

Materials Science & Engineering

Graduate Handbook 2010-2011

Last Updated: December 22, 2010

1. Introduction

The Department of Materials Science & Engineering (MSE) offers graduate students the opportunity to conduct state-of-the-art research under the supervision of world-class faculty while pursuing Master of Science or Doctor of Philosophy degrees in the discipline. The UF Graduate Catalog is the University of Florida's official record of graduate policies, critical dates, deadlines, course descriptions and faculty members for master's degree and doctoral degree students. It is the student's responsibility to know and understand these rules. The graduate school catalog may be found at the following link: <http://gradschool.ufl.edu/students/catalog.html> This handbook is provided to MSE graduate students to serve as a companion resource to the University of Florida Graduate Catalog.

For research areas in the department, refer to the Faculty Areas under the Research tab on the MSE website: www.mse.ufl.edu

2. Department Administration

Dr. Simon Phillpot
Chairman
100B Rhines Hall
sphil@mse.ufl.edu
(352) 846-3782

Dr. Elliot P. Douglas
Associate Chairman
100D Rhines Hall
edoug@mse.ufl.edu
(352) 846-2836

John J. Mecholsky, Jr.
Graduate Coordinator
237 Rhines Hall
jmech@mse.ufl.edu
(352) 846-3306

Martha B. McDonald
Academic Coordinator
108 Rhines Hall
mmcdo@mse.ufl.edu
(352) 846-3312

3. Arriving in the Department

Report to 108 Rhines Hall, Academic Services Office (ASO) for check-in and entrance interview

4. Tuition, Fees, and Insurance

- Register on time to avoid unnecessary late fees. Registration and payment deadlines for each semester can be found at the following link: <http://www.registrar.ufl.edu/catalog/adhub.html>
 - Fees for 2010-11 were \$66.31 credit hour for students who entered fall 2010; for students on assistantships taxes will be withheld
 - Pay your portion of fees before the fee payment deadline even if your tuition waiver has not been processed; this will insure you will not be assessed late payment fees. The ASO will not process petitions for late fee payments without an extenuating circumstance
- Most students on funding (who receive tuition waivers from UF) are required to pay non-matriculation fees each term

- Students on appointments will receive health insurance from UF effective fall 2010. For enrollment information in Gator Grad Care, please refer to the Human Resources Website: <http://www.hr.ufl.edu/benefits/gatorgradcare/default.asp>
- International students may refer to the insurance guidelines on the UFIC website: <http://www.ufic.ufl.edu/issresources/insurance.htm>
- Graduate Research Assistantship (GRA)
- Notify ASO after obtaining any type of funding

5. Internships and Curricular Practical Training (CPT)

- Complete and submit the EGN5949 - Request for Internship form with your letter of offer from the company. The completed form must be submitted no later than two weeks prior to the last day of classes in fall, spring, or summer C. The form may be found at the following link: http://www.mse.ufl.edu/index.php?option=com_ckforms&view=ckforms&id=9&Itemid=3
 - If approved, ASO will give you permission and e-mail you instructions for registering for EGN5949
 - It is the student's responsibility to register for EGN5949 and pay the tuition by the UF deadlines. UF Academic Deadlines may be found at the following link: <http://www.registrar.ufl.edu/catalog/adhub.html>
- International students wishing to register for internship credits must also follow the guidelines set by the University of Florida International Office (UFIC) for Curricular Practical Training (CPT). These guidelines, instructions and forms may be found on the UFIC website: www.ufic.ufl.edu
- In addition, students and their employers must fill out evaluation forms no later than the last day of classes for the term for grading purposes. You may find both forms under the EGN5949 Practical Work in Materials Science and Engineering section at the following link: http://www.mse.ufl.edu/index.php?option=com_content&view=article&id=25&Itemid=25

6. College Achievement Award

Qualified out-of-state and international students, who are not on traditional funding, may be awarded partial financial support the College Achievement Award (CA). The following rules apply to the CA:

- No other funding: i.e., assistantship, fellowship, etc. concurrently
- May only be used for up to 30 credit hours within the first two years of enrollment at the University of Florida
- Students pay a set portion of their fees per credit hour; this amount is provided in the original offer letter if you were eligible and awarded a CA
 - The student's portion of their fees for the 2010-11 academic year is \$595.00 per credit hour. Pay your portion of fees before the fee payment deadline even if your CA has not been processed; this will insure you will not be assessed late payment fees. UF Academic

Deadlines may be found at the following link:
<http://www.registrar.ufl.edu/catalog/adhub.html> ASO will not process petitions for late fee payments.

- Notify ASO after obtaining any type of funding
 - Graduate Research Assistantship (GRA)
 - External Fellowship
- GPA requirements for financially-supported students; failure to maintain the appropriate grade point average (gpa) may result in loss of funding
 - Minimum 3.0 departmental gpa (designated courses with EMA prefix or other courses taught under departmental schedule: i.e., ECH6726 or ECH6727)
 - Minimum 3.0 graduate cumulative gpa

7. Graduate Assistants United

UF Graduate Assistants United (GAU) represents all graduate assistants employed by the University of Florida GAU bargains for tuitions waivers, health benefits, improved working conditions and pay increases. It also represents graduate assistants in workplace disputes and protects their rights as state employees. To view the collective Bargaining Agreement, visit the following link:
<http://www.ufgau.org/gau%20docs/Contract.pdf>

Frequently referred sections of the GAU contract are:

- Time Worked – Article 6
- Termination – Article 2
- Grievance Procedures – Article 11

8. Curriculum Planning

The responsibility of every student's curriculum planning will rest on the student and his/her advisor/supervisor. If you have not joined a faculty member's group, then you will see Dr. John J. Mecholsky, Jr. (100 Rhines Hall) for advisement to seek approval to have your registration hold removed.

- Register properly each semester for your degree program in person with your advisor or electronically
 - Consult their isis degree audit each semester prior to registering for courses
 - In Person – Download form from MSE website and obtain signature
 - Electronically – Electronic Advisement Form on MSE website

9. Academic Requirements: PhD, MS Non-Thesis, MS Thesis

- Phd and MS Thesis students must form their Supervisory Committee no later than the end of their second semester of study or after 12 credit hours in order to be able to register for a third semester.
- Progression to Graduation – Every student is expected to make satisfactory progress toward graduation each semester. Students who fail to make satisfactory progress may be required to seek advisement, mandated to meet specific conditions in order to continue in the major, or denied further registration in the department.
 - Additional Progression Standatds: All MSE students must meet these standards:
 - Maintain a grade point average (gpa) of 3.0 or higher
 - Probation: students who fail to maintain a 3.0 gpa are placed on departmental probation and are not eligible for funding. Probation contracts must be completed with ASO by the end of drop/add. Students who enter probation may be eligible for a one-time petition to maintain funding in the first semester of probation.

PhD

- Required Credit Hours: 90 beyond the bachelor’s degree
- Required: 18 hours EMA5000-6000 level (base-count hours) courses with a minimum grade of C or better
- Maintain a minimum 3.0 departmental gpa (designated courses with EMA prefix or courses taught under departmental schedule: i.e., ECH6726 or ECH6727)
- Maintain a minimum 3.0 cumulative gpa
- Maximum 9 credit hours of coursework outside the department
- Maximum: 8 credits of EMA6905 – Individual Work
- Maximum: 5 credits of EMA6910 – Supervised Research
- Transfer credits – up to 30 credits of graduate-level B or better graded coursework from a Masters degree at another university may be considered for transfer to count towards the PhD degree with approval from the graduate coordinator. In addition per the grad school catalog, “All such transfer requests must be made by petition of the supervisory committee no later than the third term on Ph.D. study.”
- Time Limitations –
 - Qualifying Exam – Per the grad school catalog, “All work for the doctorate must be completed within 5 calendar years after the qualifying examination or this examination must be repeated.”
 - Admission to Candidacy – Per the grad school catalog, “All work for the doctorate must be completed within 5 calendar years after the qualifying examination or this examination must be repeated.”
 - Final Exam – Per the grad school catalog, “The defense should be no more than 6 months before the degree award.

- Supervisory Committee – must be formed by the end of the 2nd semester or completion of 12 credit hours. Consists of 5 members who hold graduate faculty status with the Graduate School. In addition, the supervisory committee must be in place in order to sit for the written Qualifying Examination which is taken at the beginning of your first summer as a student in the MSE department.
 - 4 Internal MSE members
 - Chair
 - 3 additional MSE graduate faculty
 - 1 external member; this individual cannot hold MSE status
 - To form the committee, students must do the following:
 - Go to the MSE website: www.mse.ufl.edu
 - Click on Students in the menu bar and highlight Forms
 - In the General Forms section under Graduate Students in the Supervisory Committees/Defenses section click on Supervisory Committee Form
 - Fill out the form and obtain signatures from all faculty members agreeing to be on your committee
 - Return the form to ASO for processing

Purpose of qualifying exam

The PhD qualifying exam has three purposes:

- Ensure students have a broad, fundamental knowledge in Materials Science and Engineering
- Ensure students have a depth of knowledge within their specialty
- Ensure that students have the ability to think critically within the field of Materials Science and Engineering, i.e. to formulate a significant problem, to ask the right questions to solve that problem, and apply the correct tools to solve that problem.

Written Qualifying Exam

Item 1 is tested through a written exam, which you must take at the beginning of your first summer semester at UF. In addition, you must be registered as a student for the summer A or C semesters. The exam is based upon two courses which are taught in the department, Advanced Materials Principles 1 during the fall semester and Advanced Materials Principles 2 in the spring. These courses are not required, and you may choose to study for the qualifying exam on your own without taking the courses.

The written exam is designed to take 2 ½ hours, but you will be provided with 5 hours to complete it. The exam consists of 10 questions, of which you must answer 8. Questions will be graded solely on a pass/fail basis. You must pass 6 of the questions to pass the exam. If you do not pass on your first attempt, you may take the exam again at the beginning of the following fall semester. Note that the

exam in the fall is only for students who have failed their first attempt in the summer. If you do not pass the second attempt you will not be admitted to PhD candidacy, which means you will not be able to obtain a PhD from our department.

Proposal Defense

Items 2 and 3 are tested by having you write and defend an original research proposal. The proposal topic can be related to your anticipated PhD dissertation research topic, but must contain original ideas/hypotheses//research plans independent of input from your advisor. The proposal serves to test your ability to formulate a significant problem, to ask the right questions to solve that problem, apply the fundamentals to your problem, and to apply the correct tools to solve that problem.

You should present the written proposal to your committee at least one week before the defense date. At the proposal defense you will present your proposal and answer questions about your proposal from your committee. The committee may also question you on topics within your specialty that may not be directly part of the proposal, but which represent knowledge required within that specialty. The scope of this examination will be determined by the PhD committee (i.e., there is no list of required areas). You should discuss the scope of the proposal defense with your advisor if you have any questions.

Passing of the proposal requires a unanimous vote of the committee. The proposal will be graded solely on a pass/fail basis. Passing cannot be subject to any additional conditions, such as additional coursework. If you fail the proposal defense, you may make a second attempt. The second attempt must occur in the semester following the first attempt. If you do not pass the second attempt you will not be admitted to PhD candidacy, which means you will not be able to obtain a PhD degree from our department. The first attempt at the proposal defense must be within 24 months of the date of the first day of classes of your first semester enrolled in MSE as a graduate student (even if you were initially enrolled as an MS student).

The written exam must be taken no later than the beginning of your first summer as a graduate student in the Department of Materials Science and Engineering. If you fail the first attempt, your second attempt must occur no later than early in the fall semester.

Proposal Defense – Complete the online form at least five business days prior to the defense, by following the steps below:

- Go to the MSE website: www.mse.ufl.edu
 - Click on Students in the menu bar and highlight Forms
 - Click on Admission to Candidacy in the Supervisory Committees/Defenses section

Proposal Defense date

- Entire Supervisory Committee must be present to examine the student
 - Chair and external may not be substituted
 - Two internal MSE members may be substituted if necessary
 - On the day of the defense the student's exam paperwork file and faculty signature page must be picked up by a faculty member from the ASO and returned within 10 business days upon completion. If signed forms are not returned within the time frame, then ASO will process as a failed examination

Admission to PhD Candidacy

- After successful completion of the written qualifying exam, topic approval and the proposal defense, a PhD student will be admitted to candidacy
- The following semester students should register for EMA7980, Doctoral Research, for any research hours; the graduate school requires a minimum of two semesters of EMA7980 to complete the degree

Guidelines for PhD Dissertation Defense

- Notify the ASO at least five business days prior to any defense by following the directions below:
 - Go to the MSE website: www.mse.ufl.edu
 - Click on Students in the menu bar and highlight Forms
 - In the Graduate Students section under the heading Supervisory Committees/Defenses, click on Final Examinations (MS-Thesis or PhD)
 - Fill out the form and submit online
 - Note: if you are using a substitute for any of the internal members please note on the form "Dr. Phillipot substituting for Dr. Douglas"
- Defense Date
 - Entire supervisory committee must attend and examine the student
 - Chair and external may not be substituted
 - Two internal MSE members may be substituted if necessary
 - On the day of the defense the student's exam paperwork file and faculty signature pages must be picked up by a faculty member from ASO and returned within 10 business days upon completion. If signed forms are not returned within the time frame, then ASO will process as a failed examination.
- Refer to the ETD website for submission information and current deadline dates. ETD site is located at: <http://gradschool.ufl.edu/> then click on Graduate Editorial and then click on Deadlines

- Original ETD signature pages are processed by ASO
 - Forms will be included in the packet for your defense
 - Forms not signed and returned to ASO with the defense paperwork are the student's responsibility to return to ASO no later than two business days prior to the grad school deadline for final submission of the dissertation

MS Non-Thesis

- Required Credit Hours: 30 beyond the bachelor's degree
- Required: 18 hours EMA5000-6000 level (base-count hours) courses with a minimum grade of C or better
- Maintain a minimum 3.0 departmental gpa (designated courses with EMA prefix or courses taught under departmental schedule: i.e., ECH6726 or ECH6727)
- Maintain a minimum 3.0 cumulative gpa
- Maximum 9 credit hours of coursework outside the department
- Maximum: 6 credits of EMA6905 – Individual Work
- Maximum: 6 credits of S/U work (includes max 5 credits of EMA6910 – Supervised Research)
- Transfer credits – up to 9 credits of graduate-level B or better graded coursework from a Masters degree at another university may be considered for transfer to count towards the MS degree with approval from the graduate coordinator. In addition per the grad school catalog, "Petitions for transfer of credit for a master's degree must be made during the student's first term of enrollment in the Graduate School."
- Time Limitations – all work, including transferred credits counted towards the master's degree, must be completed during the seven years immediately preceding the date on which the degree is awarded
- MSN Non-Thesis Paper
 - Go to the MSE website: www.mse.ufl.edu
 - Click on Students in the menu bar and highlight Forms
 - In the Graduate Students section under the heading Supervisory Committees/Defenses, click on MSN Non-Thesis Guidelines
 - All MSN Non-Thesis Papers will be reviewed by the graduate coordinator; these should be emailed to him no later than two weeks prior to the last day of classes for the term

MS Thesis

- Required Credit Hours: 30 beyond the bachelor's degree
- Required: 12 hours EMA5000-6000 level (base-count hours) courses with a minimum grade of C or better

- Maintain a minimum 3.0 departmental gpa (designated courses with EMA prefix or courses taught under departmental schedule: i.e., ECH6726 or ECH6727)
- Maintain a minimum 3.0 cumulative gpa
- Maximum 9 credit hours of coursework outside the department
- Maximum: 6 credit hours of EMA6971 – Master’s Research
- Maximum: 8 credits of EMA6905 – Individual Work
- Maximum: 8 credits of EMA6938 – Special Topics
- Maximum: 6 credits of S/U work (includes max 5 credits of EMA6910 – Supervised Research)
- Transfer credits – up to 9 credits of graduate-level B or better graded coursework from a Masters degree at another university may be considered for transfer to count towards the MS degree with approval from the graduate coordinator. In addition per the grad school catalog, “Petitions for transfer of credit for a master’s degree must be made during the student’s first term of enrollment in the Graduate School.”
- Time Limitations – all work, including transferred credits counted towards the master’s degree, must be completed during the seven years immediately preceding the date on which the degree is awarded
- Supervisory Committee – must be formed by the end of the 2nd semester or completion of 12 credit hours. Consists of 3 members who hold graduate faculty status in MSE with the Graduate School.
- To form the committee, students must do the following:
 - Go to the MSE website: www.mse.ufl.edu
 - Click on Students in the menu bar and highlight Forms
 - In the General Forms section under Graduate Students in the Supervisory Committees/Defenses section click on Supervisory Committee Form
 - Fill out the form and obtain signatures from all faculty members agreeing to be on your committee
 - Return the form to ASO for processing

Guidelines for MS Thesis Defense

- Notify the ASO at least five business days prior to any defense by following the directions below:
 - Go to the MSE website: www.mse.ufl.edu
 - Click on Students in the menu bar and highlight Forms
 - In the Graduate Students section under the heading Supervisory Committees/Defenses, click on Final Examinations (MS-Thesis or PhD)
 - Fill out the form and submit online
 - Note: if you are using a substitute for one of the internal members please note on the form “Dr. Phillipot substituting for Dr. Douglas”
- Defense Date
 - Entire supervisory committee must attend and examine the student

- Chair and external may not be substituted
- One internal MSE members may be substituted if necessary
 - On the day of the defense the student's exam paperwork file and faculty signature pages must be picked up by a faculty member from ASO and returned within 10 business days upon completion. If signed forms are not returned within the time frame, then ASO will process as a failed examination.
- Refer to the ETD website for submission information and current deadline dates. ETD site is located at: <http://gradschool.ufl.edu/> then click on Graduate Editorial and then click on Deadlines
 - NOTE: The first submission for thesis students is a defended thesis
- Original ETD signature pages are processed by ASO
 - Forms will be included in the packet for your defense
 - Forms not signed and returned to ASO with the defense paperwork are the student's responsibility to return to ASO no later than two business days prior to the grad school deadline for final submission of the dissertation

10. Conversion from MSN to either MS Thesis or PhD

Unless students are admitted directly to the PhD program, which is explained in the original offer letter, they are admitted to the Master of Science Non-thesis (MSN) coursework program. Research **cannot** be conducted as a MSN student. Upon enrollment students may seek an advisor and request for their file to be reviewed to change from MSN to either a MS Thesis or PhD student. To request for this the following must be done:

Both the student and the advisor must send emails to ASO requesting the file to be reviewed for change from MSN to either MS thesis or PhD

11. Graduation – Complete a graduation check with ASO the term before you expect to graduate

- Apply for your degree by submitting an online degree application through www.isis.ufl.edu and clicking on Degree Application by the University Deadline: deadlines may be found at the following link: <http://www.registrar.ufl.edu/catalog/adhub.html>
- Comply with the graduate rules and graduate school thesis/dissertation and final examination deadlines
- Register for a minimum of three credits of coursework which will count towards your degree, in final term for fall/spring graduation (minimum of two credits for summer)
 - PhD students – EMA7980
 - MSN students – seek advice from ASO

- MS thesis students – EMA6971
- Complete the departmental employment questionnaire and exit interview and return them to ASO no later than the last day of classes for the term. To obtain these forms, follow the directions below:
 - Go to the MSE website: www.mse.ufl.edu
 - Click on Students in the menu bar and highlight Forms
 - In the Graduate Students section under the heading Exit Interview, download both the Exit Checklist and Employment Questionnaire
 - Fill both forms out, obtain the appropriate signatures, and return the forms to ASO no later than the last day of classes for the term
- For international students planning on seeking Optional Practical Training (OPT) – Students must submit an OPT Confirmation Letter Request and schedule an appointment with the International Office. Students must submit the letter request a minimum of five business days prior to their appointment with the International Office. To submit the form online, follow the directions below:
 - Go to the MSE website: www.mse.ufl.edu
 - Click on Students in the menu bar and highlight Forms
 - In the General Forms section click on OPT Confirmation Letter Request
 - Fill out the form and then click submit. ASO will email you when the letter is ready for you to pickup for you to obtain your advisor's signature on the form