

WELDING (degree)

Program Purpose

The Associate of Occupational Technology 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 AOT 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 Technical 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

1. Program graduates will be proficient in communication, computation, and interpersonal skills.
2. Program graduates will be technically proficient.
3. Program graduates will be able to obtain industry certification.
4. Program graduates will be successfully employed in the field.
5. 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 (degree)
Associate of Occupational Technology

MINIMUM CREDITS REQUIRED: 76 Semester Credit Hours

Length: 6 Semesters of full-time attendance

GENERAL EDUCATION CORE: 19 Semester Credit Hours			Theory	Lab	Contact	Credit
ORT	100	Orientation	1	0	1	1
AREA I: WRITTEN COMPOSITION						
ENG	101	English Composition I	3	0	3	3
AREA II: HUMANITIES AND FINE ARTS						
PHL	206	Ethics and Society	3	0	3	3
AREA III: NATURAL SCIENCE AND MATHEMATICS						
<i>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</i>						
CIS	146	Microcomputer Applications	3	0	3	3
MTH	116	Mathematical Applications	3	0	3	3
CIS	149	Introduction to Computers	3	0	3	3
AREA IV: HISTORY, SOCIAL, AND BEHAVIORAL SCIENCES						
PSY 200 OR PSY 210		General Psychology Human Growth and Development	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
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 Technical 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

6. Program graduates will be proficient in communication, computation, and interpersonal skills.
7. Program graduates will be technically proficient.
8. Program graduates will be able to obtain industry certification.
9. Program graduates will be successfully employed in the field.
10. 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 (Long-Term Certificate)

MINIMUM CREDITS REQUIRED: 58 Semester Credit Hours

LENGTH: 4 Semesters of full-time attendance

GENERAL EDUCATION CORE: 10 Semester Credit Hours			Theory	Lab	Contact	Credit
ORT	100	Orientation	1	0	1	1
AREA I: WRITTEN COMPOSITION						
*ENG	100	Vocational Technical English I	3	0	3	3
AREA III: NATURAL SCIENCE AND MATHEMATICS						
*MAH	101	Introductory Mathematics I	3	0	3	3
TECHNICAL CONCENTRATION: 49 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 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 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	2	7	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 Technical 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

1. Program graduates will be proficient in communication, computation, and interpersonal skills.
2. Program graduates will be technically proficient.
3. Program graduates will be able to obtain industry certification.
4. Program graduates will be successfully employed in the field.
5. 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: 2 Semesters of full-time attendance

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