

Course Number ME 136 (2nd Sem AY 2016-2017)
Course Title Machine Tool Operations

Instructor Ervin S. Santos
Consultation M 3:00-5:00PM
Hours WF 1:00-5:00PM

Course Credit 3 u. 5 h (2 h lec, 3 lab)
Class Schedule HLN Thurs 4-6PM MH 312
FDE Fri 10AM-12NN ME 3

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Course Description:

Principles & processes in metal cutting, forming & fabrication. Safety in shop operations. Projects.

Course Objective:

To be able to familiarize the principles of material removal processes such as chip type machining, milling, turning, boring, filing, shaping and abrasive machining processes; as well as other machining processes such as gear manufacturing, thread manufacturing and non-traditional machining processes.

Reference Book:

Materials and Processes in Manufacturing, 10th edition
by: E. Paul DeGarmo, JT Black, Ronald Kohser

Schedule	Topic
Week 1	Introduction and Course Syllabus
Week 2	Fundamentals of Chip-Type Machining Process
Week 3	Cutting Tools for Machining
Week 4	Turning, Boring and Related Processes
Week 5	1st Long Examination
Week 6	Drilling and Related Hole-Making Processes
Week 7	Milling
Week 8	Broaching, Sawing, Filing, Shaping and Planing
Week 9	2nd Long Examination
Week 10	Abrasive Machining Processes
Week 11	Workholding Devices
Week 12	Thread and Gear Manufacturing
Week 13	3rd Long Examination
Week 14	Chemical Machining/EDM/Waterjet
Week 15	CNC
Week 16	4th Long Examination

Evaluation and Grading Criteria

Course Requirements:

Long Exams	65%
Quizzes/Class Participation	20%
Final Project	15%

Final Grade Computation: 2/3 Lecture Grade + 1/3 Laboratory Grade

Grading System

RG	Grade	RG	Grade
93 and higher	1.0	69 to below 73	2.5
89 to below 93	1.25	65 to below 69	2.75
85 to below 89	1.5	60 to below 65	3
81 to below 85	1.75	55 to below 60	4
77 to below 81	2.0	Lower than 55	5
73 to below 77	2.25		