

WELDING TECHNOLOGY

Program Purpose

The purpose of the Welding Technology program 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 diploma and certificate programs are intended to produce graduates who are prepared for employment as structural and/or pipe welders. 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 and SMAW and GTAW pipe welding 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 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 codes.

Occupational Data

Graduates of the Welding Technology program work in the structural iron and steel worker industry where they use their skills which are grouped under the classification of welder/pipefitter personnel. According to Economic Modeling, the national median wage for welder/pipefitter personnel was \$26.86/hr. in 2019.

Admission Requirements

Applicants to this program must complete the application procedures. While a high school diploma, in accordance with State Board 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 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.

WELDING TECHNOLOGY –Short Term Certificate

MINIMUM CREDITS REQUIRED: 28 Semester Credit Hours

LENGTH OF PROGRAM: 2 Semesters of full-time attendance

PLATE WELDING CERTIFICATION

		Theory	Lab	Contact	Credit
ORT100	Orientation	1	0	1	1
WDT108	SMAW Fillet/OFC	2	1	5	3
WDT122	SMAW Fillet/OFC/Lab	0	3	9	3
WDT109	SMAW Fillet/PAC/CAC	2	1	5	3
WDT123	SMAW Fillet/PAC/CAC Lab	0	3	9	3
WDT286	CO-OP	0	1	1	1
WDT120	Shielded Metal Arc Grooves Welding	2	1	5	3
WDT125	Shielded Metal Arc Grooves Welding Lab	0	3	9	3
WDT119	Gas Metal Arc/Flux Cored Arc Welding	2	1	5	3
WDT124	Gas Metal Arc/Flux Cored Arc Welding Lab	0	3	9	3
WKO110	NCCER Core Curriculum	1	2	5	3

WELDING TECHNOLOGY –Certificate – Pipe Welding

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
ORT100	Orientation	1	0	1	1
*ENG100	Technical English I or ENG101 English Comp I	3	0	3	3
MAH101	Introductory Mathematics I	3	0	3	3
CIS149	Introduction to Computers	3	0	3	3
TECHNICAL CONCENTRATION: 52 Semester credit hours					
WDT108	SMAW Fillet/OFC	2	1	5	3
WDT122	SMAW Fillet/OFC Lab	0	3	9	3
WDT109	SMAW Fillet/PAC/CAC	2	1	5	3
WDT123	SMAW Fillet/PAC/CAC Lab	0	3	9	3
WDT120	Shielded Metal Arc Grooves Welding	2	1	5	3
WDT125	Shielded Metal Arc Grooves Welding Lab	0	3	9	3
WDT119	Gas Metal Arc/Flux Cored Arc Welding	2	1	5	3
WDT124	Gas Metal Arc/Flux Cored Arc Welding Lab	0	3	9	3
WKO110	NCCER Core Curriculum	1	2	5	3
WDT217	SMAW Carbon Pipe	1	2	7	3
WDT257	SMAW Carbon Pipe Lab	0	3	9	3
WDT110	Industrial Blueprint Reading	3	0	3	3
WDT115	GTAW Carbon Pipe	1	2	5	3
WDT155	GTAW Carbon Pipe Lab	0	3	9	3
WDT116	GTAW Stainless Pipe	1	2	5	3
WDT156	GTAW Stainless Pipe Lab	0	3	9	3
ELECTIVIES					
WDT 281	Special Topics in Welding	0	3	9	3
WDT286	CO-OP	0	1	2	1

**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 dean of instruction.*

ASSOCIATE IN OCCUPATIONAL TECHNOLOGY (AOT)

The Associate in Occupational Technologies degree is a certificate first award. As such, a student must first meet all requirements for the long certificate in his or her program of study before submitting a change of award request to the Registrar. Once approved, the student's award will be re-classified as being Associate in Occupational Technologies. To receive the Associate in Occupational Technologies award, the student must meet curricula requirements from the catalog in effect at the point his or her change of award request was approved. Requirements at that time may or may not match those originally in effect upon his/her admission to the College.

The AOT degree program may contain no less than 60 and no more than 76 semester hours. Of the total hours in a program, 27-35 percent must be courses chosen to ensure competency in reading, writing, oral communication, computers, and mathematics. The remaining hours must be taken in the specific area of concentration and may include related courses and electives. This area of concentration must include 15 semester hours of coursework, with appropriate prerequisites, above the level of elementary courses. In addition, coursework in the area of concentration must follow an orderly, identifiable sequence. Reid State Technical College offers the Associate in Occupational Technologies (AOT) Degree as an option for the following certificate programs.

Program	Prefix	Award	Minor	Credit Hours
Welding Technology	WDT	AOT	ILT	77

Associate in Occupational Technology Degree

Students majoring in Welding Technology are eligible to earn an Associate in Occupational Technology Degree. This degree is designed to produce graduates who have comprehensive skills in a primary technical specialty (Welding Technology major) combined with complementary skills in a secondary technical specialty. Students may be admitted to the Associate in Occupational Technology degree program provided they are a high school graduate or have the GED and have completed a diploma in the major of Welding Technology.

ASSOCIATE IN OCCUPATIONAL TECHNOLOGIES—Occupational Technology

Primary Technical Specialty—Welding Technology

Secondary Technical Specialty Industrial Electricity/Electronics Technology

MINIMUM CREDITS REQUIRED: 77 Semester Credit Hours

Length of Program: 6 Semesters of full-time attendance

GENERAL EDUCATION CORE: 19 Semester Credit Hours		Theory	Lab	Contact	Credit
ENG101	English Composition I	3	0	3	3
PHL206	Ethics in Society	3	0	3	3
ORT100	Orientation	1	0	1	1
MTH116	Mathematical Applications	3	0	3	3
CIS146	Microcomputer Applications	3	0	3	3
CIS149	Introduction to Computers	3	0	3	3
PSY200	General Psychology	3	0	3	3
PRIMARY TECHNICAL CONCENTRATION: 48 Semester Credit Hours					
WDT108	SMAW Fillet/OFC	2	1	5	3
WDT122	SMAW Fillet/OFC Lab	0	3	9	3
WDT109	SMAW Fillet/PAC/CAC	2	1	5	3
WDT123	SMAW Fillet/PAC/CAC Lab	0	3	9	3
WDT120	Shielded Metal Arc Grooves Welding	2	1	5	3
WDT125	Shielded Metal Arc Grooves Welding Lab	0	3	9	3
WDT119	Gas Metal Arc/Flux Cored Arc Welding Theory	2	1	5	3
WDT124	Gas Metal Arc/Flux Cored Arc Welding Lab	0	3	9	3
WDT217	SMAW Carbon Pipe	1	2	7	3
WDT257	SMAW Carbon Lab	0	3	9	3
WDT110	Industrial Blueprint Reading	3	0	3	3
WDT115	GTAW Carbon Pipe	1	2	5	3
WDT155	GTAW Carbon Pipe Lab	0	3	9	3
WDT116	GTAW Stainless Pipe	1	2	5	3
WDT156	GTAW Stainless Pipe Lab	0	3	9	3
WDT286	CO-OP	0	1	2	1
SECONDARY TECHNICAL SPECIALTY: 12 Semester Credit Hours					
INDUSTRIAL ELECTRICITY/ELECTRONICS TECHNOLOGY:					
ILT160	DC Fundamentals	1	2	5	3
ILT161	AC Fundamentals	1	2	5	3
ILT117	Principles of Construction Wiring	1	2	5	3
INT113	Motor Controls I	1	2	5	3

NOTE: Theory credit hours are a 1:1 contact to credit ratio. Lab hours may be scheduled as manipulative (3:1 contact to credit hour ratio) or experimental (2:1 contact to credit hour ratio)