

Gateway S.M.A.R.T. Plan

Certificates: Computerized Manufacturing and Machining

Note: There may be course changes with future curriculum revisions that affect a change in course requirements listed on this sheet.

CNC Operator I: 19 Total Credit Hours

Courses	Cr	Grade	Offered
BRX 110 Basic Blueprint Reading (first eight weeks)	2		Fall/Spring
CMM 110 Fundamentals of Machine Tools - A (first eight weeks)	3		Fall/Spring
CMM 118 Metrology/Control Charts	2		Fall/Spring
CMM 130 Manual Programming (first eight weeks)	3		Spring/Summer
CMM 132 CAD/CAM/CNC	3		Spring/Summer
CMM 230 Conversational Programming	6		Fall/Spring

Digital Printing Technology (3D printing): 16 Total Credit Hours

Courses	Cr	Grade	Offered
BAS 160 Introduction to Business	3		All
DPT 100 Introduction to 3D Printing Technology	3		Fall/Spring
DPT 150 introduction to Engineering Mechanics for 3D Printing	3		Fall
DPT 280 Special Projects for 3D Printing, Level 1	1		Spring
Technical Elective within a field where 3D Printing Application Exists	3		Fall/Spring
Technical Elective within a field where 3D Printing Application Exists	3		Fall/Spring

Exploratory Machining I: 11 Total Credit Hours

Courses	Cr	Grade	Offered
CMM 110 Fundamentals of Machine Tools - A (first eight weeks)	3		Fall/Spring
CMM 112 Fundamentals of Machine Tools - B (second eight weeks)	3		Fall/Spring
Technical Electives or General Education courses	5		All

Machine Tool Operator I: 17 Total Credit Hours

Courses	Cr	Grade	Offered
BRX 110 Basic Blueprint Reading (first eight weeks)	2		Fall/Spring
CMM 110 Fundamentals of Machine Tools - A (first eight weeks)	3		Fall/Spring
CMM 112 Fundamentals of Machine Tools - B (second eight weeks)	3		Fall/Spring
CMM 130 Manual Programming (first eight weeks)	3		Spring/Summer
CMM 132 CAD/CAM/CNC	3		Spring/Summer
Social/Behavioral or Natural Science or Quantitative Reasoning course	3		All

Machine Tool Operator II: 25-28 Total Credit Hours

Courses	Cr	Grade	Offered
BRX 110 Basic Blueprint Reading (first eight weeks)	2		Fall/Spring
CMM 110 Fundamentals of Machine Tools - A (first eight weeks)	3		Fall/Spring
CMM 112 Fundamentals of Machine Tools - B (second eight weeks)	3		Fall/Spring
CMM 118 Metrology/Control Charts	2		Fall/Spring
CMM 124 Applied Machining	6		Spring/Summer
CMM 130 Manual Programming (first eight weeks)	3		Spring/Summer



Courses	Cr	Grade	Offered
CMM 132 CAD/CAM/CNC	3		Spring/Summer
Digital Literacy - CIT 105 Introduction to Computers or OST 105 Introduction to Office Systems (or Competency demonstrated by exam)	0-3		All
Social Behavioral or Natural Science or Quantitative Reasoning course	3		All

Notes

- Progression in the program is contingent upon achievement of a grade of C or better in each technical course and maintenance of a 2.0 cumulative grade point average or above (on a 4.0 scale)
- At least 25 percent of the approved curriculum for any certificate, diploma or degree must be completed at the student's home college.

Updated 6/15/22

