

Tool Design Engineering Technology

Description

Moraine Park's Tool Design Engineering Technology program provides students with the high-level manufacturing skills required in Wisconsin's evolving tool and die industry for the national and international customers it serves. Critical to the manufacturing workforce, tool design engineers design fixtures, parts, molds and stamping dies with the latest CAD (computer-aided design) software. While coursework emphasizes the computerized design aspect of tool and die making, students have combined classroom and shop instruction to experience hands-on machine operations to understand how to select appropriate materials and how their designs are applied on the shop floor. Students in the last semester have the opportunity to participate in an internship.

Tool design engineers need strong spatial aptitude, enjoy precision work and have an interest in machines and mechanical processes.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the critical core manufacturing skills throughout all the manufacturing classes. The critical core manufacturing skills include: work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work environment, demonstrate integrity, communicate clearly, follow directions, apply problem solving strategies, apply mathematical reasoning, think critically and adapt to change.

Graduates are prepared to immediately enter the industry as designers working on new tooling projects. Employers are looking for individuals who have the strong skill and knowledge base provided by this program.

Associate of Applied Science Degree: 10-617-1

Campus: West Bend

(some courses also available at the Fond du Lac campus)

Program Outcomes

- Design jigs and fixtures.
- Design mold dies.
- Design stamping dies.
- Develop detailed working drawings.
- Analyze part drawings.
- Develop 3D working models of tool assemblies.

Career Opportunities

- Tool Designer
- Product Designer
- Die Designer
- Mold Designer

Advancement Opportunities With Additional Work Experience or Education

- Design Analyst
- Manufacturing Engineer
- Plant Manager
- Mechanical Engineer

MPTC Yearly Salary Range for Recent Graduates

\$24,000 - \$58,496

Admission Process

- Submit the college admission application.
- Submit the \$30 one-time fee.
- Submit high school/other official college transcripts.
- Take the college placement assessment (ACCUPLACER, ACT or other).
- Meet with an admissions specialist to determine the best course sequencing and prerequisites (strongly encouraged).
- Check with Admissions if any additional steps are required.

For additional information, visit
www.morainepark.edu
Beaver Dam **Fond du Lac**
 700 Gould Street 235 North National Avenue
 Beaver Dam, WI 53916-1994 Fond du Lac, WI 54935-2884

920-924-3207

West Bend TTY 920-929-2109
 2151 North Main Street 1-800-472-4554
 West Bend, WI 53090-1598

Course Number	Course Title	Year	2009-2010					2010-2011			
			Cr.	S	F	W	P	S	F	W	P
Technical Studies Courses											
606-170	CAD 3-D, NX (Unigraphics) (or)	3									
617-114	CAD 3-D, SolidWorks (or)										
617-112	CAD 3-D, Pro-Engineer										
606-176	CAD 2-D, AutoCAD	3									
617-115	Jig and Fixture Design	3									
617-120	Die Making Processes	3									
617-123	Advanced SolidWorks Assembly Modeling	3									
617-125	Blanking and Compound Die Design	3									
617-126	Progressive Bending and Draw Die Design	3									
617-130	Mold Making Processes	3									
617-134	Principles of Design	3									
617-135	Two- and Three-Plate Mold Design	3									
617-136	Side-Action and Hot-Runner Mold Design	3									
617-138	Integrated Manufacturing Planning - Tool Design Engineering	2									
617-139	Integrated Manufacturing Production - Tool Design Engineering	2									
623-162	Manufacturing Processes	3									
623-196	Geometric Dimensioning and Tolerancing With CMM Verification	3									
General Studies Courses											
801-195	Written Communication	3									
801-197	Technical Reporting (or)	3									
801-196	Oral and Interpersonal Communication										
804-113	College Technical Mathematics 1A	3									
804-114	College Technical Mathematics 1B	2									
806-137	Comprehensive Technical Physics (or)	4									
804-116	College Technical Mathematics 2	4									
809-166	Introduction to Ethics: Theory and Application	3									
809-195	Economics	3									
809-198	Introduction to Psychology (or)	3									
809-199	Psychology of Human Relations										
	Students must choose an additional three credits of electives.	3									
Schedule a Course		Academic Planner	70								
A Tool Design Engineering Technology Exit Assessment is a graduation requirement for this program.											
Institutional Requirements											
890-125	Student Success - take 1st semester										
103-159	Computer Literacy/Advanced Standing - take 1st semester										
890-130	Career Development - take 3rd semester										

Semester Codes: S - Summer F - Fall W - Winter P - Spring

For information on how program credits transfer to a four-year college, please visit us at www.morainepark.edu/academics/transfer.

For course descriptions, please visit our Web site at www.morainepark.edu.