

INDUSTRY AND TECHNOLOGY
Institutional (ILO), Program (PLO), and Course (SLO) Alignment

| | | | |
|-------------------------|---------------------------------|------------------------------------|---|
| Program: Welding | Number of Courses: 12 | Date Updated: 09.18.2014 | Submitted by: SueEllen Warren, ext. 4519 Renee Newell, ext. 3308 |
|-------------------------|---------------------------------|------------------------------------|---|

| | | | | |
|-------------|--|---|--|--|
| ILOs | 1. Critical Thinking <i>Students apply critical, creative and analytical skills to identify and solve problems, analyze information, synthesize and evaluate ideas, and transform existing ideas into new forms.</i> | 2. Communication <i>Students effectively communicate with and respond to varied audiences in written, spoken or signed, and artistic forms.</i> | 3. Community and Personal Development <i>Students are productive and engaged members of society, demonstrating personal responsibility, and community and social awareness through their engagement in campus programs and services.</i> | 4. Information Literacy <i>Students determine an information need and use various media and formats to develop a research strategy and locate, evaluate, document, and use information to accomplish a specific purpose. Students demonstrate an understanding of the legal, social, and ethical aspects related to information use.</i> |
|-------------|--|---|--|--|

SLO-PLO-ILO ALIGNMENT NOTES:

Mark boxes with an 'X' if: SLO/PLO is a major focus or an important part of the course/program; direct instruction or some direct instruction is provided; students are evaluated multiple times (and possibly in various ways) throughout the course or are evaluated on the concepts once or twice within the course.

DO NOT mark with an 'X' if: SLO/PLO is a minor focus of the course/program and some instruction is given in the area but students are not formally evaluated on the concepts; or if the SLO/PLO is minimally or not at all part of the course/program.

| PLOs | PLO to ILO Alignment | | | |
|--|-----------------------------|---|---|---|
| | <i>(Mark with an X)</i> | | | |
| | 1 | 2 | 3 | 4 |
| PLO #1 Success in the Welding Industry Success in the Welding Industry Upon completion of the Welding program, students will be able to demonstrate knowledge of the skills needed for success in the welding industry. | X | | | |
| PLO #2 Safety Knowledge and Skills Upon completion of the Welding program, whether in the certificate program or degree program, students will acquire and be able to use specific safety knowledge and skills relating to welding discipline and will be able to apply those skills to specific job requirements. | | | | X |
| PLO #3 Attaining Certificates, Degrees, Transferring and Attaining Job Upon completion of the Welding program, students will successfully earn a certificate/graduate/transfer to 4 year universities and will successfully compete for jobs in which they can apply their knowledge and communicative skills acquired in welding program. | X | | | |

| SLOs | SLO to PLO Alignment <i>(Mark with an X)</i> | | | COURSE to ILO Alignment <i>*FOR OFFICE USE ONLY*</i> | | | |
|--|---|----|----|---|---|---|---|
| | P1 | P2 | P3 | 1 | 2 | 3 | 4 |
| WELD 1 Introduction to Welding: SLO #1 Students will be able to demonstrate basic knowledge of welding concepts. | X | | X | X | | | X |
| WELD 1 Introduction to Welding: SLO #2 Welding students will produce quality welds utilizing various welding techniques. | X | | X | | | | |
| WELD 1 Introduction to Welding: SLO #3 Students will be able to demonstrate the safe set up and operation of welding equipment using all applicable personal protective equipment. | | X | X | | | | |
| WELD 10A Introduction to Shielded Metal Arc Welding (SMAW): SLO #1 Students will be able to demonstrate the safe set up and operation of welding equipment using all applicable personal protective equipment. | | X | X | X | | | X |
| WELD 10A Introduction to Shielded Metal Arc Welding (SMAW): SLO #2 Safe operation of manual and semi-automatic base metal cutting tools. | X | | X | | | | |
| WELD 10A Introduction to Shielded Metal Arc Welding (SMAW): SLO #3 Students will have a basic understanding how heat affects their weldment. | X | | | | | | |
| WELD 10B Intermediate Shielded Arc Metal Welding (SMAW): SLO #1 Welding students will produce quality welds utilizing various welding techniques. | X | | X | X | | | X |
| WELD 10B Intermediate Shielded Arc Metal Welding (SMAW): SLO #2 Students will understand Blueprint symbols and their relationship to the weldment. | X | | X | | | | |
| WELD 10B Intermediate Shielded Arc Metal Welding (SMAW): SLO #3 Student will exhibit knowledge in electrode identification, weldability of metals, joint design and power sources. | X | | X | | | | |
| WELD 10C Advanced Certification and Career Preparation Lab: SLO #1 Student will perform destructive test on a qualification plate exam (guided bend tests). | X | | X | X | | | X |
| WELD 10C Advanced Certification and Career Preparation Lab: SLO #2 Students will have working knowledge of manual and semi-automatic tooling used in industry. | X | | X | | | | |
| WELD 10C Advanced Certification and Career Preparation Lab: SLO #3 Student will safely operate equipment and exhibit shop safety throughout course. | | X | | | | | |
| WELD 15 Basic Welding for Allied Fields: SLO #1 Welding Concepts Students will be able to demonstrate basic knowledge of welding concepts. | | | X | X | | | X |
| WELD 15 Basic Welding for Allied Fields: SLO #2 Safe Setup & Operation Students will be capable of the safe set up and operation of welding equipment. | | X | | | | | |
| WELD 15 Basic Welding for Allied Fields: SLO #3 Welding Process Selection Capability to choose an electrode or process that suits the metal thickness, joint fit up, and alloy composition. | X | | X | | | | |

| SLOs | SLO to PLO Alignment <i>(Mark with an X)</i> | | | COURSE to ILO Alignment <i>*FOR OFFICE USE ONLY*</i> | | | |
|--|---|----|----|---|---|---|---|
| | P1 | P2 | P3 | 1 | 2 | 3 | 4 |
| WELD 23 Advanced Arc Welding Specialty Lab: SLO #1 3G and 4G Positions Welding students will produce quality weld in the 3G And 4G positions. | X | | X | X | | | |
| WELD 23 Advanced Arc Welding Specialty Lab: SLO #2 Joint Fit-Up Students will have a developed understanding of the importance of joint fit up. | X | | X | | | | |
| WELD 23 Advanced Arc Welding Specialty Lab: SLO #3 D1.1 Certification At the completion of this course, students will be prepared to take the practical exam for their D1.1 certification. | X | | X | | | | |
| WELD 28 American Welding Society (AWS) D1.1 Certification Test Preparation: SLO #1 Preparing for Certification Exams Students will be able to locate and use charts, index and table of contents to answer open book questions to prepare for the exam. | X | | X | X | | | |
| WELD 28 American Welding Society (AWS) D1.1 Certification Test Preparation: SLO #2 D1.1 Written Exam Prep At the completion of this course, students will be prepared to take the written exam for their LA City D1.1 Structural Steel certification. | X | | X | | | | |
| WELD 28 American Welding Society (AWS) D1.1 Certification Test Preparation: SLO #3 Welding Procedure Specifications Capability to process Welding Procedure Specifications (WPS), which provides direction to the welder or welding operators for making sound and quality production welds as per the code. | X | | X | | | | |
| WELD 40A Gas Tungsten Arc Welding (GTAW), Gas Metal Arc Welding (GMAW): SLO #1 TIG Weld Concepts Students will be able to express a basic knowledge of TIG welding concepts. | X | | | X | | | X |
| WELD 40A Gas Tungsten Arc Welding (GTAW), Gas Metal Arc Welding (GMAW): SLO #2 GTAW Gases Students will be able to demonstrate a knowledge of the gases used for the GTAW processes. | | | | | | | |
| WELD 40A Gas Tungsten Arc Welding (GTAW), Gas Metal Arc Welding (GMAW): SLO #3 Constant Current Welding Students will be able to correctly set up and use a constant current welding machine. | | X | | | | | |
| WELD 40B Intermediate Gas Tungsten Arc Welding (GTAW): SLO #1 Safely set up weldment and GTAW equipment. | | X | | X | | | X |
| WELD 40B Intermediate Gas Tungsten Arc Welding (GTAW): SLO #2 Correctly adjust welding parameters to produce quality weldments in and out of position. | X | | X | | | | |
| WELD 40B Intermediate Gas Tungsten Arc Welding (GTAW): SLO #3 Produce GTAW weldment according to administered blueprint. | X | | X | | | | |

| SLOs | SLO to PLO Alignment <i>(Mark with an X)</i> | | | COURSE to ILO Alignment <i>*FOR OFFICE USE ONLY*</i> | | | |
|--|---|----|----|---|---|---|---|
| | P1 | P2 | P3 | 1 | 2 | 3 | 4 |
| WELD 40C Advanced Gas Tungsten Arc Welding (GTAW): SLO #1 Apply the proper safety procedures and precautions required when working with GTAW. | | X | | X | | | X |
| WELD 40C Advanced Gas Tungsten Arc Welding (GTAW): SLO #2 Use the appropriate equipment and materials to develop the welds and weld joints illustrated on a job sheet. | | | X | | | | |
| WELD 40C Advanced Gas Tungsten Arc Welding (GTAW): SLO #3 Produce a quality "out of position" weldment and adjust his welding parameters accordingly. | X | | | | | | |
| WELD 45 Structural Fabrication: SLO #1 Safe Setup & Operation Students will be able to demonstrate the safe set up and use of various welding and cutting apparatus. | | X | | X | | | X |
| WELD 45 Structural Fabrication: SLO #2 Job Skills Students will be prepared to demonstrate job skills required for fabrication layout. | X | | | | | | |
| WELD 45 Structural Fabrication: SLO #3 Measuring Tools Students will be able to correctly use measuring tools necessary for fabrication projects. | X | | | | | | |
| WELD 5 Basic Welding Technology: SLO #1 Quality Welds Welding students will produce quality welds utilizing various welding techniques. | X | | | X | | | |
| WELD 5 Basic Welding Technology: SLO #2 Blueprint Symbols Students will understand Blueprint symbols and their relationship to the weldment. | X | | | | | | |
| WELD 5 Basic Welding Technology: SLO #3 Welding & Weldability Student will exhibit knowledge in electrode identification, weldability of metals, joint design and power sources. | X | | | | | | |