

SCHOOL OF MATERIALS SCIENCE AND ENGINEERING
COURSEWORK REQUIREMENTS FOR DOCTOR OF PHILOSOPHY (MSE) STUDENTS

For students admitted from AY2026-2027 onwards

To complete before PhD Qualifying Examination (QE)

All students are required to complete the following components before sitting for the PhD Qualifying Examination (QE), which must be completed between the 12th and 18th month of candidature.

S/N	Component	Type	Remarks
1	12 Academic Units (AU) of Elective Courses - At least 6 AU must be letter graded. AU earned from course exemptions, credit transfers, pass/fail courses, and undergraduate-level courses are ungraded. - At least 6 AU must be courses offered by Schools under the College of Engineering (including MSE).	Credit bearing	Students must attain a minimum CGPA of 3.50. Provost Graduate Award (PGA) and Nanyang President's Graduate Scholarship (NPGS) recipients must attain a minimum CGPA of 4.00. Students who do not meet the minimum CGPA after completing 12 AU will be required to read additional courses until the minimum CGPA requirement is met.
	Elective Course Exemptions (for Master's Degree Holders)		
	Students who have previously completed a Master's degree may be eligible for up to 6 AU of elective course exemptions, subject to the following criteria: - The course completed in fulfilment of the Master's degree has equivalent course content to an NTU postgraduate course. Students are expected to conduct their own research and identify suitable course matches. - The course was completed within the last five years. - The medium of instruction for the completed course was English. Students who have previously completed a research-based Master's degree (i.e. Master's by Research programme) may be eligible for an additional 6 AU of elective course exemptions (up to 12 AU in total or full course exemption), subject to the following additional criterion: The completed Master's degree is deemed to have adequately covered the foundational knowledge required for PhD research (e.g. the Master's degree is equivalent to or has the same academic rigour as the Master's by Research programme offered by MSE, NTU). All course exemption requests are subject to the approval of the respective NTU course instructor and the Associate Chair (Graduate). The AU earned from course exemptions will be ungraded. Students who are granted elective course exemptions may sit for the PhD QE from the 6th month of candidature.		

2	GP8001 Artificial Intelligence Literacy GP8002 Fostering Community of Respect & Support GP8003 Epiguem Research Integrity Course	Critical Literacy Course	Students will be pre-registered for these courses in their first semester .
3	HWG703 Graduate English	Non-credit bearing	Compulsory for full-time international students who attained a Bachelor's or Master's degree from an institution where English is NOT the primary medium of instruction and assessment. Singaporean, Singapore PR, and part-time students may be exempted from the course. GRE, TOEFL or IELTS results are not accepted as a basis for exemption. Students are strongly encouraged to register for this course in their first semester. Those unable to secure a vacancy will be given priority registration in the following semester.
4	Seminar Attendance (QE Submission)	Critical Literacy Course	Students are required to submit the fully endorsed seminar attendance form when submitting their QE documents. Students must have attended the following at the point of QE submission: • 15 NTU/MSE Seminars • 6 MSE PhD Qualifying Examination or Oral Examination Presentations

To complete before PhD Thesis Submission

All students are required to complete the following components before submitting their PhD thesis, which must be submitted before the end of the student's maximum candidature period.

S/N	Component	Type	Remarks
5	ERWA02 Epiguem Research Integrity Re-Certification Course	Critical Literacy Course	Students will be pre-registered for this course in the third year of their candidature and must complete the course by the end of their third year of candidature.
6	Communication Course (26 hours)	Critical Literacy Course	Students are required to complete a minimum of 26 hours of communication training under the Communications / Writing Training Programme before thesis submission. MSE students are recommended to fulfil this requirement by completing either MS8001 Graduate Communication Course <u>OR</u> HWG704 Research Communication for Graduate Studies .
7	3-Minute Thesis (3MT) Presentation Symposium	Non-credit bearing	All students are required to participate in the 3MT Presentation Symposium before thesis submission. The 3MT is conducted once a year, and students may participate in any year of their candidature.
8	Seminar Attendance (Thesis Submission)	Critical Literacy Course	Students are required to submit the fully endorsed seminar attendance form when submitting their PhD thesis. Students must have attended the following at the point of thesis submission: • 40 NTU/MSE Seminars • 12 MSE PhD Qualifying Examination or Oral Examination Presentations