3.3 Degree Requirements

The **NGS Scholarship (NGSS)** PhD Scholarship is awarded to talented students with an aptitude for innovative, high-calibre PhD research.

**Terms**

- Five-year PhD candidature
- Four-year NGSS award
- All university fees, except one-time registration fee charged upon enrolment
- Monthly stipend, up to 4 years of PhD OR up to date of graduation, whichever is earlier, of
  - S$3,500 for Singapore Citizens, plus Central Provident Fund (CPF) contributions at a rate pegged to the prevailing employer’s contribution rate set by CPF
  - S$3,200 for Singapore Permanent Residents
  - S$3,000 for International students
- Allowances for computer, books and conferences
- Cross- and trans-disciplinary research at the forefront of science, engineering, computing, and biomedicine
- Opportunities for research projects based both in Singapore, and the USA/Europe/Japan/China/Australia/etc.

**Eligibility**

Open worldwide to graduates

- with excellent research potential, and at least a very good 2nd Upper Honours, or equivalent qualifications
- from all branches of life, physical, computer and engineering sciences, and medicine

**Other Conditions**

- Once awarded the NGSS, students are not eligible for the President’s Graduate Fellowship (PGF).
- Award is renewable, subject to satisfactory academic performance of CAP ≥ 3.8 at the end of every semester.
- GRE is compulsory for all applicants, except NUS, NTU and SUTD Bachelor degree holders.
- TOEFL/IELTS is compulsory for applicants whose native tongue or medium of undergraduate instruction is not English.

The **A*STAR Graduate Scholarship (AGS)** is a collaboration between the A*STAR Graduate Academy (A*GA) and NGS. It comprises a four-year PhD study tenable at NUS and the PhD degree is awarded by NUS.

**Terms**

- Monthly stipend up to 4 years of the PhD studies, or up to date of graduation, whichever is earlier
- Payment of full tuition fees or up to date of graduation, whichever is earlier
- Allowances for computer, thesis, books and conference
- Opportunities for overseas attachment
Eligibility

- Applicants must satisfy criteria for and seek admission into NGS PhD programme.
- Applicants must have obtained at least a Second Upper Class Honours Degree or its equivalent in relevant disciplines.
- Applicants with a strong interest in a research career are preferred.
- Applicants may submit GRE scores (if available) to be included in the overall assessment of their scholarship application.

Other Conditions

- Students may not hold concurrently any other scholarship or fellowship
- Singaporeans (at the point of award): no service commitment
- Non-Singaporeans (at the point of award): 2-year service in Singapore-based companies without commitment to any specific organisation. The area of work should preferably be in Biomedical Sciences, Physical Sciences or Engineering
- AGS NUS graduates who are subsequently awarded the AGS PDF for overseas post-doctoral training: 1 year service commitment after the PDF stint with A*STAR

Refer to our website: [http://www.nus.edu.sg/ngs/AGS.html](http://www.nus.edu.sg/ngs/AGS.html) for Scholarship details.

Coursework Requirements

The coursework requirements are applicable to all AGS and NGSS students, comprising the following:

(a) Coursework

All students are required to undertake a one-year equivalent coursework (min 30 MCs) to be conducted by NUS faculties/schools and /or RIs.

- Students are to undertake the 3 compulsory NGS courses:
  - GS6001 (Research Ethics and Scientific Integrity), to be read latest by the 3rd semester upon enrolment,
  - GS5002 (Academic Professional Skills and Techniques) to be read latest by the 3rd semester upon enrolment, and
  - GS6883A (Interface Sciences and Engineering) to be read latest by the 4th semester upon enrolment

- All modules taken must be level 5000 or 6000.
- Levels 1000 - 4000 are undergraduate modules and can only be read as “AUDIT”. Students who audit a module will not receive a final grade. Audited modules will not appear on the student’s transcript / result slip. No record of attendance will be issued to auditors of a module. Note that it is subject to the host Faculty’s approval whether students are allowed to audit a module.
- In special cases, NGS may give approval to Level 4000 modules to be taken as S/U, but only in instances where the background of the students require this. E.g. a student with excellent qualifications in Physics who needs to undertake basic training in Cell Biology to carry out his thesis project.
- Graduate modules classified as S/U
1. This is applicable to all NGS students who wish to take graduate modules outside their main undergraduate discipline, to be graded on a S/U system and NOT count towards the CAP.
2. Student may request for up to 3 modules (12 MCs), with the support of their main supervisor at the start of each semester.
3. The application has to be submitted within the 1st month from the commencement of the module.
4. Any request for changes to the modules after the examination results release such as changing grading basis from S/U to grade, grade to S/U or deleting a module is NOT allowed.

(b) Undergraduate Teaching / Research Supervision

1. International Students awarded the Scholarship must perform teaching or laboratory supervision duties to fulfil the requirements of the Graduate Assistantship Programme.

Total Hours Required to Serve during Candidature: 312 hours

The awardee is to note that:

• the total time spent on work done under the Graduate Assistantship Programme and any other form of paid or unpaid work, should not exceed 16 hours a week;
• the awardee must ensure that the total hours required under the Graduate Assistantship Programme is completed before thesis submission or six (6) months before the expiry of the scholarship, whichever is earlier;
• the awardee shall be remunerated for performing teaching/research duties and developmental work at a rate in accordance to the Part-Time Appointment Scheme, for work done in excess of the Graduate Assistantship Programme;
• the awardee should work with the supervisor(s) on the plan to fulfil the required hours on a yearly (Academic Year) basis.
• if the required hours are not met according to the annual plan or the quality of the work done is unsatisfactory, NGS has the right to reduce the stipend, withhold, suspend and/or terminate the Scholarship;
• if the total required hours are not met by the time the thesis is submitted for examination, the awardee will have his/her transcript (both unofficial and official), student status letter, conferment letter and degree scroll (for graduating student) withheld until the fulfilment of the requirement.

2. Awardees who are Singaporeans or Singaporean Permanent Residents are required to assist in undergraduate teaching, fulfilling a minimum of 40hrs, usually to be completed by the end of the second year of enrolment at NGS. At least 20 hours should involve demonstrating/ lecturing/tutorials only. The rest may be completed by mentoring peers or by supervision of UROP /Honours/JC Students. Note that marking hours cannot be clocked to fulfill the teaching requirement.

(c) Laboratory Rotation

• All first-semester students have to undertake two (2) laboratory rotations (LR) in two different labs, with approved NGS supervisors within the first 4 months of their candidature.
• Each rotation has to last at least 2 months.
• Students may conduct more than two LR s, if either one (or both) labs are deemed unsuitable. Students should nominate their main supervisor only AFTER they have completed their LR s. The nomination of supervisor has to be confirmed by 01 January for students enrolled in the August intake.
• Before starting any LR s, students must complete and submit the online Lab Rotation Form.
• Upon completing the two LR s, students have to submit the Lab Rotation & Evaluation Form. The student’s performance has to be certified as ‘Satisfactory’. Students may then claim a maximum of 2
**modular credits (MCs)** for the LRs **outside** that of the main/co-supervisor’s lab.

- Students are to attend a **Research Immersion** Workshop at/near the end of the first LR.
- NGS reserves the right to reject any claims for MCs if prior approval for the LRs has not been obtained.
- Those who opt out of the Research Immersion workshop will not be eligible to claim MCs.
- Students who do not comply with the requirements of the LR may have their stipend suspended and/or subject to academic probation.

The table below shows the timeframes in which students should embark on their 1st and 2nd lab rotations. Students who have decided on the lab rotations may commence earlier than the proposed timeframes.

<table>
<thead>
<tr>
<th>Start Date</th>
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<tbody>
<tr>
<td>1 Sep – 1st rotation</td>
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<tr>
<td>1 Nov – 2nd rotation</td>
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</table>

**(d) NGS PhD Thesis Seminars**

- Students may clock a maximum of 5 hours for attending 5 PhD thesis defense seminars. These 5 hours may be used to fulfill the mandatory 40 hours of teaching requirement.
- International students under the Graduate Assistantship Programme (GAP) may clock up to 20 hours for attendance at NGS PhD Thesis Seminars.
- To be awarded the hours, students have to sign in their attendance at each seminar and after each session, to submit to NGS a PhD Oral Defense Seminar Report Form to share what they have learnt.

**(e) NGS Buddy System**

It is mandatory for students to participate in the Buddy System. For example, students from an earlier August intake will take on the role of senior buddies to the freshmen of the subsequent August intake.

Seniors must meet with the freshmen at least 2 times in that academic year (once or more per semester) and obtain satisfactory feedback from the freshmen.

**Note** –

- Only 10 hours can be claimed regardless of how many freshmen the senior has.
- For the 1st freshman, the senior buddy claims 5 hours. He/she can take on 2 or more freshmen but can claim up to 10 hours max.

Both the senior buddy and the freshman have to report their meetings in a log / feedback form, 2 times per academic year (once per semester) and submit the completed forms to the NGS office.
For Buddy Hours completed from January – June: submission deadline is 1 July.
For Buddy Hours completed from August – December: submission deadline is 1 January.

(f) Criteria for candidature and graduation:

1. Coursework grades should not fall below a Cumulative Average Point (CAP) of 3.8. Higher grades in certain modules may be required.
2. Students whose CAP falls below 3.8 will be issued with a warning letter at the end of that semester for poor performance. The letter will state that the students’ candidacy may be terminated at the end of the following semester if his/her CAP remains below 3.8. Students will be counselled by members of Senior Advisory for Graduate Education (SAGE), which also takes care of students’ welfare.
3. To graduate, a student must obtain a CAP of 3.8 and above.

(g) CAP Requirements and Policies

1. CAP review for students will be done at the end of every Semester 1 & 2 of the Academic Year after the official release of the examination results (excluding Special Term 3 & 4).
2. NGS does not practice the Best CAP Calculation policy. All modules read will be used for the computation of the students’ CAP, unless the module(s) is graded as S/U or CS/CU.
3. Students whose performance is under review by NGS are required to read at least 1 module every semester.
4. For students who fail to meet the CAP requirement of 3.80 for every semester, appropriate actions will be taken as follows:

1st academic warning:
1. A warning letter will be issued via email (cc. supervisor).

2nd academic warning:
1. A warning letter will be issued via email (cc. supervisor).
2. The Educational Allowances (EA) will be suspended.

3rd academic warning:
1. A warning letter will be issued via email (cc. supervisor).
2. The Educational Allowances (EA) will be suspended.
3. For students with:
   1. CAP between 3.50 – 3.79
      Reduction of Research Scholarship (RS) stipend to faculty level:
      S$2000 per month for International Student
      S$2200 per month for Singapore Permanent Resident
      S$2300 per month for Singapore Citizen
   2. CAP below 3.50
      Termination of RS and Candidature by Registrar’s Office (RO)

* NGS will not consider any appeal from students under the 2nd and 3rd academic warnings for waiver of any penalty as stated above.

For students who have already been warned 3 times (with CAP between 3.50 – 3.79 and RS stipend at Faculty level) and achieve a CAP of less than 3.80 in the 4th semester:
1. Termination of RS and Candidature by Registrar’s Office (RO)

The RO will send a dismissal letter to student (cc to supervisor).

Notes:
1. The suspension of the EA and the reduction of RS stipend will take effect from the date of release of the exam results of the previous semester to the date of release of the next exam results in the following semester of the academic year.
2. For students who are funded by other sources – the NGS will notify the relevant funding body to recommend similar penalties.

Appeal Procedures for Re-instatement of Candidature – applicable to only dismissed/terminated students with CAP between 3.50 - 3.79
1. Students who were dismissed from their candidature due to poor academic standing and who wish to appeal for re-instatement, should submit their appeal to NGS (within two calendar weeks of the last day of the release of each semester’s examination results with support from supervisor, providing information on research performance, publications list and any other relevant information to support the appeal). NGS will not consider any appeals after that.
2. Students with potential to be considered for re-instatement will be asked to attend an interview.
3. Students will be notified of decision by NGS. RO will write to inform the student on the re-instatement of candidature and the student must accept the offer for re-instatement and reply to RO by the deadline given in the letter, failure of which will cause the offer to lapse.

Conditions for Re-instatement of Candidature
1. NGS will not provide Research Scholarship (RS) stipend.
2. NGS will not provide Tuition Fee (TF) subsidy.
3. NGS will not provide Educational Allowances (EA).
4. Students who are re-instated should still be reading course(s) in the current semester to improve on their CAP to >3.8, failure of which will result in a 2nd dismissal (with no appeal for second re-instatement). The student will have to achieve the minimum CAP required for continuation and graduation in the current semester.

* For students who have improved their CAP to >3.8, NGS will consider on a case by case basis to re-instate their RS/TF/EA.

Grading System and the Cumulative Average Point

Grades and their respective grade points given are as follows:

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<thead>
<tr>
<th>GRADE</th>
<th>GRADE POINT</th>
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<tbody>
<tr>
<td>A+</td>
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</tr>
<tr>
<td>A</td>
<td>5.0</td>
</tr>
<tr>
<td>A-</td>
<td>4.5</td>
</tr>
<tr>
<td>GRADE</td>
<td>GRADE POINT</td>
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