## School of Computer Science and Engineering

**Bachelor of Engineering (Computer Science)** 

**Part Time Programme** 

Student Handbook 2015

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### Programme Coordinator's Message

Congratulations for being selected into NTU SCSE's Part-time BEng Computer Science Programme, and welcome to the School of Computer Science and Engineering, Nanyang Technological University.

The part-time BEng CS Programme fortuitously coincided with a recent substantial revision of the full-time programme. In this exercise, the entire curriculum structure and detailed syllabi have been re-examined. The result has strengthened the professional education of Computer Engineering, and made SCSE's CS ever more relevant and competitive. Moreover, to strongly encourage people in the work force to pursue higher education and upgrade their skill sets, the all new part-time BEng CS Programme is now a 4-year programme, shortened from the formerly 5-year. In recognition of their on-going engineering experience, part-time students are generally exempted from the Multidisciplinary Design Project and Professional Internship. Part-time BEng students pursue the same core technical courses and many of the general education core courses as full-time students. The technical courses are designed to give a broad background in Computer Science with options for specialization in Year 3 and Year 4. To complete a balanced and rounded education, all NTU engineering students will also take non-engineering, general education courses. For instance, BEng students will have opportunities to get exposed to general principles of management and entrepreneurship.

As CS provides rigorous and widely applicable education for students, our graduates are welcomed by remarkably diverse companies and graduate schools over the world. Most CS graduates are gainfully employed by local or multinational corporations. Some of our graduates have even ventured to start up their own companies. All of our graduates will become part of our social network. Upon graduation, you can look for a career in a wide range of existing fields or emerging areas.

The classes for part-time undergraduates are conducted 3 to 4 nights a week. The programme is rigorous, challenging and interesting. Because of the workload and family commitments, part-time students are especially reminded to manage their time prudently and productively. Students are also strongly encouraged to meet their academic mentors who can provide career guidance and academic consultations throughout their study.

The part-time program can empower you to achieve the dreams of your life. The program also enables you to forge reliable networks and fond memories that can last for decades. We hope that you will do your best to take advantage of all these opportunities, and to successfully complete the education at NTU.

Wish you a great journey in the study!

Associate Prof Hsu Wen Jing

# **Programme Outline**

Students are required to complete a total of 33 modules (for students with the requisite full-time working experience) inclusive of electives over a period of 4 years. Each student is recommended to take about 4-5 modules per semester. Students will be required to undertake FYP in Year 3.

Year 1	Year 2	Year 3	Year 4
CZ1011 Engineering Maths I	CZ2001 Algorithms	CZ2005 Operating Systems	CZ4079 Final Year Project
CZ1003 Introduction to Computational Thinking	CZ2002 Object Oriented Design & Programming	CZ2007 Introduction to Databases	CZ3001 Advanced Computer Architecture
CZ1005 Digital Logic	CZ2004 Human Computer Interaction	CZ3002 Advanced Software Engineering	CZ4xxx Technical Elective 2
GC0001 Introduction to Sustainability: Multidisciplinary Approaches and Solutions	CZ0001 Engineers and Society	GC0002 Ethics and Moral Reasoning	CZ4xxx Technical Elective 3
HW0001 English Proficiency*	CZ2003 Computer Graphics & Visualization	CZ4079 Final Year Project	ET0001 Enterprise and Innovation
CZ1006 Computer Organisation and Architecture	CZ2006 Software Engineering	CZ3006 Net Centric Computing	CZ4079 Final Year Project
CZ1007 Data Structures	CZ3003 Software Systems Analysis and Design	CZ3005 Artificial Intelligence	CZ3007 Compiler Techniques
CZ1012 Engineering Maths II		CZxxxx Technical Elective 1	CZ4xxx Technical Elective 4
HW0188 Engineering Communication I			HW0288 Engineering Communication II
	Special Ter	m Modules	
MH1812 Discrete Mathematics		CZ4079 Final Year Project	

<sup>\*</sup>QUALIFYING ENGLISH TEST (QET)

Students admitted to undergraduate courses of study in NTU are required to take the Qualifying English Test (QET) unless they meet the exemption criteria. Students who fail the QET will be required to take English Proficiency (HW0001) as a subject of study. Students (unless exempted from QET) will not be eligible to register for Modern Languages and selected Communication Skills courses, or to graduate from NTU if they do not pass QET or HW0001.

#### **Click here for Curriculum**

#### **Period of Study**

The normal period of study is 4 years for students with the requisite full-time working experience. Students may be allowed to complete the course in not more than 6 years.

### Academic Integrity for Students

Adhering to the principles of academic integrity as defined by NTU is essential to your success in your studies and to your professional life beyond university. It is important to learn what academic integrity requires of you, and to practice it. This may mean taking a different approach to your work at NTU from what was expected of you at school.

It is also important for you to understand that the principles set out here are not just a set of rules; they are essential to the transmission of knowledge, and (importantly) to the way we build knowledge. Academic integrity is important for the whole university community, and it is central to the way your lecturers undertake research.

The following section sets out NTU's policy on plagiarism. After that, you will find a more detailed explanation of what you need to do to conform to the principles of academic integrity ("<u>A Guide to Academic Integrity</u>"). It is very important that you understand this section in detail.

#### **Plagiarism**

Plagiarism is to use or pass off as one's own, writings or ideas of another, without acknowledging or crediting the source from which the ideas are taken. As defined under the <a href="NTU Honour Code">NTU Honour Code</a>, this includes:

- The use of words, images, diagrams, graphs or ideas derived from books, journals, magazines, visual media, and the internet without proper acknowledgement;
- Copying the work of another student, having another person write one's assignments, or allowing another student to borrow one's work;
- Copying of work from the internet or any other sources and presenting as one's own; and
- Submitting the same piece of work for different courses or to different journals and publications.

Plagiarism undermines academic integrity as it is a form of intellectual dishonesty. It affects the University's reputation and devalues the degrees offered.

Plagiarism is regarded as a very serious offence by the University. It is considered as an instance of violation of the <a href="NTU Honour Code">NTU Honour Code</a> which could warrant disciplinary actions ranging from failing the assignment, failing the course, suspension and ultimately to expulsion from the University.

Source of contents: <a href="http://www.ntu.edu.sg/ai/ForStudents/Pages/index.aspx">http://www.ntu.edu.sg/ai/ForStudents/Pages/index.aspx</a>

### Matriculation

After you have accepted the offer of admission and obtain your matriculation number, you need to be registered as a student of NTU. To do this, you are required to matriculate online at the NTU website under:

Students → Freshmen → Freshmen Guide → Matriculation

http://www.ntu.edu.sg/Freshmen/FreshmenGuide/Pages/Matriculation.aspx

The period for matriculation is from Tuesday, 28 July 2015 to Thursday, 30 July 2015 (10am to 10pm). Please note that your name will not be in the student records if you do not matriculate online.

All new students will be issued a matriculation card. The card must be collected in person on the following days.

Programme	Date and Time	Venue
Computer Science (Part-Time)	4 August 2015 6 pm – 9 pm	Lecture Theatre 8
	11 Aug to 13 Aug 2015 17 Aug to 20 Aug 2015 (8.30 am – 5.30 pm) 14 Aug 2015 21 Aug 2015 (8.30 am – 5 pm)	SCSE Academic Office (Undergraduates) N4-02b-71 Note: Please look for Ms Susy

### Registration of Courses

#### **Allocation of Courses**

The courses which you will be taking in Semester 1 of AY 2015-16 are allocated to you when you matriculate on-line. Click here for Timetable

For the subsequent semesters, you have to register your courses through the *Student Automated Registration System* (STARS).

#### **Registration of Courses through STARS**

Before you register for your courses, you are advised to read the instructions pertaining to registration at the Office of Academic Services page on the NTU website.

#### For general instructions:

Students → Academic Services → Course Registration

 $\frac{\text{http://www.ntu.edu.sg/Services/Academic/undergraduates/Course\%20Registration/Pages/default.a}{\text{spx}}$ 

#### **Add/Drop Courses**

Unless otherwise specified by your School, you will be given an opportunity to de-register a registered course and take another course, if you wish to, during the Add/Drop period. The Add/Drop Period allocated for Part Time Students:

Tuesday, 11 Aug 2015 – Sunday, 16 Aug 2015 (10.00 am – 10.00 pm)

A course that is dropped within the add/drop period will not appear in the official transcript. A student who is still registered for a course after Add/Drop period but did not subsequently sit for the examination, will be deemed to have read and failed the course. 'F' will appear on his official transcript.

For instructions and guide, please check the Office of Academic Services page on the NTU website:

Students  $\rightarrow$  Academic Services  $\rightarrow$  Course Registration  $\rightarrow$  Guide to Add/Drop period <a href="http://www.ntu.edu.sg/Services/Academic/undergraduates/Course%20Registration/Pages/default.aspx">http://www.ntu.edu.sg/Services/Academic/undergraduates/Course%20Registration/Pages/default.aspx</a>

#### **Examinations**

For exam dates of the courses, please check at:

Students  $\rightarrow$  Academic Services  $\rightarrow$  Examination  $\rightarrow$  Examination Timetable http://www.ntu.edu.sg/Students/Undergraduate/AcademicServices/Examination/Pages/default.asp  $\underline{x}$ 

### Academic Unit System (AUS)

The University's academic structure for its undergraduate programmes is based on the Academic Unit System (AUS). The main features of the AUS are the semester arrangement of the academic year and the use of academic units (AU) for measuring academic workload and requirement for graduation.

The AUS handbook is available online at the Office of Academic Services page on the NTU website:

Students → Academic Services → Academic Unit System (AUS)
http://www.ntu.edu.sg/Services/Academic/undergraduates/Pages/AcademicUnitSystem(AUS).aspx

#### **Graduation Requirements**

The requirements for graduation are as follows:

- a) Successful completion of the prescribed academic unit requirement as set out by the course curriculum
- b) A minimum CGPA of 2.00 at the end of the final semester of study

The criteria for satisfactory academic standing in any given semester are:

- a) Maintaining a minimum CGPA of 2.00
- b) Completing at least 75% of the normal AU workload

#### **Academic Warning, Probation and Termination**

Students with poor standing will be subjected to the following performance review:

- Academic Warning if the CGPA falls below 2.00 for any given semester.
- Academic Probation if the CGPA falls below 2.00 for the following semester.

Academic Termination – if the CGPA falls below 2.00 for the 3rd consecutive semester, or at the end of the final semester of study. A letter of termination will be issued.

### Leave of Absence

#### **Short Leave**

Students must apply for medical leave or short leave of absence with their respective Schools if they cannot attend classes on the following occasions:

- On days when there are laboratory sessions
- On days when quizzes or tests are conducted during classes
- On any occasion during the Professional Attachment, Industrial Attachment, Professional Internship, Industrial Orientation, Enhanced Industrial Attachment or International Research Attachment Programme
- On any other occasions that tutor(s) or lecturer(s) deemed as compulsory for students' attendance

#### Categories of Leave Not Approved:

- Returning to home country during festive periods e.g. Chinese New Year, Hari Raya, etc.
- Participating in activities (in and outside campus) organised by student bodies

Please contact the school's administrative staff for a copy of the Short Leave Application Form.

#### **Semester Leave**

Students making a new application for semester leave of absence or extending their semester leave of absence are to complete and submit the <u>Application / Extension for Semester Leave of Absence Form</u> with the relevant supporting documents to their School of study.

Details and Application Form are available at the NTU website under:

 $Students \rightarrow Admin Services \rightarrow Apply for Semester Leave \\ \underline{http://www.ntu.edu.sg/Students/Undergraduate/AdminServices/Pages/ApplyforSemesterLeave.asp} \\ \underline{x}$ 

### Student Account

Each new student is issued with the following user accounts:

#### 1. A **network account** with username and password:

This is used to access the campus network, computing facilities, e-learning portal NTULearn, one-stop Intranet portal iNTU <a href="https://intu.ntu.edu.sg">https://intu.ntu.edu.sg</a> and web-based StudentLink (for undergraduates) services. StudentLink services is one-stop e-services for students such as update of personal particulars, course registration, checking of examination seating arrangement and results.

Upon acceptance of admission offer via the online form, a new student can select a network account username from four pre-assigned names. The **initial password** is set to the matriculation number (with all alphabets in upper-case) of the student. The network account is activated 1 working day after the acceptance of offer online (However, access to StudentLink services will be available only after you have **matriculated** online).

New students who have not obtained their username may do so from the website: Undergraduate students: <a href="https://wis.ntu.edu.sg/pls/webexe/account creation.logon">https://wis.ntu.edu.sg/pls/webexe/account creation.logon</a>

A new student must change his password **immediately** before using any e-services. Please refer to the section "**How to change your network account password**". Failure to do so will result in account suspension. This measure is necessary to safeguard the security of the new account. Suspended account will only be re-activated upon re-registration by the student at the **IT Service Counter** during office hours. Subsequently, the password must be changed every 180 days.

#### 2. An Office 365 EDU account with username and password:

This is used only to access e-mail and other Office 365 EDU services at <a href="http://www.outlook.com/e.ntu.edu.sg">http://www.outlook.com/e.ntu.edu.sg</a>.

The Office 365 EDU username is in the form **username@e.ntu.edu.sg** with the same username as the Network Account chosen earlier in (1) above. The initial password is set to the matriculation number (with all alphabets in upper-case) of the student. New student will be prompted to change this password upon first logon to Office 365 EDU. Please note that Office 365 EDU password and network account password are different. Changing one does not affect the other.

Office 365 EDU account is usually ready for use 1 working day after the acceptance of network account username online.

As all NTU official emails will be sent to this email box, please ensure that you check your Office 365 EDU email box regularly.

#### **Issuance of Accounts**

Please note that no separate letters will be issued to inform new students on their new user accounts. The network and Office 365 accounts are usually ready for use 1 working day after the acceptance of network account username online. However, access to other e-services such as StudentLink/GSLink will be available only after you have matriculated online.

### Change of Personal Particulars

For changes in name, citizenship, identification card number, passport number, marital status or national services status, please produce the original identification documents (note: the original reentry permit together with the identification card for students who convert to Singapore PR) and photocopies to **One Stop @ SAC** located at NS3-01-03, Academic Complex North during the following hours:

8.30 a.m. to 5.00 p.m. (Mondays – Thursday)

8.30 a.m. to 4.45 p.m. (Friday)

closed on Saturdays, Sundays & Public Holidays

For changes to other personal particulars, addresses and contact numbers, please access StudentLINK  $\rightarrow$  Administrative Matters  $\rightarrow$  Change of Personal Particulars to update the changes.

All correspondence from the University will be sent to your postal address. You are required to provide an address in Singapore as your postal address during term time. Failure to do so could lead to important correspondence (including examination results) going astray. The University will not be responsible if official correspondence fails to reach you because you did not give notice of your change of address or provide your postal address.

### Withdrawal

Students making an application for withdrawal from the University are to complete and submit the Application for Withdrawal from University (For Undergraduates) Form together with the matriculation card to their School of study.

Students will be informed officially of their withdrawal from the University by email from the Office of Academic Services to their NTU email account. Students may provide other email address to receive the official email.

Details and Withdrawal Form are available at the NTU website under:

Students → Admin Services → Withdraw from programme

http://www.ntu.edu.sg/Services/StudentServices/admin/undergraduate/Pages/Withdrawfromcours e.aspx

The matriculation card should be returned to **One Stop @ SAC** once you have withdrawn from the University. Please note that a student who withdraws after the first two weeks of the semester will be liable for the payment of fees for that entire semester.

### Academic Calendar AY2015-16

	From	То	Duration
Orientation Week	03-Aug-15	07-Aug-15	1 week
Qualifying English Test	04-Aug-15	04-Aug-15	1 day
Semester 1	03-Aug-15	04-Dec-15	18 weeks
Teaching Week 1 to 7	11-Aug-15	25-Sep-15	7 weeks
Recess	28-Sep-15	02-Oct-15	1 week
Teaching Week 8 to 13	05-Oct-15	13-Nov-15	6 weeks
Revision & Examination	16-Nov-15	04-Dec-15	3 weeks
Vacation	07-Dec-15	08-Jan-16	5 weeks
Semester 2	11-Jan-16	06-May-16	17 weeks
Teaching Week 1 to 7	11-Jan-16	26-Feb-16	7 weeks
Recess	29-Feb-16	04-Mar-16	1 week
Teaching Week 8 to 13	07-Mar-16	15-Apr-16	6 weeks
Revision & Examination	18-Apr-16	06-May-16	3 weeks
Vacation	09-May-16	29-Jul-16	12 weeks

**Note:** Effective 2015, classes will proceed normally on the immediate Monday following a public holiday on Saturday.

#### Academic Calendar is available at the NTU website under:

 $\mathsf{Services} \to \mathsf{Academic} \to \mathsf{Undergraduate} \ \mathsf{Academic} \ \mathsf{Calendar}$ 

http://www.ntu.edu.sg/Students/Undergraduate/AcademicServices/AcademicCalendar/Pages/AY20 15-16.aspx

## **Contact Us**

No.	Staff/Office	Contact Details
1	A/P Hsu Wen Jing	Office Tel: 6790 4597
	CS Part Time Programme Coordinator	Email: <a href="mailto:hsu@pmail.ntu.edu.sg">hsu@pmail.ntu.edu.sg</a>
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	Academic Manager School of Computer Science and Engineering	Email: asmcchan@ntu.edu.sg
	School of Computer Science and Engineering	Linan. asincchan@ntu.edu.sg
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6	General Enquiries	Telephone: 6908 1435
	Office of Professional Education	Email: OPE-Enquiry@ntu.edu.sg Website: www.ntu.edu.sg/ope
		Office: College of Engineering, N1.3-B1-01
		Office. College of Engineering, N1.3-b1-01
7	Office of Admissions and Financial Aid	Nanyang Technological University
		Student Services Centre, Level 2
		42 Nanyang Avenue
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