

#	Programme
1	Welcome Address by Assoc Prof CK Tham Chair, Joint Academic Committee (JAC)
2	Academic Matters by Assoc Prof Bharadwaj CEG Year 2 Coordinator
3	Innovation & Design Programme (iDP) by Dr KZ Tang
4	NUS Overseas Colleges – Start-Up your Entrepreneurial Experience by Ms Lee Tun Leng, Programme Director for NOC Shanghai
5	Cohort Representative Election by ECE Undergraduate Student Council (USC)
6	Refreshment (with CEG4 seniors)

Joint Department Briefing for CEG2


10 August 2018, 12pm @ LT3

A/Prof Bharadwaj Veeravalli elebv@nus.edu.sg

CEG Year 2 Coordinator

Joint Academic Committee (JAC)

Department of Electrical & Computer Engineering





Calling for Achievements in
Competitions, Projects, Sports, etc.,
so that we can brag broadcast!

Refer to <http://www.ceg.nus.edu.sg/students/achievements.html>



CEG1 & CEG2 students: Email to Mun Bak lowmb@nus.edu.sg

CEG3 & CEG4 students: Email to Winnie cegcwn@nus.edu.sg



PwC Prize for Whole Leadership

Donated in 2015 by PwC Singapore, the cash prize is awarded to **two** Year 2 Computer Engineering students, who demonstrated academic and non-academic excellence.

Please look out for the email call for self-nomination in end-May 2019 (after sem 2, AY18/19 results release).

Refer to: http://www.ceg.nus.edu.sg/students/awards_commencement.html

Full BEng(CEG) Degree Requirements

(for **AY2017/18** Direct intake)

Programme Requirements	General Education Requirements	Unrestricted Elective Modules/Requirements
108 MCs	1 x General Education Module (GEM) from: <ul style="list-style-type: none"> • Human Cultures GEH1xxx • Asking Questions GEQ1000 • Quantitative Reasoning GER1000 • Singapore Studies GES1xxx • Thinking and Expression GET1xxx 20 MCs (5 x 4 MCs each)	32 MCs, drawn from various modules offered across NUS (including ES1000/ES1103, if not exempted)
Total MCs = 160		

To Graduate

Honours Degree Classification is determined by CAP

http://www.ceb.nus.edu.sg/students/FFG_Checklists.html

CEG AY2017/18 Direct intake Programme/Major Requirements

Programme Components	Modules	MCs		
Faculty Requirements	<ul style="list-style-type: none"> ▪ CS2101 Effective Comm for Computing Professionals ▪ EG2401A Engineering Professionalism 	6		
Core Modules	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ▪ CS1010 Prog Methodology ▪ CS1231 Discrete Structures ▪ MA1508E Lin Algebra for Engrg ▪ MA1511 Engrg Calculus ▪ MA1512 Diff Eqns for Engrg ▪ CG2023 Signals & Systems ▪ CG2027 Transister-lvl Digi Ckts ▪ CG2028 Computer Organisation </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ▪ CG2271 Real-time OS ▪ CS2040C Data Struct & Algor ▪ CS2113T Software Engrg & OOP ▪ EE2026 Digital Design ▪ ST2334 Probability & Statistics ▪ CG3207 OR CS3230 ▪ CP3880 OR EG3611A ▪ EE4204 Computer Networks </td> </tr> </table>	<ul style="list-style-type: none"> ▪ CS1010 Prog Methodology ▪ CS1231 Discrete Structures ▪ MA1508E Lin Algebra for Engrg ▪ MA1511 Engrg Calculus ▪ MA1512 Diff Eqns for Engrg ▪ CG2023 Signals & Systems ▪ CG2027 Transister-lvl Digi Ckts ▪ CG2028 Computer Organisation 	<ul style="list-style-type: none"> ▪ CG2271 Real-time OS ▪ CS2040C Data Struct & Algor ▪ CS2113T Software Engrg & OOP ▪ EE2026 Digital Design ▪ ST2334 Probability & Statistics ▪ CG3207 OR CS3230 ▪ CP3880 OR EG3611A ▪ EE4204 Computer Networks 	62
<ul style="list-style-type: none"> ▪ CS1010 Prog Methodology ▪ CS1231 Discrete Structures ▪ MA1508E Lin Algebra for Engrg ▪ MA1511 Engrg Calculus ▪ MA1512 Diff Eqns for Engrg ▪ CG2023 Signals & Systems ▪ CG2027 Transister-lvl Digi Ckts ▪ CG2028 Computer Organisation 	<ul style="list-style-type: none"> ▪ CG2271 Real-time OS ▪ CS2040C Data Struct & Algor ▪ CS2113T Software Engrg & OOP ▪ EE2026 Digital Design ▪ ST2334 Probability & Statistics ▪ CG3207 OR CS3230 ▪ CP3880 OR EG3611A ▪ EE4204 Computer Networks 			
Projects	<ul style="list-style-type: none"> ▪ CG1111 Engineering Principles and Practice I ▪ CG1112 Engineering Principles and Practice II ▪ CG4002 Computer Engineering Capstone Project 	20		
Technical Electives	Minimum 20 MCs; at least 12 MCs technical Depth electives (from any concentration)	20		
Total MCs for Programme Requirements		108		

EE3204 recoded to EE4204
wef AY18/19

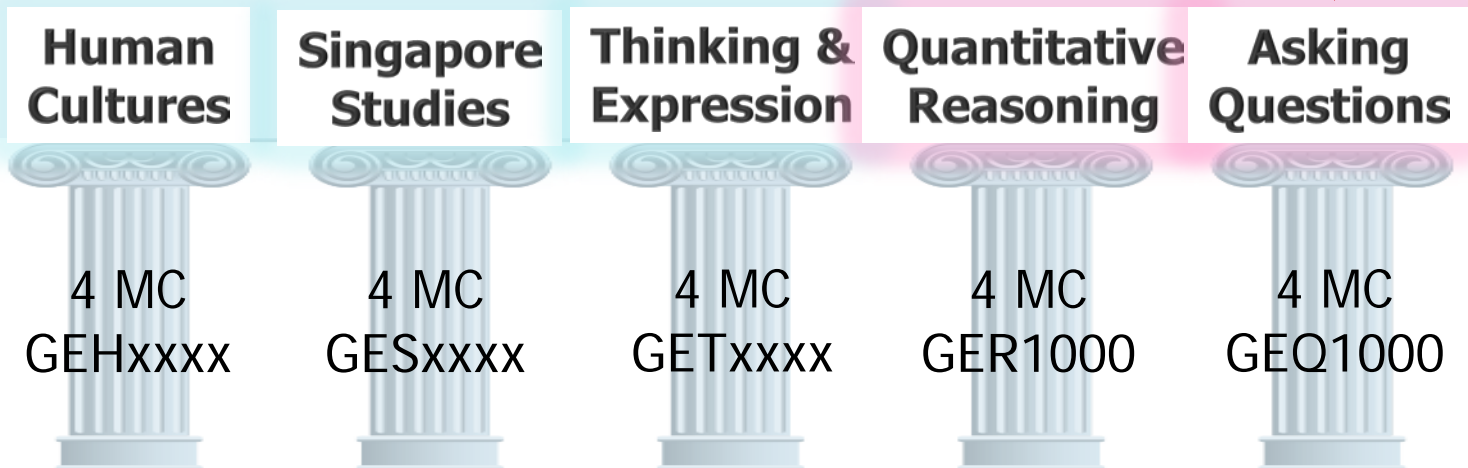
General Education Requirements/ University-Level Requirements

20 MCs

Aims:

- Broaden students' intellectual horizons
- Develop critical and creative thinking skills
- Promote spoken and written articulatory

Preallocated by PVO
(shown in your
recommended schedule)



Unrestricted Elective Modules

32 MCs

Aims:

- Explore greater breadth/depth in students' discipline
- Read complementary or contrasting minor/Second Major

Students may use the UEM space:

- to read more technical electives
- to take up CG4001 BEng Dissertation (**12 MCs**) aka FYP
(if CG4001 - 8 MCs count as technical elective, 4 MCs as UEM)

- Minor
 - Second Major
 - Double Degree
- } Look up the details on host dept's websites & email them/look out for eblast on application

Unrestricted Elective Modules

Can also use UEM space to take module(s) under **Roots & Wings 2.0** that train students on **soft skills**

For AY2018/19,

- PLS8001 Cultivating Collaboration (1 MC): both semesters
- PLS8003 Cultivating Resilience (1 MC): semester 2

Refer to Roots & Wings 2.0 website

<http://www.fas.nus.edu.sg/psy/r&w/index.html#faq>

If keen, bid via CORS from R1C.



Unrestricted Elective Modules

Minor Programmes (24 MCs)

- List of Minor Programmes (more than 50 Minors offered)
 - <http://www.nus.edu.sg/registrar/education-at-nus/undergraduate-education/special-undergraduate-programmes/minor-programmes.html>

Double Major / Second Major (48 MCs)

- List of Second Majors (more than 25 Second Majors offered):
 - <http://www.nus.edu.sg/registrar/education-at-nus/undergraduate-education/special-undergraduate-programmes/double-major-programmes.html>
- It may be possible to double-count (up to) one-third of the requirements towards both CEG and the Minor/Second Major programmes.

Advisory on Minor programmes

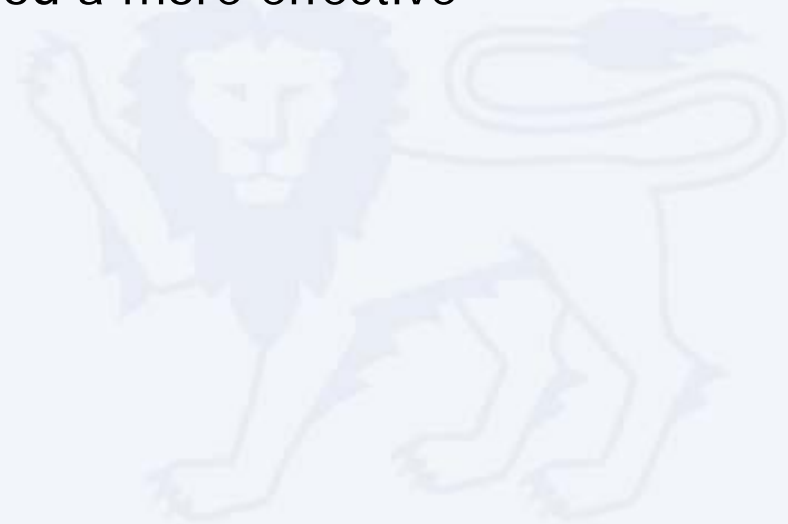
Two Types of Minors

- 'Open' type Minor:
 - Students can declare their intention to do an open minor via CORS without any prior approval from the Host Dept
 - It is the students' responsibility to declare their minor in CORS, to ensure that they are registered
- 'Restricted' type Minor:
 - Students are required to apply to the Host Dept and obtain approval to read a restricted minor. If approved, Host Dept will then request to update CORS (backend).

Note: Refer to the table in the website given earlier under “Type” column

Advisory on UEM space

- Start taking steps to plan how you could use the UEM space meaningfully
- You should consider/review how to use your UEM **now**
- If you do not intend to do a Minor/Second Major, suggest to use your UEM space to read more technical elective (TEs) and/or take up a FYP; this will help to make you a more effective engineer.



Limit on Level-1000 modules

- Should **not** read more than 60 MCs of level 1000 modules (including Programme/Major, GEMs and UEMs)
 - The 60 MCs limit excludes CFG1002 Career Catalyst (2 MCs) and ES1103 English for Academic Purposes (4 MCs)
- Any MCs over this limit will not be counted towards the MCs required for graduation (160 MCs). However, they will still be counted/used towards CAP computation.
- CEG Programme requirements (for AY17 intake & after) consist of 28 MCs of level 1000 (core) modules; See: <http://www.ceg.nus.edu.sg/admissions/curriculum.html>

Therefore:

60 - 28 (CEG level1000 core) - 20 (GE/ULR x 5) = 12 MCs

i.e. a CEG student can read up to 12 MCs of level 1000 modules from UEM space.

Breadth/Depth Electives

- Currently, the technical **Breadth/Depth** electives are grouped into six concentrations, as follows:

Communications & Networking

Embedded Computing

Large-Scale Computing

Intelligent Systems

Interactive Digital Media

System-On-a-Chip Design

- **Breadth** electives provide **broad understanding** of concepts while **depth** electives provide greater **depth & coverage**.
- The [current TE page](#) is for your seniors (from AY16 intake and prior). A similar TE page for CEG AY17 intake and after, will be available by Nov/Dec 2018.

Breadth/Depth Electives

You can choose technical electives from **any** concentrations

- **AY17**: Add up to at least 20 MCs AND at least 12 MCs [Depth](#) electives

The master-list of TEs listed within CEG concentrations will be updated in July (for Sem 1) and November/December (for Sem 2).

Also encouraged **to attend industry talks organised by CS/ECE Department**, Faculty of Engineering, School of Computing and/or NUS Centre for Future-ready Graduates.

Always refer to CEG TE page, at the start of a semester, for the complete/updated list of modules.

Possible Schedule for CEG AY2017/18 Direct Intake (with compulsory IA)

Depending on the preferred semester for IA, the modules for sem 5 & 6 may be mutually-swapped.

Sem 1	Sem 2	Sem 3	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8
CG1111 EPP1 (6 MCs)	CG1112 EPP2 (6 MCs)	CS2101 Effective Comm for Computing Professionals	CG2023 Signals & Systems	CP3880 ATAP (12 MCs) OR EG3611A IA (10 MCs)	CG4002 CEG Capstone Project (8 MCs) EE3204 EE4204 Computer Networks	CG3207 OR CS3230 Technical Elective Breadth (2 MCs if took ATAP)	Technical Elective Depth
CS1010 Programming Methodology	MA1508E Linear Algebra for Engrg	CS2113T Software Engrg & OOP	ST2334 Probability & Statistics				Technical Elective Depth
CS1231 Discrete Structures	CS2040C Data Structures & Algorithms	[CG2027 (2 MCs) & CG2028 (2MCs)] OR CG2271 RTOS				Technical Elective Breadth	Technical Elective Depth
MA1511 Engrg Calculus (2 MCs)	EE2026 Digital Design	GER1000 (if not read in sem 1) OR UEM2	GEH1xxx	EG240x Engrg Profsm (2 MCs) ^	GET1xxx	UEM5	UEM7
MA1512 Diff Eqn for Engrg (2 MCs)	GEQ1000	GES1xxx	UEM2	UEM3^	UEM4	UEM6	UEM8 (2 MCs)
ES1103* (UEM1) OR GER1000		CFG1010 (2 MCs)/UEM					
22 MCs	22 MCs	22 MCs	20 MCs	16 or 18 MCs	20 MCs	20 or 18 MCs	18 MCs
TOTAL (MINIMUM) GRADUATION REQUIREMENTS = 160 MCs							

^Students on Industrial Attachment (IA) are allowed to take up to two modules that are offered in the evenings (subject to approvals and availability). Depending on the preferred semester for IA, the modules for sem 5 & 6 may be mutually-swapped. Students who prefer not to/are unable to, take evening module(s) during IA, should take some modules in the special terms (so as not to delay graduation).

Possible Schedule for CEG AY2017/18

Common Engrg students streamed to CEG2 in AY2018/19

Sem 1, AY17/18	Sem 2	Sem 3, AY18/19	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8
EG/CG1111 EPP1 (6 MCs)	EG/CG1112 EPP2 (6 MCs)	CS1231 Discrete Structures	CG2023 Signals & Systems	CG2271 Real-Time Operating Syst	CP3880 ATAP (12 MCs) OR EG3611A IA (10 MCs)	CG4002 CEG Capstone Project (8 MCs)	Technical Elective Depth
CS1010E Programming Methodology	MA1508E Linear Algebra for Engrg	CS2040C Data Structures & Algorithms	CG2027 Transistor-level Digital Circuits (2 MCs)	CG3207 OR CS3230			Technical Elective Depth
MA1505 Mathematics I (map to MA1511 and 2 MCs UEM1)	MA1512 Diff Eqn for Engrg (2 MCs)	EE2026 Digital Design	CG2028 Computer Organisation (2 MCs)	EE4204 Computer Networks		Technical Elective Breadth (2 MCs if took ATAP)	Technical Elective Depth
GER1000	GEQ1000	ST2334 Probability & Statistics	CS2101 Effective Comm for Computing Professionals	Technical Elective Breadth	EG2401A Engrg Profsm (2 MCs) ^	UEM5	UEM7
ES1103* OR UEM2	GET1xxx	GES1xxx	CS2113T Software Engrg & OOP	GEH1xxx	UEM4 ^	UEM6	UEM8
	CFG1010 (2 MCs)/UEM1		UEM3				
22 MCs	22 MCs	20 MCs	20 MCs	20 MCs	16 or 18 MCs	20 or 18 MCs	20 MCs
TOTAL (MINIMUM) GRADUATION REQUIREMENTS – 160 MCs							

^Students on Industrial Attachment (IA) are allowed to take up to two modules that are offered in the evenings (subject to approvals and availability). Students who prefer not to/are unable to, take evening module(s) during IA, should take some modules in the special terms (so as not to delay graduation).

<http://www.ceg.nus.edu.sg/students/studyschedule.html>

Three Differentiated Pathways

Pathways have different *focus* in:

- *Pathway Modules*
- *Internship*
- *Final Year Project*

Research-focused Pathway (RfP)

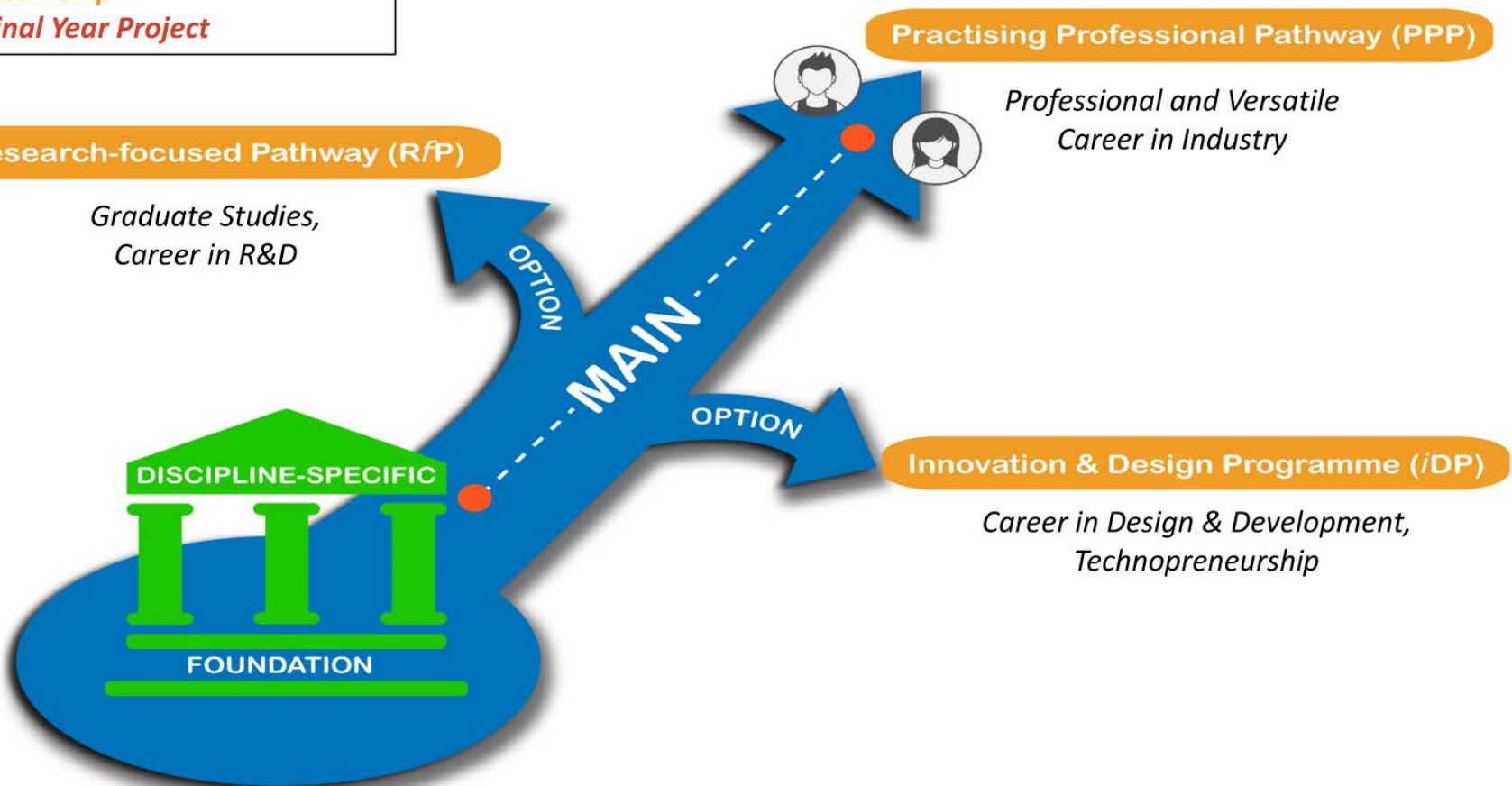
*Graduate Studies,
Career in R&D*

Practising Professional Pathway (PPP)

*Professional and Versatile
Career in Industry*

Innovation & Design Programme (iDP)

*Career in Design & Development,
Technopreneurship*



Three Differentiated Pathways

	Internship	FYP	Pathway requirement(s)
PPP	Technical work	Optional	CS2113/T
iDP	Technical work	Refer to iDP site http://www.eng.nus.edu.sg/edic/programme-requirements.html	
RfP	CG4003 Advanced Project & Internship @ Research institute/lab		TE #1: CS5/EE5 modules TE #2: CS4/CS5/EE5 modules

If keen in:

- iDP, will double-count CS2101 and EG3301R.
- RfP, highly recommended to take CS2309 [CS Research Methodology](#) or EG2605 [Undergraduate Research Opportunities Programme](#), as UEM (to help in decision-making).

Refer to the [pathway mappings for CEG AY2017/18](#)

Some important remarks

- As of now, it is still uncertain whether CG4002 (8 MCs) will be (first) offered in Sem 1, AY19/20; We hope to confirm by February 2019.
- As of now, it is still uncertain when EG2401A (2 MCs) may be first offered. Anyway, you can take the 3 MCs version (EG2401) from August 2019 (Year 3). For current AY18/19, priority goes to the Engrg Year 3 & 4 students.
- Another briefing on IA-related matters, three pathways and technical electives will be conducted for CEG2 students (AY17 intake) in January/February 2019.

Grade Point System

Grade Point (GP)

A+ / A	A-	B+	B	B-	C+	C	D+	D	F
5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.5	1.0	0

Cumulative Average Point (CAP)

$$(\sum MC_i \times GP_i) / (\sum MC_i)$$

Degree/Honours Classification: refer to [RO page](#)

Honours (Highest Distinction)

CAP ≥ 4.5

Honours (Distinction)

CAP 4.0 to 4.49

Honours (Merit)

CAP 3.5 to 3.99

Honours

CAP 3.0 to 3.49

Pass

CAP 2.0 to 2.99

CAP for Continuation and Graduation

For students admitted from AY2016/17 onwards:

To graduate, an undergraduate student must have a minimum CAP of 2.00. To remain in good academic standing, and to continue in an undergraduate programme of study, a student may not have CAP below 2.00 for **two consecutive semesters**.

From third semester onwards ☹️

	<i>Academic Standing</i>
CAP \geq 2.0	Passed/Proceed
CAP < 2.0 for current semester*	Academic Probation
CAP < 2.0 for two consecutive semesters*	Dismissal

*excluding special term

S/U Grading Option / Grade-free Scheme

(For AY2016/17 intake and after)

- Exercise S/U option for **up to 32 MCs** in the first two regular semesters and if not fully utilised, up to 12 MCs in subsequent semesters.
- Once an 'S' or 'U' grade is assigned to a module, it will count towards the 32 MCs limit that can be taken on an S/U basis.

The S/U option can be exercised on:

- All level 1000 modules (except for the English for Academic Purposes modules)
- Level 2000 modules with no other NUS modules as pre-requisites (unless otherwise stipulated by the Facs/Depts)

...

i.e. **CANNOT** exercise S/U option on technical electives

<https://myportal.nus.edu.sg/studentportal/academics/ug/su-homepage.html>

UROP

- You may want to consider doing 'Undergraduate Research Opportunities Programme (UROP)' through either FoE (EG2605) or SoC (CP3208 & CP3209).

FoE:

<https://www.eng.nus.edu.sg/undergraduatestudies/academics/enhancement-programmes/undergraduate-research-opportunities-programme-urop/>

Eligibility: Year 1 to 3 Engineering students

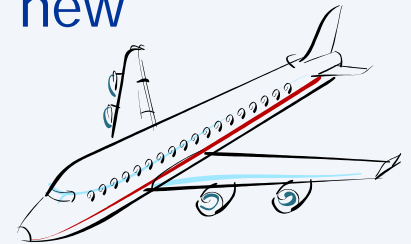
SoC: <http://www.comp.nus.edu.sg/programmes/ug/project/urop/>

Eligibility: A student must have passed/completed (at least) 60 MCs, with a minimum CAP of 3.8

SEP

Student Exchange Programme (SEP) is designed for students to go to overseas partner universities and

- experience different academic environment, new country & new culture
- make new friends and stay connected.



SEP for CEG students is administered by SoC UG Office.

Students who are keen in going for SEP in Year 3, should apply in Year 2. Round 1 application will start in mid/late Sept; please look out for the email blast. SoC will conduct a briefing then.

<http://www.ceg.nus.edu.sg/sep/>

Tuition Fee Rebate

- Applicable for Undergraduates admitted in AY2014 & After

Students who complete their undergraduate degree programmes within the normal candidature period (as defined in below table), and have taken NUS modules prior to^(a), and/or Special Term modules during, their undergraduate candidature, are likely to have paid tuition fees in excess of the fees commensurate with the normal candidature period. Under the new fee rebate policy, such students will be eligible for a rebate on the excess tuition fees paid.

Degree Type	Normal Candidature Period ^(b)
Single Degree/Joint Degree Programme (120 MCs)	6 consecutive semesters
Single Degree/ Joint Degree Programme (160 MCs)	8 consecutive semesters
Concurrent Degree Programme (CDP) / Double Degree Programme (DDP)	9 consecutive semesters

a) Examples of NUS modules taken prior to the undergraduate candidature are: NUS iBLOC; NUS H3 subjects; NUS modules taken as NUS High School students; and NUS modules taken under the Polytechnic Advanced Placement Programmes.

b) The normal candidature period is defined here to include all approved Leave of Absence (LOA) periods, except those given for medical reasons.

Tuition Fee beyond Normal Candidature

- Applicable for Undergraduates admitted in AY2016 & After

- Students who take longer than the **normal candidature period*** to complete their degree requirements will have to pay partial non-subsidized fees, culminating in full non-subsidized fees, during the extended semesters.

*Defined as 8 consecutive semesters for BEng degrees

- MOE tuition grant only covers up to the normal candidature period.
- Refer to <http://www.nus.edu.sg/registrar/education-at-nus/undergraduate-education/fees.html#TuitionFeebeyondNormalCandidature>

Tuition Fee beyond Normal Candidature

Keep track of your own academic progress.

- If you fail any module(s), you should re-work your study plan/semestral workplans, e.g. take modules in the special term, so as to reduce the likelihood that you may extend beyond four years.
- Pay more attention to your academic progress and be responsible for your studies.
- Seek help and clarifications early.



Academic Dishonesty - Plagiarism

- All students share the responsibility for upholding the academic standards and reputation of the University. Academic honesty is a prerequisite condition in the pursuit and acquisition of knowledge.
- Academic dishonesty is any misrepresentation with the intent to deceive or failure to acknowledge the source or falsification of information or inaccuracy of statements or cheating at examinations/tests or inappropriate use of resources.
- There are many forms of academic dishonesty and plagiarism is one of them. Plagiarism is generally defined as 'the practice of taking someone else's work or ideas and passing them off as one's own'
- *The University does not condone plagiarism.*

www.comp.nus.edu.sg/cug/plagiarism/

Academic Advisors

- Each CEG student has an Academic Advisor (AA)
 - Offers academic advice & even counselling
 - Can write letters of recommendation
- Try to meet your Academic Advisor regularly
- You are encouraged to upload your biodata to the [AA portal](#) to allow your AA to know you better

Academic and Emotional Support

- Department
 - Peer Tutoring Scheme - Interested junior students will be paired with passionate seniors who had performed well in year 1 & 2 core modules and are keen to volunteer their time to help the juniors
[If keen, email Dr DJ Chua elechudad@nus.edu.sg]
- Student Support Manager @
 - [Faculty of Engineering](#) - Mr Martin Nonis and Ms Nicole Phua
 - [School of Computing](#) - Ms Adele Chiew



University Health Centre

Emotional & Psychological Well Being

- Anxiety, Depression
- Mental Health, Self-Worth, Shyness, Stress
- Eating Disorders
- Sudden Loss and Grief
- Feelings, Loneliness

Relationship Issues

- Abusive Relationships, Family Stress, Managing Conflicts, Surviving a Breakup

Personal Effectiveness

- Decision Making, Motivation, Test Anxiety, Time Management, Challenges of University Life

<http://www.nus.edu.sg/uhc/services/mental-health/student.html>

DOOR GIFTS

REFRESHMENTS

ACTIVITIES

GONG CHA
VOUCHERS*

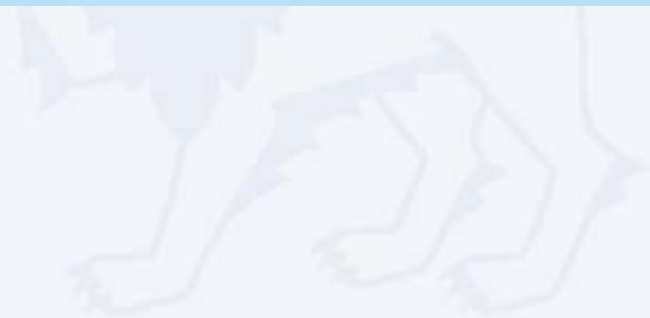
PHOTOBOOTH

*Come
&
Celebrate
With Us!*

... open to all NUS students!

*University Counselling Services
Open House*

27TH AUGUST, 10AM - 4PM
UNIVERSITY HEALTH CENTRE, LEVEL 2



Q&A

