

**BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE**

**Welding Technology  
Associate in Applied Science**

Academic Plan Code - 4805087019

**Description:**

Welding occupations are primarily concerned with joining, surfacing, or repairing structures or parts made of metal or other weldable materials. The skills and knowledge needed to determine the appropriate welding technique required for a specific project and to successfully perform that technique are gained through course work and practical experience.

	(GMAW) Fillet Lab	
WLD143	Gas Metal Arc Welding (GMAW) Groove Lab	3
WLD170	Blueprint Reading for Welding	2
WLD171	Blueprint Reading for Welding Lab	3
WLD220	Welding Certification	2
WLD221	Welding Certification Lab	3
WLD298	Welding Practicum <b>OR</b>	1-6
WLD299	Cooperative Work Experience	(1-6)
	Technical Elective	2-3
	<b>Subtotal Credit Hours</b>	<b>42-48</b>
	<b>Total Credit Hours</b>	<b>60-70</b>

Course Number	Course Title	Credit Hours
<b>General Education Core</b>		
ENG101	Writing I	3
MAH155 or MT110	Applied Mathematics <b>OR</b>	3
MA 111 or MT145	Contemporary College Mathematics <b>OR</b>	(3)
MA109 or MT150	College Algebra	(3)
	Heritage/Humanities	3
PHY151	Introduction to Physics <b>AND</b>	3
PH161	Introductory Physics Laboratory I <b>OR</b>	1
	Science	(3)
PY110	General Psychology <b>OR</b>	3
SOC101	Introduction to Sociology	(3)
COM252 or COM181	Oral Communications	3
	Computer Literacy	0-3
	<b>Subtotal Credit Hours</b>	<b>18 – 22</b>
<b>Technical Core or Support Courses</b>		
WLD100	Oxy-Fuel Systems <b>OR</b>	2
WLD110	Cutting Processes	(2)
WLD101	Oxy-Fuel Systems Lab <b>OR</b>	2
WLD111	Cutting Processes Lab	(3)
WLD120	Shielded Metal Arc Welding (SMAW)	2
WLD121	Shielded Metal Arc Welding (SMAW) Fillet Laboratory	3
WLD123	Shielded Metal Arc Welding (SMAW) Groove Welds with Backing Lab <b>OR</b>	3
WLD225	Shielded Metal Arc Welding (SMAW) Open Groove Lab	(3)
WLD130	Gas Tungsten Arc Welding (GTAW)	2
WLD131	Gas Tungsten Arc Welding (GTAW) Fillet Lab	3
WLD133	Gas Tungsten Arc Welding (GTAW) Groove Lab	3
WLD140	Gas Metal Arc Welding (GMAW)	2
WLD141	Gas Metal Arc Welding	3

**Welding Technology  
Diploma**

**Description:**

Welding occupations are primarily concerned with joining, surfacing, or repairing structures or parts made of metal or other weldable materials. The skills and knowledge needed to determine the appropriate welding technique required for a specific project and to successfully perform that technique are gained through course work and practical experience.

**Combination Welding  
Academic Plan Code – 4805084019**

ENG101	Writing I <b>OR</b>	3
	Computer Literacy	0-3
TEC200	Technical Communications <b>OR</b>	(3)
WPP200	Workplace Principles	(3)
MAH155	Applied Mathematics <b>OR</b>	3
MT115 or MAT125	Technical Mathematics <b>OR</b>	(3)
MT111 or MT145	Contemporary College Mathematics <b>OR</b>	(3)
MA109 or MT150	College Algebra	(3)
	<b>Total Credit Hours</b>	<b>6-9</b>
<b>Technical Core or Support Courses</b>		
WLD100	Oxy-Fuel Systems <b>OR</b>	2
WLD110	Cutting Processes	(2)
WLD101	Oxy-Fuel Systems Lab <b>OR</b>	2
WLD111	Cutting Processes Lab	(3)
WLD120	Shielded Metal Arc Welding (SMAW)	2
WLD121	Shielded Metal Arc Welding (SMAW) Fillet Laboratory	3
WLD123	Shielded Metal Arc Welding (SMAW) Groove Welds with Backing Lab <b>OR</b>	3
WLD225	Shielded Metal Arc Welding (SMAW) Open Groove Lab	(3)
WLD130	Gas Tungsten Arc Welding (GTAW)	2
WLD131	Gas Tungsten Arc Welding	3

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	(GTAW) Fillet Lab	
WLD133	Gas Tungsten Arc Welding (GTAW) Groove Lab	3
WLD140	Gas Metal Arc Welding (GMAW)	2
WLD141	Gas Metal Arc Welding (GMAW) Fillet Lab	3
WLD143	Gas Metal Arc Welding (GMAW) Groove Lab	3
WLD170	Blueprint Reading for Welding	2
WLD171	Blueprint Reading for Welding Lab	3
WLD220	Welding Certification	2
WLD221	Welding Certification Lab	3
WLD298	Welding Practicum <b>OR</b>	1-6
WLD299	Cooperative Work Experience	(1-6)
	Technical Elective	2-3
	<b>Subtotal Credit Hours</b>	<b>41-48</b>
	<b>Total Credit Hours</b>	<b>47-57</b>
<b>*Technical Electives:</b>		
WPP200	Workplace Principles	3
WLD151	Basic Welding A	2
WLD161	Submerged Arc Welding Lab	1
WLD181	Advanced Welding Systems Lab	1
WLD191	Plasma Arc Welding Systems Lab	1
WLD147	Flux Cored Arc Welding Lab	1
WLD145	Gas Metal Arc Welding Aluminum Lab	1
WLD251	Welding Automation Lab	1
WLD253	Pipe Fitting and Template Development Lab	1
WLD229	Shielded Metal Arc Welding Pipe Lab B	3
WLD240	Materials Technology	2
BEX100	Basic Electricity for Non-Majors	3
BEX101	Basic Electricity Lab for Non-Majors	2
FEX100	Fundamentals of Electricity for Non-Majors	3

\*This list is not all inclusive. Other courses may be approved at the discretion of the program coordinator.

**Welding Technology  
Certificates**

Course Number	Course Title	Credit Hours
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**Welder Helper**

Academic Plan Code - 4805083129

WLD151	Basic Welding A <b>OR</b>	2
WLD120	Shielded Metal Arc Welding (SMAW) <b>AND</b>	(2)
WLD121	Shielded Metal Arc Welding (SMAW) Fillet Laboratory <b>OR</b>	(3)
WLD130	Gas Tungsten Arc Welding (GTAW) <b>AND</b>	(2)

WLD131	Gas Tungsten Arc Welding (GTAW) Fillet Laboratory <b>OR</b>	(3)
WLD140	Gas Metal Arc Welding (GMAW) <b>AND</b>	(2)
WLD141	Gas Metal Arc Welding (GMAW) Fillet Laboratory <b>OR</b>	(3)
WLD152	Basic Welding B	(5)
	<b>Total Credit Hours</b>	<b>2-5</b>

**Gas Welder**

Academic Plan Code - 4805083039

WLD100	Oxy-Fuel Systems	2
WLD101	Oxy-Fuel Systems	2
	<b>Total Credit Hours</b>	<b>4</b>

**ARC Cutter**

Academic Plan Code - 4805083019

WLD110	Cutting Processes	2
WLD111	Cutting Processes Laboratory	3
	<b>Total Credit Hours</b>	<b>5</b>

**Tack Welder**

Academic Plan Code - 4805083119

WLD170	Blueprint Reading for Welding	2
WLD171	Blueprint Reading for Welding Laboratory	3
WLD151	Basic Welding A <b>OR</b>	2
WLD120	Shielded Metal Arc Welding (SMAW) <b>AND</b>	(2)
WLD121	Shielded Metal Arc Welding (SMAW) Fillet Laboratory <b>OR</b>	(3)
WLD130	Gas Tungsten Arc Welding (GTAW) <b>AND</b>	(2)
WLD131	Gas Tungsten Arc Welding (GTAW) Fillet Laboratory <b>OR</b>	(3)
WLD140	Gas Metal Arc Welding (GMAW) <b>AND</b>	(2)
WLD141	Gas Metal Arc Welding (GMAW) Fillet Laboratory <b>OR</b>	(3)
WLD152	Basic Welding B	(5)
	<b>Total Credit Hours</b>	<b>7-10</b>

**Production Line Welder**

Academic Plan Code - 4805083059

WLD130	Gas Tungsten Arc Welding (GTAW)	2
WLD131	Gas Tungsten Arc Welding (GTAW) Fillet Laboratory	3
WLD140	Gas Metal Arc Welding (GMAW)	2
WLD141	Gas Metal Arc Welding (GMAW) Fillet Laboratory	3
WLD100	Oxy-Fuel Systems <b>OR</b>	2
WLD110	Cutting Processes	(2)
WLD101	Oxy-Fuel Systems Laboratory <b>OR</b>	2
WLD111	Cutting Processes Laboratory	(3)
WLD120	Shielded Metal Arc Welding (SMAW)	2
WLD121	Shielded Metal Arc Welding	3

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	(SMAW) Fillet Laboratory	
	<b>Total Credit Hours</b>	<b>19-20</b>

**ARC Welder**

Academic Plan Code - 4805083029

WLD100	Oxy-Fuel Systems <b>OR</b>	2
WLD110	Cutting Processes	(2)
WLD101	Oxy-Fuel Systems Laboratory <b>OR</b>	2
WLD111	Cutting Processes Laboratory	(3)
WLD120	Shielded Metal Arc Welding (SMAW)	2
WLD121	Shielded Metal Arc Welding (SMAW) Fillet Laboratory <b>OR</b>	3
WLD123	Shielded Metal Arc Welding (SMAW) Groove Welds with Backing Laboratory <b>OR</b>	(3)
WLD225	Shielded Metal Arc Welding (SMAW) Open Groove Lab	(3)
WLD130	Gas Tungsten Arc Welding (GTAW)	2
WLD131	Gas Tungsten Arc Welding (GTAW) Fillet Laboratory <b>OR</b>	3
WLD133	Gas Tungsten Arc Welding (GTAW) Groove Laboratory	(3)
WLD140	Gas Metal Arc Welding (GMAW)	2
WLD141	Gas Metal Arc Welding (GMAW) Fillet Laboratory <b>OR</b>	3
WLD143	Gas Metal Arc Welding (GMAW) Fillet Groove Lab	(3)
WLD170	Blueprint Reading for Welding	2
WLD171	Blueprint Reading for Welding Laboratory	3
	<b>Total Credit Hours</b>	<b>24-25</b>

**Pipeline Welder**

Academic Plan Code - 4805083049

WLD100	Oxy-Fuel Systems <b>OR</b>	2
WLD110	Cutting Processes	(2)
WLD101	Oxy-Fuel Systems Laboratory <b>OR</b>	2
WLD111	Cutting Processes Laboratory	(3)
WLD120	Shielded Metal Arc Welding (SMAW)	2
WLD130	Gas Tungsten Arc Welding (GTAW)	2
WLD140	Gas Metal Arc Welding (GMAW)	2
WLD170	Blueprint Reading for Welding	2
WLD171	Blueprint Reading for Welding Laboratory	3
WLD220	Welding Certification	2
WLD221	Welding Certification Laboratory	3
WLD227	Shielded Metal Arc Welding (SMAW) Pipe Laboratory A	3
WLD235	Gas Tungsten Arc Welding (GTAW) Pipe Laboratory A	3
WLD245	Gas Metal Arc Welding (GMAW) Pipe Laboratory A	3
<b>Recommended Electives:</b>		

WLD229	Shielded Metal Arc Welding (SMAW) Pipe Laboratory B	(3)
WLD237	Gas Tungsten Arc Welding (GTAW) Pipe Laboratory B	(3)
WLD247	Gas Metal Arc Welding (GMAW) Pipe Laboratory B	(3)
WLD253	Pipe Fitting and Template Development Lab	(1)
	<b>Total Credit Hours</b>	<b>29-40</b>

**AWS National Skills Standards Level I**

Academic Plan Code – 4805083089

WLD100	Oxy-Fuel Systems <b>OR</b>	2
WLD110	Cutting Processes	(2)
WLD101	Oxy-Fuel Systems Laboratory <b>OR</b>	2
WLD111	Cutting Processes Laboratory	(3)
WLD120	Shielded Metal Arc Welding (SMAW)	2
WLD121	Shielded Metal Arc Welding (SMAW) Fillet Laboratory	3
WLD123	Shielded Metal Arc Welding (SMAW) Groove Welds with Backing Laboratory <b>OR</b>	3
WLD225	Shielded Metal Arc Welding (SMAW) Open Groove Laboratory	(3)
WLD130	Gas Tungsten Arc Welding (GTAW)	2
WLD131	Gas Tungsten Arc Welding (GTAW) Fillet Laboratory	3
WLD133	Gas Tungsten Arc Welding (GTAW) Groove Laboratory	3
WLD140	Gas Metal Arc Welding (GMAW)	2
WLD141	Gas Metal Arc Welding (GMAW) Fillet Laboratory	3
WLD143	Gas Metal Arc Welding (GMAW) Fillet Groove Laboratory	3
WLD170	Blueprint Reading for Welding	2
WLD171	Blueprint Reading for Welding Laboratory	3
	<b>Total Credit Hours</b>	<b>33-34</b>