

BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE

**Machine Tool Technology
Associate in Applied Science**

Academic Plan Code - 4805037019

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.

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

Course Number	Course Title	Credit Hours
General Education Core		
ENG101	Writing I	3
MT115 or MAT125	Technical Mathematics or	(3)
MT125	Technical Algebra and Trigonometry or Higher	3
	Heritage/Humanities	3
	Science	3 – 4
	Electives	2 - 3
	Social Interaction	3
	Computer Literacy	2 - 3
	Subtotal Credit Hours	19-22
Recommended Additional General Education		
COM181	Basic Public Speaking or	(3)
COM 252	Introduction to Interpersonal Communications	(3)
Technical Core or Support Courses		
MTT110	Fundamentals of Machine Tools A AND	3
MTT112	Fundamentals of Machine Tools B OR	4
MTT114	Fundamentals of Machine Tools	(7)
MTT118	Metrology/Control Charts	3
MTT120	Applied Machining I AND	3
MTT122	Applied Machining II OR	4
MTT124	Applied Machining	(7)
MTT130	Manual Programming AND	3
MTT132	CAD/CAM/CNC OR	3
MTT134	Manual Programming/CAD/CAM/CNC	(6)
MTT210	Industrial Machining I AND	3
MTT212	Industrial Machining II OR	4
MTT214	Industrial Machining	(7)
MTT220	Advanced Industrial Machining I AND	4
MTT222	Advanced Industrial Machining II	2

(Courses are listed by category and not necessarily in the order to be taken)

	OR	
MTT224	Advanced Industrial Machining	(6)
MTT2301	Intro to Conversational Programming AND	3
MTT2302	Conversational Editing and Subroutines OR	3
MTT230	Conversational Programming	(6)
MTT2401	Intro to 3-D Code Sequencing and Tool path Production AND	3
MTT2402	Advanced 3-D Code Sequencing and Macro Systems OR	3
MTT240	Intro to 3-D Programming	(6)
BRX110	Basic Blueprint Reading for Machinist AND	2
BRX210	Mechanical Blueprint Reading for Machinist OR	2
BRX112	Blueprint Reading for Machinist	(4)
	Subtotal Credit Hours	52-55
	Total Credit Hours	71-77

**Machine Tool Technology
Diplomas**

Description:

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Course Number	Course Title	Credit Hours
CNC Machinist		
Academic Plan Code - 4805034069		
MTT110	Fundamentals of Machine Tools A AND	3
MTT112	Fundamentals of Machine Tools B OR	4
MTT114	Fundamentals of Machine Tools	(7)
MTT118	Metrology/Control Charts	3
MTT120	Applied Machining I AND	3
MTT122	Applied Machining II OR	4
MTT124	Applied Machining	(7)
MTT130	Manual Programming AND	3
MTT132	CAD/CAM/CNC OR	3
MTT134	Manual Programming/CAD/CAM/CNC	(6)
MTT210	Industrial Machining I AND	3
MTT212	Industrial Machining II OR	4
MTT214	Industrial Machining	(7)

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MTT220	Advanced Industrial Machining I AND	4
MTT222	Advanced Industrial Machining II OR	2
MTT224	Advanced Industrial Machining	(6)
MTT2301	Intro to Conversational Programming AND	3
MTT2302	Conversational Editing and Subroutines OR	3
MTT230	Conversational Programming	(6)
MTT2401	Intro to 3-D Code Sequencing and Tool path Production AND	3
MTT2402	Advanced 3-D Code Sequencing and Macro Systems OR	3
MTT240	Intro to 3-D Programming	(6)
BRX110	Basic Blueprint Reading for Machinist AND	2
BRX210	Mechanical Blueprint Reading for Machinist OR	2
BRX112	Blueprint Reading for Machinist	(4)
MT115	Technical Mathematics or	3
MT125	Technical Algebra and Trigonometry or Higher	(3)
	Computer Literacy	2 – 3
	General Education/ Applied Academics	3
	Electives	2 – 3
	Total Credit Hours	62-64

Machinist

Academic Plan Code - 4805034079

MTT110	Fundamentals of Machine Tools A AND	3
MTT112	Fundamentals of Machine Tools B OR	4
MTT114	Fundamentals of Machine Tools	(7)
MTT118	Metrology/Control Charts	3
MTT120	Applied Machining I AND	3
MTT122	Applied Machining II OR	4
MTT124	Applied Machining	(7)
MTT130	Manual Programming OR	3
MTT134	Manual Programming/CAD/CAM/CNC	(6)
MTT210	Industrial Machining I	3
MTT212	Industrial Machining II OR	4
MTT214	Industrial Machining	(7)
MTT220	Advanced Industrial Machining I AND	4
MTT222	Advanced Industrial Machining II OR	2
MTT224	Advanced Industrial Machining	(6)
BRX110	Basic Blueprint Reading for Machinist AND	2
BRX210	Mechanical Blueprint Reading for Machinist OR	2
BRX112	Blueprint Reading for Machinist	(4)
MT115	Technical Mathematics OR	3

MT125	Technical Algebra and Trigonometry OR Higher	(3)
	Computer Literacy	2 – 3
	General Education/ Applied Academics	3
	Electives	2 – 3
	Total Credit Hours	47-52

**Machine Tool Technology
Certificates**

Course Number	Course Title	Credit Hours
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Exploratory Machining

Academic Plan Code - 4805033039

MTT110	Fundamentals of Machine Tools A AND	3
MTT112	Fundamentals of Machine Tools B OR	4
MTT114	Fundamentals of Machine Tools	(7)
	Total Credit Hours	7

Machine Tool Operator I

Academic Plan Code - 4805033109

MTT110	Fundamentals of Machine Tools A AND	3
MTT112	Fundamentals of Machine Tools B OR	4
MTT114	Fundamentals of Machine Tools	(7)
MTT130	Manual Programming OR	3
MTT134	Manual Programming CAD/CAM/CNC	(6)
BRX110	Basic Blueprint Reading for Machinist	2
MT115	Technical Mathematics	3
	Total Credit Hours	15 – 18

Machine Tool Operator II

Academic Plan Code - 4805033119

MTT110	Fundamentals of Machine Tools A AND	3
MTT112	Fundamentals of Machine Tools B OR	4
MTT114	Fundamentals of Machine Tools	(7)
MTT118	Metrology/Control Charts	3
MTT120	Applied Machining I AND	3
MTT122	Applied Machining II OR	4
MTT124	Applied Machining	(7)
MTT130	Manual Programming OR	3
MTT134	Manual Programming CAD/CAM/CNC	(6)
BRX110	Basic Blueprint Reading for Machinist	2
	Computer Literacy	2 – 3
MT115	Technical Mathematics OR	3
MT125	Technical Algebra and Trigonometry or Higher	(3)
	Total Credit Hours	27 – 31

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