



The Foundation for The Gator Nation

Materials Science & Engineering (MSE)

Graduate Program Guidelines

Graduate Handbook

2017-2018

Effective from 8/15/2017

This Guide contains information that supplements the University's Graduate Catalog which is the primary document governing all academic programs. Although every effort has been made to maintain accuracy, the Materials Science and Engineering Department reserves the right to correct errors when found, without further notice to students. The presence of errors will not affect the application of the rules and requirements applicable to all students.

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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 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 this link: <http://graduateschool.ufl.edu/academics/graduate-catalog/>.

The MSE Graduate Handbook is provided to all MSE graduate students to serve as a companion resource to the University of Florida Graduate Catalog. It is the responsibility of the student to be familiar with both publications and to adhere to the stated rules.

It should be noted that for all graduate students, the contract for UF Graduate Assistants United can be found at this link <http://ufgau.org/>.

1.1. Department Education Mission

The mission of the Materials Science and Engineering Department (MSE) is to educate students with strong engineering and science backgrounds for Master of Science or Doctor of Philosophy degrees in Materials Science & Engineering so that they can productively apply their training to the solution of engineering problems in all materials related fields.

1.2. Materials Science & Engineering Graduate Program Objectives

Provide students with a strong foundation of materials science & engineering and specialized knowledge, and experience in at least one of the core areas: Biomaterials, Ceramics, Computational Materials, Electronic Materials, Metals, and Polymers.

Provide students with the ability to apply fundamental engineering principles to identify, analyze, and solve scientific and engineering problems for the design and application of materials.

Provide students with the ability to design and conduct scientific and engineering experiments, and to analyze and interpret the resulting data.

Provide students with experience and understanding of design requirements and constraints in the science and engineering environment, including technology transfer.

Provide students with the skills needed to communicate effectively, work collaboratively, and understand their professional and ethical responsibilities and the impact of significant engineering solutions in a societal and economic context.

The field of materials science & engineering is highly interdisciplinary and collaborative, with interactions with other engineering and science disciplines and with professional, engineering, and clinical practice. As such, the graduate programs in MSE benefit from other departments in the Herbert Wertheim College of Engineering (WCOE), College of Liberal Arts and Sciences (CLAS), College of Medicine (COM), and College of Dentistry (COD) acting as partners in the education of Materials Engineers and Scientists.

2. Graduate Faculty

2.1. Department Administration

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2.2. MSE Graduate Faculty

The current tenure/tenure track faculty of the MSE department and their contact information are provided on the MSE website: <http://www.mse.ufl.edu/people/mse-faculty/>.

3. Graduate Programs

The University of Florida's Materials Science and Engineering (MSE) graduate program offers students a world-class education in a world-class research environment. We offer two graduate degrees: Master of Science and Doctor of Philosophy.

Our MSE graduate program includes more than 40 graduate faculty members across multiple colleges and departments and numerous research institutes. Our faculty routinely conduct multi-disciplinary research with researchers in other departments. This provides our graduate students exposure to a broad spectrum of concepts and skills, access to state-of-the-art research instrumentation, and the experience of a vibrant collaborative culture.

MSE graduate students master a set of core concepts and principles critical to a fundamental understanding of materials science and engineering, but also have tremendous flexibility in designing a sequence of coursework and research.

3.1. Common Curriculum and Core Courses

Four graduate core courses are required for all MSE graduate degrees:

- EMA 6316: Materials Thermodynamics
- EMA 6313: Advanced Materials Principles 1
- EMA 6136: Diffusion, Kinetics, & Transport
- EMA 6114: Advanced Materials Principles 2

Additionally, a minimum of 6 credits of MSE elective graduate level-6000 courses are taken based upon a student's specific interests and committee requirements for minor studies.

All graduate students are required to register for "EMA6936: Seminar in Materials Science and Engineering" (1 credit) each semester, unless a student has registered for 9 credits of graded courses in that semester, or is in the final semester before graduation and has received a waiver from the Academic Services Office.

3.2. M.S. Degree Program and Requirements

3.2.1. Course Requirements

The MSE Department offers a Master of Science (M.S) degree, which requires 30 credits of course work. The M.S degree may be thesis or non-thesis. The thesis option requires a minimum of 5 credits of supervised research (EMA 6971). The non-thesis Master course work may include up to 5 credit hours of supervised research (EMA 6910).

In addition to the four core courses and the MSE electives, up to 9 credit hours of 5000-level or higher courses from outside the MSE program can be taken based upon a student's specific interests. In certain cases, 3000 or 4000-level courses may be taken with approval of the graduate coordinator.

For the non-thesis degree, the graduate coordinator is designated as the graduate committee chair. For the M.S. thesis degree, the committee consists of the research advisor and two additional faculty members, all of whom need to be Graduate Faculty in Materials Science and Engineering.

3.2.2. Final Exam

All Master's students (thesis and non-thesis) are required to pass a final examination. The final examination should be no more than 6 months before degree is awarded. The M.S. non-thesis students satisfy this requirement by submitting a technical paper, see <http://www.mse.ufl.edu/masters-non-thesis/>. The M.S. thesis students have thesis defense, which is described in Sec. 3.4.

3.3. Ph.D. Degree Program and Requirements

3.3.1. Course Requirements

The MSE Department offers a Ph.D. degree, which requires 90 credits of course work. In addition to the four core courses, a one-credit professional development course EMA 6920 for is required, which should be taken in the Fall semester of the second year.

3.3.2. Research Advisor and Supervisory Committee

Each Ph.D. student has a supervisory committee whose members guide and supervise the student's research program. This committee is solely responsible for setting specific degree requirements, conducting and reporting on oral examinations, and approving the student's doctoral dissertation. The student should meet at least annually with their supervisory committee to discuss their progress towards the Ph.D. degree.

The student's supervisory committee is usually chaired by his/her research advisor, who must be a Graduate Faculty in Materials Science and Engineering – some 40 faculty – but not necessarily a core faculty member of the MSE department. Students must affiliate with a research advisor within the first semester. The other three members of the supervisory committee are selected by the student and the committee chair and typically complement the student's research interests. One committee member must be from outside the Graduate Faculty of Materials Science and Engineering.

Students need to 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. The Form can be found at <http://www.mse.ufl.edu/academics/mse/general-forms/>. Changes in the membership of the supervisory committee are made by petition to Academic Advising.

3.3.3. Qualifying Exam

Qualifying Exam. The purpose of the Qualifying Exam is to certify that a student possesses the fundamental knowledge and the academic and research skills necessary to complete a Ph.D. thesis. The successful completion of the exam implies that the course work is nearly completed and that other requirements are either completed or nearly complete. In the Ph.D. Qualifying Exam, the students write a Ph.D. research proposal and defend it orally in front of their supervisory committee. In addition, the exam will test knowledge of the four core subjects.

The students have a maximum of two years from the entry to the graduate program and up to two attempts, to pass the Qualifying Exam. It is recommended to take the exam no later than the end of the 5th term (counting the summer term) from the entry to the graduate program. Students converted from the MS program has an extra semester to pass the qualifying exam. The Qualifying Exam is graded pass/fail separately for the writing and oral components. An overall passing grade requires passing both the writing and oral component. All work for the doctorate must be

completed within 5 calendar years after the qualifying examination, or this examination must be repeated.

To select a proposal topic, students should consult with their advisor and supervisory committee. The proposal topic – title and abstract – must be submitted to the supervisory committee at least 4 weeks before the Ph.D. qualifying exam. The abstract should include a brief description of the students' *significant independent intellectual contribution* in formulating the proposed research.

Written Proposal. The proposal should be prepared as to be submitted to a federal agency for consideration and follow guidelines for the proposal summary, description, and references of the National Science Foundation or other federal agencies (NIH, DOE, DOD, *etc.*). Example proposals can be made available by the faculty advisor or by other graduate students. Example proposals may also be available online from some agencies, *e.g.* NIH (<http://www.niaid.nih.gov/researchfunding/grant/Pages/appsamples.aspx>), or for the NSF: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg.

The proposal should present original research is original and lead to new scientific understanding, new properties, or economic benefit. The proposal needs to demonstrate a comprehensive understanding of the literature, describe the tools and techniques to be used to answer the questions raised and how the proposed techniques will specifically answer the questions. The student should discuss the proposal topic and the requirements, expectations and other issues related the qualifying exam with his/her research advisor and the committee. However, the written proposal should be primarily the work of the student. The research advisor will not review or edit the written proposal prior to the submission of the proposal document to the entire supervisory committee.

The document is limited to 20 printed pages including all figures and tables but excluding references. The document should be single-sided with 1 inch margins all around. For the proposal text, 1.5 line spacing and a 12-point font should be used. The following topics should be addressed:

- a) Summary of the proposal (1 page)
- b) Introduction, motivation, problem statement, and significance
- c) Objectives of proposed research
- d) Literature background
- e) Proposed research – tasks and experiments to be carried out to achieve objectives
- f) Description of procedure and methods
- g) Description of preliminary work if applicable
- h) Anticipated outcomes and broader impact
- i) Timeline and required resources
- j) References

The information associated with items b-d above should occupy about a quarter of the proposal description, items e-g should occupy about 2/3 and h-i should occupy about 10% (excluding abstract and references).

The written proposal document must be submitted to the Supervisory Committee at least 5 business days before the presentation and oral examination take place.

Oral presentation and exam. The proposal presentation and oral examination occur in the same session. The exam cannot be held on reading days. The exam may be held during the final exam week if the student does not have any non-research courses that semester, or during academic

breaks with the approval of the Supervisory Committee. The chair and external member of the committee must be physically present at the exam, other can call in remotely.

The proposal presentation should be about 30 minutes in length and complement the written proposal. The presentation should demonstrate to the committee the value of the proposed research and the ability of the student to identify a scientific problem and determine a plan to resolve it. The audience and the committee may ask questions during the presentation or at the end of it. Afterwards, the general audience will be excused.

After the audience is excused, the committee will ask relevant questions to evaluate the students' competency in the chosen field of research and the proposal (presentation and written proposal). In addition, the committee will evaluate the student's competency in the core subjects and graduate level materials science and engineering topics.

Following the oral examination, the student will be excused from the room and the committee will deliberate the student's performance. A pass or fail decision will be made at this time. The written and oral components of the exam will be graded separately. Passing both components is required to pass the Ph.D. Qualifying Exam. The student will be informed of the committee's decision once the deliberation is completed. If a student receives a failing grade in either the written or the oral component, or both, the student can defend the failed component(s) in the next academic term.

If a student in the M.S. program applies to the PhD program and is accepted, the student may elect to take the Qualifying Exam and, upon successful completion, satisfy the Master's Non-Thesis and the Ph.D. Qualifying Exam simultaneously.

Ph.D. students may qualify to apply for a M.S. degree (non-thesis). Application for a M.S. degree should be made at least one semester prior to the semester of anticipated graduation from the Ph.D. program.

3.3.4. Teaching Assistant

In their second or third year, Ph.D. students will also serve as teaching assistants (TA) for two separate courses, with an expected work load of 5 hours per week per course. TA assignments will be given before the beginning of the semester. It is a TA's responsibility to meet with the assigned faculty instructor as soon as the assignment is made to discuss duties and expectations. Possible duties may include, but are not limited to host office hours and review sessions, grade homework and exams, help create homework and exam problems, prepare homework and exam solutions, proctor exams, prepare, copy and distribute classroom materials, and attend the lecture and labs. Under special circumstances and agreed upon by the TA and instructor, the TA can give a lecture.

The TA's performance will be evaluated by both the faculty instructor and the students enrolled in the course. Students who do not receive satisfactory evaluations by the instructor need to repeat the assignment as TA in a future semester. The instructor evaluation will also be forwarded to the TA's research advisor. The TA should communicate regularly and promptly with the instructor to resolve issues related to students' work in the course as well as the performance and duties of the TA. An official grievance process is in place if the TA feels they are being treated unfairly by the students in the course and/or the faculty instructor. The complaint goes to the MSE Graduate Coordinator first, then to the Associate Chair for Academics, and to the Department Chair.

3.4. Thesis Defense

The final Thesis Defense examination for the M.S. (thesis) and Ph.D. degree is in the form of a public defense with open questioning followed by a closed session with private questioning by members of the supervisory committee. At the time of the Thesis Defense, the written dissertation must be completed in all respects and editorially acceptable for final approval, though it may be modified as a result of the exam. It is the responsibility of the student to ensure that all requirements of the Materials Science and Engineering program and the Graduate School have been successfully completed in order to be awarded a M.S. or Ph.D. degree.

The Thesis Defense must be announced online at least one business day prior to the defense. Fill out the electronic form “Final Examinations (M.S.-Thesis or Ph.D.)” found at <http://www.mse.ufl.edu/onpreforms/>. If you have any internal substitutes (maximum of 2), then indicate the substitution on the form. For example, “Dr. Phillipot will substitute for Dr. Perry.” The entire Supervisory Committee must attend and examine the student. External and chair must be physically present at the exam, other can call in remotely. Two internal MSE members may be substituted if necessary. Final examination forms must be returned within 5 business days of the defense or ASO will process as a failed examination

The student must submit the completed Electronic Thesis or Dissertation (ETD) signature page to ASO no later than three business days prior to the Graduate School Editorial Office’s deadline. If the ETD signature page is not completed at the final examination, then the student will be given the ETD page for completion. The defense should be no more than 6 months before the Ph.D. degree is awarded.

The successful completion of the Final Examination must be updated into GIMS by the deadline defined by the UF Graduate School, which is posted on the UF Academic Calendar for each semester. *Note that this deadline is typically several weeks prior to the end of classes for that semester.* It is the student’s responsibility to ensure that their Final Examination Report is submitted to their Supervisory Chair with sufficient lead-time to permit review, feedback, modification, assignment of final grade, submission of Final Examination Report Form, and uploading of this form by the GAO.

If the student receives a U grade in the Final Examination, he/she must retake the exam in the next semester. The Final Examination may be retaken only once. If a second U grade is awarded, the student will be released from the program.

Table I. Summary of the graduate degree requirements.

SCH (Semester Credits Hours) Requirements	Master (Thesis)	Master (Non-thesis)	Doctor of Philosophy
Total SCH	30 ^a	30 ^a	90 ^{a,b}
MSE Core Requirements	12	12	13
MSE Electives	≥6	≥6	≥6
Specialization Electives ^c	≤9	≤9	variable
Supervised Teaching	N/A	N/A	4
Research/Special Project	≤5	0	variable

Supervisory committee members (minimum number)	3	1 ^d	4
Qualifying Exam	None	None	Yes
Final Exam	Oral defense and written thesis	Written ^e	Oral defense and written thesis
Time limit for completing degree	7 years	7 years	5 years ^f

^a Beyond B.S.

^b May include credit hours from Master's program

^c Graduate level coursework outside of MSE approved by graduate coordinator

^d Supervisory Chair only

^e Technical paper graded by Graduate Coordinator

^f From admission to Ph.D. Candidacy, passing Qualifying Exam.

4. Courses and Registration

4.1. Registration Requirements

Full-time registration is usually 6-12 credits, depending on the semester and appointment. Graduate students on appointments as Graduate Research Assistants with a typical FTE of 0.5 are required to register for 9 credits in the Fall/Spring term and 6 in the summer C term (or 3 in summer A and 3 in summer B). Students not on appointment may wish to enroll full time to finish their degrees in the minimum timeframe or may be required to enroll full time by external funding agencies or their academic units. See the MSE ASO or HR for information regarding FTE, required course hour enrollment, and other requirements associated with your appointment.

Registration is restricted and requires a completed *Graduate Online Advising Form*. Prior to each semester a registration hold will be placed on your records. To review your hold screen and to check for additional holds to your record go to Student Self Service (www.student.ufl.edu). To register for classes, you need to fill out and submit the electronic *Graduate Online Advising Form* available at <https://www.mse.ufl.edu/onpremforms/> prior to the published registration deadline (cf. <https://registrar.ufl.edu>). This form will enable the Academic Services Office (ASO) to obtain approval from the Committee Chair or the Graduate Coordinator, lift your registration hold, and register you. Record holds, registration holds, and late registration fees will be enforced. Students need to register on time to avoid unnecessary late fees. Registration and payment deadlines for each semester can be found at this link: <https://catalog.ufl.edu/ugrad/current/Pages/dates-and-deadlines.aspx>. The students need to pay any fees by the fee payment deadline even if a tuition waiver has not been processed. If any late payment fees are assessed, it is the student's responsibility to pay them.

To review the anticipated schedule of courses for an upcoming semester, students should go to <http://www.registrar.ufl.edu/soc/>. Students have access to their degree audit online at www.student.ufl.edu. *Students are ultimately responsible* for ensuring they are on track to finish their degrees.

During the final semester, the student *must* be registered for *at least 3 credits* in fall or spring and

2 credits in the summer in the following courses for each degree option: Master's Non-Thesis students must enroll in course work that counts toward the graduate degree; Master's Thesis students must enroll in EMA 6971; and Doctoral students must enroll in EMA 7980. This minimum final semester registration is applicable to all graduate students. The Graduate School will not accept petitions to this policy. Note that graduate assistants may be required to register for more credits and should see their letter of appointment for guidance.

Graduate students who complete all graduate degree requirements during a given semester, but fail to meet a deadline specified by the Graduate School, may receive their degree in the following semester without registering for the minimum three credits (this is called "clearing prior"). Please see the ASO for specific eligibility requirements defined by the Graduate School.

Graduate students will be evaluated at the end of each semester by the chair of their committee. The form can be obtained online at <http://www.mse.ufl.edu/?p=5046>.

4.2. Courses and Credits

Courses listed at 5000 and above are considered graduate courses and are limited to graduate students. Courses numbered 7000 and above are designed primarily for Ph.D. candidacy students, who have passed their Qualifying Exam.

Generally, graduate courses may not be repeated for additional credit. However, selected courses are designed to be taken multiple semesters. These repeatable courses are designed and typically subjected to a maximum number of credit hours, including courses numbered EMA 6971, EMA 7979, and EMA 7980.

No more than five credits each of EMA 6910 (Supervised Research) and EMA 6940 (Supervised Teaching) may be taken. Course numbers EMA 6971 (Masters Research), EMA 7979 (Advanced Research), and EMA 7980 (Doctoral Research) cannot count towards the Masters Non-Thesis degree. Masters Non-Thesis degree students can take EGN 6913 to do research in a faculty lab. Courses numbered EMA 7979 and EMA 7980 are not eligible to count toward the M.S. degree program.

A maximum of 6 credits of S/U graded work may be counted towards the degree.

If a student lacks instruction in a particular area, the Associate Chair, Supervisor, or Graduate Advisor may suggest course(s) to enhance this student's education to the benefit of that student and his/her matriculation and experience through the Graduate Program in MSE. For these select cases, a course could potentially not be at the graduate level, (but must be at least 3000) and could be credited towards the graduate degree (with an approved petition). *This course, however, must be approved prior to enrollment.*

A Tuition and Fee Calculator is provided by UF at <http://www.fa.ufl.edu/bursar/current-students/>.

4.3. Transfer Credit

Graduate level courses from another university, may be considered for transfer to count towards the M.S. or Ph.D. degree with approval of your supervisory chair or the graduate coordinator. For the M.S. program, up to nine credits may be transferred. For the Ph.D. program, up to 30 credits may be transferred. All work transferred must be coursework taken with a grade of B or better. For Transfer of Credit, students need to contact Academic Services Offices and send the transcript

by email to advising@mse.ufl.edu. The final decision will be made by the graduate school. 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. All work, including transferred credits, counted toward the degree must be completed during the seven years immediately preceding the date which the degree is awarded.

4.4. Add/Drop

Courses may be dropped or added during the drop/add period without penalty; however, students on fellowships or assistantships must clear these changes with their faculty advisor prior to modifications. This period typically lasts five UF calendar days, or two days for summer sessions, beginning with the first day of the semester (exact dates available on www.registrar.ufl.edu). Classes that meet for the first time after the drop/add period may be dropped without academic penalty or fee liability by the end of the next business day after the first meeting of the class. Note, this does not apply to laboratory sections. After this period, a course may be dropped and a W will appear on the transcript. *Students become financially liable for any course added or dropped after the deadline, including students with fee waivers.*

4.5. Retaking Courses

Graduate students may only repeat a course once in which they earn a failing grade. Grade points from both the initial failed attempt and the second attempt are included in computing the grade point average. The student receives credit for the satisfactory attempt only.

5. Grades

The only passing grades for graduate students are A, A-, B+, B, B-, C+, C, and S. *An overall GPA of at least 3.0 must be maintained to stay in good academic standing.* Grade points are not designated for S and U grades and are not used in calculating the grade point average; however, a grade I (incomplete) will convert to a 0.0 credit if not changed within 1 semester. All letter graded courses taken as a graduate student are used in calculating the cumulative grade point average. Letter grades of C-, D+, D, D- or E are not considered passing at the graduate level, although the grade points associated with these letter grades are included in grade point average calculations.

6. Research

All students conducting research in a laboratory must be registered for research credits or on a paid appointment. All researchers must follow appropriate MSE policies for laboratory access (see your Supervisory Chair for guidance). International students that seek to work in a research laboratory at UF, however, are *required to either be enrolled in a research course or be paid for their effort*, to ensure compliance with student visa policies. The specific course number to enroll in order to account for research effort is dependent upon the degree program (MS or PhD) and desired credit. See Section 3.10 for further details regarding appropriate research courses.

Safety and Responsible Conduct in Research training is required *prior* to enrollment in research credit (see Sections 6.1 and 6.2 for details). This is *enforced* for students on NSF, NIH, and USDA awards.

6.1. Safety

The Materials Science & Engineering Department, in collaboration with the Herbert Wertheim College of Engineering, is committed to providing a safe and healthy working and learning environment for all of its students (<https://www.eng.ufl.edu/labsafety/>). Sustaining a culture of excellent laboratory safety starts with rigorous training. To facilitate appropriate training of safety concerns, all MSE students are required to complete a laboratory checklist prior to gaining access to the laboratory:

<https://www.eng.ufl.edu/labsafety/resources/engineering-laboratory-safety-guidelines-and-training-checklist/>.

This checklist outlines required general safety training needed for general work in the building. Additional training will be needed, given the specific research conducted and risk encountered in your work. Guidance on the lab-specific training needed will be provided by your Supervisory Chair, as all Chairs are required to provide a safe working environment, ensure adequate safety training of their personnel, and maintain appropriate safety records for their own labs. Remember that most training is annual, so it must be updated. To further promote a culture of safety, our department has a MSE Student Safety Council (SSC), which is comprised of graduate and undergraduate students, faculty, and the MSE Director of Undergraduate Laboratories; an Engineering Safety Steering Committee serves at the college level. Students are strongly encouraged to join these councils. Any concerns regarding safety or training should be directed to your Supervisory Chair, the SSC, the HWCOE Director of Laboratory Safety, or UF Environmental Health and Safety (<http://www.ehs.ufl.edu/>).

6.2. Responsible Conduct in Research (RCR)

Responsible conduct in research (RCR) is expected for all University of Florida students. Students conducting research will be expected to follow ethical standards when conducting research, from identification of potential conflicts of interest to responsible authorship and publication. To assist in supporting this endeavor, all students enrolled in research credits and students funded by NSF, NIH, or USDA awards must complete the general RCR training:

<http://research.ufl.edu/faculty-and-staff/research-compliance/responsible-conduct-in-research-rcr-training/navigation-to-citi-for-rcr-responsible-conduct-of-research-training.html>.

7. General Information

7.1. Graduate Coordinator

The graduate coordinator is the advisor to all admitted and present UF MSE graduate students who have not yet joined a research group or don't have a research advisor. All UF MSE non-thesis master students are advised by the graduate coordinator. The graduate coordinator helps in planning the courses, advises on certificates, minors, and majors and guides the students in addition to the rules provided by the graduate school and the department. Furthermore, transfer credits are processed. The graduate coordinator is not able to assist applicants or non-admitted students. Admitted international students can get additional letters for US-visa issuance if the US-embassy requires more information than was provided by the UF International Office.

7.2. Academic Services Office

The Academic Services Office (ASO) serves as the graduate advising and administration unit and

is administered by the Associate Chair of MSE and the Academic Advisor. The Academic Advisor serves to assist graduate students in admission, deadlines, course requirements, registration, and routine administrative issues. Inquiries regarding the graduate program should first be made to the Academic Advisor (advising@mse.ufl.edu), which can then be forwarded to the Associate Chair, if needed. The Academic Advisor is available to meet with any student during office hours or by appointment, which can be scheduled by email to advising@mse.ufl.edu.

7.3. MSE Graduate Program Committees

The Associate Chair of MSE oversees the operation of the MSE Graduate Program, is responsible for academic program administration and policy directions, ensuring policy compliance with both MSE and the Graduate School. The admissions committee oversees admission of incoming students. The curriculum committee suggests academic policy changes. The petitions committee reviews student petitions. A student may petition with academic issues by submitting a formal request via the MSE website with the Academic Services Office. Petitions must be formally approved or disapproved by the petitions committee.

7.4. Department Student Council

The purpose of Department Student Council (DSC) is to 1) provide an agency for the coordination of materials science & engineering student activities to promote common goals and interests of the MSE graduate student body, 2) advance and enrich the academic and educational experience of graduate students in the UF MSE Department, and 3) seek the improvement of MSE graduate student education through active communication and representation between MSE students and faculty, and other governing bodies at the University of Florida such as the Graduate Student Council and UF Student Government. All MSE graduate students are welcome to attend DSC meetings and are encouraged to become involved in this organization. See the website for more information: <http://www.mse.ufl.edu/about/societies/>.

7.5. Graduate Guidelines and Catalog Year

The catalog year determines the set of academic requirements that must be fulfilled for graduation from the program. Students graduate under the catalog in effect when they begin enrollment for that degree at UF, provided they maintain continuous enrollment. A catalog year runs from Summer B of one year to Summer A of the next year. Students who are unregistered for 2 or more consecutive semesters must reapply for admission and will be assigned the catalog in effect when enrollment is resumed. Students transitioning to a more advanced degree (e.g. Masters to Doctoral) must follow the catalog year in effect when they begin the new degree program. If a catalog change occurs during the program of a student, the student has the choice to select the current catalog year requirements or remain under the original catalog requirements.

7.6. Graduate Assistantships, Fellowships, and Awards

The Department of Materials Science & Engineering offers Graduate Assistantships to select students in good academic standing. Stipend rates paid are determined by the department and based on graduate standing and degree program. Interested students should follow up with the Academic Services Office (ASO) regarding the availability of assistantships and the procedure for applying. Students are highly encouraged to apply for external fellowships such as NSF, NIH NRSA, NDSEG, DoD, DOE, and DHS. See the MSE website for more information on these opportunities:

<http://www.mse.ufl.edu/fellowships/>.

Out-of-state or international students, who are not on traditional funding, may be awarded partial financial support via the College Award (CA). No other funding, e.g. assistantship and fellowship, may be held concurrently. The students must notify ASO upon receipt of other funding, e.g. fellowship or assistantship. Support for services that do not contribute to their degree program is permitted, e.g., outside employment, temporary Other Personnel Services (OPS) in department. The CA provides for a maximum of 36 credit hours within the first two years of enrollment. Students pay a set rate per credit hour; this amount is provided in the original offer letter. The students must maintain a minimum 3.0 GPA in both the departmental and cumulative courses.

Students can find on-campus jobs through www.jobs.ufl.edu. Graduate students cannot volunteer to work in the department, they must either be compensated for their work in a lab or be registered for research under the faculty member's supervision.

Students appointed as Graduate Assistants or Graduate Fellows are still responsible for paying applicable student fees per semester credit hour. Further, they will be financially liable for excess credits beyond the required registration (see appointment letter for details). If a student on appointment drops below the required registration at any time in the semester, the student becomes financially liable for the entire registration cost.

7.7. Professional Work

Graduate students may receive credit toward their degrees for courses in professional programs (e.g., D.V.M., or M.D.) when their advisors and graduate coordinators certify that the course work is appropriate for their programs and when the students receive permission from the academic units and colleges offering the courses. See the UF Graduate Catalog (Courses and Credits section) for further details.

8. Internships

Students are required to notify ASO and if on funding HR about any internship they plan to accept.

Students may register for internship credits by completing and submitting the internship form at <http://www.mse.ufl.edu/onpremforms/>. The offer letter from the company should be attached. The student needs to have permission from their supervisory committee chair or graduate coordinator if the student has no supervisory committee. ASO will review the form and notify the student via email if the registration is approved or not. If approved ASO will register the student for EGN 5949.

If registered for EGN5949, the following forms should be submitted to ASO electronically no later than a week before classes end for the term registered in order to receive grade for that term:

- EGN5949 Employer's Student Evaluation Form
- EGN5949 Student's Evaluation of Employer

These forms are available at <http://www.mse.ufl.edu/onpremforms/>.

International students can accept internship through Curricular Practical Training (CPT). Instructions for the CPT and the registration requirements can be found at <http://www.ufic.ufl.edu>.

To apply students should follow the registration for internship instructions above by the appropriate deadline: April 1 – summer CPT, July 1 – fall CPT, and November 1 – spring CPT.

Payroll and Tax Information: Students on formal funding (assistantship, fellowship, etc.) should refer to the Tax Office for information on whether taxes will be taken out of their stipends: <http://www.fa.ufl.edu/tax/>.

Graduate Insurance: Students on appointments receiving health care benefits, please refer to <http://www.hr.ufl.edu/benefits/gatorgradcare/> for additional information.

9. Academic Honesty

All enrolled UF students have signed a statement of academic honesty upon enrollment, which commits the student to holding themselves and their peers accountable for maintaining the highest standard of honor (see <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>). This standard is essential to maintain the integrity of the program. Students are expected to work independently on coursework and program examinations, unless specifically authorized by the instructor or supervisor. It is always better to clarify permitted degrees of collaboration than to assume and be incorrect. Plagiarism of any form, from course assignments to doctoral dissertations, is a serious offense and will never be tolerated. Students are responsible for seeking and utilizing resources to understand the definition of plagiarism, see for example:

<https://mediasite.video.ufl.edu/Mediasite/Play/adaa44500eaf460a84f238e6b9a558f9>,
<http://usingsources.fas.harvard.edu/icb/icb.do?keyword=k70847&pageid=icb.page342057>.

Further, students can register for iThenticate, TurnItIn, or other plagiarism detection software to help screen their documents to avoid inadvertent plagiarism. Failure to comply with the honor code will result in disciplinary action that can span from grade penalties up to dismissal from the program.

10. Satisfactory Progress and Scholarship

Every student is expected to make satisfactory progress toward graduation each semester. This includes maintaining a grade point average (GPA) of B (3.0) or higher both cumulatively and in their major (and in the minor, if a minor is declared), the timely meeting of academic milestones, e.g. passing the Qualifying Examination, and obey the Honors Code. Students with a GPA of less than 3.0 GPA may not hold an assistantship or fellowship.

Students who fail to make satisfactory progress may be required to seek advisement and fulfill specific conditions in order to continue in the major, or may be denied further registration in the program. Students who fail to maintain the minimum 3.0 GPA in either the cumulative or departmental courses are placed on Academic Probation and may need to petition to maintain funding.

11. Correspondence and Forms

Students must correspond and comply with outlined policies via electronic or hardcopy means. For electronic communications, all students are provided with a University of Florida email account (ufl.edu) upon entrance to the program. ASO will use this UF account for all official communications. *Students are responsible for promptly and thoroughly reading emails from these accounts and are expected to communicate in a professional manner.* For hardcopy

correspondence, all documents, including forms, should be fully completed and submitted directly to the ASO. To minimize paperwork burden, the ASO encourages electronic submissions (email to advising@mse.ufl.edu) and accepts electronic signatures, unless specifically stated otherwise. Submission of forms may require the student to comply with deadlines. Otherwise financial penalties may occur, e.g. for late registration.

12. Preparation for Final Semester

It is the student's responsibility to ascertain that all requirements have been met and that every deadline is observed. Deadline dates are set forth by the registrar's office (<http://registrar.ufl.edu>) and the MSE department.

Prior to the semester of graduation, students should meet with ASO staff to conduct a graduation check. Students must notify the ASO of graduation plans no later than the Graduate School registration deadline for their program. At the beginning of the final semester, students must also file a degree application online through Student Self Service (<https://student.ufl.edu>) and must meet minimum registration requirements. Master's Thesis and PhD students should obtain the checklist (<http://graduateschool.ufl.edu/graduate-life/graduation/graduation-checklist/>) for their relevant degrees from the Graduate School website to ensure compliance with MSE and Graduate School requirements and final examination deadlines posted at <http://graduateschool.ufl.edu/graduation/thesis-and-dissertation>.

Students must register for the appropriate credits for their degree. Students receiving a tuition waiver (GRA, GSPA, etc.) must follow their tuition waiver requirements (typically 9 or 12 credits in spring/fall and 6 in summer).

PhD students without a tuition waiver need to register for a minimum of 3 credits in EMA7980 (Doctoral Research) if the final semester is fall or spring and 2 credits if the final semester is summer.

MS Non-thesis students without a tuition waiver need to register for a minimum of 3 credits, which are applicable to the degree if the final semester is fall/spring and 2 credits if the final semester is summer. Applicable courses include EMA5000-6000 level courses, courses outside the department if the maximum has not been taken, EMA6910 (Supervised Research) if the maximum S/U credit limit (6 credit hours) and the maximum credit limit of EMA6910 (5 credit hours) has not been reached. Non-thesis M.S. students need to submit a technical paper in their final semester, see <http://www.mse.ufl.edu/masters-non-thesis/>.

MS Thesis students without a tuition waiver need to register for a minimum of 3 credits in EMA6971 (Master's Research) if the final semester is fall/spring or 2 credits if the final semester is summer.

If this is a terminal degree, then student must complete the Departmental Employment Questionnaire and Exit Interview Checklist and return them to ASO no later than the last day of classes for the term. These forms can be found on the Student-Forms page of the MSE website <https://mse.ufl.edu/forms>.

For deadline information regarding submissions to the Graduate Editorial Office, please visit: <http://helpdesk.ufl.edu/application-support-center/graduate-editorial-office/>. When the dissertation or thesis is ready to be put in final form, the following website offers formatting information: <https://asc.helpdesk.ufl.edu/>.

It is solely each student's responsibility to ensure that all required forms are submitted in accordance with Department and Graduate School deadlines.

13. Student Responsibility

The student is responsible for becoming informed and observing all program regulations and procedures. The student must be familiar with UF Graduate Catalog general regulations and requirements, specific degree program requirements, and offerings and requirements of the major academic unit. *Rules are not waived for ignorance.* It is also the student's responsibility to check their UF email on a regular basis. Failure to do so will not be a valid excuse for missing deadlines. Under no circumstances will a faculty advisor be responsible for meeting student deadlines.

14. Appendix

14.1. Approved Specialty Courses

Students may designate specialty courses from the following list to fulfill the specialty requirement for Ph.D. degree.

Ceramics:

- EMA 6109: Physical Chemistry of High Temperature Materials
- EMA 6319: Applied Colloid Science
- EMA 6445: Electroceramics
- EMA 6446: Solid State Ionics
- EMA 6448: Ceramic Processing
- EMA 6540: Fundamentals of Crystallography
- EMA 6715: Fracture of Brittle Materials
- EMA 6804: Quantum Methods in Computational Materials Science

Electronic Materials:

- EMA 6110: Electron Theory in Solids
- EMA 6616: Advanced Electronic Material Processing
- EMA 6412: Synthesis and Characterization of Electronic Materials
- EMA 6416: Organic Electronics

Metals:

- EMA6625: Advanced Metals Processing
- EMA6510: Survey of Materials Analysis Techniques
- EMA6106: Advanced Phase Diagrams
- EMA6107: High Temperature Alloys

Polymers:

- EMA 6165: Polymer Physical Science
- EMA 6461: Polymer Characterization
- EMA 6581: Polymeric Biomaterials

Biomaterials:

- EMA 6165: Polymer Physical Science
- EMA 6461: Polymer Characterization
- EMA 6581: Polymeric Biomaterials
- EMA 6580: Science of Biomaterials

14.2. Course Checklists

Checklist M.S. (non-thesis) Program

MSE Core (12 credits total)	Credits	Semester/Year	Grade
<input type="checkbox"/> EMA 6313 Advanced Materials Principles 1	3		
<input type="checkbox"/> EMA 6414 Advanced Materials Principles 2	3		
<input type="checkbox"/> EMA 6316 Materials Thermodynamics	3		
<input type="checkbox"/> EMA 6136 Diffusion, Kinetics, & Transport	3		

MSE Electives (6 credits minimum)^a	Credits	Semester/Year	Grade
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			

^a Any graduate-level EMA-prefix course (including S/U graded course).

Specialization Electives (9 credits maximum)^b	Credits	Semester/Year	Grade
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

^b Any 5000-level or higher course in the College of Engineering (3000 and 4000 only with special approval). Excludes S/U graded courses.

Checklist M.S. (thesis) Program

MSE Core (12 credits total)	Credits	Semester/Year	Grade
<input type="checkbox"/> EMA 6313 Advanced Materials Principles 1	3		
<input type="checkbox"/> EMA 6414 Advanced Materials Principles 2	3		
<input type="checkbox"/> EMA 6316 Materials Thermodynamics	3		
<input type="checkbox"/> EMA 6136 Diffusion, Kinetics, & Transport	3		

MSE Electives (6 credits minimum)^a	Credits	Semester/Year	Grade
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			

^a Any graduate-level EMA-prefix course (including S/U graded course).

Specialization Electives (9 credits maximum)^b	Credits	Semester/Year	Grade
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

^b Any 5000-level or higher course in the College of Engineering (3000 and 4000 only with special approval). Excludes S/U graded courses.

Thesis credits (5 credits)^c	Credits	Semester/Year	Grade
<input type="checkbox"/> EMA 6971 Master's Thesis			
<input type="checkbox"/> EMA 6971 Master's Thesis (graduating term)			

^c M.S. Thesis students must enroll in MSE 6971 during their final graduating term for a minimum of 3 credits for Fall/Spring or 2 credits for Summer.

Checklist Ph.D. Program

MSE Core (13 credits total)	Credits	Semester/Year	Grade
<input type="checkbox"/> EMA 6313 Advanced Materials Principles 1	3		
<input type="checkbox"/> EMA 6414 Advanced Materials Principles 2	3		
<input type="checkbox"/> EMA 6316 Materials Thermodynamics	3		
<input type="checkbox"/> EMA 6136 Diffusion, Kinetics, & Transport	3		
<input type="checkbox"/> EMA 6920	1		

MSE Electives (6 credits minimum)^a	Credits	Semester/Year	Grade
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			
<input type="checkbox"/> EMA			

^a Any graduate-level EMA-prefix course (including S/U graded course).

Specialization Electives^b	Credits	Semester/Year	Grade
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

^b Any 5000-level or higher course in the College of Engineering (3000 and 4000 only with special approval). Excludes S/U graded courses.

14.3. Degree Timeline and Deadlines for Ph.D. students

The following table illustrates a typical timeline to the Ph.D. degree.

Time	Milestone
1 st semester	Select of a doctoral advisor
2 nd semester	Pass graduate core courses (B or better)
End of 1 st year	Ph.D. supervisory committee
2 nd year	Pass graduate qualifying examination / admission to candidacy
Annually after qualifying exam	Annual research update with supervisory committee
Within 6 months of defense	Sufficiency meeting with supervisory committee
4 th -5 th year	Ph.D. dissertation defense