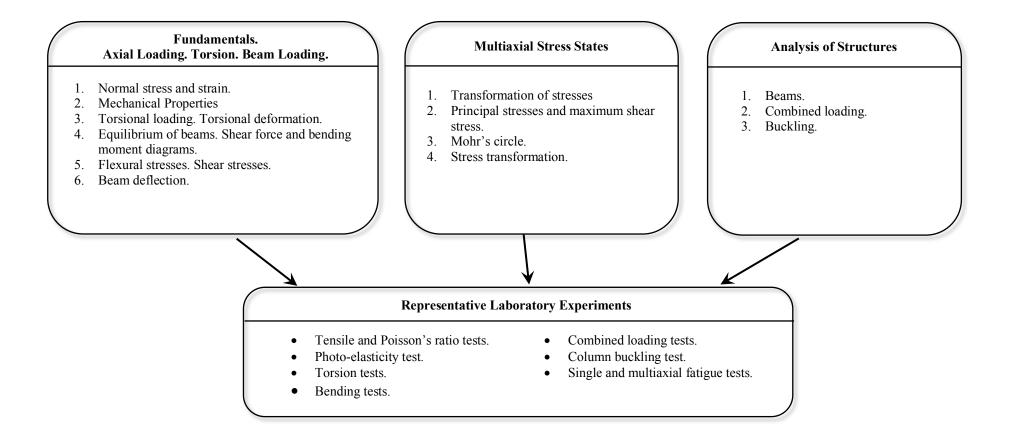




- 1. Conduct simple experiments and analyze data. [1,3,5,6]
- 2. Enhance systematic problem-solving skills and sharpen written-communication skills through short technical laboratory memos. [1,3,5]
- 3. Complete a design project on a mechanical structure. [2, 3, 7]



COURSE NUMBER: ME 32301	COURSE TITLE: Mechanics of Materials Laboratory (1 credit)
REQUIRED COURSE OR ELECTIVE COURSE: Required	TERMS OFFERED: Fall and Spring
TEXTBOOK/REQUIRED MATERIAL: None. Handouts provided by the instructors.	PRE-REQUISITIES: ME 27000 Basic Mechanics I
COORDINATING FACULTY: Solid Mechanics Area Faculty	CONCURRENT PRE-REQUISITES: ME 32300 Mechanics of Materials
 COURSE DESCRIPTION: Experimental methods and techniques employed for the measurement of mechanical properties and evaluation of mechanical structures. Application of mechanics of materials and fundamental concepts to measuring and analyzing mechanical structures. A laboratory design project on mechanical structures. ASSESSMENTS TOOLS: Laboratory memos. Project reports. Pre-lab quizzes. 	 COURSE OUTCOMES [Related ME Program Outcomes in brackets]: 1. Conduct simple experiments and analyze data. [1,3,5,6] 2. Enhance systematic problem-solving skills and sharpen written- communication skills through short technical laboratory memos. [1,3,5] 3. Complete a design project on a mechanical structure. [2, 3, 7]
NATURE OF DESIGN CONTENT: The students participate in a multi-week design project lab, in which a mechanical structure is designed to achieve a performance goal.	 RELATED ME PROGRAM OUTCOMES: 1. Engineering fundamentals 2. Engineering design 3. Communication skills
PROFESSIONAL COMPONENT: 1. Engineering Topics: Engineering Science – 80% Engineering Design – 20%	 4. Ethical/Prof. responsibilities 5. Teamwork skills 6. Experimental skills 7. Knowledge acquisition
COMPUTER USAGE : Knowledge of word processing, spreadsheet software, and basic programming (for example, MATLAB) are necessary for laboratory memo preparation.	GRADING SCALE: Course grade will be based on a straight grading scale: 97-100% A+; 93-97% A; 90-93% A-; 87-90% B+; 83-87% B; 80-83% B-; 77-80% C+; 73-77% C;
 COURSE STRUCTURE/SCHEDULE: a. Laboratory Prep – 1 day per week at 50 minutes b. Laboratory – 1 day per week at 75 minutes 	70-73% C-; 67-70% D+; 63-67% D; 60-63% D-; <60% F.
PREPARED BY: Solid Mechanics Area Faculty	REVISION DATE: January 21, 2022