NON-GRADUATING
NON-EXCHANGE PROGRAMME
(NGNE)

3.5 + 0.5 + 1 (MComp / PhD)

https://www.comp.nus.edu.sg/~ngne/

10 August 2021
National University of Singapore

Established in 1905, the National University of Singapore (NUS) is a world-leading autonomous research university in Singapore.

As a century-old university, NUS is ranked consistently as one of the top universities. NUS is ranked 11th in the world, based on the QS World University Rankings 2022.

NUS has a total of 17 faculties and schools, 11 overseas colleges, 30 university-level research institutes and centres, with more than 40,000 students from over 100 countries.

Website: www.nus.edu.sg
NUS Campus

Stephen Riady Centre

Study Corner

University Town

Education Resource Centre
The School of Computing (SoC), established in 1998, is ranked 4th in the world, and 1st in Asia, in the field of computer science, based on QS World University Rankings 2021.

- **Departments**
  - Computer Science
  - Information Systems and Analytics

- **Staff**
  - 186 (Teaching)
  - 222 (Research)

- **Student**
  - 4261 (Undergraduate)
  - 948 (Graduate)

**Website:**
[https://www.comp.nus.edu.sg/](https://www.comp.nus.edu.sg/)
What is NGNE?

• The Non-Graduating Non-Exchange Programme (NGNE) is a programme designed for *final year students* to get a taste of a different education system by immersing themselves in one of the world leading universities.

• In general, students will spend *one semester (or two in some cases)* in NUS attending classes and experiencing the life of a typical SoC undergraduate, with the opportunity to enjoy special computing resources and lab spaces offered by SoC.

• NGNE is a favourable platform if you wish to apply to the *SoC Graduate Programme*, as students who meet certain requirements in this programme may be considered for early admission into the Master of Computing (MComp) programme.

Website: [https://www.comp.nus.edu.sg/~ngne/](https://www.comp.nus.edu.sg/~ngne/)
NGNE (3.5 + 0.5 + 1)
**NGNE Programme**

3.5 + 0.5 + 1 (MComp) or more (PhD)

<table>
<thead>
<tr>
<th>Duration</th>
<th>January – May 2022</th>
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<tbody>
<tr>
<td>Place</td>
<td>National University of Singapore, School of Computing</td>
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</table>

**Merits**

1. **Utilization of Credits**
   Level-4000 modules (offered by School of Computing) taken in the NGNE programme can be used to fulfill MComp credit requirement.

2. **Admission to Master Programme, opportunity to PhD Programme**
   NGNE students who meet certain requirements in NGNE programme will be considered for early admission to the Master of Computing (MComp) Programme. Students who perform exceptionally well would stand a chance to be offered to the PhD programme.

3. **Graduate Programme Dissertation**
   Students could extend their Independent Project (CP3106) topic as their Graduate Programme dissertation.
Application Process

Are you a student from a partnering school/college of our partner university?

- Yes
  - CONSIDERATION FOR PRE-APPROVAL
    - Submit online application form for Pre-Approval with supporting documents
  - OFFICIAL APPLICATION
    - Submit official application via NUS online application portal
  - SUBMISSION OF HARD COPY DOCUMENTS
    - Submit hard copy application documents by post to NUS Registrar’s Office before the stipulated deadline

- No, but attended 2019 or 2021 NUS SoC Summer Workshop
  - CONSIDERATION FOR PRE-APPROVAL
    - Submit online application form for Pre-Approval with supporting documents
  - PRE-APPROVAL
    - Receive email notification of Pre-Approval
  - If successful
    - OFFICIAL APPLICATION
      - Submit official application via NUS online application portal
    - SUBMISSION OF HARD COPY DOCUMENTS
      - Submit hard copy application documents by post to NUS Registrar’s Office before the stipulated deadline
Consideration for Pre-Approval
— Students from partnering school/college

- SoC will work with partnering schools/colleges in reviewing the applications for Pre-Approval.

- Please submit the online application form for Pre-Approval before **15 September 2021** (for January 2022 intake) with the following supporting documents:
  - Academic transcript in English
  - An official certification of GPA and/or average score from home school, if GPA and/or average score is not shown in the transcript
  - NUS SoC Summer Workshop performance slip (if any)
  - English qualifications (either one of the following: CET6, TOEFL or IELTS)
  - CV in English
  - Certificates of awards or achievements (if any)

- Please combine all the documents into **one pdf file**.

- Application Link: [https://nus.syd1.qualtrics.com/jfe/form/SV_9Fwt7QgQW79ZXZc](https://nus.syd1.qualtrics.com/jfe/form/SV_9Fwt7QgQW79ZXZc)
Consideration for Pre-Approval
– Students NOT from partnering school/college

- Students who are not from partnering school/college but have attended 2019 or 2021 NUS SoC Summer Workshop may also apply for NGNE
- Please submit the online application form for Pre-Approval before 15 September 2021 (for January 2022 intake) with the following supporting documents:
  - Academic transcript in English
  - An official certification of your GPA and/or average score from your school, if your GPA and/or average score is not shown in the transcript
  - NUS SoC Summer Workshop performance slip
  - English qualifications (either one of the following: CET6, TOEFL or IELTS)
  - CV in English
  - Certificates of awards or achievements (if any)
  - Letter from your home university stating its endorsement for your participation in the NGNE programme if officially approved by NUS
- Please combine all the documents into one pdf file.
- Application Link: https://nus.syd1.qualtrics.com/jfe/form/SV_9Fwt7QgQW79ZXZc
Pre-Approval

• Upon successful application, you will receive notification of **Pre-Approval** via email, regardless of whether you are from a partner university or not.
• You **MUST** receive Pre-Approval from NUS SoC before you can submit the official application at the NUS online application portal.

CV submission for Pre-Approval

• CV is the most important document for consideration of Pre-Approval.
• Project topic / Supervisor matching will be done based on students’ CV.
• CV should include:
  ✓ Academic performance
  ✓ English proficiency
  ✓ Any awards and achievements
  ✓ Working/project experience
  ✓ Interest areas and future plans
  ✓ Other useful materials
Official Application

• After receiving Pre-Approval, students can proceed to submit the following documents during the official application via NUS online application portal:

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1</td>
<td>Copy of passport showing your particulars</td>
</tr>
<tr>
<td>2</td>
<td>Record of courses taken in current semester/term</td>
</tr>
<tr>
<td>3</td>
<td>Official academic transcript (including grading explanation/remarks) with English translation if the original transcript is not in English</td>
</tr>
<tr>
<td>4</td>
<td>English qualifications (CET6, TOEFL or IELTS)</td>
</tr>
<tr>
<td>5</td>
<td>Student Status Letter issued by your home university</td>
</tr>
<tr>
<td>6</td>
<td>Documentary proof of financial support in English</td>
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</table>

• After submitting the official application, print out the application form and send it together with all the documents listed above to NUS Registrar’s Office by post.

Checklist for online application: [http://www.nus.edu.sg/registrar/docs/info/prospective-students---non-graduating/ngchecklist.pdf](http://www.nus.edu.sg/registrar/docs/info/prospective-students---non-graduating/ngchecklist.pdf)
Financial Proof Required in Official Application

• The documentary proof of financial support should certify your financial ability to make payment for the **Miscellaneous Student Fees (MSFs)** and **tuition fees for at least 3 modules** (6 modules if you are studying in NUS for two semesters).

• For the actual rates of MSF and tuition fees, please refer to [this page](#).

• You may submit a **bank statement** (original, certified true copy or electronically generated statements will be accepted) OR a **certificate of deposit (存款证明) in English** issued by the bank as a proof that you (or your parent) have the stated amount in the bank account. The bank statement/certificate should not be dated more than 6 months from the intended date of admission.
# Timeline (January 2022 Semester)

<table>
<thead>
<tr>
<th>Time</th>
<th>Things to note</th>
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<tbody>
<tr>
<td>1 September – 15 September 2021</td>
<td>Submit application for consideration of Pre-Approval.</td>
</tr>
<tr>
<td>16 September – 1 October 2021</td>
<td>After obtaining Pre-Approval, submit official application via NUS online application portal.</td>
</tr>
<tr>
<td>15 October 2021</td>
<td>Submission deadline of hard copy application documents.</td>
</tr>
<tr>
<td>Mid November 2021</td>
<td>Work with NGNE coordinator to confirm supervisor &amp; courses to take.</td>
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<tr>
<td></td>
<td>Work with supervisor on project details; Get CP3106 project form signed and submitted to <a href="mailto:ngne@comp.nus.edu.sg">ngne@comp.nus.edu.sg</a></td>
</tr>
<tr>
<td>End November 2021</td>
<td>Receive official offer from NUS Registrar’s Office. Apply for on-campus accommodation.</td>
</tr>
<tr>
<td>Mid December 2021</td>
<td>Receive In-Principle Approval (IPA, used as entrance VISA and for application of Student’s Pass) for entry to Singapore. Purchase air ticket.</td>
</tr>
<tr>
<td>1 January 2022</td>
<td>Master of Computing (MComp) application open date.</td>
</tr>
<tr>
<td>Before 10 January 2022</td>
<td>Arrive in Singapore one to two weeks before start of semester to settle down.</td>
</tr>
<tr>
<td>10 January – 15 April 2022</td>
<td>Semester 1 instructional period. 13 weeks + 1 recess week.</td>
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<tr>
<td></td>
<td>Each week, student should spend around 4 days on the project, 2 days on the modules, meet the supervisor (either online or face-to-face) at least an hour or more.</td>
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<tr>
<td></td>
<td>Students are to submit a draft report to both their supervisor and another appointed evaluator by <strong>15 April, 5pm</strong>.</td>
</tr>
<tr>
<td>15 March 2022</td>
<td>MComp application deadline.</td>
</tr>
<tr>
<td>16 April – 22 April 2022</td>
<td>Reading week (preparation for final exam). On <strong>22 April</strong>, there will be an evaluation session by the supervisor and the appointed evaluator.</td>
</tr>
<tr>
<td>23 April – 7 May 2022</td>
<td>Course examination &amp; project/report evaluation (supervisor + reviewer)</td>
</tr>
<tr>
<td>End July 2022</td>
<td>If successful in gaining admission to graduate programme, return to Singapore/NUS.</td>
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</tbody>
</table>
Completion Requirements

- January intake:
  - Complete 2 elective modules with at least one level-4000 module
  - Complete Independent Project module (CP3106)

Note: Students are strongly encouraged to choose modules of level 3000 or above
# Undergraduate Modules (Semester 2)

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>BT2102</td>
<td>Data Management and Visualisation</td>
<td>BT4211</td>
<td>Data-Driven Marketing</td>
</tr>
<tr>
<td>BT4222</td>
<td>Mining Web Data for Business Insights</td>
<td>CS2030</td>
<td>Programming Methodology II</td>
</tr>
<tr>
<td>CS2040C</td>
<td>Data Structures and Algorithms</td>
<td>CS2100</td>
<td>Computer Organisation</td>
</tr>
<tr>
<td>CS2107</td>
<td>Introduction to Information Security</td>
<td>CS2108</td>
<td>Introduction to Media Computing</td>
</tr>
<tr>
<td>CS2113</td>
<td>Software Engineering &amp; Object-Oriented Programming</td>
<td>CS3211</td>
<td>Parallel and Concurrent Programming</td>
</tr>
<tr>
<td>CS3223</td>
<td>Database Systems Implementation</td>
<td>CS3230</td>
<td>Design and Analysis of Algorithms</td>
</tr>
<tr>
<td>CS3234</td>
<td>Logic for Proofs and Programs</td>
<td>CS3235</td>
<td>Computer Security</td>
</tr>
<tr>
<td>CS3236</td>
<td>Introduction to Information Theory</td>
<td>CS3240</td>
<td>Interaction Design</td>
</tr>
<tr>
<td>CS3242</td>
<td>3D Modeling and Animation</td>
<td>CS3243</td>
<td>Introduction to Artificial Intelligence</td>
</tr>
<tr>
<td>CS3245</td>
<td>Information Retrieval</td>
<td>CS3247</td>
<td>Game Development</td>
</tr>
<tr>
<td>CS4215</td>
<td>Programming Language Implementation</td>
<td>CS4218</td>
<td>Software Testing</td>
</tr>
<tr>
<td>CS4220</td>
<td>Knowledge Discovery Methods in Bioinformatics</td>
<td>CS4221</td>
<td>Database Applications Design and Tuning</td>
</tr>
<tr>
<td>CS4222</td>
<td>Wireless Networking</td>
<td>CS4231</td>
<td>Parallel and Distributed Algorithms</td>
</tr>
</tbody>
</table>

*Actual modules offered are subject to change.*
# Undergraduate Modules (Semester 2)

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</tr>
</thead>
<tbody>
<tr>
<td>CS4240</td>
<td>Interaction Design for Virtual and Augmented Reality</td>
<td>CS4242</td>
<td>Social Media Computing</td>
</tr>
<tr>
<td>CS4244</td>
<td>Knowledge Representation and Reasoning</td>
<td>CS4246</td>
<td>AI Planning and Decision Making</td>
</tr>
<tr>
<td>CS4247</td>
<td>Graphics Rendering Techniques</td>
<td>CS4268</td>
<td>Quantum Computing</td>
</tr>
<tr>
<td>CS4347</td>
<td>Sound and Music Computing</td>
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</table>

*Actual modules offered are subject to change.*
CP3106: Independent Project

• CP3106 is a project module equivalent to graduation project.

• A student who wishes to be considered for direct admission into MComp must complete CP3106.

• Student will work with a professor as supervisor on a topic
  Professors have different working styles. Some professors will propose a project to the student, while some would prefer students to work out the project scopes. In general, students can try to read and identify “gaps” in current research (i.e. missing link, interesting work that has not been done, or interesting problems not known before hand) through extensive readings of literature to form a big picture on what can be done further.

• Workload requirement
  Each week, students should spend around 4 days on the project. Students should meet (either online or face-to-face if allowed) and discuss with the supervisor for at least an hour each week.
CP3106: Potential Supervisors

- In the application for Pre-Approval, you will be asked to provide details regarding which professor you wish to work with on the CP3106 Independent Project.

- You should provide at least 3 choices for our consideration (you will only work with 1 ultimately – note that your choices are just for our reference and there is no guarantee that you will always be assigned to a supervisor of your preference).

- You may refer to the following links (look under "Regular Faculty Members") for the profile of SoC academic staff:
  - Computer Science: [https://www.comp.nus.edu.sg/about/depts/cs/faculty/](https://www.comp.nus.edu.sg/about/depts/cs/faculty/)
  - Information Systems and Analytics: [https://www.comp.nus.edu.sg/about/depts/disa/faculty/](https://www.comp.nus.edu.sg/about/depts/disa/faculty/)
MComp Admission Requirement

- NGNE students who met the following requirements may be considered for early admission to the Master of Computing (MComp) Programme:
  - All elective modules with grade B+ or above
  - Independent Project (CP3106) with grade A- or above
- An interview may be conducted before a decision to offer is made.

"I think the NGNE programme is very helpful. I have experienced the educational environment in a different country. It is very difficult to know what to do at first, for example, I do not know what tutorials are, but gradually I can get used to it. Besides, my supervisor is very nice. She and her students gave me many suggestions on my project. The weekly meeting helps me to correct my mistakes during my research. The coronavirus causes a lot of trouble at the end of the programme, for example, it is difficult to return to China. However, the NUS and NGNE programme staff provide us a lot of assistance during such hard times. Therefore, I think it is very wonderful."

— Participant from Zhejiang University, AY2019/2020

"I would like to thank NUS SoC for giving me the opportunity to attend the NGNE programme. Although it was difficult to adapt to the workload at first, I did feel that my professional skills and psychological ability have both improved a lot in the end because of the top-class learning experience and the excellent academic resources provided here. Since I participate in the NGNE programme, I’ve always had an idea about joining the MComp programme, and regard it as a goal. The experience and gains of this semester strengthen my idea even more. I will always be thankful for this experience and all the help from teachers, staff and classmates."

— Participant from Sichuan University, AY2019/2020
"My supervisor was Prof Leong and we worked on a project about dynamic decision making and reinforcement learning on a robot simulation platform. It aims to design a high-level language which allows the users to specify their problem and automatically build a mathematical model and then solve the problem. The topic is very abstract for me at the beginning, but with the guidance of Prof Leong, I successfully understood its meaning, realized the target interface and applied RL algorithms onto the target platform.

Prof Leong and everyone in her group are very nice! We arranged group meetings every week, in which we shared the papers read recently, the progress of our projects and new research results with each other. These experiences helped me improve my research ability and I have to say thank you to everyone!

Since this is a special period, it's difficult to return to my home country, so I applied to Prof Leong for an internship this summer and she agrees. It's very happy to have more time with the group and do some related research work here."

— Participant from Xi'an Jiaotong University, AY2019/2020
"I have had a wonderful time with Professor Teo, and I would like to express my sincere appreciation to him. From the determination of the project theme, to the daily research and study, and finally to the revision of the report, Prof Teo took countless time to give me careful guidance and continued support from all aspects. Professor Teo's rigorous attitude in scientific research deeply affected me, which I think I will enjoy the benefit all my life."

— Participant from University of Electronic Science and Technology of China, AY2019/2020
NGNE Estimated Expenses

• Tuition fees (excluding miscellaneous fees)
  - SoC standard fee per module: SGD3,820
  - 3 modules (CP3106 is also considered as one module) = SGD11,460
  - Latest tuition fees: http://www.nus.edu.sg/registrar/administrative-policies-procedures/non-graduating/non-graduating-fees

• Estimated living expense (including accommodation):
  - Around SGD1,000 per month
MComp Estimated Expenses

• Tuition fees (excluding miscellaneous fees)
  ✓ Master of Computing specialising in Computer Science / Information Systems / Infocomm Security / Artificial Intelligence: SGD48,000
  ✓ Master of Computing – General Track: SGD58,000
  ✓ Above tuition fees are subject to 7% GST (Goods & Services Tax)

• Estimated living expense (including accommodation):
  ✓ SGD1,000 per month
  ✓ 1 year in Singapore: ~SGD12,000

PhD Programme

- Research scholarships are offered for PhD Programme
- Full tuition fee subsidy with a monthly allowance of SGD2,000
- Scholars in a PhD programme may be eligible for an additional stipend of up to $500 per month upon passing the PhD Qualifying Examination (QE), which is normally held 12 to 18 months after registration of candidature. The additional stipend is renewable each semester subject to good performance.
- Estimated living expense (including accommodation): SGD1,000 per month

PhD Scholarships:
https://www.comp.nus.edu.sg/programmes/pg/phdcs/scholarships/
Thank you!