

ME699 Master's Thesis

College of Information Technology & Engineering
Weisberg Division of Engineering and Computer Science

Course Title/Number	ME 699: Master's Thesis
Semester/Year	Fall/2017
Days/Time	
Location	
Instructor	
Office	
Phone	
E-Mail	
Office/Hours	
University Policies	<p>By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." Or, you can access the policies directly by going to http://www.marshall.edu/academic-affairs/?page_id=802</p> <p>Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment</p>

Course Description:

This represents the course designation for a Master's Degree Research Thesis. Successful completion of a Thesis fulfills the research requirement for the M.S. degree in Mechanical Engineering. (6 CH)

Course Objectives:

In thesis work, students have to show that they are able to treat a scientific or technical subject self-directed within a given period of time and to integrate it into a larger interdisciplinary context. In a final colloquium the subject will be presented and discussed.

Student Learning Outcomes (SO):

After completion of this module the students are able to

- Investigate scientific problems in a systematic way.
- Find and use literature.
- Evaluate and describe solutions of scientific problems.
- Apply time management in theoretical and experimental investigations.
- Evaluate and write thesis work including use of references.
- Work under supervision in a self-directed, autonomous way to complete Master Thesis.

Outcome	Implementation	Evaluation Method
Students will be able to investigate scientific problems in a systematic way.	Experiments, Report & Oral Presentation	Report & Oral Presentation
Students will be able to find and use literature.	Experiments, Report & Oral Presentation	Report & Oral Presentation
Students will be able evaluate and describe solutions of scientific problems.	Experiments, Report & Oral Presentation	Report & Oral Presentation
Students will be able to apply time management in theoretical and experimental investigations.	Experiments, Report & Oral Presentation	Report & Oral Presentation
Students will be able to evaluate and write thesis work including use of references.	Experiments, Report & Oral Presentation	Report & Oral Presentation
Students will be able to work under supervision in a self-directed, autonomous way to complete Master Thesis.	Experiments, Report & Oral Presentation	Report & Oral Presentation

Process

Registration of ME 699 credit(s) initiates structured progress toward completion of the Thesis. Before a student registers for the ME 699, he/she should begin thinking about the process that leads to successful completion of this project. Possible Thesis topics should be formulated by the student and discussed with an advisor or the potential Thesis Director. In order to successfully complete the Thesis, several organizational and administrative steps must be completed. The normal order of such steps is presented below:

The student will be expected to perform an initial literature review of one or more potential thesis topics to identify and focus a direction for the research. The student should also review all information at the Thesis website of the Office of Graduate College (go to: <http://www.marshall.edu/graduate/files/2013/04/etdguide.pdf>)

to download the *Thesis Guidelines* PDF file. This document is required reading for Thesis students.

1. The student, in consultation with an advisor, will select the thesis topic and identify a Thesis Director (must be a member of the Graduate Faculty).
2. The student will complete an extensive literature review related to the selected topic. The significant material resulting from the literature review will eventually be written in a research review format as an initial draft of the Thesis Chapter II - Review of Literature.
3. Following the initial literature review, and in consultation with the Thesis Director, the student will identify a specific research question to pursue.
4. The student will write a formal Thesis Proposal. This Thesis Proposal must include the following components:
 - a. An initial Introduction will be composed to establish a summary of existing research related to the question, a statement of the problem, and the purpose of the study. This Introduction must be based upon the Literature Review.
 - b. The student will outline and describe an appropriate research design to test the hypothesis. The details of this process will be written into an initial draft of the Methodology section of the Chapter I (manuscript section) of the Thesis. The student must include a tentative design for statistical analysis of data.
 - c. A proposed time-line for the study will be included. This time-line must identify the proposed Thesis Defense (see below) date. The Thesis Director will coordinate the proposed defense date with other thesis defense

dates to prevent an overload on faculty members of thesis committees. If a student fails to have the Thesis ready for defense by the proposed date, there may be a delay before a new date may be scheduled.

d. A statement concerning any costs associated with the study, and how such costs will be covered, should be included in the Proposal. The student should discuss potential costs with the Thesis Director prior to writing the proposal.

The Thesis Committee will consist of the student, the Thesis Director, and a minimum of two additional graduate faculty members. See the MU Graduate Bulletin for the Guidelines Regarding Membership of Graduate Advisory and Theses Committees. The formal written Thesis Proposal will be distributed to members of the Committee at least one (1) week prior to a scheduled meeting of the Committee to review and approve the Thesis.

5. The student will schedule a meeting of the Thesis Committee to present the Proposal for approval. This meeting will provide all Committee members an opportunity to discuss the proposed project with the student. The student should be prepared to deliver a 15-minute oral description of the Thesis:

a. Provide a brief review of the literature and identification of the problem or question.

b. Review the planned methodology and data analysis procedures.

c. Summarize the importance of the study.

d. The student may utilize MS PowerPoint slides and/or other helpful visuals during the project description.

Committee members will have an opportunity to ask questions and make comments regarding the project. The Committee will expect the student to respond to questions. Any necessary research design changes will be agreed upon before the Committee approves for the student to begin the project. A Thesis Approval Form is completed, signed by the Committee, and submitted to the Department Head for approval.

6. Once the Thesis is approved by the Committee, the student may proceed with the project under supervision and advisement of the Thesis Director.

Prerequisite: Advisor Approval

Required Text: N/A

References: N/A

Additional Academic Policies:

Marshall University policies pertaining to Academic Dishonesty, Excused Absences, University Computing Services Acceptable Use, Inclement Weather, Dead Week, Students with Disabilities, Academic Dismissal, Academic Forgiveness, Academic Probation and Suspension, Academic Rights and Responsibilities of Students, Affirmative Action, and Sexual Harassment can be found at:

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