

Machinist Technology

Associate in Applied Science in Technical Studies

Program Description:

The Machinist Technology Program at the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI) is an industry-driven, hands-on program that prepares individuals to meet the rigorous demands of the manufacturing sector. An element of the RCBI program enables students to earn an Associate in Applied Science degree in Technical Studies by completing additional course work through Mountwest Community & Technical College.

Adhering to standards set by the National Institute for Metalworking Skills (NIMS), the RCBI program provides individuals the technical skills they need to enter a shop floor setting and begin work immediately upon graduation. Placement opportunities are excellent according to the Bureau of Labor Statistics which reports that 30,000 jobs go unfilled each year.

Participants in the Machinist Technology program receive technical skills training to work in industrial machining. Course work includes manual machine operation and technical support, introductory CNC (computer-numerical-control) machine operation and technical support, industrial communications and organizational skills, mathematics for machinists, and safety issues.

Working closely with an 11-member industry-based advisory board, RCBI designed the program's core technical components so they meet the manufacturing sector's needs.

Comprehensive full- and part-time programs are available, thus enabling current workforce members to improve their technical skills and develop professionally while helping their employers become more competitive.

Career Outlook:

Despite projected slower-than-average employment growth, job opportunities for machinists should continue to be excellent. The number of workers obtaining the skills and knowledge necessary to fill machinist jobs is expected to be less than the number of job openings arising each year from employment growth and from the need to replace experienced machinists who transfer to other occupations or retire.

Salary Forecast:

Median hourly earnings of machinists were \$16.33 in 2004. The middle 50 percent earned between \$12.84 and \$20.33. The lowest 10 percent earned less than \$10.08, while the top 10 percent earned more than \$24.34. Median hourly earnings in the manufacturing industries employing the largest number of machinists in 2004 were:

Metalworking machinery manufacturing	\$17.06
Machine shops; turned product; and screw, nut, and bolt manufacturing	\$15.87
Motor vehicle parts manufacturing	\$17.46
Employment services	\$11.09

Program Admission Requirements:

The Machinist Technology Program has admission and candidacy requirements in addition to the Mountwest Community & Technical College admission guidelines.

Tech Prep Affiliation:

The Machinist Technology Program is aligned with the West Virginia Tech Prep Engineering/Technical Cluster.

Major Code - CT20 • Concentration Code - CT21

FIRST YEAR			
First Semester		Second Semester	
IT 101	Fundamentals of Computers (EDGE)	COM 112	Oral Communication.....3
MAT 135	Mathematics for Machinist Technology ¹	ENL 231	Technical Report Writing ²3
MT 105	Industrial Safety (EDGE)	MT 215	Metal Working Theory & Applications ¹ 12
MT 121	Introduction to Machinery ¹ (EDGE)		
MT 200	Blueprint Reading (EDGE)		
MT 205	Precision Measurement (EDGE).....3		
TOTAL CREDITS21		TOTAL CREDITS 18	
SECOND YEAR			
Third Semester		Fourth Semester	
MFE 220	Computer-Aided Design I	MT 289	Internship for Machinist ¹6
MT 223	Advance Technical Specialization ³6		Social Science Elective ⁶3
MT 233	NIMS Credentialing ^{1,4}		
ISM 133	Principles of Supervision and Management ⁵3		
TOTAL CREDITS19		TOTAL CREDITS9	
HOURS REQUIRED FOR GRADUATION: 67			

Employment Opportunities:

Entry-level positions for which graduates will compete include:

- Manual machinist
- CNC machinist
- Industrial sales representative
- Auto plant
- Machinist shop
- Fabricator

Earn a Degree Graduate Early (EDGE):

This program provides students the opportunity to receive credit for their high school EDGE courses.

Contact Information:

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1. MAT 135, MT 121, MT 215, MT 233, and MT 289 have a prerequisite of instructor permission.
 2. ENL 231 has a prerequisite of ENL 111 or COM 111. This prerequisite may be waived for Machinist Technology majors. See advisor for information.
 3. MT 223 has a prerequisite of MT 215.
 4. NIMS Credentialing (National Institute for Metalworking Skills) students must be certified in at least three different skill areas as recognized by NIMS.
 5. SS 201 may be substituted for ISM 133.
 6. Choose at least one of the following: on campus: EC 102, SS 210, or SS 215; online: EC 102, HST 102, HST 103, HST 230, PSC 104, PSY 201, SOC 200, SS 201.