Undergraduate Programmes
AY 2025–2026

Slides: http://soc-n.us/socug-faculty-briefing-t2510

Video: http://soc-n.us/socug-faculty-briefing-t2510yt

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Undergraduate Division

About this Course Briefing

This course briefing is meant for students pursuing the various **Bachelor of Computing** degrees and the **Bachelor of Science in Business Analytics** degree.

- Course briefing for **Bachelor of Engineering in Computer Engineering** will be delivered by the CEG Joint Academic Committee from both the College of Design and Engineering and School of Computing.

- This course briefing touches on general information relevant to studying in the School of Computing.

- It will **not** cover detailed information about the CEG programme.
  - Please attend the Programme Briefing conducted by CEG on **Tue, 10 Jul 2025 10:00 am – 4:00 pm, Blk EA Level 1, Engineering Auditorium** to find out more.

Undergraduate Programmes

NUS National University of Singapore | Computing

B.Comp. (Honours) in Information Security	**InfoSec**
B.Comp. (Honours) in Artificial Intelligence	**AI**
B.Comp. (Honours) in Computer Science	**CS**
B.Comp. (Honours) in Business AI Systems	**BAIS**
B.Sc. (Honours) in Business Analytics	**BZA**
B.Eng. (Honours) in Computer Engineering	**CEG**

Scavenger Hunt

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See whether you can find points in these slides that address these essential qualities of your NUS degree.

We'll have a game during the live briefing on 15 Jul that will test your knowledge (with prizes — have your browser ready!)

- ❑ 1. Ensures your degree represents education done at NUS.
- ❑ 2. Figure out who has priority for securing a spot in a popular course
- ❑ 3. Ensures that academic dishonesty is taken seriously.
- ❑ 4. Allows you to experiment with new subjects without risk to your grades.
- ❑ 5. Certifies depth of understanding in your programme.
- ❑ 6. Have a solid foundation of world knowledge.
- ❑ 7. How many forms of industry experience can you get at SoC?
- ❑ 8. How many forms of research experience can you get at SoC?
- ❑ 9. Who can I turn to for help in academic, life, and career matters at SoC?

Outline

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> Courses and Grades

- Finding Course Information
- Modes of Course Taking
- Grade Point Average (GPA) with Examples

- Curriculum Structure and Degree Options
- Course Registration
- Enrichment and Activities
- Challenges and Advice
- Useful Information

Searching for Course Information

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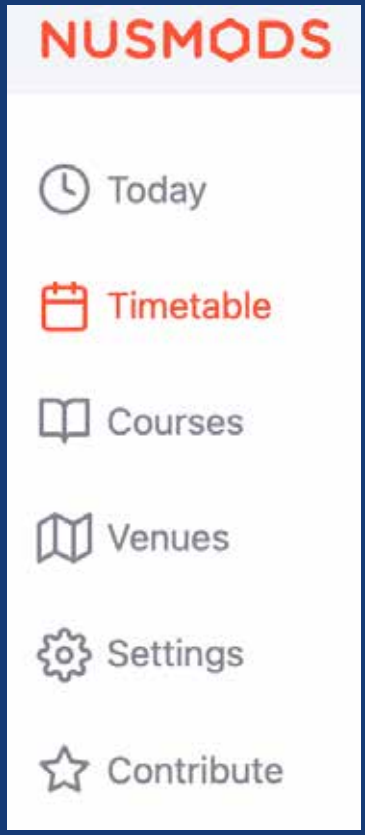
Use NUS Mods!

https://nusmods.com/

- Course Information
- Class and Exam Timetables
- Planning for your classes



NUSMODS

- Today
- Timetable
- Courses
- Venues
- Settings
- Contribute
- Whispers

CS2109S

Introduction to AI and Machine Learning

Computer Science • Computing • 4 Units
Semester 1 • Semester 2

This course introduces basic concepts in Artificial Intelligence (AI) and Machine Learning (ML). It adopts the perspective that planning, games, and learning are related types of search problems, and examines the underlying issues, challenges and techniques. Planning/games related topics include tree/graph search, A* search, local search, and adversarial search (e.g., games). Learning related topics include supervised and unsupervised learning, model validation, and neural networks.

Prerequisite
If undertaking an Undergraduate Degree THEN (must have completed 1 of CS2040/CS2040C/CS2040S/YSC2229 at a grade of at least D AND must have completed 1 of CS1231/CS1231S/MA1100/MA1100T at a grade of at least D AND (must have completed all of MA1511/MA1512 at a grade of at least D OR must have completed 1 of MA1102R/MA1312/MA1505/MA1507/MA1521/MA2002 at a grade of at least D))

Preclusion
If undertaking an Undergraduate Degree THEN (must not have completed 1 of CS3243/CS3244/DMX1401AI/IT3011 at a grade of at least D)

Additional Information

- ✓ Included in Semester 1's Course Planning Exercise
- ✓ Included in Semester 2's Course Planning Exercise

Workload - 10 hrs

Grading Basis
Graded

Semester 1 Exam
No Exam

Semester 2 Exam
No Exam

Add to **Semester 2**

Report errors

Timetable

Semester 1 | Semester 2

	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700
MON			LEC [2] LT9						LEC [1] UT-AUD2	
TUE										
WED	TUT [01] COM1-0217 Weeks 3-13	TUT [02] COM1-0217 Weeks 3-13	TUT [03] COM1-0217 Weeks 3-13	TUT [04] COM1-0217 Weeks 3-13	TUT [05] COM1-0217 Weeks 3-13	TUT [06] COM1-0217 Weeks 3-13	TUT [07] COM1-0217 Weeks 3-13			
		TUT [20] COM1-0216 Weeks 3-13	TUT [21] COM1-0216 Weeks 3-13	TUT [22] COM1-0216 Weeks 3-13	TUT [08] COM1-0214 Weeks 3-13	TUT [09] COM1-0214 Weeks 3-13	TUT [10] COM1-0214 Weeks 3-13			
					TUT [23] COM1-0216 Weeks 3-13	TUT [24] COM1-0216 Weeks 3-13	TUT [25] COM1-0216 Weeks 3-13			
THU	TUT [28] Weeks 3-13	TUT [11] Weeks 3-13	TUT [12] Weeks 3-13	TUT [13] Weeks 3-13	TUT [14] Weeks 3-13	TUT [15] Weeks 3-13	TUT [16] Weeks 3-13	TUT [17] Weeks 3-13	TUT [18] Weeks 3-13	TUT [19] Weeks 3-13
		TUT [27] COM1-0214 Weeks 3-13	TUT [30] Weeks 3-13	TUT [31] Weeks 3-13	TUT [32] Weeks 3-13	TUT [33] Weeks 3-13	TUT [26] Weeks 3-13	TUT [34] Weeks 3-13	TUT [35] Weeks 3-13	TUT [36] Weeks 3-13
		TUT [29] Weeks 3-13	TUT [37] COM1-0214 Weeks 3-13	TUT [38] COM1-0214 Weeks 3-13						
FRI										

Modes of Course Taking

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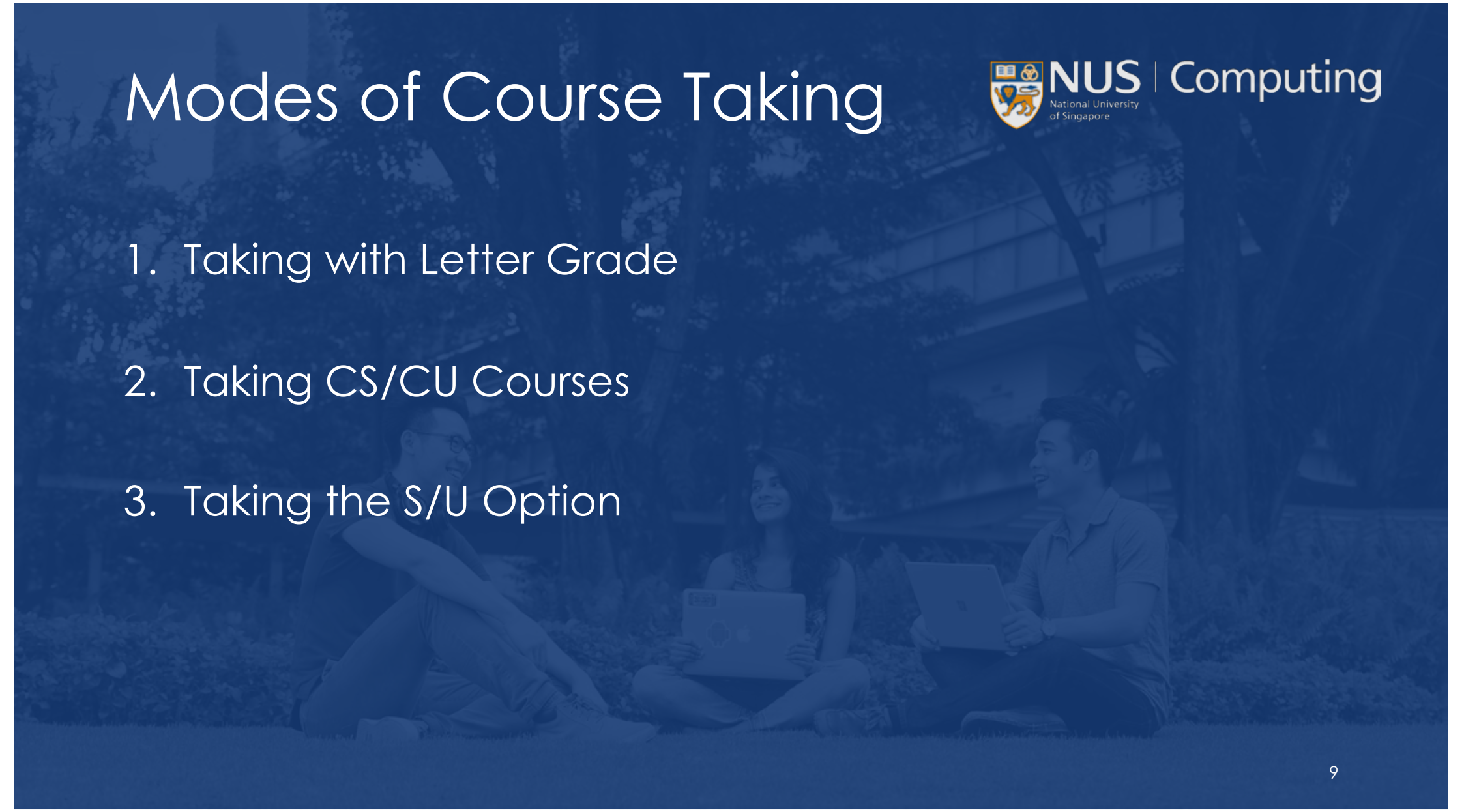
1. Taking with Letter Grade
2. Taking CS/CU Courses
3. Taking the S/U Option



1. Taking with Letter Grade

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Obtain a letter grade at the end of the course:

A+, A, A–, B+, B, B–, C+, C, D+, D, F*

*** Included in the calculation of your performance**

Grade	Grade Point
A+	5.00
A	5.00
A-	4.50
B+	4.00
B	3.50
B-	3.00
C+	2.50
C	2.00
D+	1.50
D	1.00
F	0.00

2. Taking CS/CU Courses

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Obtain either Completed Satisfactorily (CS) or Completed Unsatisfactorily (CU)

Not an option with the student

Does not affect Grade Point Average (GPA)

3. Taking the S/U Option

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Grade free scheme to encourage students to try courses outside their fields of study

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

- Obtain either a Satisfactory (**S**) or an Unsatisfactory (**U**) record
- Not included in the calculation of your GPA performance
- Need at least a **D** grade to convert to **S** grade to obtain units

- Three-day window to decide on S/U after release of results
- Can exercise S/U option on eligible course read with grades received in the same Academic Year
- **Irrevocable**. Any S/U option exercised in previous semesters cannot be amended or withdrawn once the S/U declaration exercise has concluded.

Enhanced Grade-Free Scheme

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- **S/U Option is limited to:**
  - Level **1000** courses, and
  - Level **2000** courses without NUS courses as pre-requisites
  - Level **2000** *Communication* and *Ideas & Exposition* courses offered by CELC and UTown
  - Language courses at all levels offered by Centre for Language Studies, FASS and Yale-NUS College

- **Cannot exercise this option on courses:**
  - Dropped with a **F** grade during the semester;
  - In which a student has been found to plagiarise;
  - In which a revised grade had been prescribed by the Board of Discipline.

Enhanced Grade-Free Scheme (2)

Up to 32 units in the first academic year of studies (first 2 regular semesters and two Special Terms). If not fully utilised, the remaining S/U can be used in subsequent semesters, for up to 12 units.

(Note: University will announce the revised policy applicable to Cohort 2025 and after via email at start of academic year)

Students will continue to exercise S/U options on eligible courses read and completed only in that AY and not previous AYs, at the end of every semester.

Variations on the S/U limit may apply for specific groups of students, such as:

i. Students without prior university experience but are granted 20 or more Advanced Placement Credits (APCs) at the point of admission to NUS may choose to S/U for up to 20 units in the first two regular semesters and two special terms; if this is not fully utilised, **the remaining S/U options may still be exercised in subsequent semesters, for up to max of 12 units. Students can cancel polytechnic exemptions on unrestricted electives to get additional S/U units. Office of the University Registrar will inform eligible students at the appropriate time.**

ii. Students with some prior university experience (which are recognised towards the NUS degree) may exercise S/U for up to 12 units anytime during their candidature, including the first two regular semesters.

iii. Students with a prior university degree are **not** eligible for the grade-free scheme.

Grade, Grade Points & S/U

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Grade	Grade Point	S/U Option
A+	5.00	Satisfactory (S)
A	5.00	
A–	4.50	
B+	4.00	
B	3.50	
B–	3.00	
C+	2.50	
C	2.00	
D+	1.50	
D	1.00	
F	0.00	Unsatisfactory (U)

Note: A candidate who has obtained a D or higher grade cannot repeat the course.

Grade Point Average (GPA)

$$\text{GPA} = \frac{\text{Sum \{ course grade point} \times \text{units \}}}{\text{Sum \{ units \}}}$$

rounded up to 2 decimal places.

To graduate, a student **must** obtain a GPA of at least 2.00

GPA and SGPA calculations

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Course Code	Course Title	Grade	Units	Grade Point	Points
CS1101S	*Programming Methodology*	A	4	5	
CS1231S	*Discrete Structures*	B–	4	3	
ES1103	*English for Academic Purposes*	B–	4	3	
MA1521	*Calculus for Computing*	B	4	3.5	
IS2101	*Business & Technical Communication*	D+	4	1.5	
GEA1000	*Quantitative Reasoning with Data*	S	4	N/A	

[S]GPA ([Semester] Grade Point Average) = 64/20 = 3.20

If this is the student's 2nd semester, and she achieved a 4.00 GPA last semester with 24 units (4 units S/U'ed), then:

GPA (Grade Point Average) = **(**(3.20 × 20)+(4.00 × 20)**)**/40 = 3.60

Continuation Requirement

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First Semester	Second Semester	Third Semester Onwards
All students progress	Advisory for students found to be performing poorly despite the grade-free scheme	**Probation,** if GPA < **2.00** for current semester; **Dismissal,** if GPA < **2.00** for two consecutive semesters

Student receiving **academic probation** must receive counselling from academic advisors.

Restore your good standing before reaching the state of dismissal by bringing your GPA above 2.00 in the following semester.

Candidature Limits

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Normal Candidature for our undergraduate programmes (at 160 units):

- **8 consecutive semesters**

Maximum Candidature for 4-year Programmes (at 160 units):

- **10 consecutive semesters**

Normal Candidature for our undergraduate programmes

- **9 consecutive semesters** (for graduating with single honours)
- **10 consecutive semesters** (for graduating with double honours)

Maximum Candidature for Double-Degree Programmes which may involve between 180 units and 200 units :

- **12 consecutive semesters**

Honours Classification	GPA (to 2 decimal places)
Honours (Highest Distinction)	4.50 – 5.00
Honours (Distinction)	4.00 – 4.49
Honours (Merit)	3.50 – 3.99
Honours	3.00 – 3.49
Pass	2.00 – 2.99
Fail	Below 2.00

Lectures, Assessments and Examinations

By default, all teaching activities (lecture, labs, tutorials, exams) are **required, face-to-face activities**.

- If lecturing staff feel that student learning outcomes are not compromised, they may decide to offer remote and/or asynchronous learning modes.
- In such cases, lecture recordings (asynchronous or synchronous) may be used along with reading materials, answer sketches, etc.
- You may not demand that your lecturers make concessions for your leave, internship or your convenience.

- 100 % CA for some courses.

Example 1: SoCCat

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SocCat is into his final semester. His GPA is 3.35, and his total number of units accumulated is 142. He intends to take 20 units of courses in this semester.

What should be his average grade for the final semester in order to get a GPA of **3.50**?
(Assuming no S/U options)

Grade	Grade Point
A+	5.00
A	5.00
A–	4.50
B+	4.00
B	3.50
B–	3.00
C+	2.50
C	2.00
D+	1.50
D	1.00
F	0.00

Example 1: SoCCat

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SocCat is into his final semester. His GPA is 3.35, and his total number of units accumulated is 142. He intends to take 20 units of courses in this semester.

What should be his average grade for the final semester in order to get a GPA of **3.50**?
(Assuming no S/U options)

$$(142 \times 3.35 + 20 \times G) / 162 \geq 3.50$$

$$G \geq (162 \times 3.50 - 142 \times 3.35)/20 = 4.57$$

Grade	Grade Point
A+	5.00
A	5.00
A–	4.50
B+	4.00
B	3.50
B–	3.00
C+	2.50
C	2.00
D+	1.50
D	1.00
F	0.00

Examples:

- 4 A– (4.5) and 1 A (5.0) → $G = 23/5 = 4.6$
- 2 B+ (4.0), and 3 A (5.0) → $G = 23/5 = 4.6$
- 1 B (3.5), 1 B+ (4.0), and … **No Way!!**

Example 2: LiNUS

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Grade	Grade Point
A+	5.00
A	5.00
A–	4.50
B+	4.00
B	3.50
B–	3.00
C+	2.50
C	2.00
D+	1.50
D	1.00
F	0.00

LiNUS's GPA is 1.49, and his total units accumulated is 40. He intends to take 20 units of courses in the coming semester to achieve a GPA of at least 2.00.

What should be his average grade for the coming semester in order to achieve that? (Assuming no S/U options)

$\geq ((60 \times 2.0) - (40 \times 1.49))/20 = 3.02$

Examples:

- 4 B– (3.0) and 1 B (3.5) → 15.5/5 courses = 3.1
- 2 C+ (2.5), 1 B– (3.0), 1 B (3.5), 1 B+ (4.0) → 15.5/5 = 3.1

Example 2: LiNUS

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Grade	Grade Point
A+	5.00
A	5.00
A–	4.50
B+	4.00
B	3.50
B–	3.00
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Examples:

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- 2 C+ (2.5), 1 B- (3.0), 1 B (3.5), 1 B+ (4.0) → 15.5/5 = 3.1

Academic Integrity & Student Discipline

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A breach of any of the NUS Code of Student Conduct or the assessment rules will render a student liable to disciplinary action which may result in **suspension** or **expulsion** from the University.

- NUS Statute 6 and Regulation 10 can be accessed at: https://www.nus.edu.sg/registrar/administrative-policies-procedures/undergraduate/nus-statutes-and-regulations
- Preventing Plagiarism https://www.comp.nus.edu.sg/cug/plagiarism/
- Note: AI Tools: Guidelines on Use in Academic Works" https://libguides.nus.edu.sg/new2nus/acadintegrity#s-lib-ctab-22144949-4

Academic Honesty is a Serious Matter!

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NTU penalises 3 students over use of AI tools; they dispute university's findings

'Give a positive review': Hidden AI prompt found in academic paper by NUS researchers

Q1: You have been alleged to have committed an act of plagiarism/academic dishonesty for [redacted] between [redacted] for assignment [redacted]. Please describe the incident to the best and fullest of your knowledge.

A1:

Firstly, I want to express my deepest apologies for this incident. I take full responsibility and am extremely regretful for the lapse in judgment on my part.

Throughout the [redacted], I was trying to solve the problem on my own. I made numerous submissions, all of which failed, and each one of them reflected my own efforts. I was struggling to figure out where my logic was going wrong, and out of frustration and desperation, I reached out to my friend [redacted] for help.

When I asked him for guidance, he told me he was still working on his code. He sent me what he had at that point, and I did not know that his version was already correct. My intention in running it was to compare the expected output with my own, so I could understand what I was doing wrong and try to fix my own solution. I never intended to use his work as my final answer. I only wanted to learn from the differences in outputs. However, I now understand that even running and submitting someone else's code for comparison constitutes academic dishonesty, regardless of intention. This realization pains me deeply. I made a serious mistake, and I am truly sorry for the consequences of my actions.

Q2: If there are any important mitigating circumstances, please elaborate.

A2:

This is my first and only incident of academic dishonesty in my entire academic journey. I have always held integrity as one of my core values, and I deeply regret that a moment of weakness and frustration led me to compromise those principles.

At the time, I was under significant stress due to multiple overlapping deadlines, and I had made several failed attempts on the assignment. Each failure left me more anxious and desperate to understand where I had gone wrong. In that state of mind, I made a poor decision, one that I had never made before and will never repeat.

I sincerely hope that my regret, honesty, and clean record before this will be taken into consideration.

🤞 Key points

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✅ Do:

- Check with your lecturing team what the AI communication policy is when you (or they) are not clear
- Help others recognise their incorrect behaviour

❌ Don't:

- Assume you know the policy.
- Rely on ignorance as an excuse.
- Aid others in academic dishonesty.

Outline

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- Courses and Grades

> **Curriculum Structure and Degree Options**
  - Single Degree Structure and Requirements
  - Degrees, Majors, Minors and Specialisations
  - Waivers
  - Industrial Experience

- Course Registration
- Enrichment and Activities
- Challenges and Advice
- Useful Information

Degree Structure: Flexibility in Simplicity

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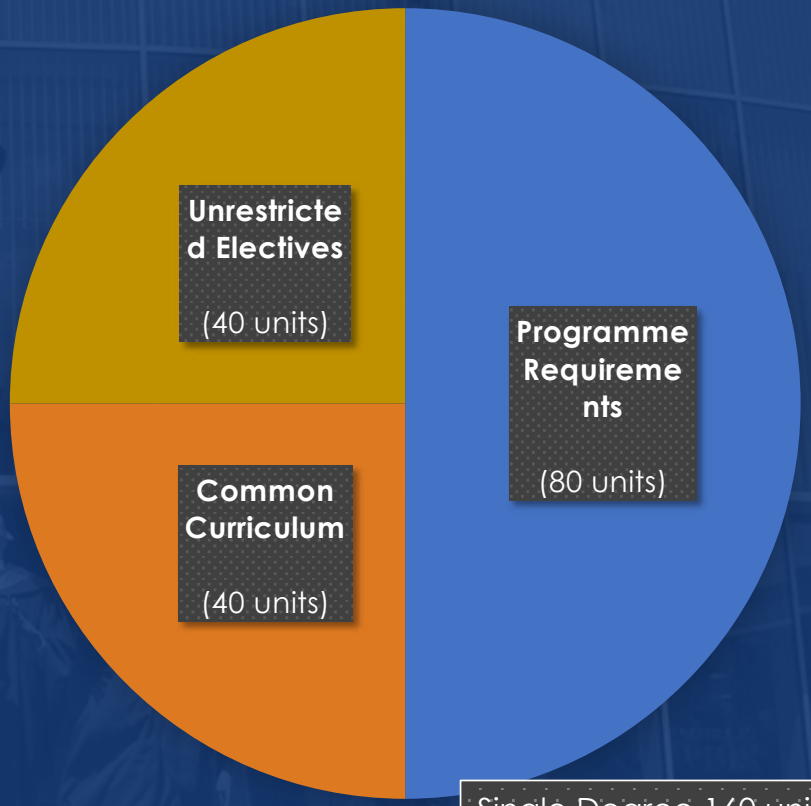
A strong foundation that builds on University Pillars with a digital core.

Your choice between advanced modules and deeper industrial experiences.

Your freedom to choose Unrestricted Electives that customize your degree your way.



Single Degree 160 units
Must achieve GPA of 2.00

Degree Requirements

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1. Fulfill all three sets of course requirements:
   - University Level Requirements, Programme Requirements, and Unrestricted Electives

2. GPA must be at least 2.00

3. No more than 60 units at Level 1000

4. Residency Requirement: must complete **50**% of the required units for the degree physically at NUS:
   - These units must be earned from NUS courses with assigned grades, or those with an '**S**' or '**CS**' grade.

For Polytechnic Graduates

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NUS recognises the prior experience of polytechnic graduates in the form of **Advanced Placement Credits**

- 20 units from Unrestricted Electives
  - These are not included in the 60-unit limit for Level 1000 courses
- Up to 20 units from Programme Requirements

More details here: https://www.comp.nus.edu.sg/programmes/ug/exemptions/

SoC Common Curriculum

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University Level Requirements (ULR: 24 units)

- One course for each General Education (GE) Pillar
- Certain GE pillar courses are specific to each programme

Common Curriculum (16 units)

1. Computing Ethics (4 units): *IS1108 Digital Ethics and Data Privacy*.

2. Interdisciplinary (**ID**) / Cross-Disciplinary (**CD**) Education (12 units)

   ✓At least two **ID** courses and
   ✓No more than one **CD** course to satisfy the 12 units required.

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Programme Requirements

~80 units

Programme Essentials

- Essentials specific to the programme

Programme Electives

- If you fail an elective, you may retake it, or read another elective

Unrestricted Electives (UE)

~40 units

- Courses from SoC or other faculties that make up the remainder of the total unit requirement

General Education / ULR

In depth...

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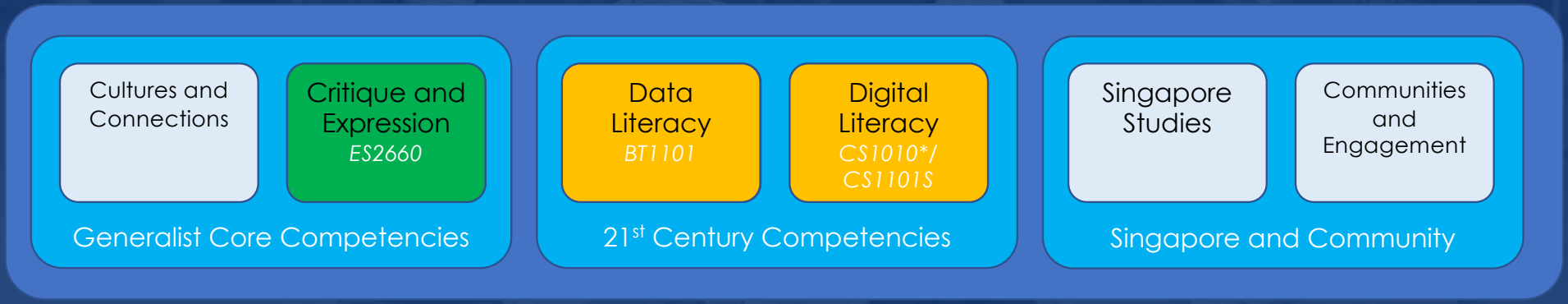
6 General Education pillars (24 units)



Courses that lay the foundation for important life skills

Students are strongly encouraged to complete the GE courses within the first 2 years of their candidature.

General Education / ULR

in depth 2 ...

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1.	Cultures & Connections	(prefixed by GEC)
2.	Critique & Expression	(fulfilled by *ES2660* for CS students whose home faculty is SoC)
3.	Digital Literacy	(fulfilled by *CS1010*/CS1101S Programming Methodology* for students whose home faculty is SoC)
4.	Data Literacy	(fulfilled by *BT1101 Introduction to Business Analytics* for BAIS and BZA students whose home faculty is SoC)
5.	Singapore Studies	(prefixed by GESS)
6.	Communities & Engagement	(prefixed by GEN)

UTown Programme, **RVRC** and **NUSC** students follow the curriculum requirements specified by their respective colleges

More details here: https://soc-n.us/ge-ulr-req

Programme and Major Requirements in depth...

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Programme Essentials / Compulsory GE courses

- Must pass all with letter grades (unless with permitted S/U option)
- Include at least 2–3 programming courses and prescribed non-GE coded courses, depending on programme
  - ✓ *CS1010/CS1010A/CS1101S Programming Methodology* (prescribed to satisfy Digital Literacy Pillar)
  - ✓ *CS2030 Programming Methodology II* and *CS2040 Data Structures and Algorithms* (for BAIS and BZA), *CS2030S/CS2040S* (for Common CS/AI)
  - ✓ *CS2040C Data Structures and Algorithms* (for InfoSec)
  - ✓ *BT1101 Introduction to Business Analytics* (for BAIS and BZA and prescribed to satisfy Data Literacy Pillar)

Programme Electives

- Each programme has its own list of elective courses
  - ✓ Allows you to choose modules from a basket

Recap and Summary

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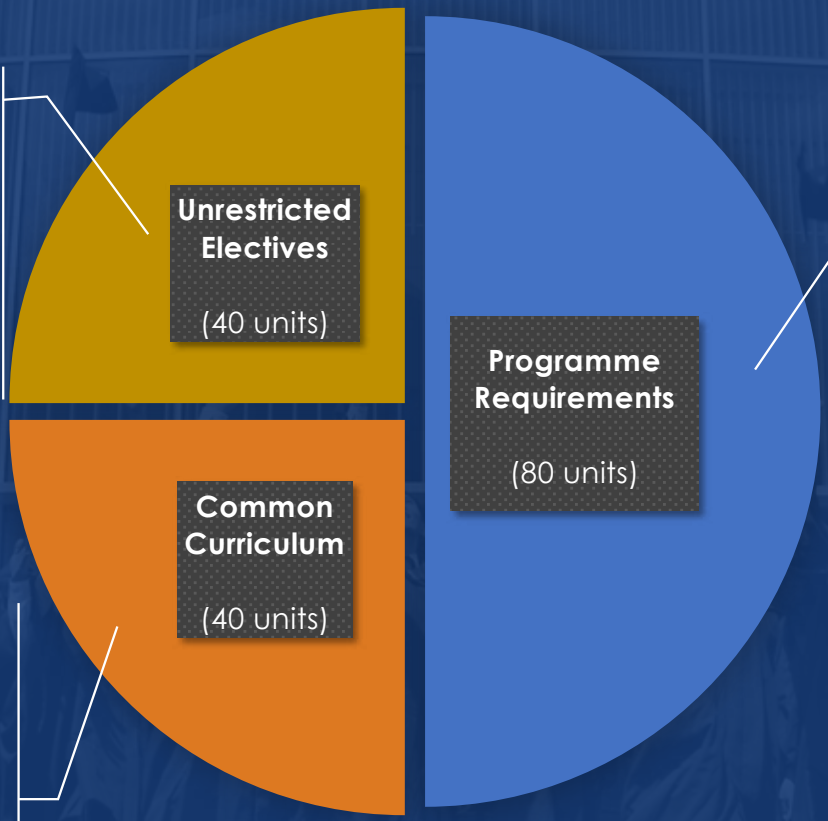
- 2nd Major, Minor may take up your Unrestricted Electives (UE)
- Advanced Placement Credits for Polytechnic students give up to 20 units under UEs



Broken down into:

- Programme Essentials
  - Industry Experience
  - Some Poly APCs also credit here
- Programme Electives

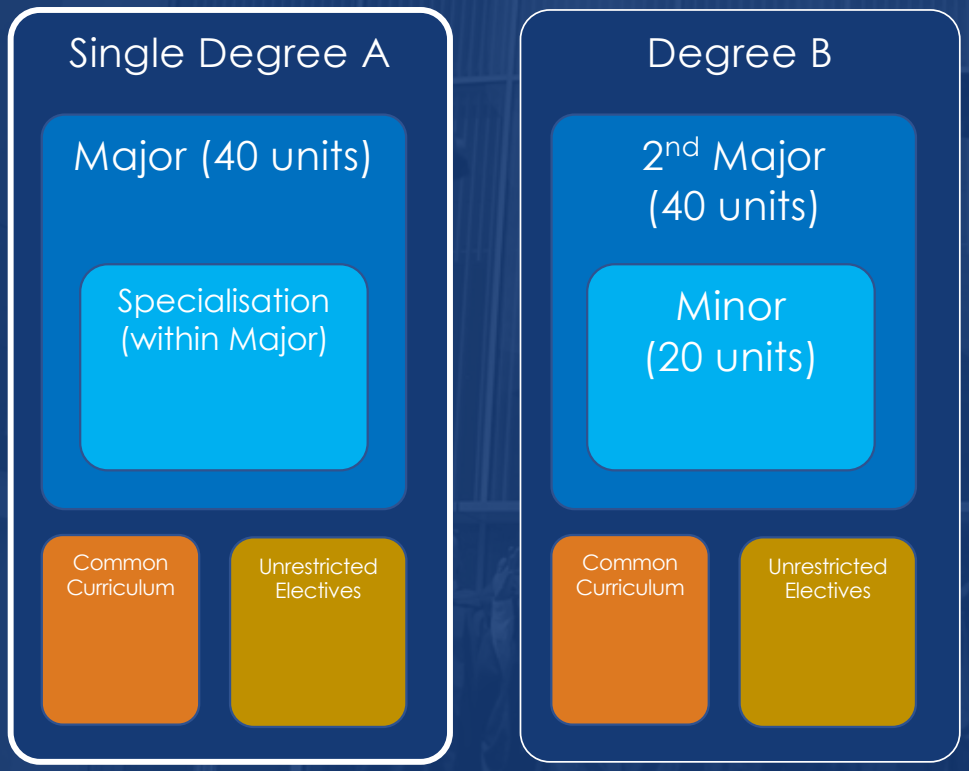
Broken down into:

- *IS1108 Digital and AI Ethics* / CD / ID
- University Level Requirements (i.e. GE)

Single Degree:
160 units

CDP, DDP often will require more units.

Degrees, Majors, Minors and Specialisations



Get your money and time's worth

Accomplishable with double (not triple) counting:

- Up to 8 units of GE requirements may be double counted with a Major requirement.
- GEs may also be double counted with 2nd Major, Minor and Specialisation requirements
  - subject to specific 2nd Major, Minor and Specialisation rules

Double Degrees (DDP) and Concurrent Degrees (CDP)

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CS/BAIS with Business Admin/Accountancy

CS/AI with Mathematics (under CHS)

Self designed DDP with another NUS Faculty

CS/BAIS with Masters in Management with NUS Business School

BAIS/BZA with Economics (under CHS)

BZA with Business Administration

Photo by Mart LMJ @ Pexels
Photo by Lennon CC-BY-SA-3

Double Major (aka Second Major) Programmes

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- Second major in Management
- Seond major in Statistics

Also from many other faculties

Minor Programmes offered by other faculties

- Math, Statistics, Economics, Management, …

Please consult relevant web pages from the host departments for updates.

2nd Major (40 units)

Up to **16** units may be used to meet the requirements for both (i) the Second Major and (ii) another Major or Minor

Only Double Counting is allowed.

- Triple counting of a course that is common to, for example, a Major, Second Major and Minor that are all being taken by a student, is **not allowed**.

  The student will have to read an additional course/s to fulfill the unit requirement for one of the three programmes.

At least **12** units must be at Level 3000.

At least 80% of the total unit requirements must be at level 1000 to 4000.

Of which, at least **60**% must be courses read at NUS include all courses taught, co-taught, supervised or co-supervised by NUS faculty members.

- These consist of graded courses or courses with an **S** or **CS** grade.
- The remaining units may be earned through credit transfers, advanced placement and exemptions, from courses deemed relevant to the particular 2nd Major.

Minor (20 units)

NUS National University of Singapore | Computing

Up to **8** units (40% of the total requirements for Minor) may be used to meet the requirements for both the Minor and a Major/Second Major, or another Minor.

At least **12** units for any Minor programme must be taken from outside the entire set of courses that are listed for the major(s)/another minor that the student is taking.

At least 80% of the total unit requirements must be at level 1000 to 4000.

A minimum of **60**% of the total units of the Minor requirements must be earned from courses read in NUS taught, co-taught, supervised or co-supervised by NUS faculty members.

- These consist of graded courses or courses with an **S** or **CS** grade.
- The remaining units may be earned through credit transfers, advanced placement and exemptions, from courses deemed relevant to the particular Second Major or Minor.

Specialisations (20 units)

NUS National University of Singapore | Computing

For each specialisation, up to 8 units (40% of the unit requirements for a Specialisation) may be double counted and used to meet

(i) the Specialisation requirement, and
(ii) other requirements,
e.g., General Education, College, Faculty, Second Major, Minor or other requirement

Said another way, at least (20 – 8=)12 units must be distinct & non-overlapping.

At least 80% of the total unit requirements must be at level 1000 to 4000.

A minimum of **60**% of the total units of the Specialisation requirements must be earned from courses read in NUS

- Taught, co-taught, supervised or co-supervised by NUS faculty members.
- These consist of graded courses or courses with an **S** or **CS** grade.
- The remaining units may be earned via credit transfers, advanced placement and exemptions, from courses deemed relevant to the Second Major or Minor.

Workload and Waivers

Minimum workload every semester: **18** units

- Underloading requests are not granted in earlier stage of study unless supported by medical grounds/extenuating circumstances
- Appeal for min workload waiver via CourseReg is **disabled** for our own undergraduates
- Instead, submit waivers for the last 3 semesters leading to graduation with a study plan via SoC Student Workload System for review

Maximum permissible workload for 1st semester of study in NUS (no waiver allowed)

- **23** units (for single degree students without any minor/second major)
- **27** units (for students who are enrolled in NUSC, DDP or CDP)

SoC **does not** support Class and Exam Timetable Waivers.
Do not submit appeals!

Industrial Experience

NUS National University of Singapore | Computing

Plan early for the compulsory internship programmes to avoid delay of graduation

- Do it by Year 3 of your studies
- No internship allowed in your final graduating semester

Completed the programme by the 8th semester or earlier, but want to do either an additional regular semester or Special Term to pull up your GPA?

- Possible with permission from UG Office
- Must take only Level 3000 or above courses in regular semester/Special Term
- Still must take at least 18 units for a regular semester

Leave of Absence

NUS National University of Singapore | Computing

1. Medical Reasons
2. Academic Reasons
   - Additional internships beyond requirements (usually only 1 extra)
3. Personal Reasons
   - Including responsibilities (Foreign National Service; Representation in Competitions for National/NUS Teams)

See https://www.nus.edu.sg/registrar/administrative-policies-procedures/undergraduate/leave-of-absence

Outline

NUS National University of Singapore | Computing

- Courses and Grades
- Curriculum Structure and Degree Options

> Course Registration

- Enrichment and Activities
- Challenges and Advice
- Useful Information

How to get the courses you want

NUS National University of Singapore | Computing

Course Registration via EduRec
employs a rules-driven priority-based engine to allocate course to students based on 1. Curricular needs; 2. Seniority in the programme; and 3. Course preferences

https://www.nus.edu.sg/coursereg

CourseReg@EduRec
(myEduRec > Academics > Course Registration)

Navigation

myEduRec > **Academics > Course Registration**

Priority Score of course(s)

$$A_c \times B_c \times C_c$$

User Guide
https://www.nus.edu.sg/coursereg/docs/CourseReg-Student-User-Guide.pdf

Priority Scoring – $A_c \times B_c \times C_c$

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National University of Singapore

Programme Requirements Category (in descending order of points) – A_c
UTown / USP courses
Major core and Major Specialisation courses
Major courses
Second Major Specialisation courses
Faculty Requirement courses
Second Major courses
Restricted / Direct Minor courses
Unrestricted Elective / General Education courses

Students' Seniority (in descending order of points) – B_c
Year 4 / GLB Year 3 / Graduating Year 3
Year 3
Year 2 / E-Scholars Programme
Year 1

Rank Preference of Courses (in descending order in descending order of points) – C_c
Rank 1
Rank 2
Rank 3
Rank 4
Rank 5
Rank 6
Rank 7
Rank 8

Tie Breakers

(in descending order of consideration)

1. Students who have not attained minimum workload
2. Student's home faculty is course host faculty
3. Course feedback points
4. Random balloting

Can I drop a course after securing it?

Activity	Deadline
Add new courses	By end of Week 1
Drop courses without grade penalty	By end of Week 2
Drop courses with "W" grade	Week 3, Day 1 to last day of Recess Week
Drop courses with "F" grade	Week 7, Day 1 onwards

Important: You need to meet the minimum workload of **18** units per semester

Outline

NUS National University of Singapore | Computing

- Courses and Grades
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- Course Registration

> **Enrichment and Activities**
  - Internships

- Challenges and Advice
- Useful Information

More than courses…

NUS National University of Singapore | Computing

University education is more than just attending classes

- Develop a network of life-long friends
- Explore and find out what you are passionate about

What do Employers Look For?

NUS National University of Singapore | Computing

How about Google?

Activities and Enrichment

NUS National University of Singapore | Computing

- Student clubs and activities
- Student Exchange Programme (SEP)
- Design-Your-Own-Course (DYOC)
- Open source and volunteer work
- Leadership programme
- Internships for work experience
- Entrepreneurship programme
- Research experience
- Competitions
- Teaching experience

Student Clubs and Interest Groups

NUS | Computing
National University of Singapore

NUS Computing Club
nuscomputing.com

NUS Student Chapter of the ACM

NUS GDG

NUS GREYHATS

nus BIZIT

WOMEN IN TECH
NUS COMPUTING
Connect. Empower. Build.

AI NUS AI Society

Computing for Voluntary Welfare Organisations

NUS HACKERS

… and many others

Overseas Experiences

- University of British Columbia
- University of California
- University of Melbourne
- University of Illinois, Urbana-Champaign
- Technische Universitat Wien
- University of Copenhagen
- Tsinghua University
- Ecole Superieure D' Electricite
- University of Stuttgart
- Tokyo Institute of Technology
- Korea Advanced Institute of Science & Technology
- University of Stockholm
- King's College London

… and many more!








CP2106 Orbital

NUS National University of Singapore | Computing

Independent Software Development Project

Every SoC student should have the confidence to

- propose their own project
- learn what is necessary to do the project
- deliver what was promised

For 1st year students

- Over the long vacation (May—July 2026)
- Work in pairs
- Basic project – web app in Python
  - ✓ Option to propose more advanced project
- 4 units independent work (graded as CS/CU under CP2106)

CP2107 Odyssey

Independent Introduction to CS Research

Learn and Deliver

- Introduce to various research areas
- Formulate research questions, reviewing the literature, and carry out part of the research project
- Derive tangible outcome such as a research proposal, prototype, or preliminary study.

For 1st year students

- Over the long vacation (May—July 2026)
- 4 units independent work (graded as CS/CU basis under CP2107)

Subsequent courses: CS2309, CP3209 (under ReX), CP4101

Join the CS Turing Programme

Internships

NUS National University of Singapore | Computing

Advanced Technology Attachment Programme (ATAP)

Industry Internship Programme (IIP)

- **6**-month course credit

Student Internship Programme (SIP)

- **3**-month course credit

Internships

NUS National University of Singapore | Computing

Advanced Technology Attachment Programme (ATAP)

Industry Internship Programme (IIP)

- **6**-month course credit

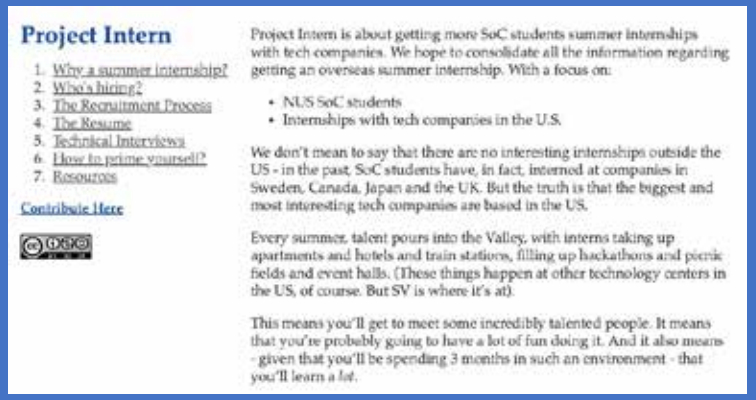
Student Internship Programme (SIP)

- **3**-month course credit

Students also go on overseas internships with leading global companies …

Project Intern

How you too, can land an internship with Google, Microsoft, Facebook and the like.
http://ymichael.github.io/projectintern



Project Intern

1. Why a summer internship?
2. Who's hiring?
3. The Recruitment Process
4. The Resume
5. Technical Interviews
6. How to prime yourself?
7. Resources

Contribute Here

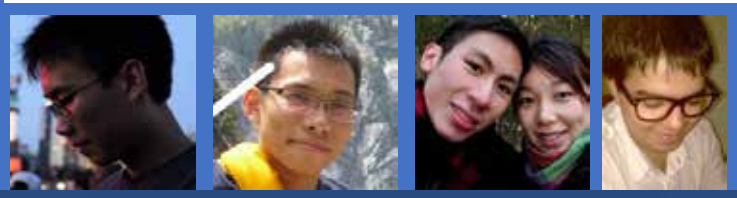
Project Intern is about getting more SoC students summer internships with tech companies. We hope to consolidate all the information regarding getting an overseas summer internship. With a focus on:

- NUS SoC students
- Internships with tech companies in the U.S.

We don't mean to say that there are no interesting internships outside the US - in the past, SoC students have, in fact, interned at companies in Sweden, Canada, Japan and the UK. But the truth is that the biggest and most interesting tech companies are based in the US.

Every summer, talent pours into the Valley, with interns taking up apartments and hotels and train stations, filling up hackathons and picnic fields and event halls. (These things happen at other technology centers in the US, of course. But SV is where it's at).

This means you'll get to meet some incredibly talented people. It means that you're probably going to have a lot of fun doing it. And it also means - given that you'll be spending 3 months in such an environment - that you'll learn *a lot*.



Open Source and Volunteer Work

CP3107 Computing for Social Service Agencies I (6 units)

CP3110 Computing for Social Service Agencies I (6 units)

Build systems for social service agencies and gain course credits in *CP3107* or *CP3110*

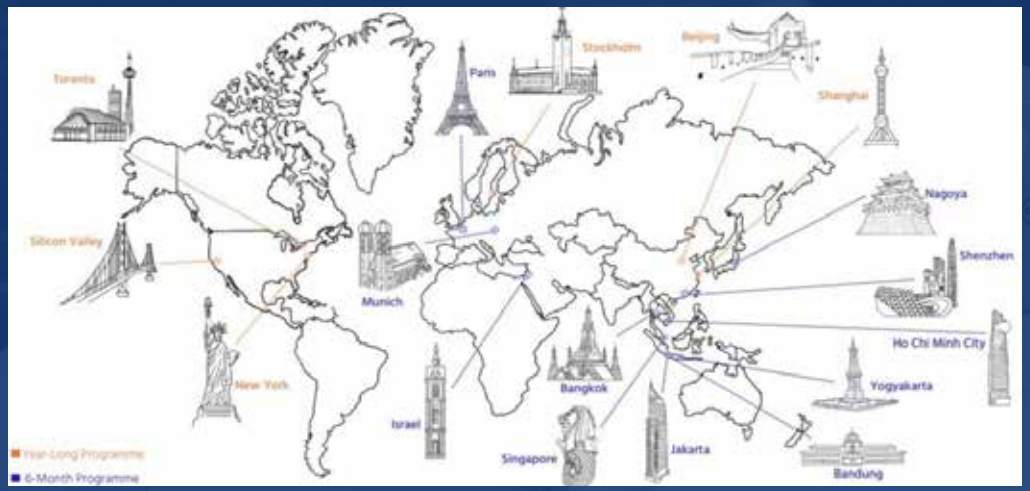
Computing for Social Service Agencies I and II can be mapped to 3-month internships.

Entrepreneurship

NUS Overseas College (NOC)

Full one year, 6- or 3-month in a start-up with NUS Overseas College. Meets compulsory internship requirement.

Enough mapping for most students to complete degree in 4 years



Courses on Digital Entrepreneurship

- *CP2201 Journey of the Innovators*
- *IS3251 Principles of Technology Entrepreneurship*

Venture Initiation Programme (VIP@SoC)

Up to $10,000 to develop an idea

The Furnace

The Incubation Center at SoC

Undergraduate Research

NUS National University of Singapore | Computing

Invent, Create and Discover…

- *CP3208 Undergraduate Research Opportunity Programme*
- *CP4101 Final Year Project*

SandCanvas by Chris Chua

Sand Animation...

What do Employers Look For?

NUS National University of Singapore | Computing

How about KPMG Consulting?

Outline

NUS National University of Singapore | Computing

- Courses and Grades
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- Enrichment and Activities

> **Challenges and Advice**

- Useful Information

Academic Advising

NUS National University of Singapore | Computing

Questions you may have:

- Should I do a DDP, FDDP, CDP, SEP, specialisation, minor, second major, etc.?
- I want to be an entrepreneur. How do I go about it?
- What courses should I do to help prepare for a career as a software engineer, consultant, etc.?
- I am interested in research. How do I go about getting research experience?
- Should I do a Ph.D.?
- I am struggling academically. How should I study? What courses should I select next semester?

- Talk to an academic advisor, especially when you are struggling with your studies!
  https://www.comp.nus.edu.sg/cug/advisors/

Academic Support

NUS National University of Singapore | Computing

You can talk to **an academic advisor** any time you need academic advice

Perhaps you want to have a closer mentorship relationship with:

- Someone who has started a company and can advise you about entrepreneurship?
- Someone who teaches or does research in a particular area so that you can get advice about the area?
- Someone who interacts actively with mentees in his or her research group using social media?
- Senior students who can also act as peer mentors?

Advice for Passing a Course

Perform consistently in Continual Assessment (CA) and Examinations!

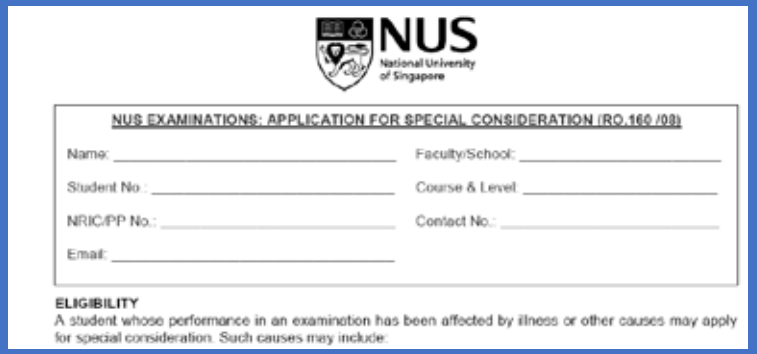
CA can take many forms, including:

- Assignments
- Tutorial Attendance
- Mid-term Tests / Quizzes

If you miss your examination due to a valid reason, make sure you apply for Special Consideration, and submit the form online via EduRec by the specified deadline given by the Office of the University Registrar in each semester/special term.

- E.g., for medical reasons, get your doctor to fill the form out.

Login to EduRec and navigate to
My Homepage > Academics > Examinations > Access Special Consideration > Make Submission for Current Semester.



NUS EXAMINATIONS: APPLICATION FOR SPECIAL CONSIDERATION (RO.160 /08)

Name: _____ Faculty/School: _____

Student No.: _____ Course & Level: _____

NRIC/PP No.: _____ Contact No.: _____

Email: _____

ELIGIBILITY

A student whose performance in an examination has been affected by illness or other causes may apply for special consideration. Such causes may include:

Academic Problems

NUS National University of Singapore | Computing

Every year, around 5% of freshmen face academic problems:

- GPA below 2.00 (**C** average)
- Must see an academic advisor

You don't want to be one of them if you can avoid it (but we can help if you end up here…)

- What got them into academic difficulties?

Problems and Solutions…

NUS National University of Singapore | Computing

No real difficulties, I just didn't study. I was lazy and just wanted to enjoy university life.

- ✓ *I started studying and taking interest in programming.*

The first time I did it, I didn't do any work at all. I didn't attend lectures, tutorials recitation nothing of sorts… the prime reason for coming down in the particular course was rather a complete negligence on my part… Especially when I had come directly after A levels this sudden influx was a bit hard to grasp, in spite of being warned that uni would be like this. =)

- ✓ *Stuck to the basics, attend lectures, tutorials and recitations more than I did the first time. Started the labs earlier.*

Problems and Solutions…2

NUS | Computing
National University of Singapore

I had difficulty understanding programming as a whole since I had no background in computing when I first took CS1101S. Therefore, learning JavaScript Programming is almost the same as learning a new language.

Secondly, I didn't really know how to apply basic algorithms to solve problems (labs).

- ✓ *I attempted all tutorial questions and clarified my doubts during tutorials.*
- ✓ *I exchanged ideas on how to solve problems and weigh their complexity or efficiency with my tutorial mates.*
- ✓ *Increase my self-confidence, really.*

Problems and Solutions…3

NUS National University of Singapore | Computing

Complacency and adaptability. CS1010S is a module that I took in the first semester. Besides adapting to a brand-new school, I also need to juggle between the new social life and a completely different (from JC) way to study a module. I think the main problem is not sure how to go about studying this course, no computing background, unsure how to go about asking question and that the nature of the course has a very huge snowballing effect once you lag at the very beginning of the course.

- ✓ *Practice, be consistent and keep asking questions (both to yourself and the lecturer), keep the programs that you practise, realise your mistakes, remember them and keep going on.*

Advice for Grade-Free Courses

NUS National University of Singapore | Computing

The purpose of the Grade-Free Scheme is to reduce stress of your transition to university and to let your experiment.

However, many do not utilise this opportunity appropriately.

Grade-Free does not mean effort-free.

Observed issues:

- Take too many and difficult courses
- Too relaxed at mid-semester, then too late to catch up

Learn your basics well – you will continue to need it!

- Upper-level courses assume mastery of foundations (like programming and problem solving)

If you worry you might struggle…

NUS National University of Singapore | Computing

1. **Don't overload yourself.** Generally, doing more than five courses a semester is not a good idea for struggling students.
2. **Work consistently through the semester**, rather than cramming at the end. Try to do all the tutorial exercises.
3. **Work in groups**. Students who study in a group tend to do better.
4. Beyond compulsory courses, pick courses that **suit your strengths.**
5. **Research** the courses before signing up for them.

You can drop a course with a **W** grade before the end of the recess week if you think that you cannot cope. Remember, the minimum workload of **18** units per semester must be maintained.

Outline

NUS | Computing
National University of Singapore

- Courses and Grades
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- Enrichment and Activities
- Challenges and Advice
- **Useful Information**

Useful Information

NUS Bulletin
https://www.nus.edu.sg/nusbulletin/ay202526/general-information

has all the information about rules and regulations governing your degree.

SoC Undergraduate Page
http://www.comp.nus.edu.sg/cug

has information relevant to SoC undergraduates. Please choose the requirement for your own cohort.

You will be informed on how to participate in **ATAP**, **SIP**, and **NOC** at the appropriate juncture by relevant SoC Offices.

Useful Information 2

NUS National University of Singapore | Computing

- **CourseReg:** http://www.nus.edu.sg/CourseReg
- **NUSMods:** http://nusmods.com, Search and view the course and timetable information from. Info on pre-requisites and preclusions of courses, whether they have S/U option, are lab-based, independent-study courses or SkillsFuture funded.
- **Course Briefing Slides to be deposited:** http://www.comp.nus.edu.sg/freshmen

- **Computer Accounts**
  - **NUSNET account**
    - **Given out during registration**
    - Email address: exxxx@u.nus.edu
- **Enquiries:** https://socug.comp.nus.edu.sg/

SoC Office of Undergraduate Studies

NUS National University of Singapore | Computing

The SoC Office of Undergraduate Studies is located at: **COM1 #02–19**

Enquiries: https://socug.comp.nus.edu.sg/

Please do not send the same email to multiple staff members via their personal account!

Vice Dean:	Assoc Prof KAN Min-Yen
Assistant Deans:	Assoc Prof CHAN Chee Yong Dr Boyd Anderson Assoc Prof Aaron TAN Tuck Choy Dr WANG Qiuhong Dr ZHAO Jin
Deputy Director:	Ms TOH Mui Kiat
Senior Associate Director:	Ms Pamela LIM
Senior Manager:	Mr LOW Mun Bak
Assistant Senior Manager:	Ms Diana WONG
Manager:	Ms Sharnie LEE Xin
Assistant Managers:	Mr LEE Zheng Yi & Ms MAH Su Zhi & Ms Valerie NEO & Ms Sharifah Noor Ain BTE AHMAD ALHABSHI
Senior Executives:	Ms Alexandria CHAN & Ms Sharon CHAN & Mr Phillips LOH & Ms Ivy NG & Mr Nicholas WAN & Ms Jenny TAY & Ms Jesline TEO

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National University of Singapore

All UG Matters

socug.comp.nus.edu.sg

Form based Request Tracker
(Best bet, but needs VPN)

socug@comp.nus.edu.sg

Free-form Email Requests
(Maybe slower)

Emailed Announcements will have "[SoC UG]" as a prefix

SoC Office of Industry Relations

Vice Dean:	Assoc Prof NG Teck Khim
Assistant Deans:	Assoc Prof HUANG Zhiyong Dr LEK Hsiang Hui
Senior Associate Director:	Ms Jane LIM
Assistant Manager:	Mr John Elijah TAN
Senior Executive and Executive:	Mr Daniel WANG Chen-En & Ms Samantha CHEN Wan Rou & Ms Alina NG Jing Rong

SoC Office of Industry Relations is located in the Dean's Office at **COM1 #03–27.**
https://www.comp.nus.edu.sg/industry/

It liaises with companies to provide internship opportunities and organises career fairs for our undergraduates and graduates.

Email: **AskIR@comp.nus.edu.sg**

SoC Career Advisory

NUS National University of Singapore | Computing

COM1 #01–23

Some questions you may have for our Career Advisors:

- How to I plan for my career?
- How do I write a good CV?
- How do I prepare for my interview?
- How do I network with people during my internship?
- What are the resources I can use to get a job?
- I failed to secure an internship this semester. What did I do wrong? How can I do better next semester?

SoC Office of Student Life (Wellness)

The Student Life Office is also located at **COM1 #02–19.**

http://www.comp.nus.edu.sg/studentlife/

The Student Life team aims to foster student success by providing students with access to experiences that provide a balanced university life both within and beyond the classroom.

Email: **SoCFamily@comp.nus.edu.sg**

Vice Dean: Assoc Prof Gary TAN
Assistant Deans: Assoc Prof Bimlesh WADHWA
Assoc Prof Anand Mohan RAMCHAND
Senior Manager: Ms Adele CHIEW
Manager: Ms NUR Arifah
Senior Executives & Executives: Mr Nicholas CHEANG & Ms Jodie CHEONG Sok Wah
Mr Daniel NGO Wei Sheng & Mr WANG Zekun

University Counselling Services (UCS) - Wellness

NUS | Computing
National University of Singapore

Phone, email or come in person (available only at Kent Ridge Campus) to make an appointment with UCS

- Phone: +65 6516 2376
- Email: ucs@nus.edu.sg

Walk-in @ KENT RIDGE CAMPUS

- 20 Lower Kent Ridge Road, Level 2, Singapore 119060

- Operating hours:
  Mon to Thu: 8:30 am – 5:30 pm
  Fri: 8:30 am – 5:00 pm
  Closed on Sat, Sun & Public Holidays.

Last walk-in appointments are available 30 minutes before closing.

Thank you!

Slides: http://soc-n.us/socug-faculty-briefing-t2510

Video: http://soc-n.us/socug-faculty-briefing-t2510yt

Meeting Etiquette for Upcoming Webinars

(for both faculty and dept briefings on 15 Jul 2025 (10:00 am to 12:00 noon, 2:30 pm to 4:00 pm)

- Please check your audio settings.
- Your microphone is muted with video switched off by default upon joining.
- You may post your questions via the webinar during the Q&A segment.
- These sessions will be recorded.
  - If you choose to participate in this webinar, you are giving your consent to have your video/audio text comments in these recordings and allowing us to share them.