

# **Graduate Student Handbook**

## **Masters Program for Aerospace Engineering**

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DEPARTMENT OF MECHANICAL AND AEROSPACE  
ENGINEERING

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# **WELCOME!**

The faculty, staff and students in the Aerospace Engineering Program would like to welcome you to the Master's program in Aerospace 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 Don Wilson**  
**206B Woolf Hall**  
**817-272-2072**  
[wilson@uta.edu](mailto:wilson@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 Aerospace Engineering**

**Professor S. M. You**  
**202 Woolf Hall**  
**817-272-5635**  
[you@uta.edu](mailto:you@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 Don Wilson**  
**211B Woolf Hall**  
**817-272-2072**  
[wilson@uta.edu](mailto:wilson@uta.edu)

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

# GETTING STARTED IN THE PROGRAM

## Graduate Teaching and Research Assistants

### Criteria for Award of Assistantships

Award of financial assistance is based solely on merit. A number of graduate teaching assistantships (GTA), graduate research assistantships (GRA), and fellowships are awarded each year. Applicants who demonstrate skills, experience or interests that meet the needs of the AE Graduate Program will be considered for fellowships or assistantships. *Students must be enrolled in the M.S. degree program and must agree to write a thesis in order to be eligible for appointment as a GTA or GRA.*

A typical GTA requires that the assistant spend a minimum of 20 hours per week helping in undergraduate laboratories. grading undergraduate students' homework assignments, and other duties specified by the supervising professor. A typical GRA requires that the assistant work on the research projects assigned by the professor who is providing the GRA support.

### 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 or SEA score on file, failing which they must enroll and complete the Developmental English course.

## 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 AE: 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](http://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 the week before classes begin. **All students must be advised by either their supervising professor and/or the Graduate Advisor prior to registration.**

### Computer Labs

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

- Ransom Hall
- Central Library (5th floor)
- Carlisle Hall (in the writing center-5th floor)
- Nedderman Hall (basement)
- Science Learning Center, Life Science Building
- MAE CADLAB, Room 320 Woolf Hall

## **Mailboxes**

AE graduate student (with TA or RA appointments) mailboxes are located in Room 214C 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 dining-meeting rooms, lounges, two ballrooms, four food service areas, bowling and billiards, a post office, general store, bank, 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.

# 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 *Student Tracking Form* basically listing the 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, since you have not picked out a research advisor, the student tracking is preliminary. If you have graduate course work from another university, the graduate advisor (with the consent of the chair of the 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. 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. The Graduate Catalog is now accessible on-line at <http://grad.uta.edu/catalog/>. Unless you have deficiencies to be made up, you will normally take AE courses in the first semester. 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 student must be enrolled in the Graduate School for the semester in which the student completes all graduate degree requirements and applies for graduation. (*Application for Graduation form*). Enrollment in courses outside the major and minor fields will not satisfy final semester enrollment requirements.

## DEGREE REQUIREMENTS

### Master of Science in Aerospace Engineering

The Master of Science Degree in Aerospace Engineering is a research-oriented program in which completion of a thesis is mandatory. A minimum of 30 credit hours is required as follows: two core courses (one course each from two of the three core areas listed below, six credit hours), two math or engineering analysis courses (six credit hours), four courses (twelve credit hours) related to a specialty in aerospace engineering, and six

credit hours of thesis. The student must enroll in AE 5398 or AE 6297 every semester in which the student is actively involved in thesis preparation or research, except that the student must enroll in AE 5698 in the semester of graduation.

## **Master of Engineering in Aerospace Engineering**

The Master of Engineering Degree in Aerospace Engineering is an engineering practice-oriented program. A minimum of 36 credit hours is required as follows: three core courses (one course each from the three core areas listed below, six credit hours), two math/engineering analysis courses (six credit hours), and seven elective courses (21 credit hours) in engineering, mathematics, and/or science relating to the student's interest areas. The elective courses may include as many as six hours of special project courses (AE 5391).

### **Degree Course Requirements**

Both Master's degree plans require completion of an aerospace engineering core, consisting of courses from the following four areas:

1. Fluid Mechanics, Aerodynamics and Propulsion: AE 5313 Fluid Dynamics, AE 5342 Gas Dynamics, AE 5326 Air-Breathing Propulsion
2. Solid Mechanics and Structures: AE 5330 Finite Element Methods, AE 5340 Structural Aspects of Design, AE 5331 Structural Dynamics
3. Flight Mechanics and Controls: AE 5302 Advanced Flight Mechanics
4. Flight Vehicle Design: AE 5368

In addition to the core courses, a minimum of three credit hours of graduate seminar are also required for the M.S. degree program, and a minimum of one semester hour of graduate seminar for the M.Engr. Degree program.

Both Master's degree plans also require completion of six credits in a minor area. In most cases, the minor is satisfied by taking the following courses:

1. AE 5351 Analytical Methods in Engineering
2. AE 5352 Engineering Analysis

or approved mathematics courses.

For students with exceptional mathematics background, the minor may be composed of two courses selected by the student and Supervising Professor that are deemed supportive of the student's area of concentration and meet approval of the Graduate Advisor. If some of these courses are not available during the period when a M.S. student is enrolled, the Graduate Advisor could approve a closely related substitute course.

## **Seminar Requirement**

All first semester graduate students and students enrolled in thesis, research or dissertation courses must sign up for the graduate seminar – AE 5101. First semester students are not required to give a seminar presentation, however students enrolled in thesis, research or dissertation courses are expected to give seminar presentations on their research topics.

## **Formal Admission to the Masters Degree Program**

A student will be admitted to candidacy for the Masters Degree only when the requirements listed previously have been met. The student must file an *Application for Candidacy and Final Program of Work* as well as an *Application for Graduation* no later than **30 days after the first day of classes for the semester in which the candidate plans to receive his degree**. A student planning to receive a degree at the end of the summer session must file *Application for Candidacy and Final Program Work*, as well as the *Application for Graduation* no less than 30 days after the first day of class of the 11 week summer session.

## **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. In or before the last semester (**no later than 30 days after the start of the last semester**) you must file the *Application for Candidacy and Final Program Work*, as well as an *Application for Graduation*.

## **Final Master's Exam**

A final program examination is required for all master's degree candidates. The final master's 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 AE 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.

### ***Thesis Degree Plan (Master of Science Degree)***

For **thesis degree plan** candidates, the examination will be an oral defense of the thesis. The examination will be conducted by all members of the student's supervising committee but will be open to all members of the faculty. The thesis examining committee must have copies of the thesis at least two weeks prior to the thesis defense.

### ***Non-Thesis Degree Plan (Master of Engineering Degree)***

For students in the MENGGR 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.

### **Graduate Student Termination Policy (Approved by Graduate Assembly 2-15-07)**

Students have the initial responsibility to recognize when they are having academic difficulties and are expected to initiate steps to resolve the problem. When a student is in academic difficulty, and dependent upon the severity of the problem, the student may receive an oral warning and/or written statement of the problem and required corrective actions. Failure to take these corrective actions can result in termination from the degree program.

A graduate student whose grade point average in all graduate courses taken while enrolled as a UTA graduate student falls below 3.00 will be placed on academic probation. The student must attain a grade point average of at least 3.00 in the next semester he or she is enrolled or be subject to dismissal. Undergraduate courses or graduate courses graded P, R, X or W cannot be used to remove the condition of academic probation.

A student who has been dismissed from the Graduate School for failure to meet the 3.0 grade-point average requirement may be readmitted for further graduate study in the same or in a different program only if a Petition to the Graduate Faculty has been approved by the appropriate Committee on Graduate Studies and the Dean of Graduate Studies

A student can be dismissed from a degree program not only for failure to maintain an adequate grade point average, but also for such reasons as unsatisfactory progress toward a degree as defined by the department or program, inability to pass a diagnostic or comprehensive examination, failure to prepare or to defend a thesis or dissertation in a satisfactory manner or complete thesis or dissertation work in an acceptable amount of time.

Students failing to pass a diagnostic/comprehensive examination or thesis/dissertation defense may be terminated upon the recommendation of the examining committee. Such decisions are indicated on the Diagnostic Evaluation Report, Comprehensive Examination Report or Final Defense Report which are returned to the Dean of Graduate Studies. The Graduate Dean will notify the student formally of the program's or department's decision.

Termination due to inadequate academic progress is a decision made by the program's or department's Graduate Advisor and Graduate Studies Committee. A student's thesis/dissertation committee may recommend termination for failure to prepare a thesis/dissertation proposal, prospectus or final draft in a satisfactory manner or failure to complete work in an acceptable amount of time to the program's Graduate Advisor and Graduate Studies Committee. Such decisions to terminate a student must be communicated to the Dean of Graduate Studies by the Chairman of the Graduate Studies Committee in writing giving the specific reasons involved, all warnings provided to the student, a description of the procedures and actions leading to the recommendation and the recorded votes of the Graduate Advisor and Graduate Studies Committee. The student may appeal his or her termination to the Dean of Graduate Studies in writing within one year of the date of the decision by the Graduate Advisor and Graduate Studies Committee. The student may continue enrollment during the termination process

# Aerospace Engineering Faculty:

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## **APPENDIX**

- A. Registration Advising Form (required each semester)
- B. Degree Plan Worksheet
- C. Application for Graduation
- D. Thesis and Dissertation Data Sheet
- E. Request for Scheduling Final Master's Examination
- F. Final Master's Examination Report