

ADVANCED MANUFACTURING

Associate in Science Degrees

- Advanced Manufacturing Technology - Associate in Science (<https://lbcc-public.courseleaf.com/degrees-certificates/advanced-manufacturing/advanced-manufacturing-technology/>)

Certificates of Achievement

- Advanced Manufacturing and Design Technology - Certificate of Achievement (<https://lbcc-public.courseleaf.com/degrees-certificates/advanced-manufacturing/advanced-manufacturing-design-technology-certificate-achievement/>)
- Advanced Manufacturing Technology - Certificate of Achievement (<https://lbcc-public.courseleaf.com/degrees-certificates/advanced-manufacturing/advanced-manufacturing-technology-certificate-achievement/>)
- Advanced Manufacturing Technology Core Skills - Certificate of Achievement (<https://lbcc-public.courseleaf.com/degrees-certificates/advanced-manufacturing/advanced-manufacturing-technology-core-skills-certificate-achievement/>)

ADMT 50 3 units

Advanced Manufacturing, Introduction

36 hours lecture, 72 hours laboratory

Grading: letter grade or pass/no pass.

Formerly MACHT 50. Introduction to the basic principles and operation of CNC machine tools with a focus on bench operations, CNC mills, CNC lathes, and computer automated machine tools. Standard industry practices and tool set-ups will be emphasized and applied.

Transferable to CSU Only

ADMT 200 3 units

Advanced Manufacturing Math

54 hours lecture

Grading: letter grade or pass/no pass.

Formerly MACHT 201. This course covers the study of machine shop problems involving the solution of formulas related to screw threads, feeds and speeds, spur gears, simple and angular indexing. Geometric figures, angles, triangles, circles, arcs, trigonometric functions, compound angles and oblique triangles will also be introduced.

ADMT 202 3 units

CNC Programming

36 hours lecture, 72 hours laboratory

Grading: letter grade.

Formerly MACHT 202. This course covers the study of Computer Numerical Control (CNC) programming with emphasis on contouring, canned cycles, cutter diameter compensation, looping, macro subroutines and multiple part programming for three axis milling machines and CNC lathes.

ADMT 251 3 units

Advanced Manufacturing, CNC Mills/Lathes

36 hours lecture, 72 hours laboratory

Prerequisite: ADMT 50.

Grading: letter grade or pass/no pass.

Formerly MACHT 203. This course covers Advanced Manufacturing with advanced principles and operations of CNC machines. 3-4-5 axis machines plus advanced setups using industry best practices will be emphasized and applied.

ADMT 252 2 units

Advanced Manufacturing, Sheet Metal CNC

18 hours lecture, 54 hours laboratory

Grading: letter grade.

This course covers the study of Computer Numerical Control (CNC) programming with emphasis on programming to support CNC machinery supporting the sheet metal industry. These machines include punch press, brakes, laser cutters and plasma cutters and pipe benders.

ADMT 253 2 units

Advanced Manufacturing Using CAD/CAM

18 hours lecture, 54 hours laboratory

Grading: letter grade or pass/no pass.

Formerly MACHT 204. This course covers Computer Aided Manufacturing (CAM), emphasizing interactive graphics programming for Computer Numerical Control (CNC) machines. Students will utilize various techniques of creating geometry on multiple work planes, three dimensional (3- D) surface tool path creation and manipulation, implementing 4th and 5th axis machining, generating surface to surface intersections, creating blends between surfaces, creating roughing operations for 3D, and CAD data conversion for the purpose of 3D machining.