



Beaufort County Community College

P.O. Box 1069 Washington, NC 27889

MEMORANDUM

TO: Wesley Beddard
Dean of Instruction

FROM: Riley Mills *RM*
Lead Instructor, Mechanical Engineering Technology

Matthew Lincoln *ML*
Machinist Instructor

DATE: April 19, 2012

RE: Curriculum Committee – Catalog Change to Mechanical Engineering Technology Certificates and Diploma

After talking to area industries, we feel these changes below will better benefit our students in finding employment in the machinist field. Please see the attached changes to the Mechanical Engineering Technology Certificates and Diplomas.

Machinist Diploma D40320 for a total of 43 hours (previously ~~39~~⁴¹ hours)

Add BPR 111, Blueprint Reading I	1	2	2
Add BPR 121, Blueprint Reading II	1	2	2

Machining Technology Certificate C40320 for a total of 17 hours (previously ~~18~~¹⁷ hours)

Add BPR 111, Blueprint Reading I	1	2	2
Add MEC 180, Engineering Materials	2	3	3
Delete DFT 111, Technical Drafting I	1	3	2
Delete DFT 111A, Technical Drafting I Lab	0	3	1

Machining Advanced Certificate C40320B for a total of 17 hours (previously 15 hours)

Add BPR 121, Blueprint Reading II	1	2	2
Add DFT 111, Technical Drafting I	1	3	2
Add DFT 111A, Technical Drafting I Lab	0	3	1
Delete MEC 180 Engineering Materials	2	3	3

Machinist Diploma D40320

The Machinist diploma is designed to develop skills in the safe use of hand tools, power machinery, computerized equipment, and precision measuring instruments.

Students will learn to interpret blueprints, set-up manual and computer numerical controlled machining equipment, perform basic machining operations, and to ensure product quality is maintained.

Student should gain necessary skills to obtain entry-level employment in manufacturing industries, government agencies, and specialty machine shops.

All courses* in this diploma program may be applied toward completion of the Associate of Applied Science degree in Mechanical Engineering Technology.

Prefix & Number	Description	Class	Lab	Clinical/ Shop	Credit
BPR 111	Blueprint Reading I	1	2	0	2
BPR 121	Blueprint Reading II	1	2	0	2
DFT 111	Technical Drafting I	1	3	0	2
DFT 111A	Technical Drafting I	0	3	0	1
DFT 151	CAD I	2	3	0	3
ENG 102	Applied Communications I*	3	0	0	3
ISC 112	Industrial Safety	2	0	0	2
MAC 111	Machining Technology I	2	12	0	6
MAC 112	Machining Technology II	2	12	0	6
MAC 113	Machining Technology III	2	12	0	6
MAC 121	Introduction to CNC	2	0	0	2
MAT 115	Mathematical Models*	2	2	0	3
MEC 128	CNC Machining Process	2	4	0	4
MEC 231	Comp-Aided Manufacturing I	1	4	0	3
Totals:		23	59	0	45

Diploma Total **45**

*Students planning to pursue the Associate in Applied Science Degree should enroll in ENG 111 Expository Writing and MAT 121 Algebra/Trigonometry I.

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All courses* in this diploma program may be applied toward completion of the Associate of Applied Science degree in Mechanical Engineering Technology.

Prefix & Number	Description	Class	Lab	Clinical/ Shop	Credit
DFT 111	Technical Drafting I	1	3	0	2
DFT 111A	Technical Drafting I	0	3	0	1
DFT 151	CAD I	2	3	0	3
ENG 102	Applied Communications I*	3	0	0	3
ISC 112	Industrial Safety	2	0	0	2
MAC 111	Machining Technology I	2	12	0	6
MAC 112	Machining Technology II	2	12	0	6
MAC 113	Machining Technology III	2	12	0	6
MAC 121	Introduction to CNC	2	0	0	2
MAT 115	Mathematical Models*	2	2	0	3
MEC 128	CNC Machining Process	2	4	0	4
MEC 231	Comp-Aided Manufacturing I	1	4	0	3
Totals:		21	55	0	41
Diploma Total					41

*Students planning to pursue the Associate in Applied Science Degree should enroll in ENG 111 Expository Writing and MAT 121 Algebra/Trigonometry I.

Machinist Certificate C40320

The Machining Technology certificate is designed to develop basic skills in the safe use of hand tools, machine tools, and precision measuring instruments.

Students will gain basic knowledge in technical drafting, engine lathe and milling machine operations, precision grinding, and precision measuring.

Students should gain necessary skills to obtain entry-level jobs in manufacturing industries and specialty machine shops.

All courses in this certificate program may be applied toward completion of the Machinists diploma and the Associate of Applied Science degree in Mechanical Engineering Technology.

Prefix & Number	Description	Class	Lab	Clinical/ Shop	Credit
BPR 111	Blueprint Reading	1	2	0	2
MEC 180	Engineering Materials	2	3	0	3
MAC 111	Machining Technology I	2	12	0	6
MAC 112	Machining Technology II	2	12	0	6
<i>Totals:</i>		7	29	0	17
Certificate Total					17

Machinist Certificate C40320

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All courses in this certificate program may be applied toward completion of the Machinists diploma and the Associate of Applied Science degree in Mechanical Engineering Technology.

Prefix & Number	Description	Class	Lab	Clinical/ Shop	Credit
DFT 111	Technical Drafting I	1	3	0	2
DFT 111A	Technical Drafting I Lab	0	3	0	1
ISC 112	Industrial Safety	2	0	0	2
MAC 111	Machining Technology I	2	12	0	6
MAC 112	Machining Technology II	2	12	0	6
<i>Totals:</i>		7	30	0	17
Certificate Total					17

**Machinist
Advanced Certificate
C40320B**

The Machining Advanced certificate is designed to develop basic skills in the safe use of machine tools both conventional and computer numerical control. This certificate incorporates skills learned in a design project selected by the student and approved by the instructor.

Students should gain necessary skills to obtain entry-level employment in manufacturing and machining industries.

All courses in this certificate program may be applied toward completion of the Machinists diploma and the Associate of Applied Science degree in Mechanical Engineering Technology.

NOTE: The Machining Technology certificate must be completed before enrolling in Machining Advanced certificate.

Prefix & Number	Description	Class	Lab	Clinical/ Shop	Credit
BPR 121	Blueprint Reading II	1	2	0	2
DFT 111	Technical Drafting I	1	3		2
DFT 111A	Technical Drafting I Lab	0	3	0	1
MAC 113	Machining Technology III	2	12	0	6
MAC 121	Introduction to CNC	2	0	0	2
MEC 128	CNC Machining Process	2	4	0	4
<i>Totals:</i>		8	24	0	17
Certificate Total					17

**Machinist
Advanced Certificate
C40320B**

The Machining Advanced certificate is designed to develop basic skills in the safe use of machine tools both conventional and computer numerical control. This certificate incorporates skills learned in a design project selected by the student and approved by the instructor.

Students should gain necessary skills to obtain entry-level employment in manufacturing and machining industries.

All courses in this certificate program may be applied toward completion of the Machinists diploma and the Associate of Applied Science degree in Mechanical Engineering Technology.

NOTE: The Machining Technology certificate must be completed before enrolling in Machining Advanced certificate.

Prefix & Number	Description	Class	Lab	Clinical/ Shop	Credit
MAC 113	Machining Technology III	2	12	0	6
MAC 121	Introduction to CNC	2	0	0	2
MEC 128	CNC Machining Process	2	4	0	4
MEC 180	Engineering Materials	2	3	0	3
<i>Totals:</i>		8	19	0	15
Certificate Total					15