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Department of Mechanical Engineering	
Machine Design II (67410)	
Total Credits	**4**
major compulsory	
Prerequisites	P1 : Machine Design I (67317)

Course Contents

Design of welded joints, mechanical springs, spur gears, shafts, belts, chains and rolling bearings. Lubrication and journal bearings. Design of helical, bevel, and worm gears. Brakes and clutches. Students in individual or groups should perform short projects to practice the main principles of the course.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	analyze mechanical systems and select the proper machine elements	E	20 %
2	analyze and design common machine elements and prevent their failure due to different types of loads and stresses	C	50 %
3	integrate machine elements to build real mechanical systems	C	15 %
4	work in a team, perform a complete project and present the work in proper ways including CAD drawings, commercial related software, writing technical reports and making oral presentations	D	15 %

Textbook and/ or Refrences

Mechanical Engineering Design; by Shiglley 8th Edition, McGraw Hill, 2008.

Assessment Criteria	Percent (%)
First Exam	15 %
Second Exam	20 %
Quizzes	10 %
Projects	15 %
Final Exam	40 %

Course Plan

Week	Topic
1, 4	Design of Screws, Fasteners, and Connections
5,6	Design of Welded Joints
6,8	Design of Mechanical springs
9, 10	Selection of rolling contact bearings
11,14	Design of spur, helical, bevel and worm gearing
14, 15	Clutches, brakes and flexible mechanical elements
16	Final exam