

PRECISION MACHINING

Precision Machining equips students with the hands-on skills and technical knowledge needed to launch a career in one of Louisiana's most in-demand industrial trades. Through training on state-of-the-art equipment, including manual lathes, milling machines, precision-grinding tools, and industry-standard computer numerical control (CNC) machinery, students learn to safely set up, operate, and troubleshoot the machines that power today's advanced manufacturing environments.

The program prepares graduates for entry-level employment as machinists, CNC operators, and related roles across manufacturing, fabrication, petrochemical, aerospace, and maritime industries. Students gain experience interpreting blueprints, applying precision measurement techniques, maintaining tolerances, and producing high-quality machined components that meet industry specifications.

The program embeds a sequence of industry-recognized credentials aligned with the National Institute for Metalworking Skills (NIMS). Students completing the Certificate of Technical Studies (CTS) earn the following certifications: NIMS Precision Measurement, NIMS Basic Lathe, NIMS Advanced Lathe, NIMS Basic Mill, NIMS Advanced Mill, NIMS CNC, and Microsoft Fusion 360. These stackable credentials document mastery of essential competencies and significantly enhance graduates' employability and advancement potential in the machining workforce.

The Student Learning Outcomes for this program are:

- Identify and implement industry-based safety standards.
- Interpret blueprints and layouts for part production.
- Demonstrate ability to use a lathe and mill.
- Demonstrate ability to use a CNC mill.
- Demonstrate ability to identify metal composition and classifications for manufacturing.

Available Programs:

- Certificate of Technical Studies, Precision Machining

Certificates and Degrees

Precision Machining, Certificate of Technical Studies

Course	Title	Hours
First Year		
Fall		
MTTC 2120	Intro to Machine Tools	4
MTTC 2410	Basic Mill	3
MTTC 2220	Shaping and Forming	2
MTTC 2310	Basic Lathe	3
Hours		12
Total Hours		12
Spring		
MTTC 2350	Survey Computer Aided Drafting	3
MTTC 2330	Advance Lathe	4
MTTC 2430	Advanced Milling	4
MTTC 2710	CNC	4
Hours		15
Total Hours		15