

Graduate Student Handbook

Ph.D. Program for Materials Science and Engineering

Academic Year 2020-2022

DEPARTMENT of MATERIALS SCIENCE & ENGINEERING

The University of Texas at Arlington

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WELCOME!

The faculty, staff and students in the Materials Science and Engineering Program would like to welcome you to the doctoral program in Materials Science and Engineering. This handbook is designed to help you get acquainted with the workings of our program. The information in this handbook will let you know what needs to be done, when it needs to be done, where you need to go to get information, and who can help you with problems that may occur. This handbook, the UTA Student Handbook, and the Graduate Catalog will serve as sources of information for you as you progress through our program.

NAMES YOU SHOULD KNOW

Graduate Advisor

Professor Seong Jin Koh

231, 331 ELB

272-1223

skoh@uta.edu

Most of the decisions you make concerning your academic program will be made with the assistance of the graduate advisor. This includes curriculum, registration, adding and dropping courses, and completing the necessary paperwork as you pursue your degree. The graduate advisor is your first point of contact for all of these matters.

Department Chair

Professor Efstathios Meletis

231 ELB

272-2398

meletis@uta.edu

The Chairman is responsible for all decisions concerning the operations of the program including the funding of all teaching and research assistantships as well as scholarships.

Chairman, Committee on Graduate Studies

Professor Yaowu Hao

325 ELB

272-0752

yhao@uta.edu

Many decisions concerning the requirements of the graduate program are made by the MS&E committee on Graduate Studies. This committee also handles student petitions and reviews the progress of all students in the program periodically.

Administrative Assistant

Ms. Angela Graham

Ms. Lashonda Davis

ELB 231

272-2398

HOW TO GET STARTED IN THE PROGRAM

Graduate Teaching and Research Assistants - Payment Procedures

International Students

You will first need to go to the International Office with your visa to obtain an Identity and Employment Authorization letter. This letter certifies that you have a visa and that you are allowed to work in the U.S. You must take this letter to the Office of Human Resources (J.D. Wetsel Service Bldg. (corner of Mitchell & Davis Streets) along with your passport and social security card (if you have one) to set up an orientation session given to all new employees. **This session is mandatory, and you will not get paid unless you attend.** This session takes about one hour. If you do not have a social security card, you must return to personnel after you receive your card and show it to them. ALL students that will be paid in any way must have a social security number. Most international students will have to apply for a card and this should be done as soon as possible. Applications must be delivered in person to the Tarrant County Court House in Fort Worth (819 Taylor Street) or to the Arlington office of the Social Security Administration. At the international student orientation session held by the International Office, you can fill out an application for a social security number and that office may arrange to take students to Fort Worth to submit the form. If you are unable to go at that time, you can go any time on your own. It takes about 2 weeks to get your card, but you can call, after several days, and receive your number only; you **cannot** be paid until you get your social security number.

All international students must attend a University orientation for foreign students, most often given the week before school starts. You will receive a letter directly from the International Office regarding this orientation. This orientation is required before you can register for classes. **All international students on assistantships should have a satisfactory TSE score on file, failing which they must enroll and complete the Developmental English course.**

Domestic Students

Domestic students must also attend an orientation session for all new employees. You will need to bring your social security card and your Texas driver's license or some other I.D. **THIS SESSION IS MANDATORY AND YOU WILL NOT GET PAID UNLESS YOU ATTEND.** The session takes about one and one half hours to complete.

UTA Identification (ID) Card

You will be required to obtain a MAV EXPRESS card from the MAV Express Office, Main Level of the University Center. This card will allow you access to various campus events, the library, and the health center, as well as being a source of identification to verify that you are a UTA student.

Once UTA ID card is acquired, you will be given with an email account along with NetID. Information on how to get NetID and email account can be found from OIT (office of information technology) web site (<https://webapps.uta.edu/oit/selfservice/>).

UNIVERSITY FACILITIES

A campus map can be found in the University Catalog. Some of the more important facilities are listed below.

Libraries

The University has three libraries, the Central Library, the Science and Technology Library, and the Architecture and Fine Arts Library. A full description of the library system is given in the graduate catalog.

Registration

In order to attend any given semester, a student must register and pay fees. ALL REGISTRATION at UTA is done on SAM, UTA's touch-tone telephone system. (817-272-2SAM) or via the web at www.uta.edu. The current semester's schedule of classes gives the exact days and times for registration and should be consulted each semester, not only for registration information but advising instructions, as well. (Spring Schedule comes out in mid-October; Summer/Fall Schedule comes out in mid-March.) New students register by SAM the week before classes begin. New students, readmitted former students and continuing students must be advised. **Advising with graduate advisor must be done prior to registration.**

Computer Labs

Computer Labs for student use can be found on campus in the following locations:

- a. Ransom Hall
- b. Central Library (5th floor)
- c. Carlisle Hall (in the writing center-5th floor)
- d. Nedderman Hall (basement)
- e. Science Learning Center, Life Science Building

Keys

A Key Request Form should be obtained from the administrative assistant in ELB 231. The form should be signed by your supervising faculty member as well as by the Department Chair. After all signatures are obtained, the form will be forwarded to the Key Control office. The student is responsible for obtaining the key(s) from Key Control Office.

Mailboxes

MS&E graduate student mailboxes are located at room next to department office. Please check your mailbox **daily** since you will be notified of important happenings by notice in your mailbox.

Health Center

A health center is available to meet your medical needs. A full description of the services offered by the health center can be found in the graduate catalog.

University Center

The University Center has numerous facilities and offices of interest to all students. In it are 13 private dining-meeting rooms, lounges, two ballrooms, four food service areas, a post office, general store, gallery, and video room. The center is also home to 160 campus student organizations, the Student Congress, and the Student Activities Board. The Housing Office is also located in the Center. A notary public is also available in the University Housing Office in the Center.

REQUIREMENTS OF THE PROGRAM

As in any doctoral program, you will be required to accomplish a number of tasks before being awarded your degree. In this section the entire process will be outlined step by step. PLEASE read this carefully and refer to it often: *The deadlines stipulated here are not to be taken lightly and the responsibility for adhering to them lies primarily with you.* The following describes the expected course of events for a typical full-time student.

1. The First Year

During the first visit with the graduate advisor, you will fill out a *Student Tracking Form* basically listing the planned courses that you will take and when you will take them, this will give you a good idea of the expected progression of events. Of course, if you have not picked out a research advisor, the plan is preliminary. If you have graduate course work from another university, the graduate advisor (**with the consent of the chairman, committee of Graduate Studies**) is empowered to waive course requirements if the student can show previous course work which is equivalent to that offered at UTA. This is handled on a case-by-case basis at the time of your initial advisement.

Your first year will be devoted primarily to course work. This year and each following year you will enroll in 9 hours of course work/research per semester. This is done by filling out a *Registration Advising Form*. The details of the course offerings are listed in the Graduate Catalog, and the requirements that pertain to you are those listed in the catalog current at the time you enter the Graduate School, so save the catalog. It is required that you maintain a **minimum 3.0 GPA (on a 4 point scale) in all course work** taken as a graduate student.

If you have not done this already, you are required to select a research advisor within the first semester. You are recommended to talk to a large number of Faculty members about potential research projects. Do not limit your search to MSE faculty but include affiliated faculty listed in MSE website. Please note that MSE is interdisciplinary and encourage our students to work with faculty in our departments, including Physics, Chemistry, Mechanical and Aerospace, Electrical Engineering, Civil Engineering, and Bioengineering.

DEGREE REQUIREMENTS

The Ph.D. degree program involves a set of core courses as well as requiring the candidate to successfully complete research in an area acceptable to the Committee on Graduate Studies. A student's research is directed by a faculty member from any of the departments or programs participating in the Materials Science and Engineering Program.

The Ph.D. degree requires the successful completion of the following curriculum components:

1. **A minimum of 24 semester hours of graduate course work for students entering with a master's degree. Students with only a bachelor's degree require a minimum of 30 hours of graduate course work and approval by the**

Committee on Graduate Studies. **Additional coursework may be required by the student's doctoral dissertation** committee on Graduate Studies. **Additional coursework may be required by the student's doctoral dissertation committee.**

2. Four core courses are required for all doctoral students.

MSE 5304,-MSE 5305, MSE 5312, MSE 5321

3. All PhD students are required to take the seminar course (MSE 5193) at least for 3 semesters;
4. The remedial course, entitled "Introduction to Materials Science and Engineering", is required for PhD students whose BS or MS degree are not from Materials Science and Engineering. This course will not be counted toward the PhD degree course work requirement but will appear in the transcript.

Based on the background of the student, he/she may request an exemption from one or more of the above courses.

5. Up to three of the following supplemental courses can be taken by all doctoral students, as approved by the Committee on Graduate Studies for Materials Science and Engineering:

All MSE courses with exception of a remedial course such as "Introduction to Materials Science and Engineering";

Course from other department can be taken with consent from graduate advisor.

6. Elective Graduate coursework will be taken by all doctoral students which will allow specialization within an academic area; Graduate courses in **CHEM, MATH, PHYS and other areas of ENG** may be used for this purpose in consultation with the student's research advisor and graduate advisor, subject to approval by the Committee for Graduate Studies for Materials Science and Engineering.

After completion of all core course work, students must **satisfactorily complete diagnostic exams** that may be written, oral or both, as determined by the Committee on Graduate Studies in Materials Science and Engineering. The diagnostic exams test student knowledge on the four course courses, and students are required to gain passing grade in all four subjects. Failure to earning passing grade in all subjects results in dismissal from PhD program. In case of failure with marginal performance, **one and only one chance** may be permitted upon approval of Graduate Studies Committee. A student must file a petition that should include a detailed justification for asking the second opportunity and study plan. If approved, a student need to retake the exam on all four subjects before the start of next long semester, during which financial support may be discontinued.

After completion of all coursework requirements, and after having demonstrated research ability through partial completion of dissertation research, a student must satisfactorily

complete a comprehensive exam.

The dissertation research will be formulated in conjunction with the student's faculty research advisor who may be in any of the academic areas relevant to the Materials Science and Engineering Program. However, students are encouraged to consult with graduate advisor or graduate studies committee about the suitability of research topic for PhD dissertation in MSE. The dissertation research represents the culmination of the student's academic efforts and is expected to demonstrate original and independent research activity and be a significant contribution towards knowledge in the field.

2. Formal Admission to the Ph.D. Program

By Texas state law you are considered a Masters student until you have completed 30 hours (including courses taken as MS students) of graduate course work. At that time you must complete an *Application to Continue Studies Beyond the Master's Degree*. This must be done on time. In the same semester you must file a *Diagnostic Evaluation Report*. These forms certify you as a potential doctoral level student. The evaluation is done by the Committee for Graduate Studies and consists of: (1) review of your GPA, which must be 3.0 or better (on a scale of 4.0), and (2) a discussion of your performance in the core courses, diagnostic exams, teaching assignments and all other relevant matters. After this is done, a faculty committee is appointed to continually evaluate your progress in the program.

3. The Comprehensive Exam

The comprehensive exam is administered by the advisory committee selected by the research advisor in consultation with and approval of graduate advisor and graduate studies committee. The chairman of the committee is appointed by the Committee on Graduate Studies and **cannot be the student's research advisor**. The advisory committee, composed of at least 5 approved faculty including the dissertation advisor, must include at least 3 core MSE faculty and at least one faculty from outside of MSE.

The purpose of the exam is to provide evidence that you have the potential to pursue and successfully complete the degree program by writing and orally defending a dissertation research proposal along with preliminary results.

- I. You will submit to your committee a document that outlines your dissertation research proposal. The details of the requirements of the comprehensive exam are provided in the Comprehensive Exam Guide available with the graduate advisor.

- II. The exam will be scheduled by submitting a *Request for the Comprehensive Exam (not less than 21 days prior to oral exam)* and **the written proposal must be submitted** to the advisory committee **not less than 7 days prior to the oral exam**. At the oral exam you will be tested in four areas:
 - (a) Scientific content of the written proposal.
 - (b) Quality of the written proposal (grammar, style, etc.)
 - (c) Oral presentation, including the ability to answer questions related to the proposed research.
 - (d) General knowledge of the research area.

The oral exam will be public, except for a final question and answer period. The results of the exam are reported via *The Comprehensive Examination Report*.

- III. If you do not pass this exam you will be given one and only one chance to retake it; this second exam must be within six months of the first one; a second failure will result in dismissal from the program.

4. Research

Research for the Ph.D. program will begin usually before the end of the first semester of course work, and will continue until your advisor and advisory committee think that you are ready to defend your work. In or before your last semester, you must file the **Application for Candidacy and Final Program of Work**.

5. Dissertation Defense

The final requirement for the Ph.D. degree is the submission and oral defense of a dissertation which describes the results of your work. The dissertation committee is the same as the advisory committee for the defense of your original research proposed at comprehensive exam. You should consult the “Thesis and Dissertation Handbook”, available at www.uta.edu/library/etd/ETD%20Files/TD_Handbook.pdf, when writing your dissertation to insure that an acceptable format is used. A copy of the dissertation must be given to each committee member two weeks in advance of the exam. This copy should be in a form so that it could be turned in as the final version. It should not be left for the committee to make major corrections and revisions in spelling, syntax, organization, or content of the dissertation. A dissertation in need of major rewriting will result in automatic failure at the first oral defense. At the oral defense you will give a brief presentation of your research and answer questions from the committee and the audience. After the public part of the exam, there will be a final question-and-answer session that involves only the student and the committee. Following the oral defense, **The Dissertation Defense Report must be submitted to the department.** You must ensure that any conditions placed on passing are met in the time allowed and to the satisfaction of the committee members. Failure of the defense will result in the scheduling of a second defense within three months; failure of that defense will result in dismissal from the program.

In the semester that you plan to graduate there are several important deadlines and requirements that you must meet. You should check the cover of the Graduate handbook for these deadlines. Also listed in this handbook are the fees to pay in order to graduate. In addition, you must enroll into following course in order for you to be qualified for graduation:

1. Either MSE 6399, 6699 or 6999 (MSE dissertation). Your total cumulative dissertation hours should be 9 hours;
2. MSE 7399 (MSE dissertation): this is one and one time only dissertation course that can be taken in case when you fail to graduate at the previous semester under either MSE 6399, 6699, or 6999.
3. In case when you fail to graduate under MSE 7399, you have to enroll in MSE 6699 without exception.

6. Resolving Complaints

The Department of Materials Science and Engineering (MSE) is committed to fair treatment of its community members and, additionally, is open to comments and suggestions for improvement. Individuals are encouraged to seek an informal resolution of the matter directly with the groups or individual(s) involved when possible. For matters where a resolution is not feasible, a formal Complaint Form (available in MSE website) can be completed and filed with the MSE office in ELB 231. A formal complaint must be submitted in writing using this form.

The information you provide will be treated as personal and sensitive, but is not confidential. This means that MSE will not volunteer or deny any of the provided information to law enforcement or other University investigative bodies. It may be shared on a need-to-know basis with other offices.

Steps to complete:

1. Please complete the form in its entirety with correct information to the best of your ability and knowledge.
2. Turn in the completed form to MSE in one of two ways:
 - a. In-person hard copy delivered or sent to ELB 231, (Box 19031)
 - b. Scan and email to Beth Robinson, Support Specialist, MSE at beth.robinson@uta.edu.
3. You should be contacted (via email or phone) within 72 business hours to confirm that the formal complaint has been received.
4. Upon receipt of the complaint, the form is reviewed and forwarded to the appropriate office based on the subject matter as articulated in the form.

Note:

If your complaint involves the Chair, MSE, it will be given to the Associate Chair, MSE. If your complaint involves both the Chair and Associate Chair, MSE, your complaint will be sent to the Dean, College of Engineering.

Materials Science and Engineering Core Faculty:

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329 ELB
X29546
kyum@uta.edu

Formal Complaint Form
Department of Materials Science and Engineering

Date: _____

Name:	Student ID:
Address:	
Phone Number:	
Email Address:	

Incident Information:

Name of group or individual(s) to whom the complaint is being filed:	
Location of incident:	Date of incident:

Statement of Complaint:

(Please describe in your own words and in detail, what happened. Include the appropriate names, departments, and/or groups involved. List any injuries or damage suffered and any other relevant information. Attach documents (photos, reports, e-mail, etc.) that are related to your complaint.)

(Describe actions you have taken to resolve the issue, e.g., discussed concern with instructor, sent an e-mail or letter to someone. Use reverse side if necessary)

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AFFIDAVIT

I, _____(name) attest that the information and facts provided in this document are true to the best of my knowledge.

(Complainant Signature)

(Date)

For office use only

Complaint received date:	
Complaint received by:	
Confirmation e-mail sent to complainant:	Date:
Referred to:	Date:

Resolution Notes:

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