

GRADUATE HANDBOOK - GENERAL INFORMATION

GRADUATE PROGRAM OFFICE

The Graduate Program Office for Mechanical and Nuclear Engineering is located in 127 Reber. Graduate Staff Assistants, Jennifer Houser and LaTrisha Wasson, are available to help students between the hours of 8:00 am -12:00 pm and 1:00 pm - 5:00 pm. The office is supervised by the Graduate Programs Coordinator, H.J. Sommer.

General functions of the Graduate Programs Office are to:

- 1) Assist students with administrative questions, documents and submitting theses;
- 2) Prepare material for consideration and action by the department graduate faculty;
- 3) Review applicants for admission to graduate study;
- 4) Recruit the highest quality graduate students; and,
- 5) Administer the Ph.D. Candidacy Exam.

The Graduate Program Office is guided and assisted in these duties by several faculty committees including the Graduate Policy Committee, the Graduate Admissions Committee, the Graduate Recruiting Committee and the Ph.D. Candidacy Committee. Committee members are appointed by the Department Head, R.C. Benson.

ACADEMIC ADVISOR

It is imperative that students obtain an academic advisor no later than the end of the first semester. The advisor or co-advisor must be a member of the Graduate Faculty of Mechanical Engineering.

Each graduate student will have an academic advisor chosen in agreement between the student and the faculty member. For master's students, the faculty member who supervises the thesis/paper will be the academic advisor. For doctoral students, the research advisor will be the academic advisor.

FULL-TIME ACADEMIC STATUS

Most loan granting agencies and the Immigration and Naturalization Service (INS) consider a 9 credit course load to be full-time academic status. The INS requires that all international students on student visas must maintain full-time academic status during Fall and Spring semesters. International students do not have to register during the Summer semester.

Any graduate student registered for ME 601 is considered to have full-time academic status. Students must pass the Ph.D. comprehensive exam before enrolling for ME 601.

INTERNATIONAL STUDENTS

International students with student visas must maintain full-time academic status during the Fall and Spring semesters, irrespective of whether they are receiving assistantships. Any exception to this policy must be approved by the International Students and Scholars (ISS) Office, 222 Boucke Building. International students may obtain part-time wage-hourly work on campus for a maximum of 20 hours per week during any semester after completing an "Application for Permission to Work On-Campus" and submitting it to ISS. For any specific questions regarding visas, academic status, work permits, etc., students should contact ISS.

All international students who have been offered teaching assistantships and graderships which involve interaction with undergraduate students are required to pass the Test of Spoken English (TSE), as a result of a Pennsylvania State law and Penn State Faculty Senate Legislation. The TSE is offered several times

a year by the Center for English as a Second Language (ESL), 305 Sparks Building. It is the responsibility of the students to satisfactorily complete the TSE if they are interested in applying for a TA or grader's position in Mechanical Engineering.

STUDENT INSURANCE

The University student insurance plan is available as well as many others. Students who currently have insurance and would like to apply for a waiver may do so at the Student Insurance Office, 320 Grange Building. International students are required to have health insurance at all times.

If you receive a graduate assistantship, you will be automatically entered into the basic student insurance plan.

COURSE LOAD

All graduate students, with or without an assistantship, must take at least nine credits per semester, until they have passed the Ph.D. Comprehensive Exam or completed the course credit requirements for a master's degree. Credits for ME 600 may be added to bring the credit total to at least 9 credits per semester. Students receiving 1/4-time assistantships may register for 9-14 credits per semester and students receiving 1/2-time assistantships may register for 9-11 credits per semester.

The Graduate School requires that all students must earn a cumulative grade point average of 3.0 or better to graduate.

After passing the comprehensive exam, all Ph.D. students must maintain continuous registration, which requires them to register for ME 601 or conventional courses for the Fall and Spring semesters, at a course load appropriate for an assistantship or visa requirements. If Ph.D. students use University facilities during the Summer or plan to take their comprehensive or final exams during the Summer, they must be registered. Also, Ph.D. students must spend at least two semesters over some 12-month period during the interval between admission to candidacy and completion of the Ph.D. program as a registered full-time student. See the Graduate Bulletin for additional details.

CORE COURSES

A selected number of graduate courses are considered central to graduate education in Mechanical Engineering. Master's degree students should include the appropriate courses in their programs. Doctoral students should do the same if they have not already taken these courses. For details, see <http://www.mne.psu.edu/graduate/courses.html>.

DROPPING/ADDING/AUDITING COURSES

Courses taken formally as audit are not included in the maximum number of credits required for assistantships or for satisfying visa requirements for international students. Students wishing to drop or add courses must consult with their advisor. Students on assistantships should not change their schedules to reduce or increase their course credits beyond the limits indicated above. Dropping a course may be petitioned through the Graduate Program Office and must be accompanied by a letter from the student's advisor. Only under rare circumstances will this be approved. A dropped course often means a considerable waste of the instructor's time and other University resources.

ME 596, 597, 598, 600 (610), 601 (611)

Graduate students registering for these courses must first consult with their advisor and the instructor to insure that they are registering for the appropriate course. Failure to select the correct course may require the student to pay retroactive drop/add fees.

ME 596 - INDIVIDUAL STUDIES - Creative projects, including non-thesis research, that are supervised on an individual basis and which fall outside the scope of formal courses. ME 596 may not be used for M.S. or Ph.D. thesis research.

ME 597/598 - SPECIAL TOPICS - Formal courses given on a topical or special interest subject which may be offered infrequently. Several different 597/598 courses may be taught in any given semester.

ME 600 (610 Off Campus) - THESIS RESEARCH - This course should be used to register for M.S. and Ph.D. thesis research. Instructors usually award an "R" grade for this course, but may award a letter grade for up to 6 credits for M.S. students and 12 credits for Ph.D. students.

ME 601 (611 Part time) - Ph.D. THESIS PREPARATION - Only Ph.D. Students can register for this course after they pass their comprehensive exam and meet the two-semester residency requirement. Ph.D. students cannot register for any other courses when they are registered for ME 601/611. Prior to graduation, the Graduate School reviews students' transcripts. Students who have registered for ME 601/611 when they have not satisfied the previously stated requirements will be required to retroactively change their registrations and pay retroactive drop/add fees before they will be allowed to graduate.

TRANSFER OF CREDITS

Students must obtain approvals from both the Graduate School and the Graduate Program Coordinator to transfer credits for courses taken elsewhere. Department policy will allow up to six transfer credits for M.S. candidates.

DESKS

Every effort will be made to provide all graduate students with desks. Since there are more graduate students than space available, priority will be given to students on assistantships. Students on teaching assistantships will be provided desks and meeting space so they can carry out their responsibilities as teaching assistants. Students on research assistantships will also be provided desks. Other graduate students will be allotted desks within the remaining available space. It may not be possible to provide all new graduate students with desks, although desks will be assigned in subsequent months as they become available.

KEYS

All students will be provided with a key to Reber Building so they can access the Department's computer facilities. Keys are individually numbered and assigned to each person. If a change of assignment results in you no longer needing a key, return the key to the key custodian who assigned it to you (usually in 132 Reber Building). Do not pass it on to another individual. Failure to return the key to the custodian will result in the loss of the key deposit (\$5/key).

OFFICE TELEPHONES

Most offices are equipped with a telephone. Some of the phones have long distance capability. Consult the University Phone Directory for directions on using the phone for local or long distance calls. Any telephone in the Department with long distance capability will have a telephone log sheet nearby. All long

distance calls charged directly to the University must be logged on this sheet. Most long distance calls are related to sponsored research. You will note on the log sheet a column headed "Budget to be Charged." If your faculty advisor asks you to make long distance calls related to research, ask for the appropriate budget number to place in this column.

Placing personal long distance calls from University office phones is not permitted. If you must make a personal long distance call, you may do so only if you have a calling card. Do not log a call made with a calling card.

PURCHASE OF EQUIPMENT AND SUPPLY ITEMS

This can get complicated. Listed below is a brief overview. We stress that you ask questions before ordering anything.

School supplies and books are personal expenses and may not be charged to any Departmental budget. Teaching assistants in need of office supplies should come to 127 Reber Building for assistance. Research assistants should see their faculty advisor to obtain office supplies, if needed.

For ordering laboratory supplies, equipment items, etc. there are several different procedures, depending on the type of item, vendor, and price range. Many of you will be working with faculty members who employ secretaries trained in working with the Penn State budget system. Before placing any order, check with your supervising faculty member or the appropriate budget secretary. If you order something on your own with the intent of eventually charging a University budget and violate University policy, you may be personally liable for the purchase price. Take time to review the procedure with someone who knows the system before you order and you will avoid complications.

COPY MACHINES

A copy machine that is available for routine graduate student use is located in the hallway on the third floor of Reber Building. Many other such machines are also available across campus. These machines operate using coins or your student ID card. If you must copy teaching or funded research related work, ask your faculty supervisor about how to be reimbursed before you use such machines.

MAIL HANDLING

All outgoing mail should be given to a secretary who will attach the appropriate mail card to indicate class of mail and budget to be charged. Personal mail can be mailed from the Department, as long you attach proper postage.

Do not use a Department mailing address to receive personal items. The Department is not responsible for loss or theft of any personal mail delivered for you to a Department address. Incoming graduate student mail will be placed in labeled folders next to the faculty and staff mailboxes in the north hallway on the second floor of Reber Bldg. You should check for mail every day.

ELECTRONIC MAIL

The Graduate Program Office uses Email extensively to notify students of various announcements, events, etc. Every student is eligible to receive an Email address via the ACCESS system at the Center for Academic Computing at Penn State. All students should acquire an Email address, become familiar with that system, provide their Email address to the Graduate Program Office, and check their Email every day.

MOTOR VEHICLES, BICYCLES AND PARKING

All graduate students must register automobiles, motorcycles, etc., at the Parking Office in 1 Eisenhower Parking Deck. Permits are required to drive and park vehicles on the campus. Permit costs are nominal and are required of all graduate students whether they are on an assistantship or not. Bicycles also must be registered. Registration stickers can be obtained at any of the police booths at campus entrances and at the Parking Office.

INSTRUMENT ROOM

The main function of the Instrument Room in 23 Reber is to supply tools, instrumentation equipment, and laboratory supply items for instructional use and in support of undergraduate laboratory courses. When not in use for these purposes, items may be checked out for graduate research use. All items checked out in this manner are subject to recall for instructional use and must be returned promptly when a recall notice is issued. Failure to return the item could result in a hold being placed on your registration for the following semester or a hold being placed on your transcript if you are graduating.

Certain items of equipment (e.g., multimeters, audio-visual equipment, hand tools) are in very high demand and have specified checkout periods usually 24 to 48 hours. The Instrument Room technician will inform you of these periods when you check items out. Please be certain to return these items promptly so they will be available for others to use.

Small quantities of supply items are available from the Instrument Room for use in research laboratories. If you are setting up an experiment which would require more than a small quantity of these types of items, you should arrange to purchase them. Check with your faculty supervisor on how to do this.

MACHINE SHOP FACILITIES

A fully equipped machine shop, staffed by a professional machinist, is located in the basement of Reber Building. The tools and equipment items in this area are for use by professional staff only. Contact your faculty advisor about how to request shop resources.

PC STUDIO

Approximately 30 Pentium PC's running Windows NT are available in 119 and 120 Reber for general student use. A description of PC Studio hardware and software is available at <http://www.mne.psu.edu/facilities/pc.html> .

Contact Matthew Lindenberg (mx1136@psu.edu) in 222 Reber to obtain ID card access and a password for the PC Studio.

SGI LAB

Approximately 15 SGI workstations are available in 317 Reber for general student use. This cluster supports graphics, word processing, programming languages and various applications packages.

Contact Prof. M. F. Modest (mfm@mara.me.psu.edu) to obtain a password for this system.

RESPONSIBILITIES OF RESEARCH AND TEACHING ASSISTANTS

Assistantships are contracts to provide services to the Department in research or teaching for which a stipend plus a tuition waiver is received. Your specific duties will require on-average 20 hours per week and will be assigned by the faculty member to whom you have been appointed. A half-time assistantship allows a student to schedule 9-11 credits per semester. Research duties often coincide with the student's graduate research. Teaching responsibilities and the faculty member to whom you are assigned begin and end each semester. Lack of satisfactory progress or performance of duties can result in termination of the assistantship contract at any time.

If you receive a graduate assistantship, you will be automatically entered into the basic student insurance plan.

All graduate students are eligible to apply for available teaching assistantships. Normally, teaching assistantships will only be given for two semesters. Students continuing their studies during the Summer should pursue research funding and/or apply for Tuition Assistance (forms available in 127 Reber). Students granted teaching assistantships must register for ENGR 588: Seminar for Teaching Assistants in Engineering during the first semester of their assistantship. All international students who have been offered teaching assistantships which involve interaction with undergraduate students are required to have passed the Test of Spoken English (TSE), as a result of a Pennsylvania State law and Penn State Faculty Senate Legislation. The TSE is offered several times a year by the Center for English as a Second Language (ESL), 305 Sparks Building. It is the responsibility of the students to satisfactorily complete the TSE if they are interested in applying for a TA or grader's position in Mechanical Engineering.

For the most part, research assistants are students supported by faculty with externally funded research projects. Continuation of a research assistantship depends on the quality of the work performed and the availability of external funds.

OBLIGATIONS AND RESPONSIBILITIES OF GRADUATE STUDENTS

A large number of graduate students are appointed as graduate assistants. They are assigned tasks in teaching, research, or other activities which are educationally significant.

The privileges and benefits as well as the obligations and responsibilities of graduate assistants are:

As a Student

A. Privileges and Benefits

1. Eligible for financial assistance (grant-in-aid, tuition waivers and stipend).
2. Eligible for services at the Ritenour Health Center.
3. Eligible for participation in Accident and Sickness Insurance Plan of the Graduate Student Association.
4. Services of the University Placement Services.
5. Participation in the program of the Graduate Student Association.
6. Eligible to join undergraduate student organizations, except those whose constitutions limit membership to undergraduates.

B. Obligations and Responsibilities

1. Maintain scholarship satisfactory to department.
2. Make progress in degree program acceptable to department.
3. Assume full responsibility for knowing the regulations and pertinent procedures of the Graduate School.
4. Comply with regulations governing the use of automobiles by all students.
5. Meet standards of conduct set forth in the Graduate Degree Programs Bulletin:

"By virtue of their maturity and experience, graduate students are expected to have learned the meaning and value of personal honesty and professional integrity before entering the Graduate School. Every student is expected to exhibit and promote the highest ethical and moral standards. A violation of such standards is regarded as a serious offense, raising grave doubt that the student is worthy of continued membership in the Graduate School community."

6. Plagiarism

The Department of Mechanical Engineering insists on strict standards of academic honesty in all courses. Any plagiarism will be penalized severely. The following discussion, provided to the M.E. Department by of the English Department, has been prepared so that no student will commit plagiarism out of ignorance:

Plagiarism is the act of passing off someone else's work as your own.

It sounds like simple dishonesty, and it often is. Anyone who buys, borrows, or steals a paper to turn in as his own work knows he is plagiarizing. Anyone who copies word-for-word--or who copies, changing a word here and there -- WITHOUT ENCLOSING THE COPIED PASSAGE IN QUOTATION MARKS AND IDENTIFYING THE AUTHOR should know that he or she is plagiarizing.

But plagiarism can be more complicated in act and intent.

Paraphrase, which is stating something in different words, can be a useful device, but it can lead, more or less unintentionally, to plagiarism. Jotting down notes and ideas from sources, and then using them without proper identification may result in a paper which is only a mosaic of others' words and ideas. Even the use of particular phrases may constitute plagiarism. And too much proofreading or rhetorical help from friends may also amount to plagiarism.

Writing courses pose particular problems. The conscientious writer keeps careful track of sources and diligently tries to distinguish between what is his own and what comes from others. Did part of what you are saying come from an identifiable source? Say so. If in doubt, talk with your instructor. If you are getting help from someone other than your instructor, let your instructor know so that the two of you together can decide what kind and how much outside help is proper.

In a discussion of plagiarism, it is hard to avoid talking about ideas as if they were objects like tables and chairs. Of course they are not. You should not feel that you are under pressure to invent new ideas--which is probably impossible. So-called original writing consists of thinking through ideas and expressing them in your own way. The result may not be new, but if honestly done, it may well be interesting and worthwhile. Other people may add to your thoughts. When they do so in identifiable and specific ways, give them the credit they deserve.

As a Graduate Assistant

A. Privileges and Benefits

1. Faculty rate for athletic tickets. A quarter-time graduate assistant who is registered for eight or more credits is entitled to free admission to many athletic events.
2. Quarter- or half-time status is classed as full-time student for purposes of Selective Service Status.
3. If part of service load is thesis research, may be eligible for partial refund of income tax from federal government.

B. Obligations and Responsibilities

1. Perform service assignments satisfactorily.
2. Eighteen weeks of service each semester.
3. Maintain a high level of academic achievement.
4. Forego other employment while a graduate assistant as required by the Graduate School.
5. Register for an appropriate number of courses/credits per semester.
6. Meet standards of the department for behavior in the performance of assigned duties.
7. Exercise the privileges and obligations of academic freedom.

ABSENCE POLICY

No instructor has the authority to cancel laboratory or class or to change the official schedule. This includes classes immediately preceding and following vacation periods.

The exchange of classes by instructors is to be discouraged. Classes can be exchanged when the staff member in question must be absent on University business or for a personal emergency. All exchanges are subject to approval by the Head of the Department.

All absences of teaching staff members from their duly assigned classes are to be reported to the Mechanical Engineering Department Head's Office (138 Reber Building). Those faculty members engaged entirely in research should report absences in the same manner for regular working hours to their project supervisors or the Mechanical Engineering Department Head's Office.

Instructional staff members are expected to notify the Head of the Department in writing and in advance whenever they will miss one or more classes due to being out of town. This note should include the arrangements made for a replacement.

Absences of more than two days during a term must also be reported to the Department Head whether or not classes are involved. One or two days of absence, e.g., for consulting, need not be reported if classes are not involved.

CORRESPONDENCE RELATIVE TO STUDENT RESEARCH

You are free to correspond with anyone and any company or agency about your project over your own signature. The only exception to this rule is that you may not correspond with project sponsors. This is the prerogative and duty of the Principal Investigator. (You may prepare letters to the sponsor for the Project Supervisor's signature).

There are, however, certain rules that you must observe:

1. The project director or thesis/paper advisor is to receive a copy of every outgoing letter. Indicate this by "cc: (Name)" at the bottom of the letter.
2. You may not make any statements in your letter that will place the University under any kind of obligation. For instance, to purchase anything, to render certain services, to disclose project information, etc. In particular, you may not modify any purchase orders (once a purchase order has been written only the Department of Purchases may make or agree to modifications).
3. Any requests that go beyond those for information, reprints of papers, catalogs, prices, etc., should be cleared with the Project Director or thesis/paper advisor beforehand. This also applies to requests for samples, unless they concern customarily free samples (such as a piece of gasket material of unspecified size), or those that were offered in an advertisement or catalog.
4. Use full and correct addresses, customary forms of address, and be sure that your letter is grammatically correct and stylistically good.
5. While the secretarial staff is available to type correspondence dealing with Departmental research, such correspondence should be routed through your advisor or project supervisor. Secretaries will not accept any correspondence from graduate students. The secretaries are here to assist you in every way in connection with your correspondence, but the responsibility for proper handling of your correspondence is yours. It is also your job to proofread and sign your letters before they go out.
6. University stationery and postage may not be used for personal purposes. If an occasion arises outside your project or thesis work that makes it seem desirable to write on University letterhead, request permission from the Department Head to do so.

7. Letters that you receive, whether in answer to yours or not, do not necessarily have to be routed to the project director or thesis advisor unless the content warrants it or requires action by him.

EMPLOYMENT REQUIREMENTS FOR INTERNATIONAL STUDENTS

In the recent past (since the addition of Employer's Sanctions to the immigration laws), a great deal of interest and controversy has been generated relating to the employment of international students. This has been particularly true in relation to summer employment for graduate students.

The following information is meant to clarify situations related to international students and to provide guidelines which will be followed by the International Students and Scholars Office in authorizing employment. This policy is meant to apply primarily to students on an F-1 Visa and is directed toward the question of summer employment. All other cases and any specific questions should be referred to the International Students and Scholars Office for interpretation. However, for purposes of general understanding, most of the rules below apply in most cases.

Work by international students is permitted under highly controlled conditions. For example, "on campus work is limited to twenty hours per week, while school is in session. Full time work is permitted during the student's vacation periods, if the student is eligible and intends to register for the subsequent academic term." "Such employment is authorized if the student is in good academic standing and is enrolled in a full course of study."* In plain language, students may work up to twenty hours per week while classes are in session, if they are full-time students. Vacations (i.e., semester breaks) are slightly more flexible, but only for those students who will be returning to a full course of study when classes resume. International students should also note additional requirements regarding oral communication for TAs and Graders on page A-4.

In order to clarify the many employment options international students enjoy, the following categories are enumerated:

1. A student may work on campus while REGISTERED FOR A FULL COURSE OF STUDY (i.e., a full credit load) with no advanced clearance at all, provided the work is limited to twenty hours or less per week. A full credit load consists of 9 credits for graduate students or 12 credits for undergraduates during fall and spring semesters; 5 credits is appropriate for the 8-week summer term. See page A-4 for full-time course load for students having assistantships.
2. Graduate Lecturers are frequently appointed during the summer in order to give those STUDENTS WHO HAVE HAD A TEACHING ASSISTANTSHIP DURING THE REGULAR YEAR the opportunity to teach without having to waste unneeded tuition credits. These students may apply to the Graduate School for tuition credit while appointed as a Graduate Lecturer. (Note that this option is available only for those who had a Teaching Assistantship appointment during the previous regular academic year).
3. PH.D. STUDENTS WHO HAVE COMPLETED THE COMPREHENSIVE EXAMINATION, AND WHO ARE REGISTERED FOR 601 may be appointed as a Pre-Doctoral Lecturer. Again, the purpose of this appointment is to allow a student to teach without utilizing scarce tuition credits for those who no longer need to take courses.
4. Assistantships greater than half time (i.e. 3/4 time, U.S. Citizens only) may be awarded to STUDENTS IN THE FINAL STAGES OF THEIR PROGRAM (almost always after completion of comprehensive exams) as long as the assistantship is for research which is directly related to the completion of the student's dissertation or thesis and has the effect of enhancing progress toward completion.
5. ** Practical Training:
 - A. Those STUDENTS WISHING TO UTILIZE a part of their full complement of Practical Training (12 months for students on a F Visa, 18 months for students on a J Visa) may apply to do so with very little delay in order to take advantage of SUMMER EMPLOYMENT

OPPORTUNITIES RELATED TO THEIR FIELD. It should be noted, however, that Practical Training utilized over the summer, once approved, can never be recovered.

- B. One of the appropriate uses of post-graduation Practical Training is "after completion of all course requirements for the degree if the student is in a Bachelor's, Master's, or Doctoral degree program".* In other words, the frequent requests for full-time or part-time employment of STUDENTS WHO ARE NOT REGISTERED BECAUSE ALL COURSE REQUIREMENTS ARE COMPLETED can be addressed by use of the Practical Training option.
6. STUDENTS WHO wish to be employed during any given semester and who for some legitimate academic reason (e.g., the lack of appropriate course offerings) CANNOT TAKE A FULL CREDIT LOAD, and who will be registered for a full load during the subsequent semester, may be approved to work without full registration. In order to process these requests, the Request for Permission to Register less than full-time form should be completed by the student's advisor and submitted to the International Students and Scholars Office. A two-week period for processing is requested.

SPECIAL NOTE: Lack of funds to pay tuition is not in itself sufficient reason to approve work permission without a full-time credit load. All international students provide a financial guarantee prior to approval of their student visa; this guarantee assures sufficient funds for full tuition, including summer.

* Advisor's Manual for Immigration Law, National Association for Foreign Student Affairs.

**The International Students and Scholars Office can process initial Practical Training Applications with little delay. Therefore, decisions need not be made until definite opportunities for employment have been identified.