



Manufacturing Technology Short Certificates

We advise CTE dual enrollment students in the shortest credential options within an AAS degree. We do this because they are the shortest credit hour options and allow students the greatest chance of completing a credential before they graduate high school. All courses in the short certificate and advanced certificate options are counted towards an AAS degree within the Career Program.

Special Details for Dual Enrollment Students in a Manufacturing Career Program:

All manufacturing options must be taken on-campus. Courses are offered at the Jefferson, Shelby-Hoover and St. Clair-Pell City campuses.

We recommend welding students contact Jeff Wiley jwiley7@jeffersonstate.edu for advising at the Jefferson campus and James Scott james.scott@jeffersonstate.edu for advising at the Shelby-Hoover campus. Students in other program options should contact Don Wilcher at dwilcher@jeffersonstate.edu for advising.

Academic Course Pairing Option: English (ENG 101 only) can be covered under the CTE scholarship. For scholarship coverage, students **must** take ENG 101 and a CTE course in the same semester.

Industrial Maintenance Technology Option			
Course	Prerequisite	Title	Semester Hours
AUT 102	none	Lean Manufacturing & Industrial Safety	3
AUT 104	none	Blueprint Reading for Manufacturing	3
AUT 116	none	Introduction to Robotics	3
ELM 200	MTH 100 or equivalent placement score	Electric Circuits I	3
MET 190	none	Mechanical Tools I	4
**Must be eligible for ENG 101 and MTH 100			
Total Credit Hours			16



Biomedical Equipment Technology Option			
Course	Prerequisite	Title	Semester Hours
ELM 200	MTH 100 or equivalent placement score	Electric Circuits I	3
ELM 201S	ELM 200	Electric Circuits II	3
BET 211	Admission to program	Biomedical Electronic Systems I	3
ELM 202	none	Digital Circuits I	3
BET 222	Admission to program	Medical Communications Systems	3
ELM 205	ELM 201S	Electronics I	3
**Must be eligible for ENG 101 and MTH 100			
Total Credit Hours			18

Automotive/Automated Manufacturing Option			
Course	Prerequisite	Title	Semester Hours
CIS 146	none	Microcomputer Applications	3
PHY 115 <i>or</i> PHS112	PHY 115: MTH 100 <i>or</i> PHS 112: None	Technical Physics <i>or</i> Physical Science II	4
AUT 102	none	Lean Manufacturing & Industrial Safety	3
AUT 104	none	Blueprint Reading for Manufacturing	3
AUT 116	none	Introduction to Robotics	3
**Must be eligible for ENG 101 and MTH 100			
Total Credit Hours			16

Manufacturing Systems Technology Option			
Course	Prerequisite	Title	Semester Hours
ADM 106		Quality Control Concepts	3
AUT 102	none	Lean Manufacturing & Industrial Safety	3
AUT 104	none	Blueprint Reading for Manufacturing	3
AUT 116	none	Introduction to Robotics	3
AUT 144	none	Manufacturing Systems, Methods and Processes	3
ELM 202	none	Digital Circuits I	3
**Must be eligible for ENG 101 and MTH 100			
Total Credit Hours			18



Electronics Option			
Course	Prerequisite	Title	Semester Hours
AUT 102	none	Lean Manufacturing & Industrial Safety	3
AUT 104	none	Blueprint Reading for Manufacturing	3
AUT 116	none	Introduction to Robotics	3
ELM 200	MTH 100 or equivalent placement score	Electric Circuits I	3
ELM 202	none	Digital Circuits I	3
**Must be eligible for ENG 101 and MTH 100			
Total Credit Hours			15

Computer Aided Drafting/Design Option			
Course	Prerequisite	Title	Semester Hours
AUT 104	none	Blueprint Reading for Manufacturing	3
AUT 116	none	Introduction to Robotics	3
MET 190	none	Mechanical Tools I	4
MET 201	none	Basic CAD	3
MET 204	MET 201	Basic Computer-Aided Modeling	3
**Must be eligible for ENG 101 and MTH 100			
Total Credit Hours			16

Welding Technology Option			
Course	Prerequisite	Title	Semester Hours
WKO 110	none	NCCER Core	3
AUT 186	none	Principals of Industrial Maintenance Welding and Metal Cutting Techniques	3
WDT 109	AUT 186	SMAW Fillet/PAC/CAC	3
WDT 166	AUT 186	Flux Core ARC Welding	3
WDT 119	AUT 186	Gas Metal Arc/Flux Cored	3
WDT 120	AUT 186	Shielded Metal Arc Welding Groove	3
**Must be eligible for ENG 101 and MTH 100			
Total Credit Hours			18



Welding Technology – NCCER Level I Certificate			
Course	Prerequisite	Title	Semester Hours
WKO 110	none	NCCER Core	3
AUT 186	none	Principals of Industrial Maintenance Welding and Metal Cutting Techniques	3
WDT 109	AUT 186	SMAW Fillet/PAC/CAC	3
WDT 258	WDT 219	Certification Lab	3
**Must be eligible for ENG 101 and MTH 100			
Total Credit Hours			12

For ENG 101 eligibility, submit official ACT scores to Jefferson State showing an English sub test score of 18 or higher **OR score 05 or higher on the Accuplacer WritePlacer exam administered through the Jefferson State testing center.

For MTH 100 eligibility, submit official ACT scores to Jefferson State showing a math sub test score of 18 or higher **OR score 253 or higher on the Accuplacer QAS exam administered through the Jefferson State testing center.

See the Jefferson State Course Catalog for more details [Catalogs - Jefferson State Community College](#)