

Graduate Student Handbook

Materials Science and Engineering Program

The University of Texas at Austin



Spring 2015

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I. INTRODUCTION

The Texas Materials Institute (TMI) was established in 1998 to administer the Materials Science and Engineering (MS&E) Graduate Program, to maintain instrumentation and associated infrastructure necessary for modern materials research, and to promote the coordination of all aspects of interdisciplinary materials research and education among participating academic departments at The University of Texas at Austin. More detailed information about our facilities and the academic program can be found on the TMI web site <http://www.tmi.utexas.edu>. Faculty members affiliated with TMI have appointments in assorted home departments within the Cockrell School of Engineering or the College of Natural Sciences. Information on all faculty members associated with TMI can be found on the TMI web site as well as on various departmental or research unit web sites.

This Handbook is provided as a guide to you in your pursuit of a master's or doctoral degree in the Materials Science and Engineering Program at The University of Texas at Austin (UT Austin). This information should be used solely as a guide. The official university-wide requirements for graduate degrees are detailed in the current *Graduate Catalog* and *General Information*, both of which can be found here: <http://registrar.utexas.edu/catalogs/>. Further information about requirements specific to the MS&E Program may be obtained from the graduate advisor or the graduate coordinator.

II. ORGANIZATION AND ADMINISTRATION OF THE GRADUATE PROGRAM

Graduate programs at UT Austin are administered through approximately 70 ***Graduate Studies Committees (GSCs)***. Members of a GSC are assistant professors, associate professors, and professors who are active in their particular graduate degree program. Each GSC elects its own chairperson. The GSC recommends admission of students to the program, sets requirements for graduate degrees in the program, recommends students for admission to candidacy for the Ph.D., and is responsible for maintaining the high quality of graduate education in the program.

The ***graduate advisor*** is a member of the GSC who is appointed by the Vice President and Dean of Graduate Studies to advise all graduate students and represent the Graduate School in matters pertaining to graduate students. Questions about degree requirements and academic policies should be directed to the graduate advisor (an appointment may be necessary if the question is too complex to be covered over email).

The ***graduate coordinator*** (GC) assists the graduate advisor and the GSC by keeping complete academic records for the students and ensuring that paperwork is processed in a correct and timely manner. The graduate coordinator fields all student questions and accepts walk-ins during normal workday hours. Students may also call the GC at 512-471-1504 or send an email to mse@tmi.utexas.edu with any questions. Please see the GC before seeking assistance from others. Although convenient, advice given to you by other students may not be accurate.

Your ***faculty supervisor*** directly supervises your research. He/she plays a vital role in all areas of your graduate education; therefore it is very important that you discuss your research regularly with your faculty supervisor. Make sure you attend all group meetings and that your course selections meet both the MS&E program thrust area requirements and your faculty supervisor's approval. You are not permitted to take courses not approved by your supervisor; this could result in termination of your teaching or research assistantship and/or a postponed graduation date.

In most cases, some or all of the funds that pay your salary and your tuition come from research grants administered by your supervisor so he/she is responsible for reporting your research progress to the funding agency. If you are appointed as a research or teaching assistant, you are an employee of the university and must follow university regulations for employment. You are employed even during academic holidays such as Winter Holiday and Spring Break. Coordinate your vacation time with your supervisor BEFORE booking any trips.

The following individuals currently administer the MS&E graduate program:

Dr. Arumugam Manthiram, director, ETC 9.104, 471-7394

Dr. Michael Becker, chair of the Graduate Studies Committee, UTA 7.342, 471-3628

Dr. Desiderio Kovar, graduate advisor, ETC 9.158, 471-5185

Dr. Paulo Ferreira, assistant graduate advisor, ETC 9.176, 471-3244

Dr. Donglei Fan, admissions advisor, ETC 9.154, 471-5874

Dr. Harovel G. Wheat, minority liaison officer, ETC 5.202, 471-1451

Ms. Bonnie Stewart-Richlen, graduate coordinator, ETC 8.172, 471-1504

III. REQUIREMENTS AND PROCEDURES for MS and Ph.D. Students

The Materials Science and Engineering Program offers graduate study and research in diverse technical fields. You will select one of these areas as your major focus. Our program is highly individualized, and you will likely pursue interests that cut across more than one research area.

Degrees in the MS&E program are approached in 3 ways: a terminal masters degree, a master's degree followed by a Ph.D., or direct admission into the Ph.D. program. You need to decide which plan you want to follow and discuss your decision with your faculty supervisor and the graduate advisor. Final approval will depend on your previous educational achievements and other qualifications, including work experience.

By selecting a specific Thrust area, students are able to study core MS&E subjects but also develop depth within a specific area of study that cuts across multiple aspects of science and engineering. Both MS and Ph.D. students should choose a Thrust area as soon as practical; we encourage this selection before the end of the first semester. If you wish to change your Thrust area, first talk to your supervisor and then report the change to the graduate coordinator. The following are Thrust areas are:

1. General Materials Science
2. Nanomaterials
3. Clean Energy Materials

For more information on Thrust areas visit:

<http://tmi.utexas.edu/prospective-students/thrust-areas/>.

A. COURSEWORK:

Coursework for the Thrust areas is divided into five categories with courses from each category taken in succession. All courses MUST be taken for a letter grade with the exception of MSE courses, which should be taken for credit/no-credit. The Thrust area categories are:

- | | |
|--|------------------------------------|
| a. Deficiency requirements (if needed) | d. Advanced level elective courses |
| b. Core Materials Science courses | e. MSE Courses |
| c. Required Thrust Area courses | |

1. Deficiency Requirements

If it is necessary for you to take deficiency courses, they must be taken in the first semester they are offered after you enter the program. The graduate advisor will determine, after meeting with you, whether these courses are necessary for successful completion of graduate-level course work. These courses are:

- 1) Upper division, undergraduate Solid State Properties/Quantum Mechanics: PH 355, CH 354, or the equivalent
- 2) Upper division, undergraduate Classical Thermodynamics: CH 353, or the equivalent.

2. Core Materials Science Courses:

These courses are required for all degree plans.

1. Phase Transformations: ME 386P1 or equivalent
2. Thermodynamics: ME 386P3, CH 382L, CHE 387, or equivalent
Choose 1 from 3 below
3. Mechanical Behavior of Materials: ME 386P2 or equivalent
4. Structure of Materials: ME 386P5 or equivalent
5. Solid State Properties of Materials: ME 386P4 or equivalent

3. Required Thrust Area Courses

The required Thrust courses depend on the Thrust area you are enrolled in. See below for a list of courses that satisfy each Thrust area. If you find a course that you think fits into a Thrust area but is not listed, please ask the graduate advisor. New courses are added on a regular basis.

General Materials Science	Clean Energy Materials	Nanomaterials
1. Elective #1	Choose three from list below:	Choose three from list below:
2. Elective #2	1. ME 386Q-14 Electrochemical Materials	1. CHE 384 Nanomaterial Chemistry and Engineering

3. Elective #3	2. CH 390L Electrochemistry I	2. ME 387R-9 Practical Electron Microscopy
	3. CH 390L Electrochemistry II	3. ME 397 Introduction to Micro and Nanomanufacturing
	4. ME 386Q Electrochemical Energy Systems	4. ME 397 Nanotech Sensing/NEMS/Energy
	5. EE 396K-25 Organic/Polymer Semiconductor Devices	5. EE 396V/CHE 384 Inorganic Nanostructures For Device Applications
	6. EE 396K-27 Charge Transport In Organic Semiconductors	6. EE 396V Advanced Solid-State Materials/Nanostructures
	7. EE 396V Semiconductor Nanostructures	
	8. ME 381R Nanoscale Energy Transport/Conversion	
	9. ME 382Q Solar Energy System Design	

4. Advanced Level Elective Courses

Advanced level courses are offered in a variety of other subject areas (microscopy, spectroscopy, x-ray diffraction, polymers, etc.) that may be of interest to you, depending on your specific field of study. Please see the current course schedule available on the [TMI website](#) for a list of courses offered for each semester. Electives are selected with the advice and consent of your supervising professor and approval of the graduate advisor.

B. MSE COURSES

Very few courses are offered through the MSE program, but all of them are essential to the success of an MS&E student.

MSE 397 Graduate Seminar must be taken at least once before you register for any MSE research courses. This class is offered on a credit/no credit basis. Students who are registered for MSE 397 will be required to attend seminars. Even if you are not registered for the seminar class, MSE seminars are critical for broadening your knowledge base in Materials Science outside of your immediate research area, and for this reason, you are STRONGLY encouraged to attend every seminar. Watch for announcements posted on the bulletin boards on the eighth and ninth floors of ETC as well as via email.

The MS&E research courses are MSE 197R, 297R, and 397R. Be sure to register for MSE research, rather than an equivalent course designation in your faculty supervisor's home

department (such as Mechanical Engineering, Electrical & Computer Engineering, etc.). A faculty member must agree to supervise your research before signing up for these courses. Registration for a research (or research problems) course in another department requires permission of the graduate advisor and your research supervisor. Such registration must be on a credit/no credit basis.

C. REQUIRED COURSES AND NUMBER OF CREDIT HOURS

If you are a full time student (all RAs and TAs are full time students), your total number of credit hours during the long semesters must add up to 9 and during the summer must add up to 3. If you are an MS student or a full time Ph.D. student who is NOT in Ph.D. candidacy and you have completed MSE 397 Seminar, then you should use MSE 397R to fill any credit hours that are needed so that you are enrolled for 9 hours total. Thus, if you are not taking any other lecture or seminar courses, you will sign up for three sections of MSE 397R in fall and spring and one section in summer. If you are taking one 3-hour lecture or seminar course, then you generally sign up for two sections of MSE 397R in fall and spring. If you are taking two 3 hours lecture or seminar courses, then you generally will sign up for one section of MSE 397R in fall and spring. There is one exception to this rule: If you are an MS student, your last semester you must take MSE 698B Thesis Writing (this is a three credit hour course) and your second to last semester you must take MSE 698A Thesis Reading (this is also a three credit hours course). These two classes are taken in place of MSE 397R in the semesters in which they are taken. (“R” courses are for student’s first semester of research. Following semesters you will take the “W” courses.)

For Ph.D. students who have advanced to candidacy, when you are taking less than 9 credit hours of lecture or seminar courses, you will use MSE 399, MSE 699, or MSE 999 to fill the remaining hours. Like the 397R/397W in the masters program, you will enroll for 399R/699R/999R your first semester of dissertation and 399W/699W/999W all subsequent semesters.

All MS&E students must take Research, Thesis, Report, and Dissertation from the Materials Science & Engineering program regardless of your research supervisor’s home department (i.e. do not sign up for ME 397 Research or ChE 399 Dissertation).

The MS&E program itself offers a limited number of courses under the MS&E designation: seminar, individual research, thesis, report, and dissertation courses. Academic courses are chosen from courses offered with departmental designations such as Chemical Engineering, Chemistry, Electrical and Computer Engineering, Engineering Mechanics, Mechanical Engineering, and Physics. It is a good idea to plan your program of work early in your academic career with the

help of your faculty supervisor and the graduate advisor. Remember that most graduate courses are offered at most once a year, while others are offered less frequently.

D. PROGRESS TOWARD MS and Ph.D. DEGREES:

If you are receiving a fellowship or assistantship, we expect you to complete the organized course work requirements for the MS degree within four long-session semesters (plus a summer session). If you are not receiving a fellowship or assistantship, it is still in your best interest to make expeditious progress. For Ph.D. students, we expect graduation in no more than 10 long semesters, but most students finish in fewer.

In all cases, it is vitally important to maintain a GPA of 3.00 or better or you will be placed on scholastic probation. While on scholastic probation you are not eligible for a teaching assistantship position or any of the associated benefits. It is also likely that you will not be eligible for a research assistantship or the benefits of that assistantship. A loss of an assistantship means you will not receive a stipend and you will have to pay tuition yourself and out-of-state residents will pay out-of-state tuition rates. You will be dismissed from the university if your overall GPA is below 3.0 for more than one (1) long semester.

You are expected to conduct research starting with your first semester. It is vitally important that you maintain communications with your supervisor to ensure that you are making adequate progress on your research. For most students, this will mean at least weekly meetings with your supervisor. Failure to make adequate progress in research can result in your teaching or research assistantship being withdrawn. A loss of an assistantship means you will not receive a stipend and you will have to pay tuition yourself and out-of-state residents will pay out-of-state tuition rates.

IV. DEGREES OFFERED

A. Master of Science in Engineering (MSE) Degree

Three options are available in the master's program: masters with thesis, masters with report, and the no thesis/no report option (see the *Graduate Catalog*). If you are supported on a research or teaching assistantship, you must complete a thesis. If you are self-supporting, you may pursue any of the three master's options, provided that you have approval of the graduate advisor. You must have a faculty supervisor for either the thesis or report options.

For the master's with thesis option, you must do original laboratory research and write a thesis based on your work. A minimum of 24 credit hours of coursework is required plus 6 credit hours of thesis. The report option requires 30 hours of coursework plus 3 hours of report. The no thesis/no report option requires 36 hours of coursework.

1. MS PROGRAM OF WORK:

The Graduate School requires that you take 18 hours (and no less than 15 hours) of courses in a major field (including deficiency, core courses, and Thrust area courses), along with six to nine hours of supporting courses (plus additional Thrust area course and advanced electives). Six hours of upper-division undergraduate coursework may, with the permission of the graduate adviser, be counted towards the degree. Upper-division undergraduate grades count toward your overall GPA. All of these courses must be taken for a letter grade and not on a credit/no-credit basis. Deficiency courses are undergraduate courses and can be counted as part of your 24 required hours on your program. If you take other undergraduate courses, remember to ask the graduate advisor BEFORE you take the course if it will count towards your program of work. It is important to always check with your supervisor and/or the graduate advisor before taking any courses not on the TMI-approved course list available [online](#).

At the beginning of the semester in which you will graduate, you should consult with the graduate coordinator to ensure that your program of work document is completed correctly. Please make sure that you consult with the graduate coordinator about your program of work since an incomplete or erroneous program of work will delay the acceptance of your application to graduate. Once it is finalized, the program of work document will be sent electronically to the graduate advisor, GSC chair, and graduate dean's office for final approval before your graduation application will be accepted. The graduation application will then be routed to the graduate advisor and Office of Graduate Studies degree evaluator for approval as well. Also keep in mind that all coursework must have been taken within the preceding six years of the date you are applying for MS graduation.

2. THESIS:

Your thesis committee consists of two readers, your faculty supervisor, and at least one other faculty member, whom you should choose in consultation with your supervisor and the graduate advisor. Be sure to ask a professor's permission before listing him or her as a part of your thesis

committee. Once you have an approved research topic from your supervisor, you may register for thesis. The first semester you register for thesis, you must register for MSE 698A. Subsequent semesters you will register for MSE 698B. You must be registered for MSE 698B during the semester in which your thesis is filed with the Graduate School, most commonly the semester you graduate. Be sure to register for MS&E thesis, not the thesis course in your faculty supervisor's home department (Engineering Mechanics, Chemistry, etc.). Since your degree is in Materials Science and Engineering, your thesis course must be in MS&E as well.

3. GRADUATION:

The Graduate School sets firm deadlines for submission of paperwork the semester you plan to graduate. All pertinent dates, including the thesis or report submission deadlines, are listed in the Course Schedule and at this site: <http://www.utexas.edu/ogs/pdn/#mf>. The application for master's graduation is an electronic form. If you miss the electronic processing deadline (usually mid-October for fall graduation and mid-March for spring graduation), you will need to reschedule your graduation with the graduate school. A number of other deadlines, forms and guides that may be helpful in your MS&E graduation application can be found at the link above.

Before your thesis or report is bound or burned onto a CD it is recommended (but not required) that you go in person to the Office of Graduate Studies in Main Building, Room 133, and have the formatting checked. The Graduate School has very specific requirements regarding the format of the thesis, whether it is electronic or a hard copy. When a master's degree evaluator checks your thesis format, you will be given a checklist to verify you have completed the MS graduation process.

****Always check your thesis after converting it to a PDF as formatting may change.****

Although you are not required to submit your MS thesis to the UT Digital Repository (<http://repositories.lib.utexas.edu/handle/2152/11>), we strongly encourage you to do so as it will facilitate the ability for others to read about your research.

B. Doctor of Philosophy (Ph.D.) Degree

1. Coursework Requirements

The basic course requirements for the Ph.D. degree are the same as those for the MS degree (see MS degree requirements above):

- a) Deficiency courses

- b) Core courses
- c) Thrust courses
- d) Advanced electives
- e) MSE courses

The specific course requirements depend on your chosen Thrust area. Unlike the requirements for the MS degree, there is no fixed requirement for the number of advanced electives that are required for the Ph.D. degree. The number of elective courses is determined by the Dissertation Committee during the Preliminary Oral Examination (detailed below). You may petition the graduate advisor to receive credit if you feel that you have taken courses at the graduate level at another institution that are equivalent in content to a required Thrust course at The University of Texas at Austin. However, transfer credit is not given for core or elective courses.

2. Ph.D. Qualifying Process:

To qualify for Ph.D. candidacy, you must maintain a 3.3 GPA in the three required core courses and show sufficient progress in your research. All students are expected to complete their core courses by the end of their third long semester at UT Austin. If you do not have a 3.3 GPA in your core courses, you may take one additional semester to complete one additional core course and raise your GPA to 3.3. Note that if you are required to take four (4) core courses, the GPA for your core courses is computed based on the average for all four core courses. You cannot retake a class to raise your core course GPA. Discuss your class selections with your supervisor and the graduate advisor to ensure you are on the right track. Under extenuating circumstances, exceptions to the 3.3 GPA may be granted. To apply for an exception, an explanation of the circumstances must be submitted to the graduate advisor in writing; applications for exceptions are considered by the GSC.

3. ADMISSION TO CANDIDACY:

Admission to Ph.D. candidacy is based on the successful completion of course work and progress in research. Most students who are making adequate research progress apply for Ph.D. candidacy during their 3rd long semester at UT. The application for Ph.D. candidacy can be prepared and submitted on-line [here](#). The official candidacy application requires a short statement describing the general topic of your research (max. 4600 characters). This should not be a historical summary of work done in the area of research nor should it require extensive supporting data, but rather, it should include the following:

- A statement explaining why this problem is worth studying from an academic perspective (note that this is not the same thing as the commercial relevance).
- An explanation of the methods and techniques you intend to use to study/address the proposed question(s).

An example candidacy abstract is available in the MSE Student UT Box folder. Students are expected to structure their candidacy abstract in a similar fashion. Students are expected to first draft their candidacy abstract in MS Word, using 12 point Times New Roman font. Basic proofreading of grammar and spellchecking is required.

After approval of the candidacy abstract by your supervisor, consult with your supervisor about who should serve on your Ph.D. committee. Your dissertation committee must consist of at least five faculty members. Three of these (one being your supervisor who serves as Chair) must be members of the MS&E GSC. To see an up-to-date list of who is a member of the GSE, see <http://tmi.utexas.edu/people/type/faculty/>; make sure you select "Graduate Program Faculty" from the pull down menu to reveal those faculty who are members of the GSC. At least one member of the Dissertation Committee must be appointed in a home department that differs from your supervisor (e.g. if your supervisor's home department is Chemical Engineering, then at least one member must have a home department that is NOT Chemical Engineering). On rare occasions, you may wish to include a committee member who is not on the faculty at UT Austin. Such a member must have academic and professional standing that is equivalent to that of a faculty member and must be approved by the graduate school. If you are considering including a non-UT member on your committee, please see the graduate advisor, as there is additional paperwork that must be completed. If you would like advice or have questions about the committee membership, please see the graduate advisor.

Once you and your supervisor have agreed on the committee membership, contact each member and ask if they are willing to serve. Some invited committee members may say no. Only once you have received approval from each member should you complete the online application. Once complete, the application will route electronically to your research supervisor, the graduate advisor, the GSC chair, and the Office of Graduate Studies for approval. At the end of this process you are eligible to register for dissertation courses.

The Dissertation Committee is responsible for conducting the preliminary and final oral examinations and must approve your dissertation. Any changes to your committee after your candidacy application is approved should be discussed with your supervisor and the graduate advisor before submitting an official [change of doctoral committee](#) form to the graduate school.

Note that changes to the committee are very carefully scrutinized by the Graduate School and must be justified. Changes in the last 30 days prior to a dissertation defense are granted only in exceptional circumstance. Thus, choose your committee wisely and, if changes are needed, make sure you take care of this early.

4. CONTINUOUS REGISTRATION AND PROGRESS TOWARD DEGREE:

Once you are admitted to candidacy for the doctoral degree, you must register continuously each long semester (i.e., fall and spring) until the degree is awarded. If you have not graduated two years after admission to candidacy, the GSC will begin reviewing your program annually to ensure that you are progressing towards completion of your degree. If you are not making satisfactory academic and research progress at this point, your candidacy may be terminated. You must maintain a satisfactory GPA. (If your GPA falls below 3.3, the GSC will review your academic performance and research progress, and will determine whether you should continue in the program.)

5. PRELIMINARY ORAL EXAMINATION AND PROGRAM OF WORK:

To make satisfactory progress towards a Ph.D. the student should complete the Preliminary Oral Examination after 24-36 months in residence. One of the big mistakes students make is to wait too long to complete the Preliminary Oral Exam. The right time to do it is as soon as you have sufficient results that you can see light at the end of the tunnel (e.g. you know what you need to do to finish your dissertation). Note that it is common in many other graduate programs at UT Austin to do this much later; don't follow the advice of students in other graduate programs.

The purpose of this examination is to determine the student's grasp of the research problem and to assess future plans and goals. The proposal should be approximately 10 double spaced pages exclusive of appendices. Copies of this proposal should be submitted to members of the committee **at least two weeks** before the oral presentation is to be made. This proposal should contain:

- A description of the problem
- The objectives of the research
- The proposed methods of conducting the research
- Preliminary results
- The methods of analyzing the data resulting from the research
- Proposed research required to complete the dissertation

- A proposed timeline for completing the dissertation

Along with the proposal, the student must submit to the committee 1) a Preliminary Oral Exam form, 2) a Doctoral Program of Work form 3) and Learning Outcomes form, all of which can be found [here](#). The Program of Work includes the courses you have taken, additional courses that you plan to take, and your prospective dissertation title. There is a minimum requirement of 30 coursework hours for the Ph.D. degree, which includes Dissertation hours. The form lists all graduate coursework the student has taken or plans to take at UT Austin. The student should consult with the supervising professor about the details of the written proposal, the oral presentation, and any proposed coursework (other than dissertation).

The Preliminary Oral Exam will consist of three parts plus the Program of Work form. First the student will submit a short written summary of proposed research and then present a 30-minute presentation on the proposed research. This will be followed by a question and answer session on the research program meant to test the student on his/her fundamental understanding of the fields pertinent to the research.

Following the Preliminary Oral Exam, the Dissertation Committee will deliberate and determine whether the student has an adequate plan for proceeding with his/her proposed research. If the Dissertation Committee feels that a major revision of the plan is needed, a re-examination will be scheduled. The Dissertation Committee will also carefully review the Program of Work and determine if any additional courses should be required.

The Dissertation Committee determines whether the research topic is appropriate and if the plan of action is adequate. In effect, they are agreeing that if the student executes this program successfully, it should lead to an acceptable dissertation. In addition, the committee is there to advise the student about any difficulties they can foresee with the research plan and to recommend any suggestions that would help the student achieve maximum success in the research. For this reason, it is essential that the student is completely honest and forthcoming about his/her proposed research. At the Preliminary Oral, the Dissertation Committee will reach an agreement with the student regarding the coursework that will be suitable for their Ph.D. At the end of the exam, the committee signs the Preliminary Oral Exam form, which is then returned to the graduate coordinator with all of the committee members' printed names and signatures. The graduate coordinator will solicit the GSC chair's signature for the Program of Work form after you have successfully completed the Preliminary Oral Examination.

6. PREPARATION FOR GRADUATION:

The Graduate School sets firm deadlines for submission of graduation-related paperwork — you should apply to graduate the semester you plan to complete your final oral defense. All pertinent dates, including the dissertation submission deadline, are listed in the Course Schedule and at <http://www.utexas.edu/ogs/pdn/>. The Graduate School also has specific requirements regarding the form of the dissertation, type of paper, reproduction, items to be included, number

of copies, and preparation of an abstract to be submitted to [Texas Digital Libraries](#). It is to your advantage to become familiar with these requirements. Additional information can be obtained directly from the Graduate School in MAI 101 and at their web page. It is your responsibility to have your dissertation typed and reproduced.

7. FINAL ORAL DEFENSE:

You must pass your final oral examination before your dissertation will be accepted by the graduate school. You should begin to schedule your final oral at least two months in advance to ensure all of your committee members can attend. **No less than four weeks** before the date on which you intend to defend the dissertation, a copy of the **final** draft of the dissertation, reviewed for technical and grammatical correctness, should be submitted to each member of the dissertation committee, after receiving approval from your supervisor. **Two weeks prior to the defense date, a written request to hold the final oral examination must be submitted to the Graduate School.** This form is a PDF file **that must be printed on pink paper.** The graduate coordinator has the right shade of pink paper available for printing this form. This request signifies the receipt of the doctoral dissertation for the purpose of administering the examination. The committee's decision to hold the examination must be unanimous. After all of the committee members have signed the document, the graduate advisor must sign the form before you submit it to the Graduate School. In the event that you cannot get the signatures from one of the committee members, the graduate advisor may sign on his/her behalf, provided that you produce documentation from this committee member indicating that 1) they have received your dissertation and 2) they will attend your oral defense at the prescribed time. In addition, you must reserve a room for the defense. Students usually hold their defense at their primary research location. If you are in ETC, you may see Diana Ziegler (ETC 5.220) to reserve ETC 9.130.

Be sure to send your EID, date, time, location, and abstract to the graduate coordinator so a public notice of your defense can be posted as is required by the Office of Graduate Studies ten (10) working days prior to the defense date.

At the final defense, you will begin by making a short public seminar presentation about your research (30-45 minutes). Remember that since the committee members have already read your dissertation, you need to highlight the importance, significance, and originality of your work.

Following your presentation, the public and committee members will ask you questions during the final oral examination concerning your research and results.

a. DEFENSE ATTENDANCE RULES:

The graduate school provides two options for attendance of committee members:

Option 1: This option requires physical attendance by four committee members, including the supervisor, at the defense. When only three committee members are available for in-room attendance, an exception requires that a fourth GSC member not on the committee attend and observe without vote. In such circumstances, a fourth committee member must also be available to participate via phone or videoconference.

Option 2: Electronic attendance and participation by a portion of the committee. This option includes the following stipulations:

1. The defense requires participation by all members of the dissertation committee.
2. The student and the supervisor(s) must be physically present.
3. Committee members may participate electronically if they cannot be physically present for a defense (i.e. conducting professional activities away from campus).
4. The student is responsible for scheduling the defense and ensuring that the electronic system is adequate for the intended purpose.

In negotiation with the committee members, the student and supervisor(s) will select one of the two options (traditional or electronic). The student **MUST** indicate which option will be used at the time that the defense is scheduled with the Graduate School.

V. Additional General Information for Both MS and Ph.D. Students

A. STUDENT GRIEVANCE PROCEDURES

It is hoped that most problems encountered by students can be resolved through informal discussion between the parties involved. If informal discussion does not resolve the issue, there are other means available. The [Office of the Ombudsman](#) (512-471-3825) can help you with complaints of a non-legal nature such as grade disputes, parking citations, financial aid, adds and drops, bars on records, refunds, residency, and scholastic probation or dismissal. Assistance is confidential and is available by phone or in person. The Office of the Dean of Students offers [legal](#)

[services for students](#) (512-471-7796) and can provide advice on legal matters, such as landlord-tenant disputes. Grievances related to academic matters such as grade disputes are handled using the procedure described in the [General Information Catalog](#) published annually by the Office of the Registrar. These grievances should be submitted in writing to the graduate advisor of the MS&E Program. Appeals may be directed to the vice president and dean of graduate studies, who has jurisdiction over your program of study, degree requirements, and all other academic matters. See the harassment link [here](#) for official policy and procedure on issues involving complaints of harassment of any kind.

B. SCHOLASTIC DISHONESTY

Never copy another person's work, unless you put it in quotations and cite exactly what you are copying, who said it, and where it was printed. Even if you just borrow someone else's idea without quoting it word for word, you must cite where you got the idea. Severe penalties can occur if you copy without giving proper credit. This is known as plagiarism and is one example of scholastic dishonesty. Scholastic dishonesty includes but is not limited to, plagiarism, cheating, collusion, falsifying academic records, and any act designed to give unfair advantage to the student, or the attempt to commit such an act. Detailed definitions of these infractions are found in the *General Information Catalog* as well as the Dean of Students Office page [here](#). All cases of scholastic dishonesty will be submitted to the Dean of Students Office.

C. ADDITIONAL INFORMATION ON COURSES AND COURSE LOADS

Long-session semesters: All students that are supported by a research or teaching fellowship must enroll for a minimum of nine hours to maintain their student employee status. This is also the minimum that is required for all international students. Generally, research assistantships and teaching assistantships will pay for a maximum of nine hours, so virtually all full-time MS&E students take nine hours during long session semesters so that they do not incur additional costs. Students who work full-time off-campus may take three or six hours per semester. These students are considered part-time. Once in Ph.D. candidacy three hours of dissertation are considered full time, but nine hours are still required to maintain student employee status (including teaching or research assistantships).

Summer session: The Graduate School requires registration during the summer if you are making use of **any** UT facilities except the library. Fellowship holders, AIs, TAs, or GRAs, must be registered for three hours in any summer session.

Grade Point Average: You must maintain at least a B (3.0) average in both your major and supporting courses in order to remain in good standing in the Graduate School. However, in order to qualify for Ph.D. candidacy, you must have a GPA of 3.30 in Core courses.

D. FINANCIAL SUPPORT

The primary types of financial support available in the Materials Science and Engineering Program are research assistantships and fellowships. You may apply to TA in any department; however, you only receive resident tuition if the department in which you TA is related to your degree program and the TA appointment is for at least 20 hours per week. Continued financial assistance is always dependent upon maintaining at least a 3.00 grade point average and continuing to make progress towards attainment of your degree. In addition, there is a 14 long-session semester limit on financial assistance for graduate students (summer does not count). After 14 semesters no student may continue to receive support by employment in a student position (TA, GRA, AI).

1. Graduate Research Assistantship (GRA) Positions

GRA positions are the most common form of financial assistance available for MS&E students. Funding is provided through research grants obtained by faculty. The number of graduate research assistantships varies, depending on individual faculty research support. Therefore, all graduate research assistantships are dependent upon availability and duration of funding.

2. Teaching Assistantship (TA) Position

The Texas Legislature has mandated that all international students demonstrate oral fluency in English before being allowed to teach. Therefore, all international students who are interested in possibly applying for teaching assistantships need to take the ITA "Oral English Proficiency Assessment" exam. It is offered before each new semester. You may take it one time for which the MS&E program will pay. If you must retake it, there is a \$75 fee. Following the assessment, there is one "ITA/AI Orientation to Teaching at UT Austin" session you must take online.

You should speak to your supervisor about TA policies. Each department has different policies and procedures concerning allocation of TA positions.

3. Fellowships

There are University Fellowships available for continuing MS&E students. Announcements about possible fellowships will be sent out by e-mail. You are encouraged to apply if you think you meet the requirements.

a. University Fellowships

Each year the Office of Graduate Studies accepts nominations of students from all programs and departments for consideration for University Fellowships. Nominees are selected based on grade point average, papers published, leadership activities on and off campus, conferences attended, and other evidence of outstanding achievement. Reply to the graduate coordinator if you think you should be eligible for a University Fellowship. The competition is university-wide so these fellowships are highly competitive.

b. Travel Awards

[Professional Development \(Travel\) Awards](#) are available to help defray expenses for a few advanced doctoral students attending major professional meetings. Priority is given to students who are in their last year of doctoral study and have had a paper accepted for presentation at a major professional meeting. Students will only be considered for this award if the published abstract for this talk lists their affiliation as Materials Science and Engineering, University of Texas at Austin. If you are planning to attend and present a paper at a professional meeting, talk to the graduate coordinator about applying for this type of award. The exact amount of the award varies depending on the funds available.

VI. REGISTRATION PROCEDURES

Registration for the upcoming semester occurs during the middle of each current semester. For example, registration for spring semester will occur in late October or early November. Registration for the summer session and fall semester will occur in mid April and will continue into early May. Information is available in the appropriate [Course Schedule](#). Follow the dates and instructions carefully because if you miss the mid-semester deadlines, you may have to pay a late registration penalty. You are expected to register for courses yourself. However, if you encounter difficulties, you may contact the graduate coordinator for assistance.

A. Advising

Steps for registration:

- 1) Check your [Registration Information Sheet](#) (RIS) for your registration schedule and for any bars you might have.

- 2) Pick up your advising card from the graduate coordinator during normal working hours.
- 3) Check the course schedule for courses offered in the upcoming semester. Approved MS&E program course will be posted on the TMI website here as well.
- 4) Discuss appropriate courses with your research supervisor and get his/her approval (they must initial your Materials Science and Engineering Registration Approval Form next to the applicable semester) BEFORE visiting with the graduate advisor.
- 5) Visit the graduate advisor during preset advising hours. The times for advising hours will be emailed to students approximately two weeks before registration. If you miss the advising office hours, then you will need to drop by during regular office hours (posted outside the graduate advisor's door) to discuss your courses. Please do not assume that you can just drop in or schedule hours for course registration advising outside of the scheduled office hours; there are simply too many students to make this practical. The graduate adviser must approve your proposed schedule before your advising bar can be cleared and you can register.
- 6) After collecting initials from both your supervisor and the graduate advisor, make sure ALL PARTS of your advising card are updated and return it to the graduate coordinator to have your advising bar lifted.

Students who have passed the oral preliminary exam are not required to have their advising card initialed and can skip these steps. The graduate coordinator will “batch lift” these bars by a set date detailed in the registration email. If after this date your bar has not been lifted, contact the GC.

B. Registration

Registration can be done via the web [here](#). You can check your [Registration Information Sheet](#) (RIS) for your registration dates and times. You will need to know the unique numbers (they are listed in the [Course Schedule](#) or on the TMI course list [here](#)) of the courses for which you want to register—be sure these are correct! Do not register for any unapproved courses. If you need to change your courses from those agreed upon by your supervisor and the graduate advisor, you must contact both of them via email (be sure to copy the graduate coordinator) for approval.

Pay your fee bill by the due date. If you do not, your registration will be canceled. **You must still confirm your registration if the balance due is \$0.00.** Be sure you receive the message “your registration is complete” after you pay online or confirm your registration.

Even if a third party (like your supervisor) is paying your tuition, you must log in to “My Tuition Bill” to confirm your registration to prevent your classes from being dropped.

Course adds or drops can be done on the web through the 4th class day. The course schedule and your RIS will tell you when to add or drop a course. Remember that the graduate advisor must approve all changes to your schedule. Do not add/drop without talking to the graduate advisor. After the 4th class day but before the 12th class day, it is possible to drop classes but requires considerable paperwork (see the graduate coordinator for details). After the 12th class day, drops are only allowed by the graduate school in extenuating circumstances. It is definitely best to finalize your course schedule BEFORE the 4th class day.

C. Out-of-State Tuition Waivers

All “benefits-eligible” students (20-hr appointment as a GRA or TA for a full semester) or students with scholarships of at least \$1,000, are eligible to pay resident tuition. Unfortunately, resident tuition is NOT billed automatically. If you meet the requirements, you must complete the waiver on-line [here](#) each semester. Students whose tuition is being paid through faculty grants should ask their supervising professor to provide all of the necessary information to the applicable support staff so that an electronic document can be created to pay for all or part of your tuition. If you have any questions concerning this matter you may check with the graduate coordinator or your supervisor. **Even if your full tuition is paid and the balance is zero, you must still confirm your \$0.00 fee bill by the due date.**

D. Health Insurance Waivers

All benefits-eligible (20-hr appointment) international students will automatically qualify for employee insurance. You must apply for a Health Insurance Waiver online [here](#) each semester in order to prevent being billed for student insurance. All students are required to carry health insurance, information can be found [here](#).

VII. RESOURCES

A. Student Organizations

The UT Official Directory, issued annually, contains a list of all Registered Student Organizations, with names and phone numbers for more information. A comprehensive list can also be found [here](#). These student organizations encompass many different kinds of clubs, such as political associations, ethnic associations, religious groups, sports clubs, etc. Here are a few applicable organizations:

1. [Graduate Engineering Council \(GEC\)](#)

The GEC is an organization developed to promote social and academic interaction among graduate students in the College of Engineering. The council is composed of representatives from each graduate program in engineering, including MS&E. The GEC publishes a Graduate Engineering Guide, sponsors several seminars and social events each semester, and compiles a resume book.

2. [Graduate Student Assembly \(GSA\)](#)

The Graduate Student Assembly is a university-wide organization aimed at representing the interests of all graduate students at The University of Texas. It provides representation within the formal university structure: Graduate Assembly, senior cabinet, and Student Senate. GSA has representatives on the Faculty Council, the Graduate Guide, and various committees such as the TA/AI Welfare, Rights, and Responsibilities Committee. Call 471-3166 for more information.

3. [Material Advantage](#)

This is a joint student chapter of ASM International TMS (the Minerals, Metals and Materials Society) and the American Ceramic Society (ACerS). See [Thomas Ivanoff](#) for information and forms.

4. [Materials Research Society Student Chapter](#)

The goal of the Materials Research Society (MRS) Student Chapter is to generate student interest in materials science. The chapter also serves as a platform for its members to network with materials scientists in industry, academia and government worldwide. The chapter provides professional development opportunities to its members by organizing speakers, seminars, conferences, and social events. The chapter also works with the national Materials Research Society to provide travel support for its members to attend the bi-annual MRS conferences.

B. Student Records

The graduate coordinator keeps current student files. You must keep your latest contact information up to date with the university on the [All My Addresses](#) page in [UT Direct](#).

C. Behavior Concerns Advice Line (BCAL) 512-232-5050

The Behavior Advice Line is a service that provides The University of Texas at Austin's faculty, students, and staff an opportunity to discuss their concerns about another individual's behavior. Trained staff members will assist the individual in exploring available options and strategies. They will also provide appropriate guidance and resource referrals to address the particular situation. Any concerns for the welfare of a fellow student can be directed to this number.

D. Counseling and Mental Health Center

The CMHC provides counseling, psychiatric consultations, and prevention services that facilitate student's academic and life goals while enhancing their personal growth and well-being. You can find more information [here](#).

E. Writing Center

The Sanger Learning Center offers a number of services for graduate students, including feedback on theses and dissertations. Please see this [link](#) to schedule an appointment with a writing tutor.

F. Mail

Mailboxes are available for all MS&E students in ETC 8.110 and used for university mail only. After graduation it is your responsibility to update your address online to ensure you receive your mail. You should check your box at least once a week. Boxes are emptied at the close of each semester. Your mailing address at UT is:

The University of Texas at Austin
Materials Science and Engineering Program
Your Name
1 University Station C2201
Austin, TX 78712-0293

Campus mail should be addressed in this way:

Your Name
Materials Science and Engineering Program
Mail Code C2201

G. Computer Facilities

A Learning Resource Center or computer lab is available to MS&E students. It is located in ETC 8.110. To gain access you must first visit the [ID Card Center](#) in [FAC](#) to have your proximity card activated and then inform the graduate coordinator to finalize access.

H. Offices and Keys

It would be convenient if all students were able to have desks in the building where they are doing their research. Unfortunately, space is very tight and there is a waiting list for desks. If your research is in the ETC building and so is your supervising professor, inform the graduate coordinator and she will put you on the waiting list. **ALL** student desks on the 8th and 9th floors of ETC are assigned by faculty committee. See the graduate coordinator with questions. Just because a desk looks unoccupied does not mean that you can claim it!

Key requests are obtained through supporting administrative staff. Please contact your supervisor for more information. Keys must be returned by their due date to the UT [Lock and Key Services](#) center.

I. Parking

Parking is very limited at UT Austin. (UTPD officers do give parking tickets.) As a student you are eligible to purchase a “C” permit (student parking). Permits do not guarantee you a spot and it may be necessary to arrive very early to find parking. Registered graduate students who are employed by UT for at least twenty hours per week (graduate research assistants, teaching assistants, and some fellowship holders) may qualify for an “A” permit (see parking maps [here](#)). The graduate coordinator sends in a parking verification form to the parking office in late August. If you believe you qualify for “A” parking and the parking office does not have your name, contact the graduate coordinator. For more information on eligibility, fees, location of the parking lots, or other information on parking, refer to Parking and Transportation Services [here](#) or at 471-7275. You may also complete an application to receive “A” parking online under [My Parking Profile](#).

UT Austin offers a [shuttle service](#) to registered students to many parts of Austin, including the Pickle Research Center. Maps are available at the Texas Union and at the Information Desk in the Main Building. Austin city buses ([Capital Metro](#)) are also free for UT students; just swipe your UT ID card as you board.

J. Copiers

Copiers are available in various places on campus, including libraries. You may get an access code or copy card from your research supervisor that you can use when making copies for official UT business only. You should obtain a separate card for yourself if you will use the copiers for personal use. There is a scanner and printer for use in the Learning Resource Center (ETC 8.110) as well as a fax machine for student use (please be courteous, this is an administrative office) in ETC 8.106. ETC machines are free of charge to MSE students.

K. Libraries

The principal library used by MS&E students is the Engineering (McKinney) Library, located on the first floor of Ernest Cockrell Jr. Hall, [ECJ 1.300](#). It is a branch of the General Libraries and has more than 165,000 volumes in all fields of engineering. Patent information, standards, and manufacturers' catalogs are available at this branch. A network containing the Applied Science and Technology Index, Engineering Index and numerous other databases are available for free self-service computerized literature searches.

Other branch libraries that are useful to engineering students are the Chemistry (Mallet) Library, [WEL 2.132](#); the Physics-Mathematics-Astronomy (Kuehne) Library, [RLM 4.200](#); and the Geology (Walter) Library, [JGB 4.202](#). The main collection of the General Libraries is located in the Perry-Castañeda Library ([PCL](#)), located on the corner of Speedway and 21st. Call 512-495-4511 for information on hours; each branch has different hours of operation. You may access the UT library online catalog (UTCAT), using a public terminal in the library or from a personal computer, for information on items in the General Libraries and library hours. Many research tools, including numerous journal subscriptions are available online [here](#) at the main UT Austin Libraries page.

Library orientation [tours](#) are usually offered at the beginning of each semester or feel free to ask a librarian if you have questions about finding materials in the library. Please note that all students are fined for overdue books but most books can be checked out for an entire semester.

L. Special Events

From time to time, the MS&E program offers special events such as parties, seminars, symposiums, etc. Watch the bulletin boards and your e-mail for announcements of such activities.

M. Additional Sources of Information

Pertinent university procedures and regulations are addressed in these university catalogs: *General Information* and *The Graduate Catalog*. Each is available from the Office of the Registrar online [here](#). All MS&E students should be familiar with the information provided.

General Information, published annually in July, contains current and historical information about the university and regulations that apply to all students during the academic year printed on the title page. *General Information* is intended for use with each of the other issues of the catalog of the university.

The Graduate Catalog is published in July of odd-numbered years, contains degree requirements and official regulations of the Graduate School. It also contains descriptions for most graduate courses offered by all departments.

The [Course Schedule](#) is issued each semester (fall, spring and summer) and is viewable online. It contains procedures on how and when to register and lists which particular classes are available during the semester and when and where they meet. It also contains the final exam schedule and the calendar of the university.

N. Helpful Sites

UT: <http://www.utexas.edu>

TMI, Current Students page: <http://tmi.utexas.edu/current-students/>

Health services: <http://healthyhorns.utexas.edu/>

Counseling services: <http://cmhc.utexas.edu/>

Legal services for students: <http://deanofstudents.utexas.edu/lss/>

Services for students with disabilities: <http://www.utexas.edu/diversity/ddce/ssd/>

Graduate student forms: <http://www.utexas.edu/ogs/pdn/>

Parking: <http://www.utexas.edu/parking/>

Student Accounts Receivable <http://www.utexas.edu/business/accounting/sar>
(My Tuition Bill, Official Fee Receipts, What I Owe, Where's My Check, FAW)

Official UT calendar: <http://registrar.utexas.edu/calendars/>

Tuition bill waivers: <http://catalog.utexas.edu/general-information/registration-tuition-and-fees/tuition-and-fees/tuition-waivers/>

Office of the Registrar: <http://registrar.utexas.edu>

New employee orientation:
http://www.utexas.edu/hr/student/new_student_employee_checklist.html

Health Insurance Orientation:
https://utdirect.utexas.edu/tclass/rprofile.WBX?component=0&course_prefix=PN&course_number=200

Ethics statement: https://utdirect.utexas.edu/pnethc/pn_ethics.WBX

Safety training: <http://www.utexas.edu/safety/ehs/train/>

Curriculum Vitae Writing Tips:

<http://www.engr.utexas.edu/ecac/yourcareer/resumes/cvtips>

GOVERNMENT OFFICES:

TxDOT

<http://www.dot.state.tx.us/>

Tx Dept. of Public Safety

<http://www.txdps.state.tx.us/>

Travis County

<http://www.co.travis.tx.us/>

Travis County Voter Registration Info

<http://www.traviscountytax.org/goVoters.do>