

Requirements for PhD students

- Regular courses and 590 units should total to 4 each quarter.
- Completion of Gen Eng 519 Responsible Conduct in Research *within first academic year* is required.
- 15 courses must be taken for a grade
 - 5 core courses
 - At least 4 400 level courses, 3 of which must be **MSE** courses
 - 2 minor courses (must be related and outside research specialty).
 - 5 other graduate level electives (see TGS website listing)
- Students may waive core courses with permission of instructor, but total number of courses remains the same.

Fall course selection- brief guidelines

- Course #1: 401: Thermo (or waiver form)
- Course #2: 400 level MSE elective (often 451)
- Course #3: grad level elective (300 or 400)
- Enroll in MSE 590 (in case one course is dropped, the student remains full time).
- Enroll in Gen Eng 519 (RCR) *if available*.

Resources:

Schedule: <http://www.matsci.northwestern.edu/courses/index.html>

Comments: <http://www.registrar.northwestern.edu/courses/index.html#CTEC>

MSE grad electives Fall 2016:

- 337 Conductive Polymers (Huang)
- 357 Magnetic Properties of Materials (Petford-Long)
- 360 Intro to Electron Microscopy (Marks)- for BS & MS students
- 381 Energy Materials (Dunand)
- 391 Process Design (Chung)

- 415 Fundamentals of Thin Film Materials (Barnett)
- 445 Polymer Physics (Olvera)
- 451 Physics of Materials (Hersam)

Background Courses

- Applied Math 311-1 and 2 may be useful for some students to strengthen background in linear algebra, ODEs, PDEs, series.

For Non-MSE majors with gaps in MSE knowledge:

- 332 Mechanical Behavior of Solids is recommended for students with insufficient background in mechanical behavior for 406.
- 351-1 Introductory Physics of Materials: recommended for students with insufficient background in elementary quantum mechanics for 405 and insufficient background for 451.
- 315 Phase Equilibria and Diffusion in Materials
- 316-1, 2 Microstructural Dynamics

Registration

- Registration starts Sept 15 (Thur) at 9:00 AM
- Last day to add a class: Sept 26
- Last day to drop a class: Oct 28