#### 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.

ENG101 Writing I  MAT 110 Applied Mathematics OR  MAT 116 Technical Mathematics OR	3 3
MAT 110 Applied Mathematics <b>OR</b> MAT 116 Technical Mathematics OR	
MAT 110 Applied Mathematics <b>OR</b> MAT 116 Technical Mathematics OR	3
Contour or Collect	(3)
MAT 146   Contemporary College	(2)
Mathematics OR	(3)
MAT 150	
or MAT   College Algebra	(3)
109	
Heritage/Humanities/Fine	3
Arts/Foreign Language	
Science OR Recommended	3
PHY151 Introduction to Physics AND	(3)
PH161 Introductory Physics Laboratory I	(1)
PY110 General Psychology <b>OR</b>	3
SOC101 Introduction to Sociology	(3)
COM252 Interpesonal Communications	
or	3
COM181 Oral Communications	
Computer Literacy	0-3
NOTE: Computer Literacy must	
be demonstrated either by	
competency exam or by	
completing a computer literacy	
course.	
	18 – 22
Technical Core or Support Courses	
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	2
(SMAW) Shielded Metal Arc Welding	
WLD121 (SMAW) Fillet Laboratory	3
Shielded Metal Arc Welding	
WLD123 (SMAW) Groove Welds with	3
Backing Lab <b>OR</b>	5
Shielded Metal Arc Welding	
WLD225 (SMAW) Open Groove Lab	(3)
Gas Tungsten Arc Welding	
WLD130 GTAW)	2
WLD131 Gas Tungsten Arc Welding	3

	(CTLAND E'II . I I	
	(GTAW) Fillet Lab	
WLD133	Gas Tungsten Arc Welding	3
WLD133	(GTAW) Groove Lab	3
WLD140	Gas Metal Arc Welding	2
WLD140	(GMAW)	2
WLD141	Gas Metal Arc Welding	3
WLD141	(GMAW) Fillet Lab	3
WLD143	Gas Metal Arc Welding	3
WLD143	(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>	1-4
WLD299	Cooperative Work Experience	(1-4)
	Technical Elective	3
	Subtotal Credit Hours	42-46
	Total Credit Hours	60-68

# 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 OR	3
TEC200	Technical Communications	(3)
MAT 110	Applied Mathematics <b>OR</b>	3
MAT 116	Technical Mathematics OR	(3)
MAT 146	Contemporary College	(2)
MAI 140	Mathematics OR	(3)
MAT 150		
or MAT	College Algebra	(3)
109		
	Computer Literacy	0-3
	NOTE: Computer Literacy must	
	be demonstrated either by	
	competency exam or by	
	completing a computer literacy	
	course.	
	Total Credit Hours	6-9
7	Technical Core or Support Courses	
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)
WI D120	Shielded Metal Arc Welding	2
WLD120	(SMAW)	2
WLD121	Shielded Metal Arc Welding	3

#### BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE

	(SMAW) Fillet Laboratory	
	Shielded Metal Arc Welding	
WLD123	(SMAW) Groove Welds with	3
	Backing Lab OR	
WI D225	Shielded Metal Arc Welding	(2)
WLD225	(SMAW) Open Groove Lab	(3)
WLD130	Gas Tungsten Arc Welding	2
WLD130	(GTAW)	2
WLD131	Gas Tungsten Arc Welding	3
WLD131	(GTAW) Fillet Lab	3
WLD133	Gas Tungsten Arc Welding	3
WLD133	(GTAW) Groove Lab	
WLD140	Gas Metal Arc Welding (GMAW)	2
WLD141	Gas Metal Arc Welding (GMAW)	3
WLD141	Fillet Lab	J
WLD143	Gas Metal Arc Welding (GMAW)	3
WLD143	Groove Lab	J
WLD170	Blueprint Reading for Welding	2
WLD171	Blueprint Reading for Welding	3
	Lab	<i>J</i>
WLD220	Welding Certification	2
WLD221	Welding Certification Lab	3
WLD298	Welding Practicum <b>OR</b>	1-4
WLD299	Cooperative Work Experience	(1-4)
	Technical Elective	2-3
	Subtotal Credit Hours	41-46
	Total Credit Hours	47-55
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*Technical		_
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
WII D252	Pipe Fitting and Template	4
WLD253	Development Lab	1
WII D220	Shielded Metal Arc Welding Pipe	2
WLD229	Lab B	3
WLD240	Materials Technology	2
BEX100	Basic Electricity for Non-Majors	3
DEV101	Basic Electricity Lab for Non-	2
BEX101	Majors	2
FEX100	Fundamentals of Electricity for	3
1 LX100	Non-Majors	<u> </u>

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

## Welding Technology Certificates

Course	Corres Title	Credit
Number	Course Title	Hours

### Welder Helper

Academic Plan Code - 4805083129

WLD151	Basic Welding A <b>OR</b>	2
WLD120	Shielded Metal Arc Welding	(2)
W LD120	(SMAW) AND	(2)
WLD121	Shielded Metal Arc Welding	(3)
WLD121	(SMAW) Fillet Laboratory <b>OR</b>	(3)
WLD130	Gas Tungsten Arc Welding	(2)
WLD130	(GTAW) <b>AND</b>	(2)
WLD131	Gas Tungsten Arc Welding	(3)
WLDI31	(GTAW) Fillet Laboratory <b>OR</b>	(3)
WLD140	Gas Metal Arc Welding (GMAW)	(2)
WLD140	AND	(2)
WLD141	Gas Metal Arc Welding (GMAW)	(3)
WLD141	Fillet Laboratory OR	(3)
WLD152	Basic Welding B OR	(5)
IMT 100	Welding for Maintenance	(3)
IMT 101	Welding for Maintenance Lab	(2)
	Total Credit Hours	2-5

#### Gas Welder

Academic Plan Code - 4805083039

WLD100	Oxy-Fuel Systems	2
WLD101	Oxy-Fuel Systems	2
	Total Credit Hours	4

#### **ARC Cutter**

Academic Plan Code - 4805083019

	Total Credit Hours	5
WLD111	Cutting Processes Laboratory	3
WLD110	Cutting Processes	2

### Tack Welder

Academic Plan Code - 4805083119

WLD170	Blueprint Reading for Welding	2
WLD171	Blueprint Reading for Welding	3
WLD1/1	Laboratory	3
WLD151	Basic Welding A <b>OR</b>	2
WLD120	Shielded Metal Arc Welding	(2)
WLD120	(SMAW) AND	(2)
WLD121	Shielded Metal Arc Welding	(3)
WLD121	(SMAW) Fillet Laboratory <b>OR</b>	(3)
WLD130	Gas Tungsten Arc Welding	(2)
WLD130	(GTAW) AND	(2)
WLD131	Gas Tungsten Arc Welding	(3)
WLDIJI	(GTAW) Fillet Laboratory <b>OR</b>	(3)
WLD140	Gas Metal Arc Welding (GMAW)	(2)
WLD140	AND	(2)
	Gas Metal Arc Welding (GMAW)	(3)
WLD141	Fillet Laboratory <b>OR</b>	(3)
WLD152	Basic Welding B	(5)
	Total Credit Hours	7-10

#### **Production Line Welder**

Academic Plan Code - 4805083059

WLD130 Gas Tungsten Arc Welding (GTAW)	2
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	Total Credit Hours	19-20
WLD121	Shielded Metal Arc Welding (SMAW) Fillet Laboratory	3
WLD120	Shielded Metal Arc Welding (SMAW)	2
WLD111	Cutting Processes Laboratory	(3)
WLD101	Oxy-Fuel Systems Laboratory <b>OR</b>	2
WLD110	Cutting Processes	(2)
WLD100	Oxy-Fuel Systems <b>OR</b>	2
WLD141	Gas Metal Arc Welding (GMAW) Fillet Laboratory	3
WLD140	Gas Metal Arc Welding (GMAW)	2
WLD131	Gas Tungsten Arc Welding (GTAW) Fillet Laboratory	3
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#### **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
	Total Credit Hours	24-25

**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	2.
	(SMAW)	2
WLD130	Gas Tungsten Arc Welding	2.
	(GTAW)	2
WLD140	Gas Metal Arc Welding (GMAW)	2
WLD170	Blueprint Reading for Welding	2

	Total Credit Hours	29-40
WLD253	Pipe Fitting and Template Development Lab	(1)
WLD247	Gas Metal Arc Welding (GMAW) Pipe Laboratory B	(3)
WLD237	Gas Tungsten Arc Welding (GTAW) Pipe Laboratory B	(3)
WLD229	Shielded Metal Arc Welding (SMAW) Pipe Laboratory B	(3)
Recommen	ded Electives:	
WLD245	Gas Metal Arc Welding (GMAW) Pipe Laboratory A	3
WLD235	Gas Tungsten Arc Welding (GTAW) Pipe Laboratory A	3
WLD227	Shielded Metal Arc Welding (SMAW) Pipe Laboratory A	3
WLD221	Welding Certification Laboratory	3
WLD220	Welding Certification	2
WLD171	Blueprint Reading for Welding Laboratory	3

#### 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
	Total Credit Hours	33-34