



## **Welding Technology**

### **Student Learning Outcomes**

- 1 Communication- The student will demonstrate the ability to communicate effectively using written and/or oral communication.
- 2 Information Literacy- The student will recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.
- 3 Problem Solving- The student will demonstrate the ability to analyze information and solve problems.
- 4 Workplace Skills - Demonstrates a mastery of workplace skills/soft skills, exhibits initiative, adapts to varied situations

### **Program Outcomes**

- 1 Obtain general industry OSHA 10 card
- 2 Fabricate a project to specifications utilizing a print
- 3 Inspect and test welds to American Welding Society (AWS) specifications
- 4 Demonstrate ability to produce fillet welds
- 5 Demonstrate ability to produce full penetration open root welds

**Fall**

Course #	Course Title	Credits	Function
CWG 103	Blue Print Reading for Welders	3	Technical Studies
CWG 105	Welding Safety & Orientation	1	Technical Studies
CWG 120	GMAW	3	Technical Studies
CWG 121	GMAW II	4	Technical Studies
CWG 141	Oxy Acetylene Welding & Cutting	2	Technical Studies
	Technical Elective	1	Elective
AVC 110	Safety/OSHA 10	1	Technical Studies
PDV 115	Work Ethics	2	General Studies

**Spring**

Course #	Course Title	Credits	Function
CWG 115	SMAW	3	Technical Studies
CWG 116	SMAW II	4	Technical Studies
	Technical Elective**	3	Elective
MTH	Math Elective*	3	General Studies
	Communication Elective*	3	General Studies

**Summer**

Course #	Course Title	Credits	Function
CWG 145	Fabrication & Design	2	Technical Studies
	Technical Electives**	8	Elective

**Fall**

Course #	Course Title	Credits	Function
CWG 125	GTAW	3	Technical Studies
CWG 126	GTAW II	4	Technical Studies
CWG 149	Materials & Testing	2	Technical Studies
ENG 101	Composition I*	3	General Studies
	Humanities Elective*	3	General Studies
	Social Science Elective*	3	General Studies

**\*\*Technical Electives**

Course #	Course Title	Credits	Function
CWG 110	Welding Applications		Elective
CWG 130	Robotic Welding		Elective
CWG 135	Measurement and Specification		Elective

CWG 155	Flux Cored Arc Welding		Elective
CWG 160	Welding Internship		Elective
CWG 242	SMAW D1.1 Qualification		Elective
CWG 243	GMAW D1.1 Qualification		Elective
MCD 101	Introduction to CAD I		Elective
MCD 102	Introduction to CAD II		Elective

\* **Kansas Systemwide General Education**

**Technical Certificate, Welding Technology**

**Total Credits 39**

**Fall**

Course #	Course Title	Credits	Function
CWG 103	Blue Print Reading for Welders	3	Technical Studies
CWG 105	Welding Safety & Orientation	1	Technical Studies
CWG 120	GMAW	3	Technical Studies
CWG 121	GMAW II	4	Technical Studies
CWG 135	Measurement and Specification	1	Technical Studies
CWG 141	Oxy Acetylene Welding & Cutting	2	Technical Studies
AVC 110	Safety/OSHA 10	1	Technical Studies
PDV 115	Work Ethics	2	General Studies

**Spring**

Course #	Course Title	Credits	Function
CWG 115	SMAW	3	Technical Studies
CWG 116	SMAW II	4	Technical Studies
CWG 125	GTAW	3	Technical Studies
CWG 126	GTAW II	4	Technical Studies
CWG 145	Fabrication & Design	2	Technical Studies
CWG 149	Materials & Testing	2	Technical Studies
	Technical Elective**	4	Elective

**\*\*Technical Electives**

Course #	Course Title	Credits	Function
CWG 110	Welding Applications		Elective
CWG 130	Robotic Welding		Elective
CWG 135	Measurement and Specification		Elective

CWG 155	Flux Cored Arc Welding		Elective
CWG 160	Welding Internship		Elective
CWG 242	SMAW D1.1 Qualification		Elective
CWG 243	GMAW D1.1 Qualification		Elective
MCD 101	Introduction to CAD I		Elective
MCD 102	Introduction to CAD II		Elective

**Technical Certificate, Welding Technology**

**Total Credits 17**

**Fall**

Course #	Course Title	Credits	Function
CWG 103	Blue Print Reading for Welders	3	Technical Studies
CWG 105	Welding Safety & Orientation	1	Technical Studies
CWG 135	Measurement and Specification	1	Technical Studies
CWG 141	Oxy Acetylene Welding & Cutting	2	Technical Studies
CWG	Technical Electives**	7	Elective
AVC 110	Safety/OSHA 10	1	Technical Studies
PDV 115	Work Ethics	2	General Studies

**\*\*Technical Electives**

Course #	Course Title	Credits	Function
CWG 115	SMAW		Elective
CWG 116	SMAW II		Elective
CWG 120	GMAW		Elective
CWG 121	GMAW II		Elective