

## 2023-24 ACADEMIC PROGRAMS

### 2023-2024 ENGINEERING TECHNOLOGIST-MANUFACTURING (APETEC)

#### Description

Students in this program will demonstrate proficiency in the operation of various types of automated design/machine tool equipment. Competencies in design, programming, and materials and machine processing will be developed. In addition, students will hone skills in the manufacturing and troubleshooting of mechanical parts and the setup and operations of advanced manufacturing systems. Students will apply problem-solving skills learned in the program to create innovative solutions for real-world manufacturing challenges in preparation for entry-level Engineering Technologist or Technician positions.

#### Admissions Requirements

College Level Reading and Writing levels of 6 and Math Level 4 are required.

#### Course Requirements

##### First Semester

Class	Title	Minimum Credits
MEC 100	Materials and Processes	3
MEC 101	Blueprint Reading for Manufacturing	2
MTT 102	Machining for the Technologies	2
NCT 101	Introduction to Computerized Machining (CNC) - I	2
NCT 110	Introduction to Computerized Machining (CNC) - II	2
ROB 101	Robotics I - I	2
Total		13

##### Second Semester

Class	Title	Minimum Credits
COM 101	Fundamentals of Speaking	3
MTH 178	General Trigonometry*	3
MTT 111	Machine Shop Theory and Practice	4
NCT 120	Introduction to 2D CAD CAM Programming and Applications	2
NCT 121	Manual Programming and NC Tool Operation	4
Total		16

##### Third Semester

Class	Title	Minimum Credits
ART 150	Monuments and Cultures	3
NCT 123	2D CAD CAM CNC Programming for Mills and Lathes	2
NCT 221	Advanced Manual Programming and NC Tool Operation	4
PHY 111	General Physics I	4
Total		13

##### Fourth Semester

Class	Title	Minimum Credits
ECO 110	Introduction to Economics	3
NCT 255	Probes, Macros and Conversational Programming for CNC	4
NCT 259	MasterCam 2D and 3D CAM CNC Programming for Mills	4
Total		11

##### Fifth Semester

Class	Title	Minimum Credits
ENG 107	Technical Writing Fundamentals	3
MEC 120	3D-Printing: Machine, Process and Innovation	4
NCT 269	4 and 5 Axis Machining for the CNC Vertical Mills	4
Total		11

**Total Credits Required: 64**

#### Footnotes

\*MTH 178 requires academic math level 5. \*\*Students may elect to take optional courses to meet MTA. Please refer to the WCC MTA Transfer Agreement web page <https://www.wccnet.edu/learn/transfer-wcc-credits/mta.php> for more information.

Accurate as of 02/15/2024 Information is subject to change without notice.

