Metals & Machining Tech (MCH)

MCH 158. Metal Fabrication. 3 Credits.
A study of equipment, metals, and procedures used to design, fabricate, and finish welded projects. Students combine skills of drafting, welding, and problem solving in developing functional projects. Prerequisites: WLDG 110 and 111 or consent of instructor.
Course Fees: $21.50

MCH 200. Machining. 3 Credits.
An introduction to machining. The student will become familiar with basic theory and operations performed on various manual and automated machine tools. Instruction includes the selection of speeds and feeds and the identification and conditioning of associated cutting tools.
Course Fees: $31.00

MCH 250. Manuf Processes and Materials. 3 Credits.
An introduction to the fundamentals of manufacturing. Capabilities, typical applications, advantages, and limitations of material and process selection for manufacturing.
Course Fees: $10.75

MCH 255. Foundry and Patternmaking. 2 Credits.
This course is designed to explore accepted industrial foundry techniques. Laboratory learning experience and individually directed research will emphasize pattern design and construction, various mold-making processes, and other industrial manufacturing processes.
Course Fees: $15.75

MCH 298. Cooperative Education. 1-12 Credits.
A planned and supervised work-learning experience in industry, business, government, or community service agencies related to the University program of study. Prerequisites: two semesters of attendance at Montana State University-Northern, approval of advisor, Dean of the College of Technical Sciences, and cooperative education coordinator. Pass/Fail Only.

MCH 351. CAD/CAM Applications. 3 Credits.
A course in the principles and application of CAD/CAM and CNC technology. Students will solve problems associated with coordinate geometry, data-base exchange, G and M codes. Prerequisites: DDSN 114 and MCH 200.
Course Fees: $10.75

MCH 352. CAD/CAM II. 3 Credits.
A continuation in the study of G and M codes from MFGT 341 with emphasis in 3-dimensional CAD/CAM tool path definition. Students will use 3-dimensional models to create sweep surfaces, ruled surfaces, projected surfaces, surface revolutions, and Coons surfaces. Prerequisite: MCH 351.
Course Fees: $10.75

MCH 391. Special Topic. 3 Credits.
Courses not required in any curriculum for which there is a particular one-time need, or given on a trial basis to determine acceptability and demand before requesting a regular course number.

MCH 392. Independent Study. 3 Credits.
Provides an opportunity for students to engage in directed research and study on an individual basis rather than in a formal class environment.

MCH 457. Quality Assurance. 3 Credits.
Industrial methods of insuring quality in manufacturing through application of codes and standards, sampling techniques, control charts and implementation of a documentable quality assurance program. Prerequisite: M 121 or higher.

MCH 498. Cooperative Education. 1-12 Credits.
A planned and supervised work-learning experience in industry, business, government, or community service agencies related to the University program of study. Prerequisites: two semesters of attendance at Montana State University-Northern, approval of advisor, Dean of the College of Technical Sciences, and cooperative education coordinator. Pass/Fail Only.