WELDING (Degree)

Program Purpose

The Associate of Applied Science in Welding program aims to provide accessible, quality educational opportunities that will provide individuals with the knowledge, technical skills, and attitudes necessary to obtain employment in the welding profession. The AAS program is intended to produce graduates who are prepared for employment as structural and/or pipe welders with a concentration in Industrial Electricity/Electronics and Industrial Maintenance. Program graduates are to be competent in the academic areas of communications, mathematics, computer literacy, and human relations and in the technical areas of cutting processes, blueprint reading, SMAW and FCAW structural welding, SMAW and GTAW pipe welding, construction wiring, DC and AC fundamentals and industrial motor controls to applicable codes.

Reid State Community College will accomplish program objectives by providing students with a comprehensive general education and technical training in the core area of Welding and the concentration of Industrial Electricity/Electronics and Industrial Maintenance Technology. The occupational skill preparation should meet the American Welding Society recognized skill standards. The college will ensure program quality through internal certification of graduate competencies through written exams and performance evaluations to applicable welding and industrial electricity/electronics and industrial maintenance technology codes.

Occupational Data

Graduates of the Welding Technology program work in the structural iron and steel working industry where they use their skills which are grouped under the classification of welder/pipefitter personnel. According to the U.S. Bureau of Labor Statistics Occupational Employment and Wages, the national median wage for welder/pipefitter personnel was $24.26/hr. in 2022.

Program Outcome Objectives

- Program graduates will be proficient in communication, computation, and interpersonal skills.
- Program graduates will be technically proficient.
- Program graduates will be able to obtain industry certification.
- Program graduates will be successfully employed in the field.
- Employers of program graduates will be satisfied with their education and training.

Admission Requirements

Applicants to this program must complete the application procedures. While a high school diploma, in accordance with ACCS Board of Trustees Policy or GED is the preferred entry requirement, applicants who did not receive a high school diploma or GED may be admitted provided they are 16 years of age, have been out of school for one year (or upon recommendation of the local superintendent), and they must demonstrate ability-to-benefit (ATB) on a standardized, federally approved entrance test. Applicants admitted under the ATB provision must obtain the GED prior to graduation.

Certification Requirements

Students who complete this program may receive voluntary certification through the National Center for Construction Education and Research or through the American Welding Society. Graduate competency is recognized through certificates and a listing in the National Training Registry. This nationally recognized record of training can be transferred throughout the industry and provide a means of assuring construction and

maintenance industries that graduates are prepared for productive positions.

Primary Technical Specialty: Welding Technology
Secondary Technical Specialty: Industrial Electricity/Electronics Technology

Welding, Associate of Occupational Technology (AOT)

MINIMUM CREDITS REQUIRED: 73-74 Semester Credit Hours
Length of Program: 6 Semesters of full-time attendance

GENERAL EDUCATION CORE: 16-17 Semester Credit Hours		Theory	Lab	Internship	Contact	Credit
ORT 100 ORI 101	Orientation OR Orientation to College	1	0		1	1
AREA I: WRITTEN COMPOSITION 3 hours						
ENG 101	English Composition I	3	0		3	3
AREA II: HUMANITIES AND FINE ARTS 3 hours						
ART 100 MUS 101 REL 151 REL 152 PHL 206	Art Appreciation OR Music Appreciation OR Survey of the Old Testament OR Survey of the New Testament OR Ethics and Society	3	0		3	3
AREA III: NATURAL SCIENCE AND MATHEMATICS 6-7 hours						
*Students are required to complete one three-hour mathematics course and may either complete an additional mathematics course or one natural science course as listed below. *NOTE: MTH courses higher than MTH 100 may be substituted for the three-hour math requirement as well. MTH 110 or 112 is suggested for students anticipating transfer. A four-hour science course is also suggested.*						
MTH 100 MTH 116 MTH@	Intermediate College Algebra OR Mathematical Applications* OR Higher MTH course	3	0		3	3
MTH* BIO 113 BIO 101 BIO 103 PHS 111	Any MTH course OR History of Biology OR Introduction to Biology I OR Principles of Biology OR Physical Science I	3 3 3 3 3	0 0 1 1 1		3 3 5 5 5	3 3 4 4 4
AREA IV: HISTORY, SOCIAL, AND BEHAVIORAL SCIENCES 3 hours						
Students are required to complete one three-hour history, social, or behavioral science listed below.						
PSY 200 PSY 210 SOC 200 ECO 231 ECO 232	General Psychology OR Human Growth and Development OR Introduction to Sociology Principles of Macroeconomics Principles of Microeconomics	3	0		3	3

PRIMARY TECHNICAL CONCENTRATION: 45 Semester Credit Hours						
WDT	108	SMAW Fillet/OFC	2	1	5	3
WDT	109	SMAW Fillet/PAC/CAC	2	1	5	3

PRIMARY TECHNICAL CONCENTRATION: 45 Semester Credit Hours						
WDT	110	Industrial Blueprint Reading	3	0	3	3
WDT	115	GTAW Carbon Pipe	1	2	5	3
WDT	116	GTAW Stainless Pipe	1	2	5	3
WDT	119	Gas Metal Arc/Flux Cored Arc Welding Theory	2	1	5	3
WDT	120	Shielded Metal Arc Welding Grooves	2	1	5	3
WDT	122	SMAW Fillet/OFC Lab	0	3	9	3
WDT	123	SMAW Filet/PAC/CAC Lab	0	3	9	3
WDT	124	Gas Metal Arc/Flux Cored Arc Welding Lab	0	3	9	3
WDT	125	Shielded Metal Arc Welding Grooves Lab	0	3	9	3
WDT	155	GTAW Carbon Pipe Lab	0	3	9	3
WDT	156	GTAW Stainless Pipe Lab	0	3	9	3
WDT	217	SMAW Carbon Pipe	1	2	7	3
WDT	257	SMAW Carbon Lab	0	3	9	3
SECONDARY TECHNICAL SPECIALTY: 12 Semester Credit Hours						
INDUSTRIAL ELECTRICITY/ELECTRONICS TECHNOLOGY:						
ILT	117	Principles of Construction Wiring	1	2	5	3
ILT	160	DC Fundamentals	1	2	5	3
ILT	161	AC Fundamentals	1	2	5	3
INT	113	Industrial Motor Controls 1	1	2	5	3

WELDING (Long-Term Certificate)

Program Purpose

The purpose of the Welding (Long-Term Certificate) is to provide accessible, quality educational opportunities that will provide individuals with the knowledge, technical skills, and attitudes necessary to obtain employment in the welding profession. The long-term certificate program is intended to produce graduates who are prepared for employment as structural and/or pipe welders. Welding (Long-Term Certificate) graduates are to be competent in the academic areas of communications, mathematics, computer literacy, and human relations and in the technical areas of cutting processes, blueprint reading, SMAW and FCAW structural welding, and SMAW and GTAW pipe welding to applicable codes.

Reid State Community College will accomplish its objectives by providing students with a comprehensive general education and technical training in the core area of Welding. The occupational skill preparation should meet the American Welding Society recognized skill standards. The college will ensure program quality through internal certification of graduate competencies through written exams and performance evaluations to applicable welding codes.

Occupational Data

Completers of the long-term certificate work in the structural iron and steel working industry where they use their skills which are grouped under the classification of welder/pipefitter personnel. According to the U.S. Bureau of Labor Statistics Occupational Employment and Wages, the national median wage for welder/pipefitter personnel was $24.26/hr. in 2022.

Program Outcome Objectives

- Program graduates will be proficient in communication, computation, and interpersonal skills.
- Program graduates will be technically proficient.
- Program graduates will be able to obtain industry certification.
- Program graduates will be successfully employed in the field.
- Employers of program graduates will be satisfied with their education and training.

Admission Requirements

Applicants to the Welding (Long-Term Certificate) must complete the application procedures. While a high school diploma, in accordance with ACCS Board of Trustees Policy or GED is the preferred entry requirement, applicants who did not receive a high school diploma or GED may be admitted provided they are 16 years of age, have been out of school for one year (or upon recommendation of the local superintendent), and they must demonstrate ability-to-benefit (ATB) on a standardized, federally approved entrance test. Applicants admitted under the ATB provision must obtain the GED prior to graduation.

Certification Requirements

Students who complete the long-term certificate may receive voluntary certification through the National Center for Construction Education and Research or through the American Welding Society. Graduate competency is recognized through certificates and a listing in the National Training Registry. This nationally recognized record of training can be transferred throughout the industry and provide a means of assuring construction and maintenance industries that graduates are prepared for productive positions

Welding, Certificate

MINIMUM CREDITS REQUIRED: 58 Semester Credit Hours
LENGTH OF PROGRAM: 4 Semesters of full-time attendance

GENERAL EDUCATION CORE: 10 Semester Credit Hours			Theory	Lab	Contact	Credit
ORT	100	Orientation	1	0	1	1
REA I: WRITTEN COMPOSITION						
*ENG	100	Vocational Technical English I	3	0	3	3
REA II: Humanities and Fine Arts						
ART	100	Art Appreciation	3	0	3	3
REA III: NATURAL SCIENCE AND MATHEMATICS						
*MAH	101	Introductory Mathematics I or higher MTH	3	0	3	3
TECHNICAL CONCENTRATION: 48 Semester Credit Hours						
WDT	108	SMAW Fillet/OFC	2	1	5	3
WDT	109	SMAW Fillet/PAC/CAC	2	1	5	3
WDT	110	Industrial Blueprint Reading	3	0	3	3
WDT	115	GTAW Carbon Pipe	1	2	5	3
WDT	116	GTAW Stainless Pipe	1	2	5	3
WDT	119	Gas Metal Arc/Flux Cored Arc Welding Theory	2	1	5	3
WDT	120	Shielded Metal Arc Welding Grooves	2	1	5	3
WDT	122	SMAW Fillet/OFC Lab	0	3	9	3
WDT	123	SMAW Filet/PAC/CAC Lab	0	3	9	3
WDT	124	Gas Metal Arc/Flux Cored Arc Welding Lab	0	3	9	3
WDT	125	Shielded Metal Arc Welding Grooves Lab	0	3	9	3
WDT	155	GTAW Carbon Pipe Lab	0	3	9	3
WDT	156	GTAW Stainless Pipe Lab	0	3	9	3
WDT	217	SMAW Carbon Pipe	1	2	7	3
WDT	257	SMAW Carbon Lab or WDT 281 Special Topics in Welding	0	3	9	3
WKO	110	NCCER Core	2	1	5	3

**These courses will not apply toward general education requirements for the Association in Occupational Technology degree but may be used for technical credit only, Students planning to pursue the Association in Occupational Technology degree must take ENG101, MTH116, CIS149, and CIS 146 or other courses approved by their advisor or Director of Instructional Services/Career Technical Education Instructor.*

WELDING TECHNOLOGY (Short-Term Certificate)

Program Purpose

The Welding Technology (Short-Term Certificate) aims to provide accessible, quality educational opportunities that will provide individuals with the knowledge, technical skills, and attitudes necessary to obtain employment in the welding profession. The short-term certificate is intended to produce graduates who are prepared for employment as structural welders. Program graduates are to be competent in the technical areas of cutting processes, SMAW, GMAW and FCAW structural welding, to applicable codes.

Reid State Community College will accomplish its objectives by providing students with a comprehensive general education and technical training in the core area of Welding. The occupational skill preparation should meet the American Welding Society recognized skill standards. The college will ensure program quality through internal certification of graduate competencies through written exams and performance evaluations to applicable welding codes.

Occupational Data

Completers of the short-term certificate work in the structural iron and steel working industry where they use their skills which are grouped under the classification of welder personnel. According to the U.S. Bureau of Labor Statistics Occupational Employment and Wages, the national median wage for welder personnel was $24.26/hr. in 2022.

Program Outcome Objectives

- Program graduates will be proficient in communication, computation, and interpersonal skills.
- Program graduates will be technically proficient.
- Program graduates will be able to obtain industry certification.
- Program graduates will be successfully employed in the field.
- Employers of program graduates will be satisfied with their education and training.

Admission Requirements

Applicants to the Welding Technology (Short-Term Certificate) must complete the application procedures. While a high school diploma, in accordance with ACCS Board of Trustees Policy or GED is the preferred entry requirement, applicants who did not receive a high school diploma or GED may be admitted provided they are 16 years of age, have been out of school for one year (or upon recommendation of the local superintendent), and they must demonstrate ability-to-benefit (ATB) on a standardized, federally approved entrance test. Applicants admitted under the ATB provision must obtain the GED prior to graduation.

Certification Requirements

Students who complete the Short-Term Certificate may receive voluntary certification through the National Center for Construction Education and Research or through the American Welding Society. Completer competency is recognized through certificates and a listing in the National Training Registry. This nationally recognized record of training can be transferred throughout the industry and provide a means of assuring construction and maintenance industries that graduates are prepared for productive positions.

Welding Technology, Short-Term Certificate

MINIMUM CREDITS REQUIRED: 28 Semester Credit Hours
LENGTH OF PROGRAM: 2 Semesters of full-timeattendance

GENERAL EDUCATION CORE: 1 Semester Credit Hour			Theory	Lab	Contact	Credit
ORT	100	Orientation	1	0	1	1
TECHNICAL CONCENTRATION: 27 Semester Credit Hours						
WDT	108	SMAW Fillet/OFC	2	1	5	3
WDT	109	SMAW Fillet/PAC/CAC	2	1	5	3
WDT	119	Gas Metal Arc/Flux Cored Arc Welding	2	1	5	3
WDT	120	Shielded Metal Arc Welding Grooves	2	1	5	3
WDT	122	SMAW Fillet/OFC/Lab	0	3	9	3
WDT	123	SMAW Fillet/PAC/CAC Lab	0	3	9	3
WDT	124	Gas Metal Arc/Flux Cored Arc Welding Lab	0	3	9	3
WDT	125	Shielded Metal Arc Welding Groove Lab	0	3	9	3
WKO	110	NCCER Core	2	1	5	3