



Expectations of the Ph.D. Program in Materials Science and Engineering

(Updated August, 2021)

The IMSE Ph.D. program in Materials Science and Engineering consists of 72 total credits hours of academic and research work. To remain in good standing and complete the program, students must meet the following expectations:

- Successfully complete graded coursework requirements (minimum 36 academic credits), including:
 - 4 required core courses (12 credits)
 - Chem 465, *Solid State and Materials Chemistry* OR Phys 472, *Solid State Physics*
 - EECE 502, *Advanced Thermodynamics*
 - Phys 537, *Kinetics of Materials*
 - MEMS 5610, *Quantitative Materials Science & Engineering*
 - 3 courses from a pre-approved list of Materials Science and Engineering electives (9 credits)
 - Two semesters of IMSE 500, 1st year PhD Research Rotation (3 credits each semester for a total of 6 credits)
 - Reports must be submitted by the first day of final exams for the semester
 - A minimum of 9 credits of graduate-level technical elective courses in mathematics or any science or engineering department, to reach a total of at least 36 academic credits.
 - A maximum of 3 credits of IMSE 505, *Materials Science Journal Club*, will be permitted toward this requirement.
 - 400 level courses not included on the pre-approved list of Materials Science and Engineering electives must be approved by the Graduate Studies Committee.
 - A maximum of 12 credits of 400 level courses may be applied to the required 36 academic credits. Undergraduate-only courses (below the 400 level) are generally not permitted by the Graduate School, and may not be used to fulfill this requirement.
- Enroll in and satisfactorily complete IMSE 501, *IMSE Graduate Seminar* (0 credits) every semester of full-time enrollment.
- Successfully complete 18-36 credits of IMSE 600, *Doctoral Research* under the advisement of an IMSE Graduate Program Faculty member.
- Complete research ethics training by the end of the 3rd semester.
- Maintain a GPA of at least 3.0 for all graded coursework
 - Have no more than one grade of B- or below in a core course or Materials Science and Engineering elective.
- Successfully complete teaching requirement
 - Attend 2+ Teaching Center Workshops
 - Have 15 units of mentored teaching experience
- Pass the IMSE Qualifying Examination (oral + written)
- Identify an IMSE faculty member willing and able to support their thesis research on a materials-related topic
- Maintain satisfactory research progress on a topic in Materials Science and Engineering, as determined by the Thesis Advisor and the Mentoring Committee
- Successfully complete the dissertation proposal and presentation, with approval from the dissertation examination committee
- Successfully complete and defend a Ph.D. dissertation, with final approval from dissertation examination committee.

Additional requirements and expectations may be set by the Director of Graduate Studies. These will be given to the student in writing.

Signature

Printed Name

Date