

ME 490 COURSE PROFILE**DEGREE PROGRAM:** Mechanical Engineering

COURSE NUMBER: ME 490	COURSE TITLE: RISE 4 - Research, Innovation, Service, Entrepreneurship
REQUIRED COURSE OR ELECTIVE COURSE: Elective	TERMS OFFERED: Fall, Winter, Spring, Summer
TEXTBOOK / REQUIRED MATERIAL: None	PRE / CO-REQUISITES: Permission of Instructor (3 credits)
COGNIZANT FACULTY: Undergraduate Program Director	COURSE TOPICS: 1. To be determined by a proposal written by the student under the direction of the faculty member and approved by the Undergraduate Program Director.
BULLETIN DESCRIPTION: Individual or group project work where student(s) must research in the area of mechanical engineering. A apply mechanical engineering principles to research, topic in mechanical engineering under the direction innovation, service or entrepreneurship projects. of a member of the department The student will Student(s) work under the direction of mechanical submit a final report. Two four-hour laboratories engineering faculty. Students should work on project per week. For undergraduates only. Approximately 10 hours/week. Student(s) submit proposal, conference paper and present project at the ME Undergraduate Symposium.	
COURSE STRUCTURE/SCHEDULE: Per Instructor	

COURSE OBJECTIVES: for each course objective, links to the Program Outcomes are identified in brackets.	1. To be specified in the proposal and to be appropriate for seniors in mechanical engineering. May include, but not be limited to: To teach the student how to conduct research [1, 6]; To teach the student how to apply the knowledge gained in other classes to solve mechanical engineering problems [1]; To teach the student the use of modern engineering tools [1, 2, 6]; To teach the student the need for and ability to engage in life-long learning [7]; To teach the student to design and/or analyze systems, components, or concepts to responsibly meet societal and/or practical needs [1, 2, 4, 7]; and to teach the student how to present their engineering work through oral, written, and/or other visual means [3].
COURSE OUTCOMES: for each course outcome, links to the Course Objectives are identified in brackets.	1. To be specified in the proposal.
ASSESSMENT TOOLS: for each assessment tool, links to the course outcomes are identified	1. Written report. 2. Oral presentation at the Mechanical Engineering Undergraduate Symposium. 3. Other tools agreed to in the proposal.

PREPARED BY: D. Dowling

LAST UPDATED: 6/2/2017