MFGT 260 -- MATERIAL REMOVAL  [3 units]

PREREQUISITES: MFGT 160. Recommended: PHYS 202A

COURSE TIME SCHEDULE:
- Lecture: Mon 11:00 to 12:50
- Lab-1: Wed 10:00 to 11:50
- Lab-2: Wed 12:00 to 1:50

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OFFICE: O'Connell 425  Office Phone: 898-5320
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OFFICE HOURS: Monday 1-3 and Tues, Wed, & Thurs 2-3

COURSE OBJECTIVES:
This course is designed to familiarize the student with the manufacturing processes associated with material removal (mass reduction by chips). The focus of this course is on calculating the material removal rate (MRR) in the machine tool environment, including speeds, feeds, and depth of cut. It includes machine set up and selection of cutting tools along with the responsibilities of a setup machinist and a machine operator. An introduction to manual control of CNC machines is included.

CATALOG DESCRIPTION:
A study of the industrial applications of material-removal technology. Emphasis will be placed on the management of the application of the technology. Units involving the physics of metal-cutting, cutting-tool materials and geometry, conventional and semi-automatic machine tools, and cost-estimating are included. 2.0 hours discussion, 3.0 hours laboratory. Special fee required; see The Class Schedule. Formerly MFGT 54.


COSTS DURING TERM OF COURSE:
- Lab Fee: $20.00 [REQUIRED]
- Safety Glasses: [REQUIRED]
- Calculator [OPTIONAL]
- Dial or Digital Caliper and 6” steel rule [OPTIONAL]

EVALUATION PROCEDURE:
- Laboratory exercises ........................................... 35%
- Article Reviews ............................................. 15%
- Spot tests ..................................................... 10%
- Mid-term exam ............................................. 20%
- Final exam ................................................... 20%
- Total ......................................................... 100%

SAFETY POLICY
Everyone entering the Langdon 120 machine tool lab must wear eye protection and closed-toed shoes at all times. Anyone failing to comply with all lab safety rules will be told to leave the lab immediately and not be allowed to return to the lab that day. Repeated offenses will result in failing the course.