MECHANICAL ENGINEERING

EN-ME-BSME

ACM:
Faculty:

Student Learning Outcomes

SLO Count: 11

Name	Content
SLO 1: Apply Math	1: a. an ability to apply knowledge of mathematics, science and engineering
SLO 10: Contemporary issues	10: j. a knowledge of contemporary issues
SLO 11: Modern tools/skills	11: k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
SLO 2: Conduct/Analyze Experiments	2: b. an ability to design and conduct experiments, as well as to analyze and interpret data
SLO 3: Design	3: c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
SLO 4: Team Work	4: d. an ability to function on multidisciplinary teams
SLO 5: Problem Solving	5: e. an ability to identify, formulate, and solve engineering problems
SLO 6: Professionalism and Ethics	6: f. an understanding of professional and ethical responsibility

SLO 7: Oral &Written communication skills	7: g. an ability to communicate effectively (3g1 orally, 3g2 written)
SLO 8: global/environmental/societal context	8: h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
SLO 9: Life-long learning	9: i. a recognition of the need for, and an ability to engage in life-long learning

Does this program have specialized accreditation?

Yes

Accreditation Activities

•Self-Study (Academic year:)

Assessment Activities and Results

Assessment Activity Count: 1

Assessment Activity: Courses Senior Design FE Exam

Please provide a brief name for this assessment activity.	Courses Senior Design FE Exam

Describe the assessment method used to assess the learning outcome(s). Provide enough detail so that we understand the nature of the project.	Direct Assessment by Instructors for Lab courses, Machine Theory and Design, and Senior Design FE Exam results of different subjects
What were the findings from this assessment?	Students were weak in SO (2): Statistical analysis of experimental data Students needed help in SO (3): Design using professional standards, e.g., ASME, ASTM, ASHRAE, ISO, etc. Students did well in SO (4): Team work and conflict resolution Students were weak in SO (11): Modern tools
How are you using or planning to use the findings from this assessment for program improvement? Where applicable, give specific examples of changes you are making to the program as a result of your findings.	SO (2): Add statistical analysis to all lab courses SO (3): Add professional standard codes to design SO (4): Continue to emphasize team work and conflict resolution SO (11): The College created a new course titled "Introduction to Problem Solving" with modern software/programming tools

Planned Assessment

Direct Assessment Activities

corresponding ID	Assessment Name	corresponding ID	Assessment Name
1	Portfolio	2	Practicum, Internship, Other Field Placement
3	Clinical Evaluations	4	Student Work in Capstone WITH Rubric
5	Student Work in Capstone WITHOUT Rubric	6	Student Work WITH Rubric in 1 or More Courses
7	Student Work WITHOUT Rubric in 1 or More Courses	8	Final Paper, Thesis, or Dissertation
9	National or Board Exam	10	Local Test or Exam
11	Juried Show, Performance, or Critique	12	Oral Presentation
13	Design Project	14	Group Project or Demonstration
15	Journal	16	Other

SLO	None	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SLO 1: Apply Math										X	X						
SLO 10: Contemporary issues	X																

SLO 11: Modern tools/skills										X	X					
SLO 2: Conduct/Analyze Experiments							X				X					
SLO 3: Design					X											
SLO 4: Team Work	X															
SLO 5: Problem Solving							X				X					
SLO 6: Professionalism and Ethics	X															

SLO 7: Oral &Written communication skills					X						X						
SLO 8: global/ environmental/ societal context	X																
SLO 9: Life-long learning	X																

Indirect Assessment Activities

SLO	None	Current Student Survey	Graduating Student Survey	Alumni Survey	Employer Survey	Focus Groups	SFFs	Other

SLO 1: Apply Math		X						
SLO 10: Contemporary issues	X							
SLO 11: Modern tools/skills		X						
SLO 2: Conduct/Analyze Experiments		X						
SLO 3: Design		X						
SLO 4: Team Work	X							
SLO 5: Problem Solving		X				X		
SLO 6: Professionalism and Ethics	X							
SLO 7: Oral &Written communication skills		X						

SLO 8: global/environmental/societal context	X							
SLO 9: Life-long learning	X							