

Milestones/Forms for a Master's Degree
Department of Chemical, Biological, and Materials Engineering

1. First semester.

- Meet with Graduate Program Advisor to determine course selection. Prepare a course plan towards graduation.
- Complete Graduate Student Advising form. After the form is signed, submit this form to the Graduate Advisor.

If you are opting for a thesis option then the Major or Co-major professors should be appointed and must be a member of the tenured or tenure-track faculty of ChBME.* Please note that the Thesis Major Professor must be appointed before you will be permitted to take thesis credit hours. All thesis credit hours must be registered with the Thesis Supervisor.

**See graduate advisor for additional guidelines on a thesis supervisor from outside the department.*

2. Semester before graduation

- Beginning of semester:
If you are opting for a thesis option then a Thesis Supervisory Committee, consisting of a Major Professor (Thesis Advisor) and two other members of the USF graduate faculty, shall be formally appointed. **Fill the Supervisory Committee Appointment form and file it with the department. It is required by the college.**

To change a committee follow the University policies outlined in the graduate catalog. You may not make changes to your committee six weeks before presentation.

Non-thesis students in MSCH degree program should register for the FE exam for timely completion.

- Follow the general guidelines in **College of Engineering Thesis / Dissertation Format Guide** available at: <http://www.usf.edu/engineering/graduate/index.aspx>

Pay special attention to deadlines for College and University

Your committee has to be appointed by this time if you are a thesis student.

3. Semester of graduation

- Register for at least 2 hours. Thesis students need to register for 2 thesis hours even if no other classes are being taken.
- Ensure that the Graduate Certification checklist with any supporting documentation is complete and submitted to ChBME office for mid-semester check.
- Apply for graduation online on OASIS
- Thesis option students should arrange for a Departmental Defense/Seminar through the ChBME office after determining a suitable time in consultation with their Thesis Supervisor and committee members.
- Thesis students need to submit the following forms (require signatures from the supervisory committee)
 - Successful Defense form
 - Assessment forms
 - Certificate of Approval of Thesis form (<http://www.grad.usf.edu/student-forms.php>).
- Students in a non-thesis programs must complete the comprehensive exam requirement (for MSCH degree provide FE exam results to Graduate coordinator; for MSME degree see the guidelines at the end of this document)

UNIVERSITY OF SOUTH FLORIDA
College of Engineering
SUCCESSFUL DEFENSE FORM

The undersigned verify that the final oral defense of the thesis/dissertation has been successfully completed by the following student.

	Name <i>(print or type clearly)</i>	USF ID#	Degree
Student		U	

Department	
Thesis/Dissertation Title	
Defense Date	

Examining Committee

	Name <i>(print or type clearly)</i>	Signature of Approval	Date Signed
<input type="checkbox"/> Major Professor			
<input type="checkbox"/> Co-Major Professor			
<input type="checkbox"/> Co-Major Professor			
<input type="checkbox"/> Member			
Member			
Member			
Member			
Member			
Member			
Member			
Member			
Chairperson of Defense (PhD Defense only)			

Student emails completed form to Catherine Burton in College of Engineering Dean's Office, sburton@usf.edu

Assessment of Master's and Doctoral Students

Candidate: Please collect these and turn these into the ChBME Office immediately after the exam.

To be completed by each of the Examining Committee Members at the time of MS or PhD Defense

Instructions to the Student:

Complete Section 1, then give a copy to each member of the committee to complete at the end of examination.

Section 1.
Name:
Degree Sought:
Title of Thesis or Dissertation:
No of publications based on your research in refereed journals:
No of conference presentations based on your research :

Section 2. (To be completed by each committee member.).

Please assess the student's ability by checking the box (leave blank if unable to evaluate). 1 = Poor and 5 = Excellent

Item	1	2	3	4	5
Assessment of the student's ability to ability to use modern research methods to conduct an in-depth study of a current issue in their chosen area of research. (ability to formulate a hypothesis, verify the hypothesis, conduct necessary experiments/modeling, analyze the results and come to appropriate conclusions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment of the student's ability analyze complex and multi-faceted data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment of student's ability to give oral technical presentations (delivery, quality of slides used, answer questions, timeliness etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment of student's ability to write technical reports (quality of writing, style, grammar, correct punctuation, correct citations, clear abstract etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment of student's ability to use modern computational and/or modeling tools for analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment of student's ability to do a critical review of the literature in their chosen area of specialization (Did the student conduct a complete and thorough study of the literature, analyze prior work, summarize it succinctly?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment of the student's contribution to advance the body of knowledge in their chosen area of specialization (Was there an original contribution to the field, has it been validated by publications in the appropriate forum?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comprehensive Exam for non-thesis MS in Materials Science & Engineering (MSE)

The intent is to demonstrate an increased awareness of the subject through a detailed exploration of a peer-reviewed journal article of special interest to you. The project gives you an opportunity to learn material not discussed in class and to share your knowledge with our faculty with expertise in Materials Science through a formal written report.

- select 3 articles from the recent literature (not more than 5 years old) which is on a MSE research or R&D topic.
The articles should be original research articles, with an experiment carried out or a new device developed and tested (so no review articles, book chapters or short communications). The articles should not be ones that you had previously reported on in any of your classes.
- submit selected articles to the MSE coordinator, who along with other faculty in the program will select one from the three submissions.

Once the selection is returned to you, study the paper and critically review it, including some verification of results given if possible. Check the accuracy of conclusions drawn. Look for possible mistakes including misleading statements, i.e., claims that go beyond the data presented, improper citations, and mistakes in graphs, figures and tables. Check relevant references and examine them to see if there has been a duplication of effort and if the work presented is original. Check other publications from the same authors in the same area to see if they have extended their work appropriately and effectively.

Basic Guidelines

- a) The project should be relevant to the subject of contemporary Materials Science and Engineering
- b) The project should extend your knowledge beyond what has been covered in the classroom
- c) The project should be more than a review of the paper. It should contain a critical review of the article you choose, and supporting material such as calculations, brief review of key related articles and material that validate that you have not merely read and understood the paper, but you can critique the quality of the research or R&D reported. You will need to study the topic of the paper in more detail than what is presented there, so use the journal article as a starting point, not the only article to look at.

Report Requirements

- a) A written report, **8 pages long as given below**, typewritten, double-spaced, 11 or 12 point type, 1 inch margins. The report should be organized as follows:

Except for the Summary of the Article, do not repeat the material in the paper; rather remember that you are reviewing/critiquing the quality of the paper.

- I. **Summary of the article:** summarize the main parts of the study/experiment, e.g., goal of the study methods, results, conclusions (1 page).
2. **Introduction:** What is the background for why the study was undertaken; what were the goals of the study? Why is this study important for the field of MSE (2 pages).
3. **Main body of report:** Do the data back up the main claims and conclusions? Are the methods and statistics appropriate to the purposes of the study? Are the data presented clearly in the Tables, Figures, and Graphs? Is the article clearly written and understandable? (3 pages).
5. **Main conclusions and future directions** for this line of research; what are the main unanswered questions on the horizon (1 page).

6. **References** (1 page)

Note: if the article you selected turns out to have a lot of problems and limitations, rather than a lot of strengths; you can still do well by pointing out the weaknesses effectively. For example, you can describe better approaches or alternatively, you could propose how to improve the article (increase sensitivity of the measurements, eliminate sources of the noise/variability in the data, use a different instrument, etc.).

Note: Unless you want to quote something from the article directly (using quotation marks) do not cut or paste any text. Your report must be written by only you.

Plagiarism discovered because of AI-generated material, images and text, is subject to an academic integrity review and sanctions.

Grading of your report: Reports will be graded by our program faculty on a scale of 1 (low) - 5 (high). An averaged score of 3 or better is considered passing.

Deadlines:

1) Step 1: Selection of Articles

for Fall semester, the deadline is September 25, and for Spring semester, the deadline is February 8

Select and send email with the 3 articles. Include the digital object identifier (DOI) or the pdf copy of the articles.

2) Step 2: Submission of Final Report

for Fall semester, the deadline is November 1, and for Spring semester, the deadline is April 1

Submit a pdf copy of your final exam report to the Graduate coordinator as per guidelines given above.

Grading of report will consider the following items:

- Report addressed all points in the guidelines
- Report critically examines the article and points out major strengths and weaknesses.
- Adequate effort was made to survey related literature and article/works were cited properly with a brief explanation.
- Adequate effort was made to critique the quality of the results presented in the selected article
- Errors in the article were identified and noted, if any.
- Prior works by the authors of the article were cited to determine the originality and the relationship of the article being evaluated to the prior publications.
- Future directions for research were addressed.
- Report was clearly written, was organized, exhibited few (or no) spelling and syntax errors, and references were cited correctly and completely.