

CNC/Tool and Die Technologies - Academic Planner

Technical Diploma: 32-444-2

Campus: West Bend

Curriculum for 2015-2016

12/1/2014

Program Advisor: _____

✓	T/G	Course		Hours / Week			Total	Credits	Prerequisites and/or Corequisites	Typically Offered			Comments		
		Subj	Num	Lec	Lab	Other	Hours			S	F	SP			
Note: Students must purchase tool kits for this program.															
Term 1:										S	F	SP			
New Program Students: Attend New Student Orientation and your Priority Registration Session															
		103	159	**Computer Literacy - Microsoft Office			2	36	1		x	x	x	**Institutional Requirement. May be eligible for Advanced Standing. Students must possess fundamental computer skills and have experience with Windows Operating System.	
T		439	301	Introduction to Basic Machining			1	1	36	1		x			
T		439	303	Basic Machining - Milling			1	3	72	2	Completion of or concurrent enrollment in 439-301 Introduction to Basic Machining		x		
T		439	305	Basic Machining - Drilling and Grinding			1	3	72	2	439-301 Introduction to Basic Machining; 439-303 Basic Machining - Milling		x		
T		439	399	2D AutoCAD Mold and Die Print Reading			4		72	2		x			
T		444	302	CNC Controls			1	3	72	2		x		Recommended: 103-189 Microsoft Windows or 103-159 Computer Literacy - Microsoft Office	
T		444	333	Basics of Metrology			2		36	1	103-159 Computer Literacy - Microsoft Office		x		
T		444	350	Basic Programming			2	4	108	3	Completion of or concurrent enrollment in 103-159 Computer Literacy - Microsoft Office		x		
G		804	360	Occupational Mathematics 1			3		54	2		x	x		
		890	101	**College 101			2		36	2		x	x	x	**Institutional Requirement
				Total 1st Term Credits						18					
Term 2:										S	F	SP			
T		439	306	Basic Machining - Turning			1	3	72	2	439-301 Introduction to Basic Machining			x	
T		444	310	Material Selection			2		36	1	890-101 College 101			x	
T		444	311	Tooling and Workholding			1	3	72	2			x		
T		444	340	Beginning CAM - Mastercam			1	3	72	2	444-350 Basic Programming 103-159 Computer Literacy - Microsoft Office;		x		Working knowledge of CNC programming language is desired.
T		444	342	Advanced CAM 2D			1	3	72	2	444-340 Beginning CAM - Mastercam			x	
T		444	346	Design for 3D Machining			1	3	72	2	103-159 Computer Literacy - Microsoft Office			x	Experience with 2D desirable
T		444	355	CNC Machining Center Programming			2	2	72	2	444-350 Basic Programming			x	Working knowledge of CNC Programming and CAM is helpful.
T		444	365	CNC Machining Center Operation			2	2	72	2	444-355 CNC Machining Center Programming			x	
G		804	361	Occupational Mathematics 2			3		54	2	804-360 Occupational Mathematics 1			x	
				Total 2nd Term Credits						17					

✓	T/G	Course		Title	Hours / Week			Total Hours	Credits	Prerequisites and/or Corequisites	Typically Offered			Comments
		Subj	Num		Lec	Lab	Other				S	F	SP	
Term 3:											S	F	SP	
	T	439	324	Pierce and Die Making	2	4		108	3	439-305 Basic Machining – Drilling and Grinding; 439-306 Basic Machining – Turning; 444-342 Advanced CAM 2D; 444-365 CNC Machining Center Operation		x		
	T	439	329	Compound Die Making*	2	4		108	3	439-324 Pierce and Die Making		x		
	T	444	312	Product Engineering - Lean Manufacturing		2		36	1			x		Restricted to program students. It is recommended that students take 444-313 Product Manufacturing the semester after completing this course.
	T	444	343	Beginning CAM 3D	1	3		72	2	444-342 Advanced CAM 2D		x		
	T	444	344	Advanced CAM 3D	1	3		72	2	444-343 Beginning CAM 3D		x		
	T	444	375	Turning Center Operation	2	2		72	2	444-385 Turning Center Programming		x		
	T	444	385	Turning Center Programming	2	2		72	2	444-350 Basic Programming		x		
	G	804	362	Occupational Mathematics 3	3			54	2	804-361 Occupational Mathematics 2		x		
				Total 3rd Term Credits					17					
Term 4:											S	F	SP	
Apply for Graduation when completing Term 4 registration.														
	T	439	334	Single Cavity Mold Making	2	4		108	3	439-305 Basic Machining – Drilling and Grinding; 439-306 Basic Machining – Turning			x	
	T	439	339	Multi Cavity Mold Making*	2	4		108	3	439-334 Single Cavity Mold Making			x	
	T	444	313	Product Manufacturing		4		72	2	444-312 Product Engineering - Lean Manufacturing		x		Restricted to program students. It is recommended that students take this course the semester after taking 444-312 Project Engineering - Lean Manufacturing.
	T	444	386	Advanced Machining Center*	2	2		72	2	444-355 CNC Machining Center Programming			x	
	T	444	391	Coordinate Measuring Machine	2	4		108	3	439-399 2D AutoCAD Mold and Die Print Reading; 804-361 Occupational Mathematics 2			x	
	T	444	394	Advanced Turning Center*	2	2		72	2	444-385 Turning Center Programming			x	
	G	801	310	Occupational Communication	3			54	2			x	x	
				Total 4th Term Credits					17					
				Total Program Credits and Institutional Requirements					69					
**The credits for 103-159 Computer Literacy-Microsoft Office and 890-101 College 101 are Institutional Requirements for graduation. Consequently, they are not part of the program credit requirements.														
*Capstone Projects are the exit assessment graduation requirement for the program.														

T/G: T - Technical Studies course; G - General Studies course

Semester Codes: S-Summer; F-Fall; SP-Spring

Curriculum and program acceptance requirements are subject to change.

If Student Success Center or General College courses (ie: 831-103 Introduction to College Writing, 838-105 Introduction to Reading and Study Skills, 834-109 Pre-Algebra) are required based on college placement; or if the student elects part-time enrollment, the time required to complete the program will increase.

For a complete list of course descriptions for this program, please consult the College Catalog at <http://www.morainepark.edu/MPTCCatalog>.