

Graduate Student Handbook

Masters Program in Mechanical Engineering

Academic Year 2006-2007

DEPARTMENT OF MECHANICAL AND AEROSPACE
ENGINEERING

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WELCOME!

The faculty, staff and students in the Mechanical Engineering Program would like to welcome you to the Master's program in Mechanical 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 Roger D. Goolsby
206A Woolf Hall
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goolsby@uta.edu

Most of the decisions you make concerning your academic program will be made with the assistance of the graduate advisor. These include 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.

Associate Chair for Mechanical Engineering

Dr. S. M. You
202 Woolf Hall
817-272-2561
smyou@uta.edu

The Associate Chair 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 Albert Tong
306C Woolf Hall
817-272-2297
tong@uta.edu

Major decisions concerning the requirements of the graduate program are made by the ME Committee on Graduate Studies. This committee also handles student petitions and reviews the progress of all students in the program periodically.

Program Senior Secretary

Donna Woodhead
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817-272-2563, woodhead@uta.edu

GETTING STARTED IN THE PROGRAM

Graduate Teaching and Research Assistants

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 US. You must take this letter to the Office of Human Resources (J.D. Wetsel Service Bldg. on Mitchell Street) 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 at 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. It takes about 2 weeks to get your card, but you will be notified of your social security number sooner than that; 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 should have received a letter directly from the International Office regarding this orientation. This orientation is required before you can register for classes. **All international students on assistantship should have a satisfactory TSE score on file, failing which they must enroll and complete the Developmental English course.**

American Students

American students must also attend an orientation session for all new employees. You will need to bring your social security card and your Texas drivers 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.

UNIVERSITY FACILITIES

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

Office of Research and Graduate Studies (Graduate School)

The Graduate School is located in Davis Hall Room 333. The staff in that office can answer questions and supply the forms that you will need while you are enrolled here.

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.

Library contact for ME: Ms. Barbara Howser (howser@uta.edu)

Registration

In order to attend any given semester, a student must register and pay fees. ALL REGISTRATION at UTA is done on the UTA website, www.uta.edu/mymav.

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 the week before classes begin. New students, most readmitted former students and continuing students in certain majors must be advised. **If advising is required, it 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
- f. ME CADLAB, Room 320 Woolf Hall (see Appendix H for current access procedure)

Mailboxes

ME graduate student (with TA or RA appointments) mailboxes are located in Room 204 Woolf Hall. 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 is in the graduate catalog.

Keys

A Key Request Form should be obtained from the administrative assistant in Room 204-Woolf Hall. The form should be signed by your supervising faculty member as well as by the Department Chairman. After all signatures are obtained, the form will be forwarded to the Key Control office.

University Center

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

REQUIREMENTS OF THE MASTER'S PROGRAM

As in any Master's 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.

The First Year and the Final Semester

During the first visit with the Graduate Advisor, you will fill out a **Registration Advising Form** basically listing the courses that you will take your first semester. Unless you have deficiencies to be made up, you will normally take ME courses in the first semester. If you have graduate course work from another university, the graduate advisor (with the consent of the chairman, committee on 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.

This year and each following year you will enroll in up to 12 hours of course work/research per semester. 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. The Graduate School requires that you maintain a 3.0 GPA (on a 4 point scale) in all course work taken as a graduate student.

If you have elected a thesis degree, you will select a research advisor in your first year. You are recommended to talk to a large number of faculty members about potential research projects.

The appendix provides copies of a number of forms which are used by graduate students. Of particular note is the Application for Candidacy and Final Program of Work form. This form need to be filed before the semester in which the student expects to graduate.

The student must be enrolled in the Graduate School for the semester in which the student completes all graduate degree requirements and applies for graduation. A number of forms must be filed during this last semester, including Application for Graduation, Request for Scheduling Master's Examination, and Final Examination Report.

DEGREE REQUIREMENTS

Core Courses

Thermal Science: ME 5316 Thermal Conduction, ME 5317 Convection Heat Transfer, ME 5318 Radiative Heat Transfer, ME 5321 Advanced Classical Thermodynamics

Fluid Science: ME 5313 Fluid Dynamics, ME 5342 Advanced Gas Dynamics I, ME 5344 Viscous Flows,

Design, Mechanics and Manufacturing: ME 5310 Finite Element Methods, ME 5337 Introduction to Robotics, ME 5339 Structural Aspects of Design, ME 6314 Mechanisms,

Controls and Systems: ME 5303 Classical Methods of Control Systems Analysis and Synthesis, ME 5305 Dynamic Systems Modeling, ME 5307 Modern Methods of Control System Analysis and Synthesis, ME 5341 Control Systems Components.

Analysis Courses

ME 5331, ME 5332, approved mathematics courses.

Master of Science in Mechanical Engineering

The Master of Science degree is a research-oriented program in which completion of a thesis is mandatory. A minimum of 30 credit hours is required as follows: three core courses (one course each in three of the four areas) and two analysis courses listed above; three graduate courses (nine credit hours) related to a specialty in mechanical engineering; and six credit hours of thesis. The student must enroll in ME 5398 or ME 6397 every semester in which the student is actively involved in thesis preparation or research, except that the student must enroll in ME 5698 in the semester of graduation.

Master of Engineering in Mechanical Engineering

The Master of Engineering degree is an engineering practice-oriented program. A minimum of 36 credit hours is required as follows: four core courses (one in each area) and two analysis courses listed above; six courses (18 credit hours) of elective graduate courses in engineering, mathematics, and/or science relating to the student's interest areas. The elective courses may include as many as three hours of special project courses (ME 5391).

Certificate in Electronic Packaging

The Certificate in Electronic Packaging program provides graduate-level knowledge in the field of electronic packaging. Technical material covered in the classroom will be complemented by a number of seminars by industry leaders in the packaging field. There are two enrollment options: as a student pursuing a MS degree or as a non-degree-seeking special student. The special student avenue is tailored for individuals currently employed in an electronics-related industry. Students will receive the certificate after completing 12 credit hours of packaging courses. You can find more details about the program at:

http://www.uta.edu/engineering/specials/elec_pkging.php

Master's Thesis (for Master of Science Degree)

The final copies of the Master's thesis must be prepared according to the regulations described in the current edition of the *Thesis and Dissertation Manual of Style*, available from the UTA bookstore.

The Assistant Dean of the Graduate School examines each thesis and report and determines whether or not it meets the Graduate School requirements for format and mechanical presentation. **After the Graduate School is given the master copy of the final draft, the student will be given a written formal evaluation 72 hours later**

(excluding weekends, holidays and graduate registration periods). The master copy must be received **no later than ten working days** in advance of the final deadline to allow at least three days for Graduate School exams, time for the student to make corrections, and time to have final copies made.

Time Limit

The master's degree must be completed **within six years** (time in military service excluded) from initial registration into the Graduate School.

Research (for Master of Science Degree)

Research for the Master's Degree will begin usually by the end of the first year of course work (or earlier). It will continue until your advisor and advisory committee determine that you are ready to defend your work.

Final Master's Exam

The final requirement for the Master's degree is the **final program exam**. The final program exam can result in:

1. Pass with a recommendation to the Dean of the Graduate School that the candidate be certified to receive the earned degree.
2. A conditional pass with the requirement that additional conditions be met which may include further work on the thesis or the thesis substitute, additional course work with a minimum GPA specified, and within a specified time period.
3. Failure and recommendation to the Dean of the Graduate School the candidate be dismissed from the program.

The ME program limits the number of repeats of the final master's exam to two times. Additional repeats require the written permission of the Dean of the Graduate School.

If the student chooses the exam date past the deadline, the student will be considered to graduate in the following semester.

Non-Thesis Degree Plan (for Master of Engineering Degree)

For students in this degree plan the final exam will be a comprehensive exam that will be written, oral, or both. The exam will be administered by all members of the student's supervising committee.

The student must prepare a Request for Scheduling of the Final Master's Examination. The form must be submitted to the Graduate School no later than two weeks before the proposed exam date. The exam must indicate the time, place, and

form (oral and/or written). The Final Master's Examination Report must be filed in the Graduate School no less than three weeks before the date on which the candidate expects the degree to be conferred.

In the semester that you plan to graduate there are several important deadlines that you must meet. You should consult the inside cover of the Graduate Handbook for these deadlines.

Miscellaneous

Students on academic probation:

If your GPA falls below 3.0 at any time, you are automatically put on academic probation by the Graduate School. You are given one long semester (Fall or Spring) to raise your GPA to a 3.0. The Committee on Graduate Studies shall meet at the end of each semester to review the progress of all graduate students on academic probation; under very special circumstances the Committee on Graduate Studies may petition the Graduate School to allow a student to continue on academic probation for one more long semester; however, do not depend on this to keep you in school. Keeping your GPA at 3.0 or better is extremely important and a major responsibility on your part. Keep your advisor informed; he may be able to assist you when you are having difficulties in your courses.

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Academic Calendar 2006-2007

APPENDIX

- A. Add/Drop Form
- B. Application for Candidacy and Final Program Work
- C. Application for Graduation
- D. Thesis and Dissertation Data Sheet
- E. Request for Scheduling Final Master's Examination
- F. Final Master's Examination Report