MAN: Manufacturing Operations, Certificate of Proficiency: 2001 to Present

For Students Enrolled in:
MAN: Manufacturing Operations, Certificate of Proficiency
2001 to Present

Program Description: This certificate will provide the student with the necessary skills to seek employment as advanced conventional machine tool operators/machinists in the manufacturing field of Precision Machining. Specific general education courses must be selected in order to be appropriately prepared to secure this certificate. Selected courses will aid in preparing the student to meet a more demanding work assignment. The program is intended for students who seek above entry-level positions.

Program Outcomes:
Upon successful completion of program requirements, students should be able to:

- Analyze the features of an object and develop a representative sketch using the principles of orthographic projection.
- Interpret line work, dimensions, orthographic views, various section types, auxiliary views, and annotations associated with mechanical drawings.
- Apply appropriate terminology in order to, select, handle, care for, and store tools used to perform bench work, inspection and assembly operations.
- Perform commonly assigned operator clean up and maintenance tasks associated with grinding, sawing and drilling machines.
- Utilize detail drawings, calculations, layout tools, precision measuring instruments and appropriate techniques to prepare parts for manufacture on a lathe and mill and verify part dimensions during inspection procedures.
- Create internal features to include chamfers, bores, recesses, counterbores, countersinks, grooves and pockets using a milling machine.
- Perform geometric/algebraic/trigonometric calculations to machine for set-up and inspection of parts, to include chamfers, tapers, threads, etc.
- Develop computer integrated graphical documents to prepare technical correspondence and presentations.

Semester by Semester Plan:

Semester 1:
MTT 110
MTT 111
MTT 112
MTT 124
MAT 110

Semester 2:
MTT 122
MTT 214
MTT 213
TCC 111

General Education Option - 6 credits required
Program Electives:
MTT 111
ENG 100
ENG 112
HIS 120
ECO 220

Notes:
MTT 199 Co-op/Internship

Total Credits: 34-35

Notes:
MTT 199 Optional Co-op/Internship

Students seeking to pursue this certificate program must meet the following prerequisites: MTT 108, MAT 110, MTT 110, MTT 111, MTT 112, and MTT 124

Total Credits: 15