

# WELDING, TECHNICAL DIPLOMA (TD)

**Locations:** Gonzales, Reserve

The TD in Welding prepares individuals for employment in the field of welding. The curriculum aligns with the National Center for Construction and Education Research (NCCER) modules for Core Curriculum and Welding Levels 1 and 2, and with the American Welding Society's (AWS) School Excelling through National skill Standards Education (S.E.N.S.E.) Guidelines for Entry Welders (Modules 1-9). Students earn certificate-level awards with progression in the program, are eligible to take NCCER Core and Welding Level 1 and Level 2 exams and earn these industry-based credentials, and qualify for AWS certification exams, for which those who pass earn industry-based certifications. All courses must be passed with a "C" or better.

## Curriculum Program of Study

Course	Title	Hours
<b>First Semester</b>		
CORE 1003	Core Industry Safety	3
WELD 1115	Welding Fundamentals I	5
WELD 1124	SMAW I, Beads & Fillet Welds	4
<b>Hours</b>		<b>12</b>
<b>Second Semester</b>		
WELD 1134	Welding Inspection and Welding Processes	4
WELD 1211	Welding Fundamentals II	1
WELD 1317	SMAW III, Pipe 2G, 5G, 6G	7
<b>Hours</b>		<b>12</b>
<b>Third Semester</b>		
WELD 2227	GMAW and FCAW Plate	7
WELD 2325	GMAW and FCAW Pipe 2G-5G-6G	5
<b>Hours</b>		<b>12</b>
<b>Fourth Semester</b>		
WELD 2233	GTAW Basic Multi Joint	3
WELD 2336	GTAW Carbon Steel Pipe 2G-5G-6G	6
WELD 2343	GTAW Low Alloy & SS Pipe	3
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>48</b>

## Industry-Based Certification

### First Semester

- NCCER Core

### Second Semester

- NCCER Welding Level 1<sup>1</sup>

### Fourth Semester

- NCCER Welding Level 2<sup>2</sup>

<sup>2</sup> Requires completion of CORE 1003 Core Industry Safety, WELD 1211 Welding Fundamentals II, WELD 2227 GMAW and FCAW Plate, and WELD 2233 GTAW Basic Multi Joint.

## Academic Awards Available

### Welder Helper, Career and Technical Certificate (CTC)

Code	Title	Hours
CORE 1003	Core Industry Safety	3
WELD 1115	Welding Fundamentals I	5
<b>Total Hours</b>		<b>8</b>

### Entry Welder, Certificate of Technical Studies (CTS)

Code	Title	Hours
CORE 1003	Core Industry Safety	3
WELD 1115	Welding Fundamentals I	5
WELD 1124	SMAW I, Beads & Fillet Welds	4
WELD 1134	Welding Inspection and Welding Processes	4
WELD 1317	SMAW III, Pipe 2G, 5G, 6G	7
<b>Total Hours</b>		<b>23</b>

Upon successful completion of the program, the graduate will be able to:

- Demonstrate safe and efficient work practices, basic occupational skills, and employability skills.
- Interpret technical information used on welding drawings and blueprints.
- Produce quality cuts according to specifications using Oxyfuel Cutting (OFC), Plasma Arc Cutting (PAC), and Air- Carbon Arc Cutting (CAC) processes.
- Produce quality welds according to specifications and position using the Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux-cored Arc Welding (FCAW), and Gas Tungsten Arc Welding (GTAW) processes.
- Demonstrate the skills necessary to successfully complete the Entry Level Welder tests offered by the American Welding Society.

For additional career-related information and resources, visit the RPCC Career Success webpage (<https://www.rpcc.edu/workforce-training/career-success-center/career-success-center/>).

<sup>1</sup> Requires completion of CORE 1003 Core Industry Safety, WELD 1115 Welding Fundamentals I, WELD 1124 SMAW I, Beads & Fillet Welds, and WELD 1134 Welding Inspection and Welding Processes.