### BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE

Credit

Hours

## Machine Tool Technology Associate in Applied Science

Academic Plan Code - 4805037019

### **Description:**

Course

Number

Work activities in machine shop involve applying knowledge of machine capabilities, the properties of materials, and shop practices to set-up and operate various machines. The skills needed to position work pieces, adjust machines, and verify the accuracy of machine functions and finish products are taught by classroom instruction, demonstration, and hands on experience.

Students enrolled in the Machine Tool Technology program must achieve a minimum grade of "C" in each BRX, MTT, and IE Core.

**Course Title** 

Number		Hours
General Education Core		
ENG101	Writing I	3
MT116 or	Taskaisal Mathamatica on	(2)
MAT125	Technical Mathematics or	(3)
MT125	Technical Algebra and Trigonometry	2
	or Higher	3
	Heritage/Humanities/Foreign	3
	Language	
	Science	3
	Social Interaction	3
	Computer Literacy: Computer	0-3
	Literacy must be demonstrated either	
	by competency exam or by	
	completing a computer literacy	
	course.	
Subtotal	Credit Hours	15-18
Sustanti		10 10
	<b>Technical Core or Support Courses</b>	
MTT110	Fundamentals of Machine Tools A	3
1411110	AND	
MTT112	Fundamentals of Machine Tools B	4
	OR	
MTT114	Fundamentals of Machine Tools	(7)
MTT118	Metrology/Control Charts	2
MTT120	Applied Machining I AND	3
MTT120	Applied Machining II OR	3
MTT124	Applied Machining	(6)
MTT130	Manual Programming AND	3
MTT130	CAD/CAM/CNC OR	3
MTT134	Manual OR	(6)
M111134		(6)
MTT 138	Programming/CAD/CAM/CNC OR	(6)
WIII 138	Intro to Programming & CNC Machines	(6)
MTTO10		2
MTT210	Industrial Machining I AND	3
MTT212	Industrial Machining I AND Industrial Machining II OR	3
MTT212 MTT214	Industrial Machining I AND Industrial Machining II OR Industrial Machining	3 (6)
MTT212	Industrial Machining I AND Industrial Machining II OR	3

MTT222	Advanced Industrial Machining II  OR	2
MTT224	Advanced Industrial Machining	(6)
MTT2301	Intro to Conversational Programming AND	3
MTT2302	Conversational Editing and Subroutines <b>OR</b>	3
MTT230	Conversational Programming <b>OR</b>	(6)
MTT 234	CNC Machines and Coding Practices	(6)
MTT2401	Intro to 3-D Code Sequencing and Tool path Production AND	3
MTT2402	Advanced 3-D Code Sequencing and Macro Systems <b>OR</b>	3
MTT240	Intro to 3-D Programming <b>OR</b>	(6)
MTT244	Advanced Programming/Setup Practices	(6)
BRX110	Basic Blueprint Reading for Machinist AND	2
BRX210	Mechanical Blueprint Reading for Machinist <b>OR</b>	2
BRX112	Blueprint Reading for Machinist	(4)
	Subtotal Credit Hours	49
	Total Credit Hours	64-67

## Machine Tool Technology Diplomas

### **Description:**

Work activities in machine shop involve applying knowledge of machine capabilities, the properties of materials, and shop practices to set-up and operate various machines. The skills needed to position work pieces, adjust machines, and verify the accuracy of machine functions and finish products are taught by classroom instruction, demonstration, and hands on experience.

19-23 undents enrolled in the Machine Tool Technology program must achieve a minimum grade of "C" in each BRX, MTT, and IE Core.

CNC Machinist Academic Plan Code - 4805034069

Course Number	Course Title	Credit Hours
	General Education Core	
Area 1	Writing/Accessing Information, Oral	3
	Communications,	
	Humanities/Heritage/Foreign	
	Language	
MT115	Technical Mathematics <b>OR</b>	3
MT125	Technical Algebra and Trigonometry	(3)
	OR Higher	
Area 3	Computer Literacy Course or	0-3
	demonstrated competency	
	Subtotal Credit Hours	6-9
Technical Core or Support Courses		
MTT110	Fundamentals of Machine Tools A	3

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	AND	
MTT112	Fundamentals of Machine Tools B	4
1111112	OR	•
MTT114	Fundamentals of Machine Tools	(7)
MTT118	Metrology/Control Charts	2
MTT120	Applied Machining I AND	3
MTT122	Applied Machining II OR	3
MTT124	Applied Machining	(6)
MTT130	Manual Programming AND	3
MTT132	CAD/CAM/CNC OR	3
MTT134	Manual	(6)
	Programming/CAD/CAM/CNC <b>OR</b>	(-)
MTT 138	Intro to Programming & CNC	(6)
	Machines	( )
MTT210	Industrial Machining I AND	3
MTT212	Industrial Machining II OR	3
MTT214	Industrial Machining	(6)
MTT220	Advanced Industrial Machining I	4
	AND	
MTT222	Advanced Industrial Machining II	2
	OR	
MTT224	Advanced Industrial Machining	(6)
MTT2301	Intro to Conversational Programming	3
	AND	
MTT2302	Conversational Editing and	3
	Subroutines <b>OR</b>	
MTT230	Conversational Programming <b>OR</b>	(6)
MTT 234	CNC Machines and Coding Practices	(6)
MTT2401	Intro to 3-D Code Sequencing and	3
	Tool path Production AND	
MTT2402	Advanced 3-D Code Sequencing and	3
	Macro Systems OR	
MTT240	Intro to 3-D Programming <b>OR</b>	(6)
MTT244	Advanced Programming/Setup	(6)
	Practices	
BRX110	Basic Blueprint Reading for	2
	Machinist AND	
BRX210	Mechanical Blueprint Reading for	2
DDW	Machinist OR	(4)
BRX112	Blueprint Reading for Machinist	(4)
	Subtotal Credit Hours	49
	Electives (General Education or	1
	Technical)	F.C. 50
	Total Credit Hours	56-59

## Machinist

Academic Plan Code - 4805034079

MTT110	Fundamentals of Machine Tools A	3
	AND	
MTT112	Fundamentals of Machine Tools B	4
	OR	
MTT114	Fundamentals of Machine Tools	(7)
MTT118	Metrology/Control Charts	2
MTT120	Applied Machining I AND	3
MTT122	Applied Machining II OR	3
MTT124	Applied Machining	(6)
MTT130	Manual Programming AND	3

CAD/CAM/CNC OR	3
Manual	(6)
Programming/CAD/CAM/CNC OR	
Intro to Programming & CNC	(6)
Machines	
Industrial Machining I AND	3
Industrial Machining II OR	3
Industrial Machining	(6)
Advanced Industrial Machining I	4
AND	
Advanced Industrial Machining II	2
OR	
Advanced Industrial Machining	(6)
Basic Blueprint Reading for	2
Machinist AND	
Mechanical Blueprint Reading for	2
Machinist <b>OR</b>	
Blueprint Reading for Machinist	(4)
Technical Mathematics <b>OR</b>	3
Technical Algebra and Trigonometry	(3)
OR Higher	
Computer Literacy	0 – 3
General Education/ Applied	3
Academics	
Electives	1
Total Credit Hours	44-47
	Manual Programming/CAD/CAM/CNC OR Intro to Programming & CNC Machines Industrial Machining I AND Industrial Machining II OR Industrial Machining II OR Industrial Machining II OR Advanced Industrial Machining II AND Advanced Industrial Machining II OR Advanced Industrial Machining II OR Advanced Industrial Machining Basic Blueprint Reading for Machinist AND Mechanical Blueprint Reading for Machinist OR Blueprint Reading for Machinist Technical Mathematics OR Technical Algebra and Trigonometry OR Higher Computer Literacy General Education/ Applied Academics Electives

## **Machine Tool Technology** Certificates

Course Number	Course Title	Credit Hours
	<b>Exploratory Machining</b>	
	Academic Plan Code - 4805033039	
MTT110	Fundamentals of Machine Tools A	3
	AND	
MTT112	Fundamentals of Machine Tools B	4
	OR	
MTT114	Fundamentals of Machine Tools	(7)
	Total Credit Hours	7

Machine Tool Operator I Academic Plan Code - 4805033109

	Total Credit Hours	15 – 18
MT115	Technical Mathematics	3
	Machinist	
BRX110	Basic Blueprint Reading for	2
	Machines	
MTT 138	Intro to Programming & CNC	(6)
	Programming/CAD/CAM/CNC <b>OR</b>	
MTT134	Manual	(6)
MTT132	CAD/CAM/CNC OR	3
MTT130	Manual Programming AND	3
MTT114	Fundamentals of Machine Tools	(7)
	OR	
MTT112	Fundamentals of Machine Tools B	4
	AND	
MTT110	Fundamentals of Machine Tools A	3
	Academic Plan Code - 4805033109	

## BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE

Machine Tool Operator II Academic Plan Code - 4805033119

	Total Credit Hours	26-29
	or Higher	
MT125	Technical Algebra and Trigonometry	(3)
MT115	Technical Mathematics OR	3
	course.	
	completing a computer literacy	
	by competency exam or by	
	Literacy must be demonstrated either	
	Computer Literacy: Computer	0-3
	Machinist	
BRX110	Basic Blueprint Reading for	2
	Machines	(-)
MTT 138	Intro to Programming & CNC	(6)
	Programming/CAD/CAM/CNC <b>OR</b>	(-)
MTT134	Manual	(6)
MTT132	CAD/CAM/CNC OR	3
MTT130	Manual Programming AND	3
MTT124	Applied Machining	(6)
MTT122	Applied Machining II OR	3
MTT120	Applied Machining I AND	3 3
MTT118	Metrology/Control Charts	
MTT114	Fundamentals of Machine Tools	(7)
1111112	OR	•
MTT112	Fundamentals of Machine Tools B	4
WITTIO	AND	3
MTT110	Fundamentals of Machine Tools A	3

CNC Operator Academic Plan Code - 4805033129

MTT110	Fundamentals of Machine Tools A AND	3
MTT112	Fundamentals of Machine Tools B	4
	OR	
MTT114	Fundamentals of Machine Tools	(7)
MTT118	Metrology/Control Charts	2
MTT 130	Manual Programming and	3
MTT 132	CAD/CAM/CNC OR	3
MTT 134	Manual Programming	(6)
	CAD/CAM/CNC or	
MTT 138	Intro to Programming & CNC	(6)
	Machines	
MTT2301	Intro to Conversational Programming	3
	AND	
MTT2302	Conversational Editing and	3
	Subroutines <b>OR</b>	
MTT230	Conversational Programming <b>OR</b>	(6)
MTT 234	CNC Machines and Coding Practices	(6)
BRX110	Basic Blueprint Reading for	2
	Machinist	
	Computer Literacy: Computer	0-3
	Literacy must be demonstrated either	
	by competency exam or by	
	completing a computer literacy	
(C 1" +	tompicting a computer incracy	

MT115	Technical Mathematics OR	3
MT125	Technical Algebra and Trigonometry	(3)
	or Higher	
	Total Credit Hours	26 – 29
	<b>Total Credit Hours</b>	26 – 29

course.

Academic Plan Code - 4805033179

IEX 297	Special Problems IV	4
	Total Credit Hours	4

# CNC Machining & Waterjet Technology Academic Plan Code - 4805033189

MTT138	Intro to Programming and CNC	6
	Machines	
MTT234	CNC Machines & Coding Practices	6
MTT244	Advance Programming/Setup	6
	Practices	
	Total Credit Hours	18