

4.1.2 Degree Requirements

Programme Overview

The research degree provides training in a particular subject area through independent investigation, study and experimental work, culminating in the submission of a thesis on the research undertaken. A supervisor or supervisors will be appointed for each candidate. Students are required to attend appropriate lectures and sit for written examinations.

The following degrees are awarded upon completion of the research programme:

- Master of Science (M.Sc.) or
- Doctor of Philosophy (Ph.D.)

All applicants are admitted into the M.Sc. or Ph.D. programme. For students pursuing Ph.D. candidature, they must pass the Qualifying Examination by the fourth semester.

Candidature

The period of candidature ranges from a minimum of one year to a maximum of three years for M.Sc. and a minimum of two years to a maximum of five years for Ph.D.

Research candidates may be admitted as full-time or part-time students. The minimum and maximum periods of candidature are the same.

Research Scholarship

All applicants who wish to pursue full-time research studies may apply for the NUS Research Scholarship.

Admission Requirements

The normal minimum entry qualifications for admission to the Graduate Programmes is a good relevant bachelor's degree (applicants who are NUS graduates should have a bachelor's degree with honours at least at second class upper level) and/or master's degree and the ability to pursue research in the candidate's proposed field of advanced study.

All applicants must submit either their GRE or GATE test score. The minimum requirement is 1800 or 90 percentile respectively. Under the new GRE format, the requirements are Verbal 500, Quantitative 700 and Analytical Writing 3.5.

As the medium of instruction at NUS is in English, applicants whose native tongue or medium of undergraduate instruction is not English should submit their TOEFL or IELTS score as evidence of their proficiency in the English Language. The minimum TOEFL score is 580 (Paper-based Test) , 260

(Computer-based Test) and 85 (Internet-based Test with a minimum of 22 for the writing component). The minimum requirement for IELTS score is 6.

Applicants who are not residing in Singapore or would like to do their research in overseas institutions must spend a period in residence in Singapore for a minimum of six months (master's degree) or one and a half years (doctoral degree) during his candidature.

Programme Intake

There are two intakes per academic year: one in January and the other in August. Application forms can be obtained from the respective departments or online. Please note that applications must be submitted to the departments by 15 May for the January intake, and by 15 November (for international students) for the August intake respectively.

Degree Requirements

A. Coursework Requirements

Candidates pursuing higher degrees by research are required to attend and pass examinations in a minimum of three modules (two coursework modules and one compulsory seminar module) for M.Sc. and a minimum of six modules (five coursework modules and one compulsory seminar module) for Ph.D. These courses are to be chosen in consultation with their thesis supervisor(s) and/or department(s). The specific coursework requirements for the respective departments in the Faculty of Science are as follows:

1. Department of Biological Sciences

PhD

- Complete a minimum of twenty (20) modular credits (MCs) consisting of
- BL5198 Graduate Seminar Module in Biological Sciences
- Five (5) BL-coded graduate modules
- MB5104 - An Integrative Approach to Understanding Cell Functions (only for students under the Biophysics and Cell & Molecular Biology research groups. This is to be read during student's first semester of study)
- Students may read up to two graduate-level modules from other departments (subject to approval)

MSc

- Complete a minimum of twelve (12) modular credits (MCs) consisting of
- BL5198 Graduate Seminar Module in Biological Sciences
- Two (2) BL-coded graduate modules
- MB5104 - An Integrative Approach to Understanding Cell Functions (only for students under the Biophysics and Cell & Molecular Biology research groups. This is to be read during student's first semester of study)
- Students may read one graduate-level modules from other departments (subject to approval)

2. Department of Chemistry

PhD

- Complete a minimum of twenty-four (24) modular credits (MCs) consisting of
- CM5198 Graduate Seminar Module in Chemistry
- CM5161 Advanced Chemical Laboratory Safety
- Four (4) CM-coded graduate modules
- Students may read up to two graduate-level modules from other departments (subject to approval)

MSc

- Complete a minimum of twelve (12) modular credits (MCs) consisting of
- CM5198 Graduate Seminar Module in Chemistry
- CM5161 Advanced Chemical Laboratory Safety
- One (1) CM-coded graduate module
- Students may read up to one graduate-level modules from other departments (subject to approval)

3. Department of Food Science and Technology

PhD

- Complete a minimum of twenty-four (24) modular credits (MCs) consisting of
- CM5198 Graduate Seminar Module in Chemistry
- Five (5) FST-coded or CM-coded graduate modules
- Students may read up to two graduate-level modules from other departments (subject to approval)

MSc

- Complete a minimum of twelve (12) modular credits (MCs) consisting of
- CM5198 Graduate Seminar Module in Chemistry
- Two (2) FST-coded or CM-coded graduate modules
- Students may read up to one graduate-level modules from other departments (subject to approval)

4. Department of Physics

PhD

- Complete a minimum of twenty-four (24) modular credits (MCs) consisting of
- PC5198 Graduate Seminar Module in Physics
- Five (5) PC-coded graduate modules
- Students may read up to two graduate-level modules from other departments (subject to approval)

MSc

- Complete a minimum of twelve (12) modular credits (MCs) consisting of

- PC5198 Graduate Seminar Module in Physics
- Two (2) PC-coded graduate modules
- Students may read up to one graduate-level modules from other departments (subject to approval)

5. Department of Pharmacy

PhD

- Complete a minimum of twenty-four (24) modular credits (MCs) consisting of
- PR5198 Graduate Seminar Module in Pharmacy
- Five (5) PR-coded graduate modules
- Students may read up to two graduate-level modules from other departments (subject to approval)

MSc

- Complete a minimum of twelve (12) modular credits (MCs) consisting of
- PR5198 Graduate Seminar Module in Pharmacy
- Two (2) PR-coded graduate modules
- Students may read up to one graduate-level modules from other departments (subject to approval)

6. Department of Mathematics

PhD

- MA5198 Graduate Seminar Module in Mathematics
- Eight (8) level 5000 or above MA-coded modules, with at least four (4) from Department's Basic Graduate module list amounting to a minimum of thirty-two (32) modular credits (MCs).
- Students may read up to two (2) Level 5000 and above modules from other departments (subject to departmental approval).

MSc

- MA5198 Graduate Seminar Module in Mathematics
- Five (5) other Level 5000 or above MA-coded modules, with at least three (3) from Department's Basic Graduate module list amounting to a minimum of twenty (20) modular credits (MCs).
- Students may read up to two (2) Level 5000 and above modules from other departments (subject to departmental approval).

Department's Basic Graduate Module List

- MA5203 Graduate Algebra I
- MA5204 Graduate Algebra IIA or MA5218 Graduate Algebra IIB
- MA5205 Graduate Analysis I
- MA5206 Graduate Analysis II or MA5217 Graduate Complex Analysis
- MA5209 Algebraic Topology
- MA5210 Differentiable Manifolds
- MA5213 Advanced Partial Differential Equations

- MA5232 Modeling and Numerical Simulations
- MA5233 Computational Mathematics
- MA5241 Computational Harmonic Analysis
- MA5243 Advanced Mathematical Programming
- MA5245 Advanced Financial Mathematics
- MA5248 Stochastic Analysis in Mathematical Finance
- MA5259 Probability Theory I
- MA5260 Probability Theory II
- MA5269 Optimal Stopping and Stochastic Control in Finance

7. Department of Statistics and Applied Probability

PhD

- Complete a minimum of twenty-four (24) modular credits (MCs) consisting of:
- ST5198 Graduate Seminar Module in Statistics
- ST5214 Advanced Probability Theory
- ST5215 Advanced Statistical Theory
- ST5222 Advanced Topics in Applied Statistics
- ST5224 Advanced Statistical Theory II
- Any other one (1) ST-coded graduate module
- Students may read up to two graduate-level modules from other departments (subject to approval)

MSc

- Complete a minimum of twenty-four (24) modular credits (MCs) consisting of:
- ST5198 Graduate Seminar Module in Statistics
- ST5214 Advanced Probability Theory
- ST5215 Advanced Statistical Theory
- Any other three (3) ST-coded graduate module
- Students may read up to two graduate-level modules from other departments (subject to approval)

B. Thesis/Dissertation

Candidates must submit, through the supervisor(s) and the Head of Department, his thesis/dissertation for examination within the maximum period of candidature. The thesis/dissertation must be on a topic approved by the respective departments and must make some contribution to knowledge and not be a mere collation of existing materials. The thesis/dissertation must contain original work or critical interpretation worthy of publication.

C. Other Requirements

Any other additional requirements that is specified by the respective departments.

Continuation Requirements

Masters

For continuation in the Master's programme, a student's CAP should not fall below 2.5 or equivalent for two consecutive semesters, or 3.0 for three consecutive semesters.

Ph.D.

For continuation in the Ph.D. programme, a student's CAP should not fall below 3.0 or equivalent for two consecutive semesters, or 3.5 for three consecutive semesters.

Termination of candidature will result if a student fails to maintain the minimum CAP.