

This course provides an introduction to machine shop practices. Students will learn to use the lathe, mill, bandsaw, drill press and hand tools. All students will complete a machining project. Sections of 8 students will be formed at the beginning of the quarter and each section will meet for one three hour period each week. Attendance is mandatory. The shop superintendent is Mr. Nelson Bednersh (Student Machine Shop, x4090, slogo@engineering.ucsb.edu). Mr. David Bothman is responsible for the organization and administrative details of the course (2109 EII, x4125, bothman@engineering.ucsb.edu).

Text: *Modern Metalworking*, John Walker is on reserve in the RBR and is also for sale online. *Machinery's Handbook* is a recommended reference for students interested in design and manufacturing. Students must complete all reading assignments in order to pass the exams.

Schedule:

	Date	Assignment	Reading
Week 1	3 April	All students meet in shop to form sections, Thursday, 3 April, 3:00pm in Arts room 0249.	Safety Handout
Week 2	7 April	Introduction to the shop, Lathe Demo. Safety Test	Ch. 4
Week 3	14 April	Mill lecture and demonstration,	Ch.25, 26, 27, 28
Week 4	21 April	Begin projects	Ch. 30
Week 5	28 April	Continue project work, Midterm Exam#1 (Lectures, reading thru 4 th week)	Ch. 5,6,7 and 8
Week 6	5 May	Continue project work	
Week 7	12 May	Continue project work	Ch. 9, 24
Week 8	19 May	Midterm Exam #2 (Lectures, Reading thru 8 th week)	Ch. 23
Week 9	26 May	Continue project work	
Week 10	2 June	Continue project work	
		Projects due by Friday 8 June. (end of dead week)	

Notes: Class will not be held on Monday, 28 May for Memorial Day

Attendance: All students **must** attend their section for the first two lectures, and are encouraged to work on their projects during assigned lab sessions. The machine tools will be reserved for ME12S students at these times and TAs will be available to help. Staff and other students may have priority on the machines outside of the 12S reserved times.

Safety: Injury is a very real risk in a machine shop and can only be prevented by being careful. **Do not rush while working in the shop.** Safety glasses must be worn in the shop. Shoes or boots that cover the entire foot are required. Tennis shoes are OK, sandals are not. Do not wear clothing with loose sleeves, necklaces that might get tangled in the tools, or rings while working in the shop. If you are unsure about the safety of any operation in the shop **ask for help!**

Shop Rules: Clean the machines you use and the floor around them. Workers leaving a mess will not be allowed to use the shop. Check with Nelson before beginning a job. Put tools back where they belong.

Grades:

Exam 1	100 points
Exam 2	100 points
Project	76 points
Measuring Test	24 points