[Computerized Manufacturing and Machining](https://bluegrass.kctcs.edu/education-training/program-finder/computerized-manufacturing-machining.aspx)

Associate in Applied Science

Coordinator: Danny Roberts ([danny.roberts@kctcs.edu](mailto:danny.roberts@kctcs.edu)) 859-246-6773

Student Name: Student ID:

*Students must meet college readiness benchmarks as identified by the Council on Postsecondary Education or remedy the identified skill deficiencies.*

NOTE: New students must start CMM classes in the Fall semester.

Semester 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Courses | Cr. Hrs. | Term | Grade | Prerequisites | Notes |
| CMM 114 Fundamentals of Machine Tools | 6 |  |  |  | Fall only |
| CMM 118 Metrology/Control Charts | 2 |  |  |  | Fall only |
| BRX 112 Blueprint Reading for Machinist | 4 |  |  |  | Fall only |
| MAT 116 Technical Mathematics or MAT 126 Technical Algebra and Trigonometry or Higher | 3 |  |  |  |  |
| Digital Literacy | 0 – 3 |  |  |  | Course or competency exam |
| Total Semester Credit Hours | 15 – 18 |  |  |  |  |

Semester 2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Courses | Cr. Hrs. | Term | Grade | Prerequisites | Notes |
| CMM 124 Applied Machining | 6 |  |  | CMM 114 | Spring only |
| CMM 134 Manual Programming CAD/CAM/CNC OR  CMM 138 Intro to Programming and CNC Machines | 6 |  |  | CMM 114 | Spring only |
| ENG 101 Writing I | 3 |  |  |  |  |
| Total Semester Credit Hours | 15 |  |  |  |  |

Semester 3

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Courses | Cr. Hrs. | Term | Grade | Prerequisites | Notes |
| CMM 214 Industrial Machining | 6 |  |  | CMM 124 | Fall only |
| CMM 230 Conversational Programming OR  CMM 234 CNC Machines and Coding Practices | 6 |  |  | Instructor Consent Required  CMM 134 or CMM 138 | Fall only |
| Heritage or Humanities course | 3 |  |  |  |  |
| Natural Sciences course | 3 |  |  |  |  |
| Total Semester Credit Hours | 18 |  |  |  |  |

Semester 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Courses | Cr. Hrs. | Term | Grade | Prerequisites | Notes |
| CMM 224 Advanced Industrial Machining | 6 |  |  | CMM 134 and CMM 214 | Spring only |
| CMM 240 Intro to 3-D Programming OR  CMM 244 Advanced Programming/Setup Practices | 6 |  |  | CMM 134 or CMM 138 | Spring only |
| CMM 298 Practicum OR  CMM 299 Cooperative Education Program | 1 |  |  | Instructor Consent Required |  |
| Social and Behavioral Sciences course | 3 |  |  |  |  |
| Total Semester Credit Hours | 16 |  |  |  |  |
| Total Degree Credit Hours | 64 – 67 |  |  |  |  |

**Graduation Requirements:**

* 25% or more of Total Degree Credit Hours must be earned at BCTC.
* Cumulative GPA must be 2.0 or higher.

Advisor Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Advisor Contact \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Additional Information**

General Education courses (math, natural sciences, writing, social and behavioral sciences, and heritage or humanities) can be taken in any order. It is recommended that math be taken in the first semester if possible.

Students must earn a grade of C or better in each CMM and BRX course.

Alternate course numbers that are equivalent to courses listed in the above plan:

CMM 110 and CMM 112 = CMM 114

BRX 110 and BRX 201 = BRX 112

CMM 120 and CMM 122 = CMM 124

CMM 130 and CMM 134 = CMM 134

CMM 210 and CMM 212 = CMM 214

CMM 2301 and CMM 2302 = CMM 230

CMM 220 and CMM222 = CMM 224

CMM 2401 and CMM 2402 = CMM 240

**Embedded Credentials**

|  |  |  |  |
| --- | --- | --- | --- |
| Credential | Title | Requirements | Total Cr. Hours |
| Diploma | CNC Machinist | BRX 112, CMM 114, CMM 118, CMM 124, CMM 134 OR CMM 138, CMM 214, CMM 230 OR CMM 234, CMM 224, CMM 240 OR CMM 244, CMM 298 OR CMM 299, ENG 101, MAT 116 OR MAT 126 OR higher, Digital Literacy | 55 – 58 |
| Diploma | Machinist | BRX 112, CMM 114, CMM 118, CMM 124, CMM 134 OR CMM 138, CMM 214, CMM 224, CMM 298 OR CMM 299, ENG 101, MAT 116 OR MAT 126 OR higher, Digital Literacy | 43 – 46 |
| Certificate | CNC Machining & Waterjet Technology | CMM 138, CMM 234, CMM 244 | 18 |
| Certificate | CNC Operator | BRX 112, CMM 114, CMM 118, CMM 134 or CMM 138, CMM 230 or CMM 234, MAT 116 OR 126 OR higher, Digital Literacy | 27 – 30 |
| Certificate | Exploratory Machining I | CMM 114, 5 hours of electives | 11 |
| Certificate | Machine Tool Operator I | BRX 112, CMM 114, CMM 134 OR CMM 138, Social and Behavioral Sciences OR Natural Sciences OR MAT 116 OR MAT 126 OR higher | 19 |
| Certificate | Machine Tool Operator II | BRX 112, CMM 114, CMM 118, CMM 124, CMM 134 OR CMM 138, Digital Literacy, Social and Behavioral Sciences OR Natural Sciences OR MAT 116 OR MAT 126 OR higher | 27 – 30 |

**Diploma Requirements:**

* 25% or more of Total Diploma Credit Hours must be earned at BCTC.
* Cumulative GPA must be 2.0 or higher.

**Certificate Requirements:**

* 25% or more of Total Certificate Credit Hours must be earned at BCTC.
* Grade of C or higher in each course required for certificate.

*Reviewed by: Danny Roberts Effective Term: Fall 2021*

*Review Date: 2-10-2021*