



Mechanical Engineering Dept. Department

Syllabus

ME 495: Undergraduate Research (3-0-3)

Course Catalog Description:

A course for ME senior students be involved in one of the ongoing research projects under the supervision of ME faculty members. The course is intended to expose the student to the process of scientific research. The student is expected to acquire research skills and methodologies including formulation of a research plan, design and execution, laboratory techniques, data collection, assessment, analysis, and presentation. Work may be of experimental, theoretical, or design nature related to Mechanical Engineering.

Course Pre-requisites:

- ME 302: Machine Design II
- ME 315: Heat Transfer

Course Objectives:

1. To expose the student to the process of scientific research under the supervision of ME faculty
2. To develop student's effective communication skills and research ethics

Course Learning Outcomes:

- CLO1. Imparting Research Skills and Tools
- CLO2. Imparting Skills to Professionally Document the Research Findings
- CLO3. Effective communication and research ethics
- CLO4. Improve the critical thinking skills

Learning Resources:

- literature published papers and books

Lecture Assessment Plan:

Assessment Task	Week Due	Weight
final report as a research paper	15	40.0%
progress report	8	20.0%
Achievements	None	25.0%

Assessment Task	Week Due	Weight
Oral and poster presentations	None	15.0%

Lecture Weekly Schedule:

Week#	Topics
1	introduction, literature, planning
2	introduction, literature, planning (Continue)
3	introduction, literature, planning (Continue)
4	introduction, literature, planning (Continue)
5	introduction, literature, planning (Continue)
6	introduction, literature, planning (Continue)
7	introduction, literature, planning (Continue) Follow up the student progress and activities
8	Follow up the student progress and activities (Continue)
9	Follow up the student progress and activities (Continue)
10	Follow up the student progress and activities (Continue)
11	Follow up the student progress and activities (Continue)
12	Follow up the student progress and activities (Continue)
13	Follow up the student progress and activities (Continue)
14	Follow up the student progress and activities (Continue)
15	Follow up the student progress and activities (Continue)