths-17-18/> for details.

† Please refer to: <http://ww1.math.nus.edu.sg/undergraduates.aspx?file=UP-MA> for details.

Table D: BComp (Computer Science) - BSc (Applied Mathematics) Single Honours Programme

DOUBLE HONOURS DEGREE REQUIREMENTS	MCS REQUIREMENT
(A) University Level Requirement	20 MCs
(B) Computer Science Requirements [#]	84 MCs
Computer Science Foundation and IT Professionalism Modules	36 MCs (+ 12 MCs to be satisfied by common modules)
Computer Science Breadth & Depth Modules	44 MCs
Mathematics and Science Modules	4 MCs (+ 12 MCs to be satisfied by common modules)
(C) BSc Programme Requirements [†]	48 MCs
Faculty Requirements Modules*	8 MCs (+ 4 MCs to be satisfied by CS1010)
Mathematics Modules [†]	40 MCs (+ 20 MCs to be satisfied by common modules)
(D) Common Modules ^(Tables 1 & 2)	24 MCs
Total	180 MCs (including 4 MCs of UEs)

* BSc Faculty Requirements:

1. CS1010 Programming Methodology (4 MCs)
2. 8 MCs from two distinct subject groups excluding 'Computing Sciences' and 'Mathematical & Statistical Sciences'.

Students without A-level or H2 Mathematics are required to complete the bridging module MA1301/X as part of the Unrestricted Electives. Please refer to:

<http://www.comp.nus.edu.sg/cugresource/per-cohort/ddp-cs-maths/cs-maths-17-18/> for details.

† Please refer to: <http://ww1.math.nus.edu.sg/undergrad.aspx?file=UP-MA> for details.

6.5.3.3 Integrated Honours Project

Students pursuing one of the listed specialisations in the double honours degree programme must undertake an integrated honours project in Mathematics and Computer Science. The project will provide the students with the opportunity to explore and integrate their knowledge in the specialised field.

A student pursuing a double honours degree programme without specialisation can choose to undertake:

1. One integrated honours year project or
2. One Computing honours year project and one Mathematics honours year project
3. Industrial Experience Requirement (12 MCs) and one Mathematics honours year project

The integrated honours project will be jointly supervised by faculty members from the Department of Computer Science and the Department of Mathematics, and must contain elements of both computer science and mathematics.

6.5.4 Grading and Degree Requirements

1. Double Honours Programmes

The degree classification for Computing Degree (Honours) will be based on CAP calculated from 140 MCs: 88 MCs B.Comp. Programme Requirements, 32 MCs Common Modules, 20 MCs University Level Requirements (ULR).

The degree classification for Science Degree (Honours) majoring in Mathematics will be based on CAP calculated from 133 MCs: 17 MCs Faculty Requirement Modules, 64 MCs Mathematics Modules, 32 MCs Common Modules, 20 MCs (ULR).

The degree classification for Science Degree (Honours) majoring in Applied Mathematics will be based on CAP calculated from 137 MCs: 17 MCs Faculty Requirement Modules, 68 MCs Mathematics Modules, 32 MCs Common Modules, 20 MCs ULR.

2. B.Comp. (Hons.) – B.Sc. in Mathematics: Single Honours Programme

The degree classification for Computing Degree (Honours) will be based on CAP calculated from 140 MCs: 104 MCs B.Comp. Programme Requirements, 16 MCs Common Modules, 20 MCs ULR .

The degree classification for Science Degree (non-Honours) majoring in Mathematics will be based on CAP calculated from 93 MCs: 13 MCs Faculty Requirement Modules, 44 MCs Mathematics Modules, 16 MCs Common Modules, 20 MCs ULR .

3. B.Comp. (Hons.) – B.Sc. in Applied Mathematics: Single Honours Programme

The degree classification for Computing Degree (Honours) will be based on CAP calculated from 140 MCs: 100 MCs B.Comp. Programme Requirements, 20 MCs Common Modules, 20 MCs ULR .

The degree classification for Science Degree (non-Honours) majoring in Applied Mathematics will be based on CAP calculated from 97 MCs: 13 MCs Faculty Requirement Modules, 44 MCs Mathematics Modules, 20 MCs Common Modules, 20 MCs ULR .

The list of common modules is given as follows:

COMMON MODULES TABLE 1

MODULE CODE	MODULE TITLE	MCS
CS1231	Discrete Structures	4

MODULE CODE	MODULE TITLE	MCS
MA1101R	Linear Algebra I	4
MA1102R	Calculus	4
ST2131/MA2216	Probability	4
CS3230	Design and Analysis of Algorithms	4
XFC4101/ MA4199	Integrated Honours Project	12
Total		32

COMMON MODULES TABLE 2

MODULE CODE	MODULE TITLE	MCS
CS3234	Logic and Formal Systems	4
CS4232	Theory of Computation	4
CS4234	Optimisation Algorithms	4
CS4236	Cryptography Theory and Practice	4
CS5230	Computational Complexity	4
CS5237	Computational Geometry and Applications	4
CS6209	Topics in Cryptography	4

6.5.5 Exiting the Programme

For students admitted with effect from AY2014/15 onwards: A student who does not maintain a CAP of 3.75 in modules contributing to the original degree, and a CAP of 3.25 for the second degree for any two consecutive semesters will be required to withdraw from the DDP by withdrawing from the second degree programme.

6.5.6 Relevant website

Please refer to: http://www.comp.nus.edu.sg/undergraduates/dd_cs_math.html

6.6 Double Degree in Engineering and Economics

6.6.1 [Overview of Programme](#)

6.6.2 [Admission Requirements](#)

6.6.3 [Exiting the Programme](#)

6.6.4 [Relevant website](#)

6.6.1 Overview of Programme

*[Bachelor of Engineering and Bachelor of Social Sciences (Honours) in Economics;
Bachelor of Engineering and Bachelor of Arts in Economics]*

Overview of Programme

The Double Degree Programme in Engineering[#] and Economics is a specialised degree programme that combines two disciplines that have significant synergies. The programme is designed to develop the core engineering skills of students so that they would fulfil the requisite professional requirements of their chosen engineering fields. At the same time, the programme will equip a student with necessary knowledge in economics, which will help them succeed in the global marketplace.

This combination of engineering[#] and economics will produce a new breed of engineer-managers for the marketplace.

[#] All Engineering courses except Engineering Science.

6.6.2 Admission Requirements

Students will be admitted to the double degree programme only if they meet the requirements of both the Faculty of Engineering (FoE) and Faculty of Arts and Social Sciences (FASS). A committee comprising staff members from both FASS and FoE will review applications.

Students may be admitted to the programme in one of the following ways:

1. Direct application by students with relevant GCE 'A' Level or equivalent qualifications — Please apply via Office of Admissions website: nus.edu.sg/oam OR
2. Current students from FoE[#] or FASS programmes — Students are strongly advised to apply by the end of their first year so as to start the double-degree programme at the beginning of their second year. Students must apply through their home faculties. Short-listed applicants may then be interviewed.

Faculty of Arts and Social Sciences students who plan to enrol after the first year must have read at least two Engineering modules such as MA1505 and MA1506. The selection criteria include the following:

- Performance in MA1505 and MA1506.
- Minimum Cumulative Average Point (CAP) of 3.75.

Faculty of Engineering students[#] who plan to enrol after the first year must have read EC1301 and at least one other Economics module in the first year to enable them to better understand the discipline's focus and methodologies. The selection criteria include the following:

- Performance in EC1301.
- EC2303 must not be taken as the DDP curriculum does not require it.
- Performance in MA1505 and MA1506 will be taken into consideration as a strong mathematical background would be advantageous in pursuing an Economics degree.
- Minimum Cumulative Average Point (CAP) of 3.75.

Current students have to apply to the programme through their respective Faculty/School. The application will be forwarded to the partner School/Faculty if the original Faculty/School approves the application.

The applicant's non-academic activities may be considered, and the applicant may have to attend an interview.

Please refer to nus.edu.sg/prog/engecon for more details.

Note:

[#] All Engineering courses except Engineering Science.

6.6.3 Exiting the Programme

Students can choose to leave the programme, or be asked to leave if they fail to meet and maintain requirements. Students who leave the programme are permitted to work instead for a single degree in their original home Faculty. Modular Credits completed in the double degree programme will be counted towards the fulfilment of the degree requirements of their single degree, subject to the normal limits of the Faculty curriculum.

A student who does not maintain a CAP of 3.75 in modules contributing to the original degree, and/or a CAP of 3.25 for the second degree for any two consecutive semesters will be required to withdraw from the DDP by withdrawing from the second degree programme. For details, please refer to nus.edu.sg/prog/engecon/exit.htm.

This DDP continuation rule is not applicable once students' total cumulative modular credits exceeds 160 MCs.

6.6.4 Relevant website

Further information on the programme is available at: nus.edu.sg/prog/engecon

6.7 Double Degree in Engineering and Business Administration / Business Administration (Accountancy)

6.7.1 [Overview of Programme](#)

6.7.2 [Admission Requirements](#)

6.7.3 [Exiting the Programme](#)

6.7.4 [Relevant website](#)

6.7.1 Overview of Programme

*[Bachelor of Engineering and Bachelor of Business Administration (Honours/Non-honours),
Bachelor of Engineering and Bachelor of Business Administration (Accountancy) (Honours/Non-honours)]*

The double degree programmes in Business Administration and Engineering[#] are special degree programmes that combine two disciplines that have significant synergies. The programmes are designed to develop core engineering skills in students to fulfil the requisite professional requirements of their chosen engineering fields. At the same time, the programme will equip students with the necessary business skills and knowledge in the areas of organisational behaviour, finance and accounting, marketing, economics, and business law, among others, for success in the business world. This combination of engineering and business skills will produce a new breed of business-savvy engineers for the marketplace.

There are four programme choices:

1. BEng (Honours) + BBA (Honours)
2. BEng (Honours) + BBA Accountancy (Honours)
3. BEng (Honours) + BBA ^
4. BEng (Honours) + BBA Accountancy ^

#All Engineering programmes except Engineering Science.

^Available only to students whose home faculty is Engineering.

6.7.2 Admission Requirements

Students will be admitted to the double degree programme only if they meet the requirements of both the School of Business and the Faculty of Engineering. A committee comprising staff members from both the Business School and the Faculty of Engineering will review the applications.

Students may apply to the programmes in one of the following ways:

1. Direct application by students with relevant GCE 'A' Level or equivalent qualifications (*not applicable for Accountancy programme**) — Please apply via Office of Admissions website: nus.edu.sg/oam
OR
2. Current students from the School of Business and Faculty of Engineering[#] — Students are strongly advised to apply by the end of their first year so as to start the double degree programme at the beginning of their second year. Students must apply through their home faculties. Short-listed applicants will then be interviewed.

Engineering students who plan to enrol in either of these double degree programmes after the first year are encouraged to read at least one Business module in the first year to enable them to better understand the Business programme. Similarly, Business students who plan to enrol in either of these programmes are also encouraged to read at least one Engineering module in their first year.

The minimum Cumulative Average Point (CAP) requirement for acceptance to either of the double degree programmes is 3.75. The applicant will also need to meet the minimum prevailing admission criteria of both courses[^]; that is, the applicant generally must have:

1. H2 pass in Chemistry or Physics at the GCE 'A' levels and
2. H2 pass in Mathematics at the GCE 'A' levels

The applicant's non-academic activities may be considered, and the applicant will have to attend an interview.

**There is no direct admission for double-degree programmes with Business Administration (Accountancy). Non-business students must obtain at least B+ for ACC1701X Accounting for Decision Makers and preferably also ACC2706 Managerial Accounting, in order to be considered for late-entry admission after their first year of study.*

[#] *All Engineering programmes except Engineering Science*

[^] *Minimum admission criteria for Chemical Engineering and Environmental Engineering courses is H2 in Chemistry and Mathematics, and GCE 'O' Level pass in Physics.*

6.7.3 Exiting the Programme

Students can choose to leave the programme, or can be removed from the programme if they fail to meet continuation requirements.

Students who do not maintain a minimum CAP of 3.75 in modules contributing to the original degree, and/or a minimum CAP of 3.25 for the second degree for any two consecutive semesters will be required to withdraw from the DDP by withdrawing from the second degree programme.

Upon withdrawal, all the modules which the students have taken to fulfil the requirements of the second degree will be reflected in the transcript and included in the computation of the CAP for the single degree.

For more details, please refer to the [DDP Framework & Guidelines](#).

6.7.4 Relevant website

Please refer to the [DDP website](#) for any updates on this programme.

6.8 Double Degree in Law and Life Sciences

6.8.1 [Overview of Programme](#)

6.8.2 [Admission Requirements](#)

6.8.3 [Exiting the Programme](#)

6.8.4 [Relevant website](#)

6.8.1 Overview of Programme

[Bachelor of Laws (Honours) and Bachelor of Science (Honours) in Life Sciences]

The intersection between Law and Life Sciences is an expansive one, cutting across many critical and controversial areas including biotechnology, bioethics, environmental regulation, forensic science, and the protection of intellectual property. The Double Degree Programme (DDP) in Law and Life Sciences leverage on the strength of the Faculty of Law in the legal dimensions of these issues and depth of technical expertise of NUS Life Sciences, Faculty of Science and Yong Loo Lin School of Medicine. It enables students to discover the broad connections between law and life sciences and acquire a broad expertise to occupy the niche position linking up both disciplines.

With effect from Cohort AY2015/2016, the DDP is offered as a Double Honours Degree (with Honours in Law and Life Sciences).

6.8.2 Admission Requirements

Students may be admitted to the programme, on a competitive basis, via a dual-entry system:

1. By direct application with relevant GCE 'A' Level or equivalent qualifications. Shortlisted applicants will be required to undergo a written test and interview;
2. By application at the end of their first year in the Faculty of Law or first year of Faculty of Science. Students in the top 50% of their LL.B. class and Life Sciences Majors will be invited to apply. Shortlisted applicants will be required to undergo a written test and/or interview.

Applicants to the double degree programme must meet the admission requirements of both Faculties.

Detailed information on the admission requirement is available at

<http://www.nus.edu.sg/prog/lawlifesciences/admission.htm>

6.8.3 Exiting the Programme

DDP students can choose to leave the programme, or can be required to leave the programme if they fail to meet continuation requirements.

To remain in the programme, DDP students should remain in the top 50% of students in modules counting toward the LL.B. or maintain a CAP of 3.75 for modules counting towards the B.Sc.(Hons). They will be asked to leave the programme, even if all other requirements are met, if:

1. The student falls below the top 50% of students in modules counting toward the LL.B. for completed Law modules for two consecutive semesters; and
2. CAP falls below 3.75 for completed modules counting toward the Science degree for two consecutive semesters.

Students who choose to leave the Double Honours degree programme are permitted to work for a single degree, or for two separate degrees under the normal university regulations. Students who choose to pursue a single degree in Science will receive MCs for completed Law modules, the grades of which will be converted to the five-point scale and factored into their CAP. Students who pursue a single degree in Law will be considered for credit for their non-Law modules on a case-by-case basis.

6.8.4 Relevant website

For more information, please visit <http://www.nus.edu.sg/prog/lawlifesciences>

6.9 Double Degree in Business and Law

6.9.1 [Overview of Programme](#)

6.9.2 [Admission Requirements](#)

6.9.3 [Exiting the Programme](#)

6.9.4 [Relevant website](#)

6.9.1 Overview of Programme

[Bachelor of Business Administration (Honours/non-Honours) / Bachelor of Business Administration (Accountancy) (Honours/non-Honours) and Bachelor of Laws (Honours)]

The Double Degree Programme in Business Administration/Business Administration (Accountancy) and Law is a prestigious five-year programme offered jointly by the School of Business and the Faculty of Law. The programme is established in line with NUS's aim of attracting the best students from Singapore and around the world, keen on having a quality education and leveraging on interdisciplinary opportunities in a university ranked amongst the world's best.

Built around the core modules of the Business Administration and Law degrees, students who have successfully completed the double degree programme will be awarded one of the following:

- Bachelor of Laws (Hons) + BBA (Hons)
- Bachelor of Laws (Hons) + BBA (Acc. Hons)
- Bachelor of Laws (Hons) + BBA - *not available for students whose home faculty is Business*
- Bachelor of Laws (Hons) + BBA (Acc) - *not available for students whose home faculty is Business*

6.9.2 Admission Requirements

Students may be admitted to the programme, on a competitive basis, via a dual-entry system:

1. By direct application with relevant GCE 'A' Level or equivalent qualifications (*not applicable for Accountancy programme**). Shortlisted applicants will be required to undergo a written test and interview;
2. By application at the end of their first year in the Faculty of Law or School of Business. Students in the top 50% of their LL.B. class and Business students with a CAP of 4.0 and above will be invited to apply. Shortlisted applicants will be required to undergo a written test and/or interview.

Applicants to the double degree programme must meet the admission requirements of both Faculties.

Detailed information on the admission requirement is available at

<http://www.nus.edu.sg/prog/bbalaw/admission.html>

**There is no direct admission for double-degree programmes with Business Administration (Accountancy). Non-business students must obtain at least B+ for ACC1701X Accounting for Decision Makers and preferably also ACC2706 Managerial Accounting, in order to be considered for late-entry admission after their first year.*

6.9.3 Exiting the Programme

Students can choose to leave the programme, or can be required to leave if they fail to meet the continuation requirements. The exemptions from two Business core modules namely, BSP1702 Legal Environment of Business and ES2002/MNO2706 Business Communication for Leaders, will be extended to all exiting students on the condition that they have completed the relevant Law compulsory modules, LC1015 Singapore Law in Context and LC1016 Legal Analysis, Research & Communication respectively. The other special provisions (extra double counting and possible exemption from University Requirements) of the programme will not apply.

Students who choose to leave the double Honours degree programme are permitted to work instead for a single degree. Students who choose to pursue a single degree in Business Administration will receive Modular Credits for completed Law modules, the grades of which will be converted to the five-point scale and factored into their CAP. The common modules may count towards Restricted Elective modules under the programme requirements for this group of students, and other Law modules can contribute towards Unrestricted Elective requirements, subject to the normal limits of the Faculty curriculum. Students who decide to pursue a single degree in Law will be considered for credit for their non-Law modules on a case-by-case basis.

Students must either maintain a CAP of 3.75 for the Business degree or remain in the top 50% of the Law cohort. Those who fall below in both degrees for two consecutive semesters will be required to leave the programme. Direct entry students will have the choice of degree into which they exit. Later entry students will exit into their home faculty.

6.9.4 Relevant Website

For more information, please visit: nus.edu.sg/prog/bbalaw/overview.html

6.10 Bachelor of Arts (with Honours) and Bachelor of Law (Honours)

6.10.1 [Overview of Programme](#)

6.10.2 [Admission Requirements](#)

6.10.3 [Exiting the Programme](#)

6.10.4 [Relevant website](#)

6.10.1 Overview of Programme

This double degree programme in Law and Liberal Arts is an innovative program offered jointly by Yale-NUS College and NUS Law for those seeking a broad liberal arts education in addition to their professional training in the law. The five-year honours programme was established by Yale-NUS College and NUS with the aim of attracting students of the highest calibre from Singapore and around the world. This programme will provide an interdisciplinary legal education in a residential, liberal arts setting. Up to 25 students will be admitted into this prestigious programme each year. Students who have met the graduation criteria will be awarded a Bachelor of Arts (with Honours) degree from Yale-NUS College and a Bachelor of Laws (with Honours) degree from the NUS Law.

Students are required to be resident at Yale-NUS College for the first four years of the program. At this dedicated campus they will participate fully in the Yale-NUS community and enjoy the benefits of residential college life. In their first year of study they will take Yale-NUS Common Curriculum courses and a Law elective. In the second, third and fourth years students will complete the Yale-NUS Common Curriculum, take Yale-NUS electives, and take core and elective Law courses. For Law classes, students travel to the Bukit Timah Campus (BTC), where the Faculty of Law is located. Students are also eligible to participate in a semester of an exchange programme abroad. In the fifth year, students will move out of the Yale-NUS College residential college and continue with their academic pursuits at BTC. Students will also complete a capstone project in their fifth year, which entails a research and writing project in a topic that combines Law and the Liberal Arts.

6.10.2 Admission Requirements

If you are interested in being considered for the Double Degree Program with Law, you will first need to apply separately and gain admission to both the NUS Faculty of Law and Yale-NUS College. You must:

1. Apply to Yale-NUS College, expressing interest in the Double Degree Program with Law via a checkbox on the Yale-NUS College application
2. Apply separately to the NUS Faculty of Law

You will then follow the normal application processes for each institution. This will result in shortlisted students doing two interviews – one for Yale-NUS College and one for the NUS Faculty of Law.

If you subsequently gain admission to both Yale-NUS College and the Faculty of Law, you will then become eligible for the Double Degree Program. Of those students admitted to both institutions, a selected number will be offered admission to the program.

Information on the admission requirement is available at:

<http://admissions.yale-nus.edu.sg/apply/#double-degree-programme-with-law>

6.10.3 Exiting the Programme

The prevailing continuation and graduation requirements at YNC and FOL will govern the respective degrees. Students may leave the DDP programme or be required to leave the programme if they fail to meet YNC's or Law's requirements.

A student will be asked to leave the DDP if, for any two consecutive semesters, the student both:

1. falls below the top 50% of students in modules counting toward the LL.B. for completed modules, and
2. fails to remain in "good academic standing," as defined by YNC.

This DDP continuation rule shall not apply in the final graduating semester. Moreover, a warning will be issued if the student's academic performance triggers both of the above guidelines in a semester.

6.10.4 Relevant website

For more information, please visit: http://www.nus.edu.sg/prog/yale_nus_ba_llb/overview.html

6.11 Double Degree in Master of Laws and Master in Public Administration / Public Policy

6.11.1 [Overview of Programme](#)

6.11.2 [Admission Requirements](#)

6.11.3 [Exiting the Programme](#)

6.11.4 [Relevant website](#)

6.11.1 Overview of Programme

[Master of Laws and Master in Public Administration/Master in Public Policy]

The Faculty of Law and the Lee Kuan Yew School of Public Policy double degree programmes comprising a Master of Laws (LL.M.) and Master in Public Administration (MPA) or Master in Public Policy (MPP) aim to provide students of law and public administration and public policy broad exposure to the issues and challenges that lawyers and leaders of public institutions face.

6.11.2 Admission Requirements

Applicants must fulfil the admission requirements for both degree programmes in order to gain admission. The requirements are as follows:

LL.M. Degree

- A good Bachelor's degree in Law; and minimum TOEFL score of 100 (Internet Based Test). Candidates with an iBT score of 92-99 may also apply, but may be required to undertake intensive English language training prior to commencing law studies. Other TOEFL score of 600- 603 or IELTS (Academic) of minimum 7 will be considered, but the iBT is strongly preferred.

MPA/MPP Degrees

- A good NUS honours degree (second class and above) or equivalent (e.g., a four-year Bachelor's degree with at least an average grade of B or equivalent); or
- A good Bachelor's degree
- Other qualifications and experience subject to approval by the Board of Graduate Studies and
- Good command of the English Language (minimum TOEFL iBT score of 100, PBT score of 600 or IELTS (Academic) score of 7.0).

Additional Requirements

MPA Degree – At least five years of work experience

MPP Degree – Preferably some background in Mathematics and Economics

6.11.3 Exiting the Programme

A student's Cumulative Average Point (CAP) should not fall below 2.5 for two consecutive semesters or 3.0 for three consecutive semesters. Any student who fails to maintain the minimum CAP as stipulated would have his/her candidature terminated.

A student who fails a module on a second attempt or fails in more than two modules throughout the course of study will be required to terminate his/her candidature.

Any candidate who does not meet the continuation or graduation requirements for the MPA or MPP degree may be conferred a Graduate Diploma in Public Administration or in Public Policy if the following requirements are met:

1. a minimum CAP of 2.25 for the best 24 MCs at graduate level; and
2. at least 12 of these MCs must be from MPA/MPP core modules or equivalent.

6.11.4 Relevant website

For more information, please visit: <http://www.nus.edu.sg/prog/lawspp/llmmppmpa/index.htm>

6.12 Double Degree in Master of Business Administration and Master in Public Administration / Public Policy

6.12.1 [Overview of Programme](#)

6.12.2 [Admission Requirements](#)

6.12.3 [Exiting the Programme](#)

6.12.4 [Relevant website](#)

6.12.1 Overview of Programme

[Master of Business Administration and Master in Public Administration/Master in Public Policy]

The Business School and the Lee Kuan Yew School of Public Policy double degree programmes comprising a Master in Business Administration (MBA) and Master in Public Administration (MPA) or Master in Public Policy (MPP) will enable students to gain knowledge and expertise in both business and government. These students will acquire competencies relevant to industry, government and public sector organizations.

6.12.2 Admission Requirements

Applicants must fulfil the admission requirements for both degree programmes in order to gain admission. The requirements are as follows:

MBA Degree

- A good undergraduate degree from a reputable academic institution;
- A minimum of two years of full-time post-graduation managerial experience;
- Good Analytical Writing Assessment, Verbal, Quantitative and Total GMAT scores;
- Applicants whose undergraduate degree was not in English are required to submit TOEFL or IELTS scores.

MPA/MPP Degrees

- A good NUS honours degree (second class and above) or equivalent (e.g., a four-year Bachelor's degree with at least an average grade of B or equivalent); or
- A good Bachelor's degree and successful completion of a placement test; or exceptionally
- Other qualifications and experience subject to approval by the Board of Graduate Studies and
- Good command of the English Language (minimum TOEFL score of 580 or IELTS score of 6.5).

Additional Requirements

MPA Degree – At least five years of work experience

MPP Degree – Preferably some background in Mathematics and Economics

6.12.3 Exiting the Programme

A student's Cumulative Average Point (CAP) should not fall below 2.5 for two consecutive semesters or 3.0 for three consecutive semesters. Any student who fails to maintain the minimum CAP as stipulated would have his/her candidature terminated.

A student who fails a module on a second attempt or fails in more than two modules throughout the course of study will be required to terminate his/her candidature.

Any candidate who does not meet the continuation or graduation requirements for the MPA or MPP degree may be conferred a Graduate Diploma in Public Administration or in Public Policy if the following requirements are met:

1. a minimum CAP of 2.25 for the best 24 MCs at graduate level; and
2. at least 12 of these MCs must be from MPA/MPP core modules or equivalent.

6.12.4 Relevant website

For more information, please visit:

<http://bschool.nus.edu.sg/TheNUSMBA/ProspectiveStudents/DoubleDegreeProgrammes/TheNUSLKY/Background.aspx>

6.13 Double Degree in Master of Business Administration and Master of Science in Real Estate

Candidates have to fulfill the admission requirements for both the MBA and MRE degree programmes to gain admission to the MBA-MRE DD programme. Students may apply for the MBA-MRE DD programme prior to starting either programme, or within the first semester of either programme that they have been admitted to.

Applicants seeking admission to the degree of Master in Business Administration (MBA) must have:

- A good undergraduate degree from a reputable academic institution;
- A minimum of two years of full-time post-graduation managerial experience
- Good GMAT or GRE score, with good scores in Analytical Writing Assessment, Verbal, Quantitative and Integrated Reasoning sections;
- TOEFL/IELTS score is required for applicants whose medium of undergraduate instruction is not in English.

Applicants seeking admission to the degree of Master of Science, Real Estate (MRE) must have:

- A good undergraduate degree with honours in a relevant discipline from a reputable academic institution;
- A minimum of two years of full-time post-graduation relevant practical experience
- TOEFL/IELTS score is required for applicants whose medium of undergraduate instruction is not in English.

6.14 The NUS-Renmin Master of Science in Real Estate - Master in Business Administration Double Degree Programme

Expand your expertise

The NUS-Renmin MSRE-MBA Double Degree Programme (DDP) offers Renmin University of China 's general MBA Degree and NUS Master of Science Degree in Real Estate. The programme is designed for two-year full-time study in both China and Singapore. The curriculum for this double degree programme provides an up-to-date business and real estate knowledge as well as the real world practice and trainings to selected postgraduate candidates.

COURSE STRUCTURE AND SCHEDULE

This Double Degree Programme (DDP) is a 2-year full-time programme. Students will spend 1 year at RBS completing 35 modular credits (MCs) of MBA, and another year at NUS completing 32 MCs of MSRE. Students are also required to complete a RBS dissertation during their two years of study.

	Study 1 year at RENMIN	Study 1 year at NUS
Core MCs	29	20
Elective MCs	6	12
Total MCs	35	32
Other Requirements	A RBS MBA Dissertation	NIL

Course Structure of the Double Degree Programme

CURRICULUM

**Renmin University, China School of Business
(RBS)**

Master Degree in Business Administration (MBA)

National University of Singapore (NUS)

Department of Real Estate

School of Design & Environment

Master of Science Degree in Real Estate (MSRE)

Core Modules (compulsory modules)

Management communication

Corporate Finance

Organizational Behavior

Data Modeling and Decision Making

Operations Management

Management Information System

Strategic Management

Financial Accounting

Managerial Economics

Marketing

Business Ethics

Social Practice/ Internship Report

Core Modules (compulsory modules)

Real Estate Development Real Estate Investment

Real Estate Economics

Real Estate Finance

Urban Policy & Real Estate Markets

Elective Modules

There are a total number of 124 modules to choose from.

Elective Modules

There are a total number of 12 modules to choose from

Other Requirements

RBS MBA Dissertation

NIL

ADMISSION CRITERIA

The DDP admission criteria satisfy all the criteria of the existing NUS-MSRE and RENMIN-MBA programmes. Specifically, the candidates must:

1. Possess a good honours degree (or equivalent) in a relevant discipline.
2. At least two years of relevant work experience upon completion of bachelor's degree.
3. Applicants whose medium of undergraduate instruction is not in English will need to submit the TOEFL or IELTS result as evidence of language proficiency. The proficiency will be determined by

the TOEFL score of at least 580-600 (paper-based test), 237-250 (computer-based test) or 85 (internet-based test), or a IELTS result of at least 6.0.

4. Applicants who are China nationals must pass China's national MBA admission examination. Applicants of other nationalities are recommended to submit the GMAT result.

7 Concurrent Degree Programmes

7.1 [Concurrent Master of Science \(Management\) Programme](#)

7.2 [Concurrent Programme in Bachelor of Business Administration with Honours / Bachelor of Business Administration \(Accountancy\) with Honours and Master in Public Policy](#)

7.3 [Concurrent Programme in Bachelor of Computing with Honours and Master of Science in Management](#)

7.4 [Concurrent Programme in Bachelor of Laws \(Honours\) and Master in Public Policy](#)

7.5 [Concurrent Programme in Bachelor of Arts with Honours / Bachelor of Science with Honours and Master in Public Policy](#)

7.6 [Concurrent Programme in Bachelor of Social Sciences with Honours and Master of Social Sciences \(Psychology by Research\)](#)

7.7 [Concurrent Programme in Bachelor of Arts with Honours / Bachelor of Social Sciences with Honours and Master in Public Policy](#)

7.1 Concurrent Master of Science (Management) Programme

The NUS Master of Science (Management), MSc (Mgt), consisting of 20 management and leadership modules drawn from the BBA and MSc (Mgt) curricula, is only available as a concurrent programme for eligible undergraduates from all NUS faculties and schools. Students may gain this additional master's degree generally with about one extra year of coursework study with no research requirement.

We welcome sensitive, inquisitive and articulate students who are concerned for each other's social, intellectual, and leadership developments to be lifelong co-owners of our collegiate community, hence building a close-knit alumni network of caring and influential leaders.

Students in the concurrent degree programme must meet the stipulated academic requirements for continuation in the programme. With advance planning, students should be able to complete the concurrent degree requirements within five years. Capable MSc (Mgt) students may spend an additional year to obtain the CEMS Master's in International Management (MIM). This global pre-experience master's programme has been ranked by Financial Times among the top Master's in Management programme in the world since 2005.

Through exposure to business modules, students of this programme will acquire a well-rounded set of skills and be in a position to make meaningful contributions to their workplace.

Interested applicants may apply directly to the MSc Programmes office. Admitted students enjoy all the rights and privileges of BIZ membership.

Faculty of Engineering

The NUS Business School offers a customised MSc (Mgt) programme for interested undergraduate students from the Faculty of Engineering. The admission criteria for the generic MSc (Mgt) degree also apply to this customised double degree programme. Please visit <https://www.eng.nus.edu.sg/undergraduatestudies/special-programmes/concurrent-m-sc-management/> for details on this customised programme.

NUS Business School

The MSc (Mgt) programme is available to undergraduates from all NUS faculties and departments as a concurrent programme. An admitted student completes the MSc (Mgt) programme as an extension to his/her undergraduate programme, and will be awarded two separate degree scrolls with the same conferment date. Good applicants to the BBA programme may apply for admission to the MSc (Mgt) programme concurrently. Successful applicants will then be offered admissions to both the BBA and MSc (Mgt) programmes at the same time. Such students may need to perform and pass an interview before taking graduate modules.

BBA Honours programme students who are admitted into the MSc (Mgt) programme need to take 32 modular credits (i.e., eight modules) over and above the BBA Honours Programme requirements of 160 modular credits to fulfil the MSc (Mgt) programme requirements. That is, they need to spend just one more year to complete the master's programme requirements.

Corresponding modules taken from NUS outside NUS Business School, or from exchange partners, may be considered as equivalent, subject to approval by NUS departments and academic exchange offices.

No MSc (Mgt) module taken in NUS can be on the Satisfactory/Unsatisfactory basis.

Please visit <http://bba.nus.edu/academic-programmes/bba-msc-mgt-programme/about-msc-mgt> for details on the MSc (Mgt) programme structure, which consists of Domain Knowledge Requirements (DKR) and MSc (Mgt) Requirements (MSR) segments.

Relevant websites

For more information, please visit the following websites:

- <https://www.eng.nus.edu.sg/undergraduatestudies/special-programmes/concurrent-m-sc-management/>,
- <http://bba.nus.edu/academic-programmes/bba-msc-mgt-programme/about-msc-mgt>, and
- http://www.comp.nus.edu.sg/undergraduates/cdp_bcomp_msc.html and
- <http://www.cems.org>

7.2 Concurrent Programme in Bachelor of Computing with Honours and Master of Science in Management

7.2.1 [Overview of Programme](#)

7.2.2 [Admission Requirements](#)

7.2.3 [Programme Requirements](#)

7.2.4 [Grading and Degree Requirements](#)

7.2.5 [Further Enquiry](#)

7.2.1 Overview of Programme

IT professionals need to rise up to the challenges of managing new IT and market trends such as IT outsourcing and offshoring, IT entrepreneurships, and commercialisations and management of innovative and complex IT products and services. The concurrent programme combining Bachelor of Computing with honours [B.Comp. (Hons.)] from the School of Computing and Masters of Management [MSc (Mgt)] from the School of Business provides a multidisciplinary platform for students to marry strong technical computing skills with the requisite management, communications, and marketing skills to respond effectively to these challenges.

In this programme, students from the School of Computing will take management modules from the School of Business in addition to their usual pursuit of the Bachelor of Computing degree. These management modules consist of 20 management and leadership modules drawn from the Bachelor of Business Administration (B.B.A.) and MSc (Mgt) curricula. Thanks to the broad-based nature of the NUS curriculum structure, such double focuses may be completed within five years. The combined curricula provide an enriching education in the management of both human resources and information technology.

7.2.2 Admission Requirements

Application procedure for the concurrent MSc(Mgt) programme can be found at <http://bba.nus.edu/academic-programmes/bba-msc-mgt-programme/about-msc-mgt>.

Details on direct admission to the concurrent programme in Bachelor in Computing in Information Systems and MSc(Mgt) can be found at: http://www.comp.nus.edu.sg/undergraduates/cdp_bcomp_msc.html.

7.2.3 Programme Requirements

The structure for the concurrent MSc (Mgt) programme is as follows:

40 MCs Domain Knowledge Requirements (DKR) segment:

A student must complete the following 10 modules, or 40 MCs, chosen from modules currently offered in the Minor in Management programme:

1. Four Level-1000 modules or their equivalents;
2. Four Level-2000 modules or their equivalents; and
3. Two Level-3000 modules: One module, or its equivalent, from each of two different areas out of those available.

For details on modules listed under the Minor in Management, please refer to:

<http://bba.nus.edu/bba-academic-programmes/bba-majors-minors/for-non-business-students/major-minor-in-mgmt>.

40 MCs MSc Requirements (MSR) segment:

A student must complete 40 MCs from the modules below:

1. A maximum of two Level-4000 modules chosen from any offered by the School of Business, or equivalent modules; and
2. A minimum of eight Level-5000 MSc modules offered by the School of Business

The key features of the programme are listed below:

- School of Computing students use the MCs from breadth requirements and unrestricted electives (UEM) as well as equivalent modules from the B.Comp. (Hons.) programme requirements to meet the 40 MCs Domain Knowledge Requirements (DKR) segment.
- School of Computing students in the B.Comp. (Hons.) (Information Systems) degree programme are deemed to have satisfied item (1) of the MSR segment as their degree requirements include 16 MCs of Level-4000 modules offered by the Department of Information Systems and Analytics. These modules are business and IT related.
- School of Computing students are allowed to partially meet item (2) of the MSR segment by taking up to two M.B.A.-type equivalent coursework modules offered by the Department of Information Systems and Analytics. For example, IS5111 IT Strategy and Governance.

The two graduate modules taken from the Department of Information Systems and Analytics cannot be used to satisfy the unrestricted electives requirements of the B.Comp. (Hons.) (Information Systems) programme should students discontinue the concurrent programme.

School of Computing students must meet all the other requirements for admission, continuation in the programme and the award of the concurrent programme.

School of Computing students who have completed the MSc (Mgt) programme, as well as their B.Comp. (Hons.) programme will be awarded two degrees depending on their honours classification for their bachelor programme.

Please refer to:

http://www.comp.nus.edu.sg/undergraduates/cdp_bcomp_msc.html for the module requirements, and computation of CAP, for the following concurrent programmes:

I. B.Comp. (Hons.) (Computer Science) with MSc (Mgt)

II. B.Comp. (Hons.) (Information Systems) with MSc (Mgt)

Please refer to: <http://www.comp.nus.edu.sg/programmes/sp/cdp/bcomp-msc/> for the module requirements, and computation of CAP, for the concurrent programme in B.Comp. (Hons.) (Information Systems) with MSc (Mgt).

7.2.4 Grading and Degree Requirements

The MSc (Mgt) degree will be awarded to students who have

- earned at least a Second Class Lower division in the B.Comp. (Hons.) degree; and
- maintained a CAP of 3.0 in the modules counting towards the MSc (Mgt) requirement.

7.2.5 Further Enquiry

Please submit your enquiry to bcomp@nullcomp.nus.edu.sg.

7.3 Concurrent Programme in Bachelor of Business Administration with Honours / Bachelor of Business Administration (Accountancy) with Honours and Master in Public Policy

7.3.1 [Overview of Programme](#)

7.3.2 [Admission Requirements](#)

7.3.3 [Exiting the Programme](#)

7.3.4 [Relevant website](#)

7.3.1 Overview of Programme

The NUS Bachelor of Business Administration with Honours [BBA (Hons)] / Bachelor of Business Administration (Accountancy) with Honours [BBA (Acc Hons)], and Master in Public Policy (MPP) concurrent degree programme aims to prepare the next generation of policy leaders to apply business principles to social and environmental issues, as well as to address corporate social responsibility and business ethics concerns.

There is a convergence in the practices of public sector and private sector companies, and in the management of private enterprises and state or public enterprises. Hence, Business Administration and Public Policy are closely intertwined and correlated. The set of management principles applicable to private enterprises draws parallels in the government sector, particularly in the context and framework of government-linked companies in a dynamic environment.

This concurrent degree programme by the School of Business and the Lee Kuan Yew School of Public Policy is ideal for young people in this region who aspire to lead in the public sector and its enterprises. The rigorous academic curriculum is well complemented by the intimate networking among like-spirited future leaders, many nominated by their own governments, from more than 20 countries in this part of the world and beyond.

7.3.2 Admission Requirements

Admission to the Concurrent Degree Programme is highly competitive and selective; applicants should have very good verbal skills, in order to mingle comfortably with generally more mature MPP students who articulate and write well.

There is a dual-entry system for the Concurrent Degree Programme:

1. Admissions with competitive GCE 'A' Level qualifications or equivalent. (Application through NUS Office of Admissions and online USP Admissions; Eligibility as per BBA / BBA (Acc) programme.)
2. Admissions at the end of the second year of the BBA / BBA (Acc) programme. (Application through BBA Office when announced in the middle of the second semester; CAP of at least 4.0 out of 5.0).

All offers to this concurrent degree programme are conditional in the first instance. A place in the MPP programme is not guaranteed until the student pass a final interview with the Lee Kuan Yew School of Public Policy during his/her third year in the BBA (Hons) / BBA (Acc Hons) programme. Successful candidates will then join the next MPP cohort in their fourth year.

7.3.3 Exiting the Programme

Students can choose to leave the Concurrent Degree Programme, or can be removed from the Concurrent Degree Programme if they fail to meet continuation requirements.

A student whose academic performance falls under any of the following categories shall be removed from the Concurrent Degree Programme, even if all other requirements are met:

1. CAP falls below 4.0 for completed BBA/BBA (Acc) modules for two consecutive semesters; or
2. CAP falls below 3.0 for completed MPP modules for two consecutive semesters; or
3. CAP falls below 3.5 for completed MPP modules for three consecutive semesters; or
4. Fail any particular MPP module twice; or
5. Fail three or more MPP modules.

Students who leave the Concurrent Degree Programme are permitted to work towards a single honours or non-honours degree in BBA/BBA (Acc) if prevailing continuation requirements for the single degree programme are met. Modular credits completed in the Concurrent Degree Programme will be counted towards the fulfilment of the prevailing single degree requirements, with all completed MPP modules being included in the computation of the CAP score for the single degree programme.

7.3.4 Relevant website

For more information, please refer to our [CDP website](#).

7.4 Concurrent Programme in Bachelor of Laws (Honours) and Master in Public Policy

7.4.1 [Overview of Programme](#)

7.4.2 [Admission Requirements](#)

7.4.3 [Exiting the Programme](#)

7.4.4 [Relevant website](#)

7.4.1 Overview of Programme

The Lee Kuan Yew School of Public Policy (LKYSPP) and the Faculty of Law have long been preparing their students for the complex world of policy making and public service. LKYSPP helps its students to understand the complex issues that challenge policy makers daily and offers a strong curriculum anchored firmly within an Asian context. The courses and case studies offered in the programmes reflect a wide spectrum of issues which are unique to countries in the Asia Pacific region and complicated by religious, ethnic, historical, and political variables which add to the complexity of governance. The Faculty of Law, on the other hand, offers rigorous training in public law, international law, and governance, and has a long history of placing its graduates in leading positions in government and public service, including Senior Minister and co-ordinating Minister for National Security, Professor S. Jayakumar, the current Chief Justices of Singapore and Malaysia, and the former Secretary General of ASEAN.

The concurrent degree programme in Law (LL.B.) and Public Policy (M.P.P.), launched in Academic Year 2007-2008, combines the strengths of the LKYSPP and the Faculty of Law, offering law students, particularly those interested in a career in public service, a unique opportunity to understand the legal, policy, and practical dimensions of governance and national, regional, and international policy making.

7.4.2 Admission Requirements

Admission to the concurrent degree programme is highly competitive and selective. Applicants applying with 'A' Levels or equivalent qualifications will be required to satisfy the admissions criteria of both the LKYSPP and the Faculty of Law.

Applicants must have an outstanding academic record and undergo the Law admissions test and an interview if they are shortlisted.

For the detailed admissions criteria of the LKYSPP, please refer to

<http://lkyspp.nus.edu.sg/admissions/graduate-programmes/master-in-public-policy-mpp/mpp-admissions-criteria/>

Please note that applicants for the LL.B. – M.P.P. concurrent degree need not have a first degree but must satisfy the other listed criteria.

For the admissions criteria of the Faculty of Law, please refer to

http://www.law.nus.edu.sg/admissions/4_yrs_llb_prog.html

There is a dual entry system for the concurrent degree programme:

1. Admissions with competitive 'A' Level or equivalent qualifications. Prospective applicants will be invited to apply online through the NUS Office of Admissions.
2. Admissions at the end of completion of the second year of the LL.B. programme. Applications are open in June only to Law students in the top 50% of their class in Year 2 Semester 2. Interviews, if required, will be conducted by the Lee Kuan Yew School of Public Policy in Year 3 Semester 2 between late February to March.

7.4.3 Exiting the Programme

Students can choose to leave the concurrent degree programme, or can be removed from the concurrent degree programme if they fail to meet continuation requirements.

A student whose academic performance falls under any of the following categories shall be removed from the concurrent degree programme, even if all other requirements are met:

- The student falls below the top 50% of students in modules counting toward the LL.B. for completed Law modules for 2 consecutive semesters; or
- CAP falls below 3.0 for completed M.P.P. modules for 2 consecutive semesters; or
- CAP falls below 3.5 for completed M.P.P. modules for 3 consecutive semesters; or
- Fail any particular M.P.P. module twice; or
- Fail 3 or more M.P.P. modules.

In addition, a student who, at the point of entry into the MPP component of the programme, does not stand within the top 55% of his LL.B. cohort will be asked to leave the programme.

Students who leave the concurrent programme are permitted to work toward the LL.B., while adhering to prevailing regulations. Modular Credits completed in the concurrent degree programme will be counted towards the fulfillment of the degree requirements for LL.B., subject to the normal limits of the curriculum.

7.4.4 Relevant website

For more information, please visit <http://www.nus.edu.sg/prog/mpplaw/>

7.5 Concurrent Programme in Bachelor of Arts with Honours / Bachelor of Science with Honours and Master in Public Policy

7.5.1 [Overview of Programme](#)

7.5.2 [Admission Requirements](#)

7.5.3 [Exiting the Programme](#)

7.5.4 [Relevant website](#)

7.5.1 Overview of Programme

The NUS Bachelor of Arts with Honours [B.A. (Hons.)] / Bachelor of Science with Honours [B.Sc. (Hons.)], and Master in Public Policy (M.P.P.) Concurrent degree programme is offered by Yale-NUS College (Yale-NUS) and the Lee Kuan Yew School of Public Policy. This concurrent degree programme aims to prepare the next generation of policy leaders by providing them with a broad academic and intellectual background from the liberal arts and sciences curriculum, which can then be applied to thinking and acting in the global dimensions of public affairs and national policies.

The programme also aims to develop versatile graduands able to tackle big public policy issues in a complex global context. Yale-NUS' multidisciplinary intellectual commitment, coupled with its emphasis on leadership, community service, international and professional experiences will be interwoven with MPP's interdisciplinary curriculum that integrates analytical depth and theoretical sophistication with practical skills of problem-solving, negotiation, teamwork, leadership, and learning in diverse environments, thereby ensuring graduates will become the next generation of effective policy leaders.

7.5.2 Admission Requirements

Admission to the Concurrent Degree Programme is highly competitive and selective; applicants should have very good verbal skills, in order to mingle comfortably with generally more mature M.P.P. students who articulate and write well. Shortlisted high-calibre candidates must undergo a rigorous admissions selection process, which includes the following requirements:

- a. Outstanding academic results
- b. Interview session
- c. Written placement test

Entry into the Concurrent degree programme will occur at the end of the third year of the Yale NUS programme. Application through the Yale-NUS Admissions Office will be announced in week 4 of Semester 2 of Year 3. Students must pass a final interview by week 10 of Semester 2 of Year 3, before joining their MPP cohort for the Master's programme.

7.5.3 Exiting the Programme

Students can choose to leave the Concurrent Degree Programme, or can be removed from the Concurrent Degree Programme if they fail to meet continuation requirements.

A student whose academic performance falls under any of the following categories shall be removed from the Concurrent Degree Programme, even if all other requirements are met:

- a. CAP falls below 3.0 for completed M.P.P. modules for two consecutive semesters; or
- b. CAP falls below 3.5 for completed M.P.P. modules for three consecutive semesters; or
- c. Fail any particular M.P.P. module twice; or
- d. Fail three or more M.P.P. modules.

Students who leave the Concurrent Degree Programme are permitted to work towards a single degree in B.A. (Hons) /B.Sc. (Hons) if prevailing continuation requirements for the single degree programme are met. Modular Credits completed in the Concurrent Degree Programme will be counted towards the fulfilment of the prevailing single degree requirements , with all completed M.P.P. modules being included in the computation of the CAP score for the single degree programme.

7.5.4 Relevant website

To be confirmed.

7.6 Concurrent Programme in Bachelor of Arts with Honours / Bachelor of Social Sciences with Honours and Master in Public Policy

7.6.1 [Overview of Programme](#)

7.6.2 [Admission Requirements](#)

7.6.3 [Selection](#)

7.6.4 [Continuation Requirements](#)

7.6.5 [Relevant website](#)

7.6.1 Overview of Programme

The programme aims to develop versatile graduands able to tackle big public policy issues in a complex global context. This is achieved by combining the disciplinary training in appropriate disciplines and broad education from FASS, with the interdisciplinary and multidisciplinary leadership training of the LKYSPP. Such leaders will be strongly positioned for the critical thinking, problem-solving, decision-making and policy implementation in public affairs and national policies in a globalized world.

7.6.2 Admission Requirements

Admission to the CDP will be highly competitive and selective; applicants should have very good verbal skills, intellectual maturity and good critical and analytical ability. Shortlisted candidates must undergo a rigorous admissions selection process, which includes the following:

- (a) Outstanding academic results
- (b) Interview session
- (c) Written placement test
- (d) Profiling test

Currently, only FASS students who major in Economics, Political Science, Sociology and Social Work are considered.

7.6.3 Selection

Entry into the CDP will occur after three semesters of study in the FASS degree program. Application through the FASS Dean's Office will be announced in week 4 of the first semester of Year 2. Students need to have a CAP of at least 4.00 out of 5.00. Students must pass a final interview by week 10 of Semester 2 of Year 2 before joining their MPP cohort for the Master's programme.

7.6.4 Continuation Requirements

The prevailing continuation and graduation requirements at FASS and LKYSPP will govern the respective degrees. Students may leave the CDP programme or be required to leave the programme if they fail to meet FASS' or LKYSPP's requirements. Such students will revert to becoming a non-CDP FASS degree student, subject to FASS' rules and requirements.

Students falling under any of the following categories shall exit from the CDP, even if all other requirements are met:

- (a) CAP falls below 4.00 for modules counted towards the Bachelor of Arts (Honours) / Social Sciences (Honours) degree for 2 consecutive semesters; or
- (b) CAP falls below 3.00 for completed MPP modules for 2 consecutive semesters; or
- (c) CAP falls below 3.50 for completed MPP modules for 3 consecutive semesters; or
- (d) Failing any particular MPP module twice; or
- (e) Failing 3 or more MPP modules.

7.6.5 Relevant website

For more information please refer to:

<https://myportal.nus.edu.sg/studentportal/fas/ug/currentstd/concurrent-degree-programme.html>

7.7 Concurrent Programme in Bachelor of Social Sciences with Honours and Master of Social Sciences (Psychology by Research)

7.7.1 [Overview of Programme](#)

7.7.2 [Programme Structure](#)

7.7.3 [Admission Requirements](#)

7.7.4 [Graduation Requirements](#)

7.7.5 [Continuation Criteria](#)

7.7.6 [CAP Computation](#)

7.7.7 [Degrees Awarded](#)

7.7.8 [Exiting the Programme](#)

7.7.9 [Relevant Website](#)

7.7.1 Overview of Programme

In Singapore, the Master's degree is increasingly becoming the desired entry level requirement for junior and senior psychologist positions in the Civil Service and the private sector. Our department's Concurrent Degree Programme [BSocSci (Hons) and MSocSci in Psychology] provides psychology majors with the option of making a seamless transition to the Master's programme, and to secure 2 degrees in 5 years (instead of the usual 6 years if the 2 degrees are taken separately), thereby making them more competitive for industry and graduate school. Graduates from this programme will possess strong research skills, as well as domain expertise in their chosen area of research. To the extent possible, candidates will also be encouraged to attend and present their work at international conferences.

7.7.2 Programme Structure

Candidates must successfully complete 176 MCs of coursework, which comprise the following:

- 20 MCs University-Level Requirements (Breadth, General Education, Singapore Studies)
- 28 MCs (Unrestricted Electives)
- 97 MCs (Exposure and Major Modules)
- 16 MCs (Graduate Modules)
- 15 MCs (Integrated Thesis)

In addition to the present graduation requirements for Single Major Honours, the candidate must also pass an additional research module (PL3231/PL328x), PL3239 (Industrial and Organizational Psychology), and PL4201 (Psychometrics and Psychological Testing).

At the graduate level, candidates will take PL6770 (Graduate Research Seminar), PL5221 (Analysis of Psychological Data using GLM), PL5222 (Multivariate Statistics in Psychology), and a core module corresponding to their area of interest (PL5303, PL5304, PL5305, PL5306, PL5307, OR PL5308).

A key component of this research-intensive programme is the Integrated Thesis, which reflects the candidate's ability to independently conduct quality research that makes meaningful connections to the extant literature.

7.7.3 Admission Requirements

Admission to the Concurrent Degree Programme is both competitive and selective. Shortlisted candidates will undergo a rigorous admissions selection process, which includes the following requirements:

- Majoring in Psychology,
- Passed the following essential modules (PL1101E, PL2131, PL2132, PL3232, PL3233, PL3234, PL3235, PL3236, and PL3231 OR PL328x),
- Cumulative Average Point (CAP) ≥ 4.00 & Psychology Subject Average Point (SJAP) ≥ 4.3 (at the time of application),
- Average grade of A- for PL2131, PL2132, and either PL3231 or PL328x (no lower than B+ for any of these modules),
- TWO (or more) recommendation/referee letters,
- Personal Statement and a rank-ordered list of potential thesis supervisors.

Candidates will also be required to attend an interview session.

7.7.4 Graduation Requirements

Pass at least 176 MCs of modules, and fulfill the requirements of both the BSocSci (Honours) and MSocSci. (Psychology by Research) programmes, which include the following:

Essential Undergraduate Modules:

1. PL1101E Introduction to Psychology
2. PL2131 Research and Statistical Methods I
3. PL2132 Research and Statistical Methods II
4. PL3232 Biological Psychology
5. PL3233 Cognitive Psychology
6. PL3234 Developmental Psychology
7. PL3235 Social Psychology
8. PL3236 Abnormal Psychology
9. PL3231 Independent Research Project
10. One of the PL328x lab modules
11. PL3239 Industrial and Organizational Psychology
12. PL4201 Psychometrics and Psychological Testing

Essential Graduate Modules:

1. PL6770 Graduate Research Seminar
2. Core Module (PL5303, PL5304, PL5305, PL5306, PL5307, OR PL5308)
3. PL5221 Analysis of Psychological Data using GLM
4. PL5222 Multivariate Statistics in Psychology

Integrated Thesis:

Integrated Thesis (15 MCs)

Other Requirements:

1. Attend workshops (e.g., on academic writing, presentation, non-experimental research methods, and advanced statistics) prescribed by the department.
2. Attend at least 5 departmental research seminars.
3. Give one research presentation during the candidacy. Students are also strongly encouraged to present their findings at an international conference.
4. Where applicable, students have to obtain satisfactory grades (at least grade C) in the graduate English courses conducted by the Centre for English Language Communication at intermediate level.

7.7.5 Continuation Criteria

CDP candidates will be officially enrolled in the programme at the beginning of Semester 7. At this point, they will be classified as research students, allowing them to register for graduate-level courses and to start work on their thesis. Supervisors will also need to submit progress reports at the end of each semester. In order to remain in the programme, candidates' SJAP (based on both undergraduate and graduate PL modules) must not fall below 4.00 over two consecutive semesters.

7.7.6 CAP Computation

The undergraduate CAP is based on the grades for the undergraduate modules (Level 4000 and below) and the integrated thesis, while the graduate CAP is based on the four required graduate modules (Level 5000 and above).

7.7.7 Degrees Awarded

Candidates will typically graduate at the end of their 10th semester. On completion of the programme, subject to meeting the graduation requirements, candidates will be awarded the BSocSci (Hons) and the MSocSci in Psychology.

7.7.8 Exiting the Programme

Candidates who opt out of the programme, or who are unable to fulfil continuation requirements, can graduate with the BA or BSocSci (Hons), subject to meeting graduation requirements. Assuming they qualify for the honours degree, their class of honours will jointly depend on their undergraduate CAP and their grade for the honours thesis. If work on the thesis project is in progress, they need to carry out sufficient experimental work to produce a thesis that meets the standards of an honours thesis.

7.7.9 Relevant Website

For more information, please visit http://www.fas.nus.edu.sg/psy/_prospective/pr_cdp.htm and http://www.fas.nus.edu.sg/psy/_current/gradresearch/gr_masters_cdp.htm.

8 Joint Degree Programmes / Concurrent Degree Programmes / Double Degree Programmes with Overseas Universities

- 8.1 [Joint Bachelor of Science \(Honours\) from National University of Singapore \(NUS\) and Bachelor of Philosophy \(Honours\) from Australian National University \(ANU\)](#)
- 8.2 [Joint Bachelor of Arts \(Honours\) from National University of Singapore \(NUS\) and Bachelor of Philosophy \(Honours\) from Australian National University \(ANU\)](#)
- 8.3 [Joint Bachelor of Music from National University of Singapore and Peabody Institute of The John Hopkins University](#)
- 8.4 [Joint Bachelor of Arts \(Honours\) from National University of Singapore and Bachelor of Social Sciences \(Honours\) in Actuarial Studies and Economics from Australian National University](#)
- 8.5 [Joint Bachelor of Arts \(Honours\) from National University of Singapore and from University of North Carolina – Chapel Hill](#)
- 8.6 [Joint Bachelor of Science \(Honours\) in Life Sciences from National University of Singapore and Bachelor of Science in Biology from The University of North Carolina – Chapel Hill](#)
- 8.7 [Joint Bachelor of Science \(Honours\) in Life Sciences from National University of Singapore and Bachelor of Science \(Honours\) in Biological Sciences/Biomedical Sciences from University of Dundee](#)
- 8.8 [Bachelor of Arts \(Honours\) / Bachelor of Science \(Honours\) from National University of Singapore and Bachelor of Arts in International Liberal Studies from Waseda University](#)
- 8.9 [Bachelor of Arts/Social Sciences \(Honours\) from National University of Singapore and Bachelor of Arts from Sciences Po](#)
- 8.10 [Bachelor/Master of Engineering or Bachelor/Master of Science or Bachelor/Master of Computing from National University of Singapore and Diplome d'Ingenieur from French Grande École \(the equivalent of Masters in France\)](#)
- 8.11 [Concurrent Programme in Bachelor of Computing \(Computer Science\) of National University of Singapore and Scientiae Magister in Computer Science of Brown University](#)
- 8.12 [Concurrent Programme in Bachelor of Computing \(Computer Science\) of National University of Singapore and Master of Entertainment Technology of Carnegie Mellon University](#)

8.13 [NUS Master of Laws \(International Arbitration and Dispute Resolution\)-Geneva Master of Laws in International Dispute Settlement \(MIDS\) Double Degree Programme](#)

8.1 Joint Bachelor of Science (Honours) from National University of Singapore (NUS) and Bachelor of Philosophy (Honours) from Australian National University (ANU)

Please refer to <http://usp.nus.edu.sg/curriculum/special-programmes/nus-anu-fos-joint-degree-programme> for programme details.

8.2 Joint Bachelor of Arts (Honours) from National University of Singapore (NUS) and Bachelor of Philosophy (Honours) from Australian National University (ANU)

Please refer to

<http://usp.nus.edu.sg/curriculum/special-programmes/nus-anu-fass-joint-degree-programme> for programme details.

8.3 Joint Bachelor of Music from National University of Singapore and Peabody Institute of The John Hopkins University

8.3.1 [Overview of Programme](#)

8.3.2 [Admission Requirements](#)

8.3.3 [Grading and Degree Requirements](#)

8.3.4 [Programme Requirements](#)

8.3.5 [Exiting the Programme](#)

8.3.1 Overview of Programme

The joint B.Mus. degree provides a best-practice Bachelor's level music education that aims to provide undergraduate music students from both YSTCM and the Peabody Institute with learning and performance experience in a global context.

The joint degree is a continuation of the agreement between the two institutions first established in 2001.

Of the total of eight semesters of undergraduate study, the proposal stipulates that students spend five semesters in their home institution and three semesters in the partner (or "host") institution. The programme will encourage those students where the joint B.Mus. degree will provide additional value to their undergraduate education by expanding the possibility for a broader instructional base not available at a single institution.

8.3.2 Admission Requirements

It is anticipated that the annual intake of students into the joint-B.Mus.-degree programme will be approximately three to five (3-5) students from each institution. Entering students to each institution are encouraged to declare their interest and intention in applying for the joint degree programme at the commencement of their studies. Each institution will conduct its own auditions and interviews for proposed candidates, in accordance with the standard regulations for B.Mus. entry. In particular, potential students will need to be able to articulate why the joint-degree programme will have meaning for their music educational and performance contexts. The Joint-Degree Committee must approve all potential candidates, and both institutions have the right to accept or reject candidates put forward by the Committee.

The selection process into the joint degree programme will be highly competitive, with all potential candidates interviewed and evaluated at the completion of their first year of study. Candidates will be required to demonstrate:

- Strong English language comprehension skills (both oral and written);
- Excellent first-year CAP results (generally minimum 4.1), with a proper balance of high results in both academic and practical modules;
- A strong motivation and desire to study music performance and/or composition within an international context.

A test may be administered at the time of application to assist in determining a candidate's suitability for the joint-degree programme. Final selection will be determined by the Joint-Degree Committee and the individual student's major study teacher at their home institution.

8.3.3 Grading and Degree Requirements

Assessment of student progress shall be conducted in accordance with the academic regulations of the home institution or host institution at which the student is currently resident, unless the Joint-Degree Committee has granted prior approval with alternative arrangements. Each institution will be responsible for the assessment of students enrolled in its course. Responsibility for monitoring student progress lies with the institution at which the student is currently resident, which will submit a report each semester to the Joint-Degree Committee for oversight. The awarding of the joint BMus degree to a student will be approved by the respective authorities of both institutions.

With the exception of the Major Study lesson and the Junior Recital / Departmental Examination modules, all other modules read at the host university will be granted credit transfer without grades at the home institution. The Major Study and Junior Recital / Departmental Examination modules will be assigned a transferable letter grade, in consultation with the Joint-Degree Committee, and will additionally be assessed utilising the traditional written evaluation of performance in the major study modules.

Of the 164 equivalent module credits in the YSTCM (home) and Peabody (host) institutions, students who complete the joint degree programme will be granted credit transfer of 45 equivalent MCs, and 119 equivalent MCs as graded modules.

The transferable letter grade for the Major Study and Junior Recital / Departmental Examination modules will be evaluated as follows:

PEABODY GRADE YSTCM (CAP)	
A	5.0
A-	4.5
B+	4.0
B	3.5
B-	3.0
C+	2.5
C	2.0
D+	1.5
D	1.0

PEABODY GRADE YSTCM (CAP)

F

0.0

8.3.4 Programme Requirements

A student's period of candidature will commence at the beginning of an academic year in his/her home institution. Students at YSTCM and The Peabody Institute will normally be expected to earn their B.Mus. degree after four (4) years, or eight (8) semesters, of full-time study. Extensions of the joint-B.Mus.-degree programme are only possible for extenuating circumstances, and must be approved by both institutions. Matters related to any interruptions of study will be handled by the home institution, subject to the approval of the Joint-Degree Committee.

The joint-B.Mus.-degree programme stipulates that students spend five semesters in their home institution and three semesters in the host institution. Traditionally the study format will be as follows:

- Students will follow the standard requirements for their home institution during their first year of enrolment.
- Normally, students will then undertake study at the host institution in Semester 1 of their second year of study, and return to the home institution for Semester 2 of their second year.
- Students will then return to the host institution for their entire third year of study (both Semesters 1 and 2), and complete their study with the entire fourth year at the home institution.
- This format provides the opportunity for students to explore the joint-degree option in their second year of enrolment to evaluate the value-added benefits of overseas study.
- If at the end of Semester 1 of their second year students decide that they do not wish to continue in the joint-degree programme, they will have the option to return to the traditional programme of study at their home institution, with the "semester away" credited as an exchange semester.

As with the traditional B.Mus. programme at each institution, each student will have a major study instructor responsible for one-to-one training on their primary instrument, voice or composition, and will be supervised by at least one major-study instructor at each institution.

Candidates will follow the rules and regulations of both the host and home institutions relating to student conduct during their periods of candidature at each location, unless the Joint-Degree Committee has granted prior approval of alternative arrangements.

Students who complete the joint B.Mus. degree successfully will be awarded a joint degree scroll: Bachelor of Music. Students will have their degree conferred jointly by the home and host institutions, but will have their degree presented in the home institution. Students awarded the joint B.Mus. degree are entitled to become members of the alumni associations of both institutions.

Coursework Requirements and List of Undergraduate Modules

The module mapping for each student will be conducted on an individual basis, with a general comparative outline as follows:

PEABODY		YSTCM
55 / 134 [65.7 / 164]	MAJOR AREA - lessons, juries, recitals - ensembles	80 / 164
45 / 134 [53.7 / 164]	SUPPORTIVE COURSES IN MUSIC - Mus Concepts & Materials (20) - History (8) - Prof Dev (8) - Comm about Mus (4) - Conducting (2) + - Advanced theory electives (4) - Advanced history electives (6)	42 / 164 [w/ directed electives: 52/164]
28 / 134 [33.4 / 164]	GENERAL STUDIES - Singapore Studies (4) - Humanities/GEMS (16) + - 12 further MCs in general studies	20 / 164 [w / directed electives: 32 / 164]
6 / 134 [7.3 / 164]	ELECTIVES	22 / 164 [w / re-direction: 0/164]

Appendix A includes a generic outline mapping the module structure in the joint-degree programme at both the Peabody Conservatory and YSCTM.

8.3.5 Exiting the Programme

Continuation will be based upon the normal criteria and regulations of the institution where the student is currently resident. Oversight will be undertaken by the Joint-Degree Committee. YSTCM students are expected to maintain a minimum CAP of 4.0 during their enrolment in the joint-degree programme. Any student falling below this CAP at any time during their enrolment is subject to review by the Joint-Degree Committee.

Withdrawal will follow the home institution's normal processes. If a student withdraws from the joint BMus degree, the home institution will notify the host institution.

Cases for termination must be agreed upon by the Joint-Degree Committee, as well as the home and host institutions.

JOINT DEGREE: YONG SIEW TOH CONSERVATORY AS HOME INSTITUTION

Course	Name	Category	Semester	MC	
MUA1107	Ensemble	Major	1.1	4	
MUA1161	Lesson	Major	1.1	5	
MUH1115	Communicating about Music	Music Academics	1.1	2	
MUT1121	Musical Concepts and Materials I	Music Academics	1.1	6	
MUA1108	Ensemble	Major	1.2	4	
MUA1162	Lesson	Major	1.2	6	
MUH1116	Communicating about Music	Music Academics	1.2	2	
MUT1122	Musical Concepts and Materials II	Music Academics	1.2	6	
MUL2101	Critical Thinking for Musicians	General Studies	2.1	4	Σ = 23 Semester at Peabody
MUA2107	Ensemble	Major	2.1	4	
MUA2161	Lesson	Major	2.1	5	
MUT2117	Musical Concepts and Materials III	Music Academics	2.1	4	
MUH2115	Music and Context: Before 1800	Music Academics	2.1	4	
MUA1163	Introduction to Professional Studies	Music Academics	2.1	2	

MUL2102	Patrons of the Arts	General Studies	2.2	4	These are the MC credits to be replaced with credits in courses at Peabody
MUA2108	Ensemble	Major	2.2	4	
MUA2162	Lesson	Major	2.2	6	
MUT2118	Musical Concepts and Materials IV	Music Academics	2.2	4	
MUH2116	Music and Context: After 1800	Music Academics	2.2	4	
xxxxxxx	Electives	Electives	3.1	3	Σ = 40 Year at Peabody
MUL320x	Science and Technology as Artistic Innovators / Art of Ritual and Recreation	General Studies	3.1	4	
MUA3107	Ensemble	Major	3.1	4	
MUA3161	Lesson	Major	3.1	5	
MUA3105	Conducting	Music Academics	3.1	2	
xxxxxxx	Electives	Electives	3.2	3	
SSxxxx	GEM Electives	General Studies	3.2	4	
MUA3108	Ensemble	Major	3.2	4	
MUA3162	Junior Recital	Major	3.2	8	
MUAxxxx	Applied Studies Elective	Music Academics	3.x	3	
SSxxxxx	GEM Electives	General Studies	4.1	4	
SSxxxx	GEM Electives	General Studies	4.1	4	
MUA4107	Ensemble	Major	4.1	2	
MUA4161	Lesson	Major	4.1	5	
SSxxxx	Singapore Studies	General Studies	4.1	4	
SSxxxx	GEM Electives	General Studies	4.2	4	
MUA4108	Ensemble	Major	4.2	2	
MUA4132	Senior Recital	Major	4.2	12	

MUAxxxx	Applied Studies Elective	Music Academics	4.2	3	
				160	

JOINT DEGREE: PEABODY AS HOME INSTITUTION

Course	Name	Category	Semester	Credits	
PY.206.115	Humanities Seminar	General Studies	1.1	4	
PY.100.100	Major Lesson	Major	1.1	4	
PY.910.xxx	Large Ensemble	Major	1.1	2	
PY.710.123	Ear-training I	Music Academics	1.1	2	
PY.710.155	Keyboard Studies I	Music Academics	1.1	2	
PY.710.1xx	Music Theory 1-2	Music Academics	1.1	3	
PY.206.xxx	Humanities	General Studies	1.2	3	
PY.100.100	Major Lesson	Major	1.2	4	
PY.910.xxx	Large Ensemble	Major	1.2	2	
PY.xxx.109	Departmental Examination	Major	1.2	1	
PY.710.124	Ear-training I	Music Academics	1.2	2	
PY.710.156	Keyboard Studies I	Music Academics	1.2	2	
PY.710.1xx	Music Theory 3-4	Music Academics	1.2	3	
PY.206.xxx	Humanities	General Studies	2.1	3	Σ =16 Semester at YSTCM
PY.100.100	Major Lesson	Major	2.1	4	
PY.910.xxx	Large Ensemble	Major	2.1	2	
PY.710.223	Ear-training I	Music Academics	2.1	2	
PY.710.255	Keyboard Studies I	Music Academics	2.1	2	
PY.710.2xx	Music Theory 1-2	Music Academics	2.1	3	

PY.206.xxx	Humanities	General Studies	2.2	3	These are the credits to be replaced with credits in modules at YSTCM
PY.100.100	Major Lesson	Major	2.2	4	
PY.910.xxx	Large Ensemble	Major	2.2	2	
PY.xxx.209	Departmental Examination	Major	2.2	1	
PY.710.224	Ear-training I	Music Academics	2.2	2	
PY.710.256	Keyboard Studies I	Music Academics	2.2	2	
PY.710.2xx	Music Theory 3.4	Music Academics	2.2	3	
PY.206.xxx	Humanities	General Studies	3.1	3	Σ = 26 Year at YSTCM
PY.100.100	Major Lesson	Major	3.1	4	
PY.910.xxx	Large Ensemble	Major	3.1	2	
PY.610.xxx	Musicology	Music Academics	3.1	2	
PY.710.311	Music Theory 5	Music Academics	3.1	3	
PY.206.xxx	Humanities	General Studies	3.2	3	
PY.100.100	Major Lesson	Major	3.2	4	
PY.910.xxx	Large Ensemble	Major	3.2	2	
PY.xxx.309	Departmental Examination	Major	3.2	1	
PY.610.xxx	Musicology	Music Academics	3.2	2	
PY.xxx.xxx	General Elective	Elective	4.1	3	
PY.206.xxx	Humanities	General Studies	4.1	6	
PY.100.100	Major Lesson	Major	4.1	4	
PY.910.xxx	Large Ensemble	Major	4.1	2	
PY.950.531	Small Ensemble	Major	4.1	1	
PY.330.331	Basic Conducting	Music Academics	4.1	1	
PY.610.xxx	Musicology	Music Academics	4.1	2	

PY.xxx.xxx	General Elective	Elective	4.2	3	
PY.206.xxx	Humanities	General Studies	4.2	3	
PY.100.100	Major Lesson	Major	4.2	4	
PY.190.495	Recital	Major	4.2	2	
PY.910.xxx	Large Ensemble	Major	4.2	2	
PY.950.531	Small Ensemble	Major	4.2	1	
PY.610.xxx	Musicology	Music Academics	4.2	2	
PY.710.xxx	Music Theory Elective	Music Academics	4.2	3	
				132	

8.4 Joint Bachelor of Arts (Honours) from National University of Singapore and Bachelor of Social Sciences (Honours) in Actuarial Studies and Economics from Australian National University

For details please refer to section [A2.3.4.1 of Part II](#) of this bulletin or alternatively, please visit the following link: http://www.fas.nus.edu.sg/ecs/undergraduate/anu_nus.html

8.5 Joint Bachelor of Arts (Honours) from National University of Singapore and from University of North Carolina - Chapel Hill

For details please refer to [section A2.3.4.3 of Part II](#) of this bulletin or alternatively, please visit the following link:

<http://www.fas.nus.edu.sg/intl/JointBA-NorthCarolina.html>

8.6 Joint Bachelor of Science (Honours) in Life Sciences from National University of Singapore and Bachelor of Science in Biology from The University of North Carolina - Chapel Hill

Overview of Programme

This joint degree programme combines the Bachelor of Science (Honours) in Life Sciences offered by the Faculty of Science, NUS, and Bachelor of Science in Biology offered by the College of Arts and Sciences, the University of North Carolina at Chapel Hill (UNC-CH), and is designed to be completed in four years, to be taught in NUS and UNC-CH. It brings together the strengths of both universities' undergraduate curricula, integrates overseas experience into the undergraduate studies, and awards a jointly validated Bachelor of Science degree qualification. NUS students will complete the requirements for an Honours class while UNC-CH students will have the option to pursue (or not to pursue) the Honours class.

Admission Requirements

Students in NUS Faculty of Science with a primary major in Life Sciences may apply to enter this programme at the end of their first year of B.Sc. (Hons.) candidature. All applicants will undergo a selection process and an interview to assess their academic performance, and aptitude and suitability for the programme, as well as other relevant criteria.

The application period and procedure will be announced every academic year.

Exiting the Programme

NUS students in this programme must maintain a CAP of 4.00 or above (out of 5.00) for the Bachelor of Science degree. A student whose CAP falls below 4.00 for two consecutive semesters will be required to leave the programme, resulting in a termination to the JDP candidature. The student may then resume and complete the default B.Sc. (Hons.) degree in NUS.

NUS students in this programme can also choose to withdraw and continue with the default B.Sc. degree study.

The withdrawal and termination processes will follow the prevailing practices of the home university. Students who withdraw or are terminated from the programme would only transfer the credits but not grades of the modules read at the partner university.

Relevant website

For more information, please visit <http://www.lifesciences.nus.edu.sg>

8.7 Joint Bachelor of Science (Honours) in Life Sciences from National University of Singapore and Bachelor of Science (Honours) in Biological Sciences/Biomedical Sciences from University of Dundee

Overview of Programme

This Joint Degree Programme (JDP) combining Bachelor of Science (Honours) [BSc(Hons)] in Life Sciences offered by the Faculty of Science (FoS), NUS, and Bachelor of Science (Honours) [BSc Hons] in Biological Sciences/Biomedical Sciences offered by the School of Life Sciences, University of Dundee (UoD), is designed to be completed in four years, and taught in NUS and UoD. The Programme combines the strengths of both universities' undergraduate curricula, integrates overseas experience into the undergraduate studies, and awards a jointly validated BSc (Hons) degree qualification.

NUS students in this JDP will complete the degree requirements as per that of the NUS BSc (Hons) degree in Life Sciences. Participants will spend the first two-and-a-half years in NUS before moving to and staying at UoD for three regular semesters (i.e. the 6th to 8th semesters inclusive of their course of undergraduate study). This study abroad segment thus includes the Honours year.

Admissions

Students in NUS Faculty of Science with primary major in Life Sciences may apply to enter this programme in the first year. Life Sciences Major students in the senior years may apply but the study plan may deviate as scheduled. All applicants will undergo a selection process and an interview to assess their academic competencies, aptitude and suitability for the programme, as well as other relevant criteria.

Continuation and Exiting the Programme

NUS students in this JDP must maintain a CAP of 3.50 or above (out of 5.00) for the BSc (Hons) degree. A student whose CAP falls below 3.50 for any semester will be required to leave the programme, resulting in a termination to the JDP candidature. The student may then resume and complete the default BSc or BSc (Hons) degree in NUS, the latter if the student meets the Honours requirements and wishes to pursue Honours .

NUS students in this programme can also choose to withdraw and continue with the default BSc or BSc (Hons) degree study, the latter if the student meets the Honours requirements and wishes to pursue Honours.

Relevant website

For more information, please visit <http://www.lifesciences.nus.edu.sg>

8.8 Bachelor of Arts (Honours) / Bachelor of Science (Honours) from National University of Singapore and Bachelor of Arts in International Liberal Studies from Waseda University

Please refer to usp.nus.edu.sg/curriculum/special-programmes/nus-waseda-double-degree-programme for programme details.

8.9 Bachelor of Arts/Social Sciences (Honours) from National University of Singapore and Bachelor of Arts from Sciences Po

Please refer to usp.nus.edu.sg/nus-sciencespo/index.html for programme details.

8.10 Bachelor/Master of Engineering or Bachelor/Master of Science or Bachelor/Master of Computing from National University of Singapore and Diplome d'Ingenieur from French Grande École (the equivalent of Masters in France)

For details please refer to section [C3.3.4](#) (for School of Computing), section [F3.5.4.4](#) (for Faculty of Engineering) and section [K3.6.7](#) (for Faculty of Science) of Part II of this bulletin, or alternatively, please visit the following link: fddp.nus.edu.sg

8.11 Concurrent Programme in Bachelor of Computing (Computer Science) of National University of Singapore and Scientiae Magister in Computer Science of Brown University

8.11.1 [Overview of Programme](#)

8.11.2 [Admission Requirements](#)

8.11.3 [Programme Requirements](#)

8.11.4 [Grading and Degree Requirements](#)

8.11.5 [Exiting the Programme](#)

8.11.6 [Tuition Fees at Brown University](#)

8.11.7 [Further Enquiry](#)

8.11.1 Overview of Programme

This is a fast-track programme that allows deserving students to obtain the Bachelor of Computing (Computer Science) degree from NUS and a Scientiae Magister in Computer Science from Brown University within five years. It offers an opportunity for students to integrate professional development with a rich international experience.

The programme commenced in August 2011, with an expected intake of five to ten students annually.

Partner University: Department of Computer Science of Brown University

The Department of Computer Science, Brown University has an excellent reputation for innovative education and research, and for the tight interaction of theory and practice of Computer Science. It offers one of the leading computer science programme in the US, as ranked by US's National Research Council.

3.1.2.1 Admission Requirements

Admission Requirements

A. Masters

In general, the University requires:

- Normally an NUS Honours degree (Merit/Second Class and above) or equivalent (e.g., a four-year Bachelors degree with at least an average grade of 'B') in a relevant discipline;
- In exceptional cases, a Bachelors degree in a relevant discipline with at least two years of relevant work experience, subject to approval by the Faculty and Board of Graduate Studies, on a case-by-case basis; and
- TOEFL/IELTS, where applicable.

All applicants should consult the website of relevant Departments/Programmes for specific departmental requirements.

B. Ph.D.

In general, the University requires:

- Normally a good Masters degree in a relevant discipline; or
- An NUS Honours degree (at least Distinction/Second Class Upper Division) or equivalent (e.g., a four-year Bachelors degree with an average grade above 'B') in a relevant discipline, subject to approval by the Faculty, on a case-by-case basis; and
- TOEFL/IELTS, where applicable.

All applicants should consult the website of relevant Departments/Programmes for specific departmental requirements.

8.10.3 Programme Requirements

The programme structure comprises the modules and requirements of both the B.Comp. in Computer Science, and the Scientiae Magister in Computer Science programmes.

1. B.Comp. (CS) Programme Requirement

The details of B.Comp. (CS) requirements (including the two special programmes in Computer Science) can be found at: <http://www.comp.nus.edu.sg/undergraduates>.

2. Scientiae Magister in Computer Science Degree Structure

The programme requirements consist of a basic component and an advanced component:

Basic component (six courses):

1. Two must be CS courses that form a coherent major,
2. One must be a CS course that complements the major., and
3. Three additional courses must be in CS or related areas

Here, “coherent” refers to a pair of intimately related courses (e.g., a sequence, or same subject matter) whereas “complementary” indicates a less strong relatedness, but still a meaningful pairings. Such relations are dynamic and sanctioned by the department: the current version is clearly spelled out in the table Sample Curricula for the Sc.M. degree (from the Master’s programme website).

Please visit: http://www.comp.nus.edu.sg/undergraduates/samplecurriculum_ScM.pdf for a sample.

Finally, of these courses, at least two must be at the level-200(advanced graduate) offered by the Department of Computer Science, other than reading and research.

Advanced component (two courses):

A student must choose one of the following three options:

1. A research thesis (typically, involving two semesters of reading and research) directed by an advisor.
2. A project, involving either a software implementation (typically, involving two semesters of reading and research under an advisor).
3. Two additional 200-level courses in CS or related areas.

8.11.4 Grading and Degree Requirements

Continuation Criteria

Students in this concurrent programme must maintain a CAP of 4.00 or above (out of 5.00) for their B.Comp. requirements.

Award of Degree

Students must fully satisfy the concurrent B.Comp. in Computer Science and the Scientiae Magister in Computer Science degree requirements before they are simultaneously conferred both degrees. Under no circumstances would a student be conferred the Brown degree before both degree requirements are fully satisfied.

8.11.5 Exiting the Programme

A student whose CAP falls below 4.00 for two consecutive semesters in NUS will not be allowed to remain in the concurrent programme, but may continue with his B.Comp. study at NUS.

8.10.6 Tuition Fees at Brown University

Tuition Fees at Brown University

Students will pay Brown tuition fees during the time they undertake instruction at Brown in partial fulfillment of the requirements of the concurrent degree. They will also provide their medical insurance coverage.

Applicants pursuing this concurrent programme are encouraged to take up the National Infocomm Scholarship which is offered by the Infocomm Development Authority of Singapore.

8.11.7 Further Enquiry

Please direct all queries to socug@nullcomp.nus.edu.sg with the subject clearly marked: "Concurrent Programme in Computer Science with Brown University".

8.12 Concurrent Programme in Bachelor of Computing (Computer Science) of National University of Singapore and Master of Entertainment Technology of Carnegie Mellon University

8.12.1 [Overview of Programme](#)

8.12.2 [Admission Requirements](#)

8.12.3 [Programme Requirement](#)

8.12.4 [Grading and Degree Requirements](#)

8.12.5 [Exiting the Programme](#)

8.12.6 [Further Enquiry](#)

8.12.7 [Relevant website](#)

8.12.1 Overview of Programme

This is a fast-track programme that allows talented and passionate students to obtain the Bachelor of Computing (B.Comp.) in Computer Science degree from NUS and a Master of Entertainment Technology (M.E.T.) degree from Carnegie Mellon University (CMU) within five years.

Successful applicants will spend three-and-a-half years in NUS to complete the bachelor degree and the next one-and-a-half years at campuses of the Entertainment Technology Centre (ETC-Global) located in the United States, Australia and Korea to complete the M.E.T. degree. If the degrees were pursued separately, the B.Comp. programme takes four years to complete, and the M.E.T. two years.

Students who meet selection criteria may also gain full scholarship support from the Infocomm Authority of Singapore (IDA) under its National Infocomm Scholarship (NIS) scheme.

Students will also build up a portfolio of work as the programme emphasises project work, which is much valued in the interactive digital industry. Alumni of the ETC are known to be much sought after by the digital media industry, as well as museum and theme park companies.

Partner University: ETC of CMU

ETC of CMU is a leading institution in the world for training in interactive digital media installations and technology. Trainees undergo a rigorous project-based curriculum where they work in teams in highly creative environments. ETC currently has its headquarters in Pittsburgh, USA, and other operational campuses in Adelaide, Australia/Seoul, Korea/L.A., USA. Trainees are encouraged to travel to interesting sites all over the world, and work with first-hand perspective on projects. Adventurous projects often lead to start-up companies or starting points for Ph.D. research in renowned universities.

8.12.2 Admission Requirements

Selection criteria

Students will be admitted directly to the Concurrent Programme during their application to undergraduate admission to NUS via: <http://www.nus.edu.sg/oam/>. These students will be selected on the basis of their GCE 'A' Level grades or equivalent, and their interest profiles in creative projects and activities. An interview will be conducted to assess the potential and suitability of students for this concurrent programme.

Computing students who are not granted direct entry into this concurrent programme but are accepted into the School as part of the general Bachelor in Computing cohort may apply to the programme after their first year of studies. The call for applications will be announced to all existing students at an appropriate time. These students must demonstrate strong academic ability (gaining a CAP of 4.0 and above) and creative talent in their first year of studies with the School. They must also meet all criteria of the Concurrent Programme for B.Comp. Admission of these students is subject to the size constraint of the Concurrent Programme.

Subject Prerequisites

GCE 'A' Level Pass in Mathematics and either GCE 'A' Level Pass in Computing or GCE 'A' Level Pass in Physics or GCE 'A' Level Pass in Chemistry.

Applicants must first make an online application with the NUS Office of Admissions at:

<http://www.nus.edu.sg/oam/apply/cata/>

After the online application is made, the following documents must be submitted to the School:

1. Academic Performance documents: Copy of GCE 'A' Level consolidated results;
2. Curriculum Vitae: concise, tabular, less than four pages;
3. Statement of intent: an essay on why you are suitable for the concurrent programme;
4. Portfolio: academic and personal projects submitted in non-returnable CD form; highlighting the important aspects of each demo item.

Instructions for submission of supporting documents:

- Please do not submit original certificates or official documents; send the photocopies instead.
- Please write your name and application number on all documents.
- Please enclose an English translation for any supporting document that is not in English.
- Please write your application number and 'M.E.T.' on the top left-hand corner of the envelope.
- Please send the documents to:

The Administrator (B.Comp.-M.E.T.)
School of Computing
National University of Singapore
Computing 1, #03-68
13 Computing Drive
Singapore 117417

8.12.3 Programme Requirement

The programme structure comprises the modules and requirements of both the B.Comp. in Computer Science (CS) programme, and the M.E.T. programme. The details are listed at http://www.comp.nus.edu.sg/undergraduates/cdp_carnegie_CS.html

8.12.4 Grading and Degree Requirements

Students in this concurrent programme must maintain a CAP of 4.00 or above out of 5.00 and/or demonstrate strong creative talents.

8.12.5 Exiting the Programme

Students who fail to meet the criteria will not be allowed to remain in the Concurrent Programme, but may continue with their B.Comp. studies at NUS.

8.12.6 Further Enquiry

Please direct all queries to socug@nullcomp.nus.edu.sg with the subject clearly marked: "Concurrent Programme in Interactive Digital Media with CMU-ETC"

8.12.7 Relevant website

Please refer to: <http://www.comp.nus.edu.sg/programmes/sp/cdp/carnegie-cs/>.

8.13 Concurrent Programme in Bachelor of Computing (Information Systems) of National University of Singapore and Master of Science (Engineering & Technology Innovation Management) of Carnegie Mellon University

8.13.1 [Overview of Programme](#)

8.13.2 [Admission Requirements](#)

8.13.3 [Programme Requirements](#)

8.13.4 [Grading and Degree Requirements](#)

8.13.5 [Exiting the Programme](#)

8.13.6 [Further Enquiry](#)

8.13.7 [Relevant website](#)

8.13.1 Overview of Programme

This fast-track 4.5-year programme allows students to graduate with a Master degree in Engineering and Technology Innovation Management (thereafter called MS (E&TIM)) from Carnegie Mellon University (CMU) and a Bachelor degree in Information Systems (hereafter called BComp(IS)) from NUS. Students get a global education with 3.5 years at NUS and 1 year at Carnegie Mellon University. To apply for this programme, students must apply for Information Systems course, offered by School of Computing, NUS. They can apply for direct admission to this programme. They will be chosen on the basis of their A-level grades (or equivalent), their interest profile in information systems studies, and a personal interview designed to judge their potential and suitability for the programme.

Students will complete 144 modular credits (equivalent to 36 modules) of the BComp(IS) programme before they proceed to complete MS(E&TIM) at CMU. Sixteen modular credits (equivalent to 4 modules) will be counted against the modules in MS(E&TIM). Students who have successfully completed the stipulated four modules in the MS(E&TIM) programme will be awarded BComp(IS) from NUS. At the end of the MS(E&TIM) programme, the students will be conferred the second degree – MS(E&TIM) from CMU. The intake to this BComp(IS) – MS(E&TIM) concurrent programme will be limited by agreement between CMU and NUS.

Partner University: College of Engineering, Carnegie Mellon University

The Carnegie Mellon University's College of Engineering ranks among the leaders in the world for engineering research and education. It offers a five-year joint bachelor's and master's degree in all five of the traditional majors, in addition to an accelerated master's programme in Engineering & Technology Innovation Management.

8.13.2 Admission Requirements

The admission and progress criteria comply with the requirements established by both Carnegie Mellon University and NUS. A joint steering committee comprising at least one faculty representative from each of the two universities will oversee the programme. Students may enter the concurrent degree programme at any point during their undergraduate study at NUS although it is preferred that they declare their interest at NUS matriculation.

Direct admission

Candidates applying for admission to NUS can apply for direct admission to this programme. They will be chosen on the basis of their A-level grades (or equivalent) or polytechnic diploma grades, their interest profile in information systems studies, and a personal interview designed to judge their potential and suitability for the programme.

In-progress admission

Students who have not opted for direct admission, but are admitted to SoC-NUS, may also declare their interest at NUS matriculation. Selection criteria for these students will be similar to those for direct admission.

Existing BComp (IS) students admission

Existing BComp (IS) students who have demonstrated strong academic abilities may be allowed to enter the programme at any stage of their study at NUS (subject to size constraints). These students are required to meet all the requirements of the programme.

During their course of study at NUS, students in the programme must maintain a high level of performance (CAP 4.20 and above). Students who do not meet this standard will be moved to the standard BComp (IS) programme at NUS. Admission to the Master's degree component of the programme, granted by the College of Engineering and Tepper Business School at Carnegie Mellon University, will be based on the student's academic performance, and recommendations of a joint steering committee.

8.13.3 Programme Requirements

The programme structure comprises the modules and requirements of both the B.Comp. in Computational Biology, and the Scientiae Magister in Computer Science programmes.

A. Programme Structure of the Concurrent Programme in Computational Biology

Table 1 : Bachelor of Computing in Computational Biology Degree Structure

MODULES		MCS	SUBTOTALS
UNIVERSITY LEVEL REQUIREMENTS			20
PROGRAMME REQUIREMENTS			120
Common Essentials			
CS1010	Programming Methodology ¹	4	
CS1020	Data Structures and Algorithms I ²	4	
CS2010	Data Structures and Algorithms II ²	4	
CS2100	Computer Organisation	4	
CS2102	Database Systems	4	
CS2103T	Software Engineering ³	4	
CS2105	Introduction to Computer Networks	4	
Major Requirements			
Level-1000 CS and LS major requirements			
CS1231	Discrete Structures	4	
LSM1101	Biochemistry and Biomolecules	4	
LSM1102	Molecular Genetics	4	
MA1101R	Linear Algebra I	4	
MA1102R	Calculus	4	

8.13.4 Grading and Degree Requirements

Students are required to complete 144 modular credits (equivalent to 36 modules) of the BComp (Information Systems) programme before they can register for the MS (Engineering and Technology Innovation Management) (MS (E&TIM)) from Carnegie Mellon University. Students need to complete their internship requirement before going to CMU.

Students who have satisfied the core requirements of the MS (E&TIM) programme namely, Managerial and Engineering Economics, The Strategy and Management of Technological Innovation, Product/Process Project Course, and the Innovation Management in Practice Seminar will be considered as having successfully completed the 4 remaining modules required for the BComp (Information Systems) programme. These CMU core modules are mapped to the IS electives but students may also request mapping to appropriate core modules, subject to the approval of the department.

Continuation Criteria

Students in this concurrent programme must maintain a CAP of 4.20 or above (out of 5.00) for their BComp requirements.

Award of Degree

Students who satisfy the concurrent BComp (Information Systems) - MS (Engineering and Technology Innovation Management) degree requirements will be conferred both degrees.

8.13.5 Exiting the Programme

A student whose CAP falls below 4.20 for two consecutive semesters in NUS will not be allowed to remain in the concurrent programme, but may continue with his/her BComp (Information Systems) study at NUS.

Students who have completed the four core modules from the MS (E&TIM) programme but did not succeed in completing the entire programme will only be awarded the BComp (Information Systems) degree and not the MS (E&TIM) degree.

8.13.6 Further Enquiry

Please direct all queries to bcomp@nullcomp.nus.edu.sg with the subject clearly marked: "Concurrent Programme in Information Systems with College of Engineering, Carnegie Mellon University (CDP-IS-CMU)".

8.13.7 Relevant website

Please refer to: www.comp.nus.edu.sg

8.14 Concurrent Programme in Bachelor of Science in Life Sciences of National University of Singapore and Doctor of Veterinary Medicine of University of Melbourne

Overview of Programme

This Concurrent Degree Programme (CDP) combining Bachelor of Science in Life Sciences (BSc) offered by the Faculty of Science (FoS), National University of Singapore (NUS), and Doctor of Veterinary Medicine (DVM) offered by the Faculty of Veterinary and Agricultural Sciences, University of Melbourne (UoMelb), is designed to allow an NUS Life Sciences Major to embark on a graduate studies in veterinary medicine concurrently while on a study abroad programme, complete the BSc, and continue with the DVM as a graduate student in UoMelb.

Students in this programme will complete the BSc degree in Life Sciences with three regular semesters in NUS and two regular semesters in UoMelb. During the one-year study abroad segment in UoMelb, students will read the first year of the DVM programme. Upon completion of the BSc, students will then continue with the DVM.

Admissions

Students in NUS FoS with primary major in Life Sciences may apply to enter this programme at the start of the first year of the candidature. Life Sciences Major students in the second year may apply but the study plan may deviate as scheduled. All applicants will undergo a selection process and an interview to assess their academic competencies, interest profile in veterinary studies, and suitability for the programme, as well as other relevant criteria.

Continuation and Exiting the Programme

The continuation requirements are as follow:

While student is in NUS

NUS students in this CDP must maintain a CAP of 3.50 or above (out of 5.00) for the BSc degree requirements at the completion of three semesters. A student whose CAP falls below 3.50 at the completion of three semesters will be required to exit the programme. The student may then resume and complete the default BSc degree in NUS with or without Honours depending on his or her CAP and desire.

NUS students in this CDP are given the option to withdraw and continue with the default BSc study.

While student is in UoMelb

NUS students must pass prescribed subjects undertaken at UoMelb for articulation into the DVM degree. A student who does not meet the requirements will be required to leave the programme, resulting in a termination of the CDP candidature. The student will then return to NUS to complete the default BSc degree, taking into account all the accepted credit transfer stated for this CDP for any DVM module completed.

The withdrawal and termination processes will follow that of the host university.

Relevant website

For more information, please visit <http://www.lifesciences.nus.edu.sg>

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8.15 NUS Master of Laws (International Arbitration and Dispute Resolution)- Geneva Master of Laws in International Dispute Settlement (MIDS) Double Degree Programme

The NUS Master of Laws (International Arbitration and Dispute Resolution)-Geneva Master of Laws in International Dispute Settlement (MIDS) Double Degree Programme (DDP) is available to students in the NUS LL.M. (International Arbitration & Dispute Resolution) programme. Under this arrangement, students will complete the curriculum for the LL.M. (IADR) at NUS and then go to Geneva to read the LL.M. in International Dispute Settlement (MIDS) for one semester. Upon successful completion of their studies at Geneva, NUS law students will graduate with an LL.M. (IADR) from NUS and LL.M. in International Dispute Settlement (MIDS) from Geneva.

For more information, please visit:

http://law.nus.edu.sg/student_matters/grad_prog/nus_geneva_ddp.html

MODULES		MCS	SUBTOTALS
Level-2000	CS and LS major requirements		
CS2220	Introduction to Computational Biology	4	
CS2101	Effective Communication for Computing Professionals	4	
LSM2101A	Metabolism and Regulation or		
LSM2102A	Molecular Biology or	4	
LSM2103	Cell Biology		
LSM2201A	Experimental Biochemistry		
or		4	
LSM2202A	Experimental Molecular and Cell Biology		
ST2334	Probability and Statistics ⁴	4	
Level-3000	CS and LS major requirements		
CS3230	Design & Analysis of Algorithms	4	
CS3225	Combinatorial Methods in Bioinformatics or		
MA3259	Mathematical Methods in Genomics	4	
LSM3231	Protein Structure and Function	4	

MODULES		MCS	SUBTOTALS
Level-3000 Electives ⁵ ; Choose any three from the following:		12	
CS3103	Computer Networks Practice ⁶		
CS3225	Combinatorial Methods in Bioinformatics		
or MA3259	Mathematical Methods in Genomics		
CS3240	Interaction Design		
CS3241	Computer Graphics		
CS3243	Introduction to Artificial Intelligence		
CS3244	Machine Learning		
Level-4000 CS and LS major requirements			
CS4220	Knowledge Discovery Methods in Bioinformatics	4	20
LSM4241	Functional Genomics	4	
Industrial Experience Training ⁶ Sufficient number of modules from CB Elective Course List ⁷		20	
UNRESTRICTED ELECTIVES ⁸			20
Grand Total			160

Note 1:

CS1010 can be replaced by CS1101S Programming Methodology.

Note 2:

CS1020 (4 MCs) and CS2010 (4 MCs) can be replaced by CS2020 Data Structures and Algorithms Accelerated (6 MCs). The remaining 2 MCs will be added to the Unrestricted Electives Requirements.

Note 3:

Students taking CS2103T Software Engineering must take CS2101 Effective Communication for Computing Professionals in the same semester.

Note 4:

Students should choose ST2131 (Probability) and ST2132 (Mathematical Statistics) in place of ST2334 (Probability and Statistics) if they plan to pursue higher level statistics modules.

Note 5:

With the special permission from the UROP coordinator and Computational Biology Programme Coordinator, CP3208/CP3209 Undergraduate Research in Computing I/II can be used to replace two of the Level-3000 Computational Biology electives if the project is on Computational Biology.

Note 6:

Please refer to Section 3.2.6 for the details on Industrial Experience Training for students in the Department of Computer Science. Students doing this concurrent degree may opt to replace Industry Experience Training by CP4101 B.Comp. Dissertation.

Note 7:

The Computational Biology (CB) Elective Course List may be revised from time to time to include new Computational Biology electives that are introduced and approved by the Department of Computer Science.

Note 8:

Students are required to read CM1121 Basic Organic Chemistry, and PC1432 Physics IIE towards Unrestricted Electives.

B. Scientiae Magister in Computer Science - Computational Biology track (ScM-CS Compbio) Degree Structure

The course requirements consist of two components (comprising eight Brown courses):

I. Basic component (six courses):

1. Two level-100 or higher courses in Computational Genomics,
2. Two level-100 or higher courses in another area in Bioinformatics/Computational Biology, and
3. Two additional level-100 or higher courses, one of which requires “significant programming”, and the other, under normal circumstances, is a rotation in a Life Sciences laboratory.

Of these courses, at least two must be at the level-200 (advanced graduate) offered by the Department of Computer Science, other than reading and research.

II. Advanced component (two courses):

A student must choose one of the following three options:

1. A research thesis (typically, involving two semesters of reading and research) in a CCMB-approved area directed by a CCMB advisor.
2. A project, involving either software implementation or laboratory work (typically, involving two semesters of reading and research under a CCMB advisor).
3. Two additional level-200 courses, selected in consultation with the assigned academic advisor to balance Computer-Science/Computational-Biology expertise.

Finally, students are expected to participate in the seminar programme organised by the CCMB, both as audience and as occasional speakers.

C. List of Brown modules that can be double counted towards B.Comp. Requirements

ScM-CS Compbio modules can be taken in replacement of either Level-3000 or Level-4000 B.Comp. in Computational Biology modules. Only a maximum of three ScM-CS Compbio modules can be used for double counting towards both degrees.

SCM-CSCOMP BIO MODULES		IN REPLACEMENT OF B.COMP. IN COMP.BIO. MODULES	
CSCI1680	Computer Network	CS3103	Computer Networks Practice
CSCI1810 <u>or</u> CSCI1950-L Computational Biology <u>or</u> CSCI1950-Z Computational Methods for Biology	Computational Molecular Biology Algorithmic Foundations of Computational Methods for Biology	CS3225 Combinatorial Methods in Bioinformatics <u>or</u> MA3259 Mathematical Methods in Genomics	
CSCI1230	Intro to Computer Graphics	CS3241	Computer Graphics
CSCI1410	Intro to AI	CS3243	Introduction to Artificial Intelligence
CSCI1950F	Intro to Machine Learning	CS3244	Machine Learning
CSCI1380	Distributed Computer Systems	CS4231	Parallel and Distributed Algorithms
CSCI1950-J	Introduction to Computational Geometry	CS4235 Computational Geometry <u>or</u> CS5237 Computational Geometry and Applications	

SCM-CSCOMP BIO MODULES		IN REPLACEMENT OF B.COMP. IN COMP.BIO. MODULES	
CSCI1430	Introduction to Computer Vision	CS4243	Computer Vision and Pattern Recognition
CSCI1460(CS146)	Introduction to Computational Linguistics	CS4248	Natural Language Processing
CSCI2500-A (CS250)	Advanced Algorithms	CS5206	Foundation in Algorithms