

Instructional Program Review Welding Technology 2021

LASSEN COMMUNITY COLLEGE

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Instructional Program Review Welding Technology

SECTION 1: ACADEMIC PLANNING

I. Program Overview, Objectives, and Student Learning Outcomes

The Welding Technology Program is designed to prepare the student with the necessary skills to acquire an entry-level position in the various industries that require the different welding processes available through the program.

The Welding Program is also designed to assist those already employed in the industry and those in the community to improve their skills.

The Program offers coursework in Robotic Welding, Blueprint Reading, Industrial Safety, Industrial Technology, Oxyacetylene Welding (OAW), Gas Metal Arc Welding (GMAW), Gas Metal Arc Welding Pulse (GMAW-P), Flux Core Arc Welding (FCAW), Flux Core Arc Welding with a gas (FCAW-G), Shielded Metal Arc Welding (SMAW) and Gas Tungsten Arc Welding (GTAW). Also offered is welding qualification testing on plate and pipe that's recognized by the American Welding Society (AWS).

The curriculum is updated with the assistance of an industry advisory committee.

Description/Evaluation:

- a. Describe and evaluate the program objectives against the LCC strategic plan, specifically the mission statement and strategic goals [available online or in the current catalog].
The Welding Technology Program objectives fall within the vocational mission statement of Lassen Community College.
- b. Identify and evaluate the Program Student Learning Outcomes including the relationship between course, program and institutional student learning outcomes utilizing information from WEAVE.

All course and degree student learning outcomes link to program level learning outcomes for the Welding Technology programs, which have been linked to the institutional student learning outcomes. For the academic years 2017-2020, 88.7% of the welding technology department's students have met their student learning outcomes, which exceeds the minimum requirements. For a more detailed breakdown, see appendix A.

- c. Evaluate any changes in the program since last review. Include summary of Annual Updates completed since last review.

Since the last review, our robotics operations and programming class (WT-52) has been offered every fall since 2019. In addition, we've added the following pieces of equipment to our lineup to support current and future courses and to meet the unexpected need brought on by Covid. Eight laptops to run SolidWorks computer aided design (CAD) software, four Miller XMT 350 MPA welders, Miller drive roll kits and Profax guns to support 0.068 T-8 wire, Thermal Dynamics plasma cutter to replace the oxy-acetylene set-up for pipe beveling, two roll-out wheels, Stratasys F170 3D printer, Led lighting for the shop, purchased materials for electrical drops in new welding booths, ground rod for our computer numerically controlled (CNC) plasma cutter, and a welding camera from Visible Welding.

There have been no annual updates since the last review.

- d. Analyze program-related promotional materials/advertising as appropriate

A print ad was run in the Lassen Times advertising the welding program, but the Times has since closed its doors. A similar ad is also run on the website SusanvilleStuff.com.

Other areas of marketing and outreach used to include the following, but have been on hold since the pandemic:

- Participation in 8th grade week visit
- Summer Employment Boot Camp – Alliance for Workforce Development.
- Visits to area high schools such as Lassen and Modoc
- Susanville Indian Rancheria summer program.
- FFA Field day event.
- College day hosted by LCC

The younger demographic responds best to the high school and hands-on welding demonstrations.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning, Student Services Planning, and/or Institutional Effectiveness Planning tables at the end of the section for any recommendations requiring institutional action.

1. Development of new courses in order to create an advanced manufacturing program. To date, two robotics operations and programming classes and two CAD classes have been approved through the curriculum process.
2. In order to offer the new advanced manufacturing classes along with all of the currently scheduled welding classes, a new full-time faculty member will need to be hired.
3. In regards to advertising and reaching the next generation of welders, it is recommended that we advertise in a medium that they can relate to. That medium is online music applications, such as Pandora, Spotify or IHeart radio.

II Student Outcomes

A. Trends and Patterns in Student Outcomes

Description/Evaluation:

1. Provide in tabular form followed by an analysis
 - a. Number of degrees and certificates awarded during the last four years. See Appendix B for a more detailed description.

Award	2017	2018	2019	2020
Certificate of Accomplishment	3	2	1	4
Certificate of Achievement 1yr.	3	1	1	3
Certificate of Achievement 2yr.	1			2
A.S. Degree	1	3	2	2
Total	8	6	4	11

- b. Transfer numbers for the last four years

In the last four years one student graduated with their A.S. degree in welding and transferred to a four-year institution. Typically, students enrolled in the welding program are there to either enhance their welding skills or to gain first-time employment in the field of welding.

- c. Completion, retention and success data for the last four years. . See Appendix C for a more detailed description.

	2017	2018	2019	2020
Retention	95%	90%	90%	84%
Success	74%	76%	78%	78%

2. Analyze program effectiveness based on available quantitative data and qualitative experiences.

Unfortunately, I know that the data is inaccurate when it comes to the completion rates for a certificate of accomplishment or for the one-year certificate of achievement. What the data doesn't take into consideration are those students who take two semesters of welding classes in order to get a job, but fail to petition for the certificate. Given that, faculty and staff will track students in the welding program and make sure the certificates earned along the way are petitioned. In addition to the certificates earned, the one piece of paper that does translate into getting the student a high paying job is their welding qualification papers. The following table would normally show those students who successfully passed a welding qualification test, but as a result of the cyber attack on the college, this data was lost the night of the attack when I logged into our servers. The only data that I'm able to provide is for what's been completed since the cyber attack. Typically these numbers would be over 100 for each of the given years.

	2019	2020	2021
Successfully passed a welding qualification test		2	30

In regards to our retention and success rates, the table shows that our retention of students has decreased slightly between 2017-2019 and dropped even further in 2020. I would attribute this drop to when we switched from face-to-face to hybrid learning due to the pandemic. Even though the retention has dropped,

their success has increased slightly. As a result, a student's success is directly related to their attendance and completion of their objectives in this hands-on environment. Those students, who continually have an attendance problem, typically don't pass the class. Our retention rate does indicate that we continue to offer an excellent product.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning, Student Services Planning, and/or Institutional Effectiveness Planning tables at the end of the section for any recommendations requiring institutional action.

At this time, there is no necessary action needed unless we can come up with a way to more accurately address the completion of all certificates and degrees.

B. Student Learning Outcome Assessment

SLO assessment is important to maintain and improve an effective learning experience for LCC students. Evaluating SLO results regularly is helpful for evaluating student learning and identifying emerging program needs. By contract, faculty are required to measure at least one SLO for every class taught each semester; these records are maintained in WEAVE and are available for review by faculty at any time.

Description/Evaluation:

1. Attach an SLO assessment summary as provided by Office of Institutional Effectiveness.
2. Provide an analysis of findings of the assessments completed and recommendations being made in individual assessments. Consider the impact or influence of the assessment results at the program level. Consider how SLO results may be leveraged to support equipment, facility, staffing, or other budget and planning need and include the justification in your analysis.
 1. See Appendix A for SLO assessment.
 2. My analysis is that over the past four years 496 students were assessed and of that number, 440 students met the SLO for an average of 88.7%. This is a 6.7% increase over the prior four years. Student learning outcome results do not necessitate any changes.

Planning Agenda:

List recommendations and actions necessitated by the above evaluation of SLO results. Complete Academic Planning, Student Services Planning, and/or Institutional Effectiveness

Planning tables at the end of the section for any recommendations requiring institutional action. For any items needing Human Resources Planning, Institutional Technology Planning, or Facilities Planning action, please make sure to include the information within the appropriate section and table later in the program review document.

Every SLO cycle leads to appropriate instructional changes to meet the identified SLO.

In regards to this data, no new action is necessary.

C. Student Evaluation Summary

The student survey portion of the evaluation procedure is designed to solicit comments concerning the program only, and is not an evaluation of instructors (See appendix D, Student Survey).

An anonymous questionnaire is considered to be the most effective format. This will encourage the students to be frank in their responses. The student evaluation will be scheduled and administered by the Office of Instruction during October/November and February/March of each instructional review process. The Office of Instruction staff will consult with the members of the self-evaluation group to determine the student sampling and consider any program-specific revisions to the student survey. The sampling will consist of a minimum of three core courses and other courses as selected by the self-evaluation team. (Example: The basic skills program might wish to survey courses with high enrollment of former basic skills students.)

Description/Evaluation:

Attach Student Evaluation Summary provided by Office of Academic Services and provide an analysis of the results of the student evaluations

Student Evaluation Summary can be found in appendix D.

The following is the analysis of the survey. If the analysis showed a category to be over 25% negative, it was listed below as needing improvement.

- 82% of students noted that the chairs, tables and desks were inadequate. I believe this response to be an outlier, because I would urge anyone reviewing this to see for themselves that this is not the case. Trust me, I would be the first to say so if it were true.
- 43% of students noted that the shop was too hot. Although this may be true, the students need to prepare themselves for conditions they will likely encounter in the field.

In addition to the survey, some of the more common open-ended responses were as follows:

- Echo in the classroom needs to be addressed because lectures are hard to hear.
- Better lighting in the TIG welding room, under the mezzanine.
- Improve ventilation in the welding booths.

Overall, the course met more than the majorities needs.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning, Student Services Planning, and/or Institutional Effectiveness Planning tables at the end of the section for any recommendations requiring institutional action.

Address those items listed in the bullet points above and in the planning tables below.

III. Curriculum

A. Degrees and/or Certificates

Description/Evaluation:

- List degree and/or certificates offered in the program and attach the approved course of study or two-year plan for each degree and certificate (see pages 10/11). Degree and certificate student learning outcomes, if different from program student learning outcomes, should be included in this section.
- Faculty should analyze progress made on the assessment of program (degree/certificate) learning outcomes
- Evaluate the need for courses, degrees and/or certificates
- Transfer programs: Evaluate the core courses against the major preparation requirements for an entering junior at receiving four-year institutions (e.g. CSU System and UC System).
- Transfer programs: Evaluate the courses against the specific area requirements needed to satisfy the general education requirements for associate degrees and transfer. Consider whether there are adequate opportunities to meet the area requirements in combination with all disciplines within each general education area. Is there an adequate number of course and discipline options within each area, and can those courses be offered in a manner that maximizes student enrollment in each section? Do courses need to be added or deleted from any general education area?
- Career/Technical programs: Attach dates of Advisory Committee meetings (a minimum of two meeting per year). Reference Committee Member Rosters and Minutes located in the Office of Academic Services. Summarize the advisory committee recommendations for program curriculum enhancement or improved student competencies
- Career/Technical programs: Use advisory committee recommendations, labor market or other standards to answer the following question: **Do the core courses**

in the certificates and degrees meet current employer skill requirements for the field?

- Special Programs: By nature, special programs themselves do not lead to a degree or certificate. However, special programs may have coursework that is included in transfer or vocational degrees or certificates. Note the relationship between special program courses and LCC transfer or vocational degrees or certificates.

The Welding Technology Program offers the following degree and certificates along with their course of study and program student learning outcomes. These are provided below and in more detail on pages 10 and 11 from our 2020-2021 course catalog. At this time all learning outcomes are being met in the degrees and certificates.

Associate of Science Degree Welding Technology

Certificate of Achievement: Welding Technology - Two Year

Certificate of Achievement: Welding Technology - One Year

Certificate of Accomplishment: Welding Technology

The welding technology program has an advisory committee made up of industry professionals as well as a career and workforce development person. The following is a summary of the committee's specific functions:

- Provide recommendations based on industry need and trends.
- Review the current welding course offerings and provide recommendations (add/remove) coursework where applicable.
- Recommend job shadowing or internships where applicable within their industry.
- Recommend any specialized equipment, tooling or software that would better prepare our students to obtain employment within their industry or abroad.

With that, the advisory committee reiterated by e-mail on October 3, 2021, we stay the course as outlined in appendix E. In summary, the core welding courses are meeting industry needs with minor changes to inactivate courses that are no longer relevant to the industry such as our WT-40, advanced oxy-acetylene welding. Other than that, minimal change is necessary.

Also of note, is the need for an advanced manufacturing certificate. This was addressed, going back to my 2015 IPR. The committee reiterated this need during a recent review of the items in appendix E. To date, the welding program has been

acquiring the equipment and I've been creating the courses needed for an advanced manufacturing certificate.

I do want to point out a very important fact in regards to all of the recommended changes and additions by the committee in appendix E. The fact is, not all of the recommended changes and additions can happen with only one full time faculty member. I'm sorry to say, but this one fact is out of my control. Until that time comes, I will continue to educate myself through training, acquire the necessary equipment, and create new courses that will move us closer to offering an advanced manufacturing certificate. To date, we have a computer numerically controlled (CNC) plasma cutter, robotic welder, 3D printer, and eight laptop computers to run the SolidWorks software. The last piece of equipment needed is the CNC press brake.

Note, I've highlight those items that have been addressed in orange since my recent committee meeting and I've provided details where appropriate in blue.

Welding Technology

DEGREE

Associate in Science in Welding Technology

CERTIFICATES OF ACHIEVEMENT

Welding Technology Two-Year Plan
Welding Technology One-Year Plan

CERTIFICATE OF ACCOMPLISHMENT

Welding Technology

The Welding Technology Program is designed to prepare the student with the necessary skills to acquire an entry-level position in the various industries that require the different welding processes available through the Program. The Welding Program is also designed to assist those already employed in the industry and those in the community to improve their skills. The Program offers course work in Oxyacetylene Welding (OAW), Gas Metal Arc Welding (GMAW), Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW) and American Welding Society (AWS) qualifications in plate and pipe welding. The curriculum is updated with the assistance of an industry advisory committee.

As a Welding major, you will:

- Study a general welding curriculum including welding plate and pipe and qualifications in multiple welding processes to American Welding Society standards.
- Develop leadership and communication skills.
- Identify the welding careers you are most interested in and build a course of study to better qualify you to succeed in that career.

Career Options

Welding Technician
Sales
Inspection
Supervision & Management
Aerospace
Welding Engineering
Construction
Trucking & Automotive
Welding Instructor

Some positions however require a four-year degree for which LCC's program is a good base for transfer.

Program Highlights

- Classes for beginning through advanced welders.
- Welding qualifications through the American Welding Society.
- Practical hands-on training with classroom theory.
- Short term courses.

Associate Degree and Certificate of Achievement in Welding can be completed within two (2) years.

Internships in welding are available for students interested in Work Experience opportunities.

Associate in Science Degree Welding Technology

Total Units for the Associate in Science Degree: 60 Units

Required Core Courses: 24 Units

Course No	Course Title	Units	CA 31	Computer Applications I	2.0
WT 20	Power Plant and Field Pipe Welding I	3.0	IT 22	Operations Maintenance and Safety	1.0
WT 21	Power Plant and Field Pipe Welding II	3.0	IT 72	Facilities Maintenance: Welding	2.0
WT 22	Power Plant and Field Pipe Welding III	3.0	WT 42	Intermediate Shielded Metal Arc Welding	3.0
WT 23	Power Plant and Field Pipe Welding IV	3.0	WT 43	Advanced Shielded Metal Arc Welding	3.0
WT 36	Welding Theory and Practice: Oxyacetylene	3.0	WT 44	Gas Metal Arc Welding	3.0
WT 37	Welding Theory and Practice: Shielded Metal Arc Welding	3.0	WT 45	Gas Tungsten Arc Welding	3.0
WT 38	Welding Theory and Practice: Gas Metal Arc Welding	3.0	WT 51	Blueprint and Symbol Reading for Welders	2.0
WT 39	Welding Theory and Practice: Gas Tungsten Arc Welding	3.0	WT 52	Robotic Welding Operations and Programming	3.0
			WT 53	Robotic Welding Operations and Programming Advanced	3.0
Required Electives: 18 Units			General Education Requirements: 18 Units		
BUS 25	Small Business Management	3.0			

Program Student Learning Outcomes

Upon completion of the Associate in Science Degree Welding Technology, the student will be able to:

1. Demonstrate the safe setup and application of various welding and cutting processes to specific metals and joint designs, which meet or exceed industry standards and the American Welding Society Structural Welding Code, DI.1.

Certificate of Achievement: Welding Technology - Two Year

Total Units for the Two-Year Certificate of Achievement: 44 Units

Required Core Courses: 29 Units

Course No	Course Title	Units	WT 51	Blueprint and Symbol Reading for Welders	2.0
IT 22	Operations Maintenance and Safety	1.0			
IT 72	Facilities Maintenance: Welding	2.0	Required Electives: 15 Units		
WT 20	Power Plant and Field Pipe Welding I	3.0	BUS 25	Small Business Management	3.0
WT 21	Power Plant and Field Pipe Welding II	3.0	CA 31	Computer Applications I	2.0
WT 22	Power Plant and Field Pipe Welding III	3.0	WT 42	Intermediate Shielded Metal Arc Welding	3.0
WT 23	Power Plant and Field Pipe Welding IV	3.0	WT 43	Advanced Shielded Metal Arc Welding	3.0
WT 36	Welding Theory and Practice: Oxyacetylene	3.0	WT 44	Gas Metal Arc Welding	3.0
WT 37	Welding Theory and Practice: Shielded Metal Arc Welding	3.0	WT 45	Gas Tungsten Arc Welding	3.0
WT 38	Welding Theory and Practice: Gas Metal Arc Welding	3.0	WT 52	Robotic Welding Operations and Programing	3.0
WT 39	Welding Theory and Practice: Gas Tungsten Arc Welding	3.0	WT 53	robotic Welding Operations and Programing Advanced	3.0

Program Student Learning Outcomes

Upon completion of the Certificate of Achievement in Welding Technology Two-Year, the student will be able to:

1. Demonstrate the safe setup and application of various welding and cutting processes to specific metals and joint designs, which meet or exceed industry standards and the American Welding Society Structural Welding Code, DI.1.

Certificate of Achievement: Welding Technology - One Year

Total Units for the One-Year Certificate of Achievement: 23 Units

Required Core Courses: 17 Units

Course No	Course Title	Units	Required Electives: 6 Units		
IT 22	Operations Maintenance and Safety	1.0	WT 42	Intermediate Shielded Metal Arc Welding	3.0
IT 72	Facilities Maintenance: Welding	2.0			
WT 20	Power Plant and Field Pipe Welding I	3.0	WT 43	Advanced Shielded Metal Arc Welding	3.0
WT 21	Power Plant and Field Pipe Welding II	3.0	WT 44	Gas Metal Arc Welding	3.0
WT 37	Welding Theory and Practice: Shielded Metal Arc Welding	3.0	WT 45	Gas Tungsten Arc Welding	3.0
WT 38	Welding Theory and Practices: Gas Metal Arc Welding	3.0	WT 52	Robotic Welding Operations and Programing	3.0
WT 51	Blueprint and Symbol Reading for Welders	2.0	WT 53	Robotic Welding Operations and Programing Advanced	3.0

Program Student Learning Outcomes

Upon completion of the Certificate of Achievement in Welding Technology One-Year, the student will be able to:

1. Demonstrate the safe set-up and application of Oxyacetylene Cutting (OAC), Oxyacetylene Welding (OAW), Carbon Arc Cutting (CAC), Gas Tungsten Arc Welding (GTAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), and Shielded Metal Arc Welding (SMAW) to ferrous, alloy and nonferrous metals.
2. Apply the SMAW, GTAW, GMAW, and FCAW processes to steel plate and pipe that meet or exceed industry standards and the American Welding Society Structural Welding Code, DI.1.

Certificate of Accomplishment: Welding Technology

Total Units for the Certificate of Accomplishment Welding Technology: 12 Units

Required Core Courses: 9 Units

Course No	Course Title	Units	Required	Electives: 3 Units	
WT 20	Power Plant and Field Pipe Welding I	3.0	IT 22	Operations Maintenance and Safety	1.0
WT 37	Welding Theory and Practice: Shielded Metal Arc Welding	3.0	IT 72	Facility Maintenance: Welding	2.0
WT 38	Welding Theory and Practice: Gas Metal Arc Welding	3.0	WT 36	Welding Theory and Practice	3.0
			WT 51	Blueprint and Symbol Reading for Welders	2.0

Program Student Learning Outcomes

Upon completion of the Certificate of Accomplishment in Welding Technology, the student will be able to:

1. Demonstrate the safe set-up and application of Oxyacetylene Cutting (OAC), Oxyacetylene Welding (OAW), Carbon Arc Cutting (CAC), Gas Tungsten Arc Welding (GTAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), and Shielded Metal Arc Welding (SMAW) to ferrous metals.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning table at the end of the section for any recommendations requiring institutional action.

In order to offer the proposed new courses for an advanced manufacturing certificate along side our existing welding technology courses, a new full-time faculty member will be required. Last, a CNC press brake will need to be purchased to round out the equipment needed to offer the certificate in advanced manufacturing.

B. Courses

Description/Evaluation

1. Identify courses added or deleted from the instructional program since the last instructional program review.

Since my last IPR, WT-40 was inactivated, and new course outlines were approved for WT-51 (Robotics Operations and Programming) WT-52 (Robotics Welding Operations and Programming, Advanced) and WT-25 (SolidWorks Fundamentals). WT-51 is currently offered every fall since 2019

2. Each course offered within the instructional program must be reviewed for accuracy and currency (see Attachment I, Course List by Program). Review of each course outline should include asking the following questions:
 - Should the Disciplines of Assignment remain the same or be changed?
 - Should the Catalog/Schedule description remain the same or be updated?
 - Is the course repeatable? Is the repeatability reflected in the SLOs, Objectives, and Course Content sections? What is the basis for repeatability: legal requirement or increased skill level?
 - If the course meets a core requirement within specific degrees or certificates, is it accurately noted on the outline?
 - If the course satisfies a specific area within the general education requirement for an associate degree or transfer, is it accurately noted on the outline?
 - Are course-level student learning outcomes included on each course outline? Are learning outcomes included for each allowable repetition?
 - Does the course require a prerequisite or have recommended preparation? Are content review forms on file for each recommended preparation and/or prerequisite?
 - Do any of the learning outcomes or objectives need revision?
 - Does any content need to be updated?

- Are any changes necessary in the Methods of Instruction, Assignments, Critical Thinking or Methods of Evaluation sections?
 - Is the course being considered for distance education offering? If so, has it been approved for specific distance education delivery?
 - Is the textbook current and is the publication date included?
3. Whether changes to a course outline are necessary or not, a Revision to Existing Course Form for each course must be completed and submitted to the Curriculum/Academic Standards Committee for action. When changes are necessary, indicate the revisions on the form. Where no changes are necessary, simply indicate on the Revision Form that “the course has been reviewed as part of the program review and no changes are necessary.” Revision forms will be retained in the Instructional Office with the Curriculum agenda packets.
 4. Following the Curriculum/Academic Standards Committee action on all submitted Revision to Existing Course Forms, a summary Instructional Program Curriculum Review Form will be completed by the Curriculum/Academic Standards Subcommittee Chair and given to the program faculty for inclusion in the program review.
 5. The signed Instructional Program Curriculum Review Form is to be included with your completed program review documents

In regards to question two above and all of the subsequent bullet points, the only change made was to update the textbook to a newer edition. Beyond that, no additional changes were necessary. Going forward and time permitting, updates will be made to specific courses as outlined by the welding advisory committee in Appendix E.

Below is the status of the curriculum review as provided.

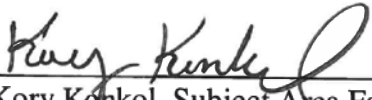
Lassen Community College
Status of Curriculum Reviews

**Welding Instructional Program Review
Status of Curriculum Review October 19, 2021**

Course Name	Curriculum Committee Review Completed	Curriculum Committee Review <u>Not</u> Completed	Course SLO mapping Curriculum Committee reviewed
	<i>Date course last reviewed</i>	<i>Date here if last review 4 years or more</i>	<i>Date</i>
IT 22 Operation Maintenance an safety	10/05/2021		05/04/2021
IT 72 Facilities Maintenance-Welding Safety	10/05/2021		05/18/2021
WT 20 Power Plant & Field Pipe Welding I	10/05/2021		05/04/2021
WT 21 Power Plant & Field Pipe Welding II	10/05/2021		05/04/2021
WT 22 Power Plant & Field Pipe Welding III	10/05/2021		05/04/2021
WT 23 Power Plant & Field Pipe Welding IV	10/05/2021		05/04/2021
WT 25 SolidWorks	10/19/2021		05/04/2021
WT 31 GTAW For Gunsmiths	10/05/2021		05/04/2021
WT 32 Advance GTAW for Gunsmithing	10/05/2021		05/04/2021
WT 36 Welding theory & Practice-Oxyacetylene	10/05/2021		05/04/2021
WT 37 Welding theory & Practice-Shield Metal Arc Welding	10/05/2021		05/04/2021
WT 38 Welding theory & Practice Gas Metal Arc Welding	10/05/2021		05/04/2021
WT 39 Welding theory & Practice Gas Tungsten Arc Welding	10/05/2021		05/18/2021
WT 42 Intermediate Shield Arc Welding	10/05/2021		05/04/2021
WT 43 Advance Shield Arc Welding	10/05/2021		05/04/2021
WT 44 Gas Metal Arc Welding	10/05/2021		05/04/2021
WT 45 Gas Tungsten Arc	10/05/2021		05/04/2021

Lassen Community College
Status of Curriculum Reviews

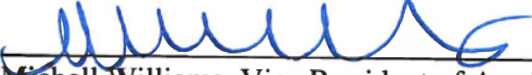
Welding			
WT 50 Welding for Artists (design and Fabrication)	10/05/2021		05/04/2021
WT 51 Blue Print and Symbol Reading for Welders	10/05/2021		05/04/2021
WT 52 Robotic Operations and Programing	10/05/2021		05/04/2021
WT 53 Robotic Welding Operation and Programing (Advanced)	10/05/2021		05/18/2021
			Program PSLO mapping Curriculum Committee reviewed
AS Welding Technology	10/19/2021		05/18/2021
CA Welding Technology (one-year)	10/19/2021		05/18/2021
CA Welding Technology (Two-year)	10/19/2021		05/18/2021
COA – Welding Technology	10/19/2021		05/18/2021



 Kory Konkol, Subject Area Faculty Signature 10/21/21
Date



 Chad Lewis, Curriculum and Academic Standards Committee Chair Signature 10/21/21
Date



 Mitchell Williams, Vice President of Academic Services 10/21/2021
Date

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation.

Complete Academic Planning table for any recommendations requiring institutional action.

Update specific courses as outlined by the welding advisory committee.

C. Articulation/Integration of Curriculum

Description/Evaluation:

1. Attach a tabular comparison of Lassen Community College courses articulating with UC and CSU, indicating courses with approved C-ID designations as applicable (Obtain copies of Articulation Agreements from the Transfer Center)
2. Provide a narrative reviewing the Lassen Community College courses and courses at four-year institutions for course alignment. (i.e. two courses at Lassen needed to articulate with one course at UC).and the units requirements for Lassen Community College courses as compared to four-year institutions.

At this time the welding technology program does not articulate with any UC or USC.

Planning Agenda:

Complete Student Services Planning table (see below) for any proposed changes to articulation or C-ID designation

No changes at this time.

III. Scheduling and Enrollment Patterns

Description/Evaluation:

1. Describe and explain any deviation from the two-year plan in course scheduling during the last four years.

There have been no deviations during the last four years.

2. Evaluate the relationship between schedule, enrollment patterns and FTE generated statistics.

Currently, the Welding Technology Program offers classes four days a week with both morning and evening classes available. All of the Welding Technology classes are offered every semester, with the exception of IT-22, IT-72 and WT-32,

which are offered in the spring and WT-31 and WT-51 in the fall. In order to offer all of the 30 and 40 series classes every semester, we stack them.

Enrollment data between spring and fall offerings nearly mirror each other, with the fall semester having slightly more enrolled. 2018 was an outlier in this case with spring bringing in more FTE's than fall. Due to the fact that nearly every welding class is offered every semester, one might expect very little change between spring and fall enrollment. See Appendix F for enrollment and FTE data. As one might expect FTE's are down slightly from Covid.

Not sure why the relationship between enrollment patterns and FTE's are considered, because FTE's are a result of enrollment.

3. Using FTE data provided, evaluate how the scheduling of courses within the program has served the needs of a variety of students (e.g. day, evening, single parents, employed full-time). Include the following considerations:
 - a. Number of sections (too many/too few to serve student needs)
 - b. Variety of times (three times a week, twice a week, one day a week and morning/afternoon/evening)
 - c. Length of courses (traditional semester/short term)
 - d. Method of delivery (traditional/technology-mediated/correspondence delivered instruction).

The current structure of welding technology program classes, as offered, has met the need of our students. With the exception of two classes all other courses are full term, semester long.

Also note in appendix D, student surveys showed that scheduling of courses met 100% of the respondents needs.

4. Evaluate student access to general education courses within the context of the scheduling of the instructional program courses.

When scheduling welding courses, I do not concern myself with conflicting schedules, especially general education courses. My perspective on this is that there are more instructors and class offerings available in general education, including online courses than there are in welding. To date, there has not been an issue with welding students not being able to meet their general education needs.

Planning Agenda:

Complete Academic Planning table (see below) for any proposed changes in the schedule that might improve enrollment patterns and better meet student needs.

No changes at this time.

IV. Equipment

Description/Evaluation:

1. List capital outlay equipment, age of equipment and replacement schedule

<u>Equipment</u>	<u>Age</u>
(12) Single process stick welders	20+
(4) TIG/Stick welders	20+
Shop ventilation system	20+
(1) Piranha hydraulic shear	20+
(1) Uni-Hydro hydraulic shear	15+
(11) Milller XMT350 multi-process welders	10+
(4) Milller XMT350 MPA multi-process welders	2
(8) Miller Dynasty 200 TIG/Stick welders	8
(1) Miller Dynasty 280 TIG/Stick welders	<1
(2) Miller Dynasty 350 TIG/Stick welders	10+
(2) Miller 350P Pulse MIG	15+
(4) Lincoln/Miller MIG welders	18+
(1) Lincoln multi-process MIG welder	4
(1) Fanuc/Lincoln robotic welder	5
(1) Dynatorch CNC cutting table	6

We currently don't have a replacement schedule. As one can see, equipment from the above list that is 20+ years old is still serving our needs. The only draw back from those pieces of equipment is that they can only perform one welding process.

2. Identify any existing equipment maintenance/service agreements

The welding technology program doesn't have any equipment maintenance or service agreements.

3. Evaluate the condition of capital outlay equipment in light of the replacement schedule and available funds.

As noted above, some of our equipment is 20+ years old, but this doesn't necessitate their need to be replaced. Any maintenance costs to keep the equipment operational is taken from the welding departments' budget.

4. Evaluate the effectiveness of and need for additional maintenance/service agreements.

The welding equipment in the shop requires very little maintenance and any circumstances that come up are taken care of in house.

Now, in regards to the welding departments' ventilation system, this should have a maintenance schedule as conducted by the maintenance department. This would consist of preventive maintenance duties such as belts and greasing the bearings. Due to the lack of maintenance, in house, we should consider an outside service agreement.

5. Justify any proposed modification or additions to equipment available for students and/or faculty/instructional assistants within the program.

As noted above some of our equipment is 20+ years old and still functions fine, but they can only perform one welding process. Real estate in the shop is at a premium and it becomes more efficient to have a multi-process welder taking up the same space. The benefit of a multi-process welder is that the same piece of equipment can be used to teach multiple welding processes and classes versus only one for our older machines.

With the addition of our CNC plasma cutting table and robotic welder along with future equipment to necessitate our advanced manufacturing program, there is a need for one full-time faculty member.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning, Student Services Planning, Facilities Planning, or Technology Planning tables as appropriate for any recommendations requiring institutional action.

Continue to purchase and replace older welders with multi-process units.

Hire a full-time faculty member.

Develop an outside service agreement so that our ventilation system in the welding shop can receive the proper maintenance.

V: Outside Compliance Issues (if appropriate for program)

Description:

If appropriate, describe the role of outside compliance issues on the Special Program.

The following is from our 2015 welding IPR:

The main outside compliance issues that govern the welding technology program are OSHA and local building codes. These standards outline regulations that provide for the health and safety of occupants working in or around this department.

Evaluation:

Assess changes in compliance or identification of compliance-related needs and the impact on the Special Program.

There continues to be insufficient welding fume ventilation in the welding department.

The following was also noted in our 2015 welding IPR:

One issue that has been addressed was moving the classroom to its current location downstairs. This move benefited by meeting ADA requirements, but still has compliance issues. Greg Collins pointed out the following known issues:

- No ventilation for the space or windows that can be opened to provide ventilation or egress.
- One of the two exits opens inward.
- Exits to the space are opposite each other and may not meet code due to the shape of the space.

Another issue that was brought to my attention and outlined in a prior IPR was the mezzanine located in the construction trades space. The structure may not be up to code and may need modification.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning, Facilities Planning, Technology Planning and Human Resource Planning Forms as appropriate for any recommendations requiring institutional action.

Correct the known issues as noted above.

VI. Prioritized Recommendations

A. Prioritized Recommendations for Implementation by Program Staff

List all recommendations made in Section One that do not require institutional action (ie. curriculum development) in order of program priority.

None at this time

B. Prioritized Recommendations for Inclusion in the Planning Process

List all recommendations made in Section One that should be included in Lassen College’s planning and budgeting process, specifically in the Educational Master Plan, Student Services Master Plan, or Institutional Effectiveness Master Plan. Separate recommendations into the appropriate plan(s). Items to be included in the Human Resource Master Plan, Institutional Technology Master Plan, or Facilities Master Plan should be addressed in Sections Two, Three or Four in lieu of or in addition to inclusion in the Academic Master Plan. See Attachment C, Master Plan Overview, in the IPR handbook to determine where recommendations are best placed.

Item IV Equipment - Continue to purchase and replace older welders with multi-process units.

Prioritized Recommendations for Inclusion in Education Master Plan

Welding Technology 2021:

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost (implementation & ongoing)	Expected Outcome
2,4	Hire one new full-time faculty member	ASAP	Approx. \$60K	Offer new advanced manufacturing courses for new certificate.
1,4	Set up a service agreement to maintain the ventilation systems in the shop.	ASAP	Approx. \$2000	Allow for proper maintenance of equipment

Prioritized Recommendation for Inclusion in Student Services Master Plan

Welding Technology 2021: At this time, no information needs to be added to this chart.

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost (implementation & ongoing)	Expected Outcome

--	--	--	--	--

Prioritized Recommendations for Inclusion in Institutional Effectiveness Master Plan

Welding Technology 2021: At this time, no information needs to be added to this chart.

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost (implementation & ongoing)	Expected Outcome

Section Two: Human Resource Planning

I. Program Staffing

Description/Evaluation:

1. List the current staffing for the program include: full-time and part-time faculty positions, instructional assistants and classified staff

The Lassen College Welding Technology Program has one full-time faculty, one adjunct faculty and one instructional support specialist, ISS.

2. This section provides an opportunity for analysis and justification of projected staffing needs to support the program. Clerical support by the Office of Academic Services and work-study needs may be included.

In order to offer courses for an advanced manufacturing program along with all of the current welding course offerings, another full-time instructor will be needed.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation.

Complete Academic Planning and Human Resources Planning Forms as appropriate for any recommendations requiring institutional action.

Hire one full-time faculty member for the welding technology program.

II. Professional Development

Description/Evaluation:

1. If available, reference Flex Contracts for full-time faculty teaching in the program for each of the last two years. [Copies may be available in the Office of Instruction].

Full-time faculty is fulfilling their professional development obligations.

2. Describe the professional development and professional activities of the program faculty/instructional assistants in addition to flex obligation relevant to program improvement that has occurred during the period under review. (workshops, conferences, staff development, sabbatical leaves, work experience, etc.)

For the 2020-2021 flex activity, I created content that previously didn't exist, for online welding courses during our shutdown due to Covid.

Besides the flex activity, I had training in the use of our SolidWorks CAD software scheduled, but was ultimately cancelled due to Covid.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning and Human Resources Planning Forms as appropriate for any recommendations requiring institutional action.

No action is required at this time.

III. Student Outcomes

Description/Evaluation:

Description/ Evaluation:

Describe any results from assessment of learning outcomes that affect human resource planning

Data does not indicate any change that affects human resource planning.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning and Human Resources Planning Forms as appropriate for any recommendations requiring institutional action.

No recommendations necessary at this time.

IV. Prioritized Recommendation

Prioritized Recommendations for Implementation by Program Staff

List all recommendations made in Section Two that do not require institutional action (ie. curriculum development) in order of program priority.

No recommendations for implementation by the program staff were made.

Prioritized Recommendations for Inclusion in the Planning Process

List all recommendations made in Section Two that should be included in Lassen College's planning and budgeting process. See Attachment C, Master Plan Overview, in the IPR handbook to determine where recommendations are best placed.

In order to offer courses for an advanced manufacturing program along with all of the current welding course offerings, another full-time instructor will be needed.

Prioritized Recommendations for Inclusion in Human Recourse Master Plan

Welding Technology 2021

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost (implementation & ongoing)	Expected Outcome
1	Hire one full-time faculty	Fall 2019	Approx. 60K	Offer new courses for advanced manufacturing program/ increase FTE's

Section Three: Facilities Planning

I. Facilities

Description/Evaluation:

1. Describe and evaluate the Lassen Community College facilities available to the program.

TR102, formerly construction trades, consists of the following: 12 welding booths (without power or ventilation) along the west wall, eight TIG welding booths, a metal rack, welding tables and a lockable office.

TR103 consists of the following: eight aisles along the east wall each containing four welding stations, three of which are for oxyacetylene welding, four welding stations along the west wall, a CNC cutting table, robotic welder, metal shear, floor mounted band saw, pipe beveling station, oxy-acetylene/plasma cutting table, three work tables, tool room, front office for storage, and an upstairs storage space and office.

2. Describe and evaluate additional facilities utilized off-campus by the program (attach any relevant rental agreements)

No additional facilities are being utilized off-campus.

3. Describe any facilities needs identified by assessments of student learning outcomes

Student assessments outlined the need for better chairs tables and desks, although I question that evaluation. Air-conditioning in the shop, because it's too hot for the season. Please see my response to this in II C, page six. Improve sound quality in the classroom during lectures. Improve lighting under mezzanine for TIG welding booths.

4. Justify any proposed modifications or additions to existing facilities that would better serve the program planned for the next five years.

Improve acoustics in the classroom would allow the student to hear the lectures. This problem is now compounded with the Covid filtration device that's been recently installed. Improve lighting over the welding stations would allow students to see their work. In addition to those items, the following items are carried over from my 2015 welding IPR and still apply.

- Address the health and safety concerns as outlined in section V – outside compliance.
- Improve existing electrical drops (splitting circuits if possible) and extend them to welding booths in construction trades.
- Provide necessary ventilation for additional welding booths.
- Improve ventilation in existing welding shop (previous student evaluations).

- Install carpeting in the classroom to eliminate poor acoustics. (Peer evaluation recommendation and recent student survey).

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation. Complete Academic Planning, Facilities Planning, and Technology Planning Forms as appropriate for any recommendations requiring institutional action.

- Install ventilation for welding booths in TR102
- Improve the current ventilation system in TR103
- Add electrical drops for welding booths in TR102
- Improve lighting TR102 (under mezzanine)
- Address the outside compliance issues from section V.
- Install carpeting or other sound deadening material in the classroom between TR102 and TR103 to improve acoustics

II. Prioritized Recommendations

Prioritized Recommendations for Implementation by Program Staff

List all recommendations made in Section Three that do not require institutional action (ie. curriculum development) in order of program priority.

All recommendations need institutional action.

Prioritized Recommendations for Inclusion in the Planning Process

List all recommendations made in Section Three that should be included in Lassen College’s planning and budgeting process. See Attachment C, Master Plan Overview, in the IPR handbook to determine where recommendations are best placed.

Prioritized Recommendations for Inclusion in the Facilities Master Plan

Welding Technology 2021

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost (implementation & ongoing)	Expected Outcome
1,4	Install ventilation for welding booths in TR102	Fall 2022	\$80,000	Health and Safety and expand student capacity
1,4	Improve the current ventilation system in TR103	Fall 2022	\$40,000	Health and Safety

1	Add electrical drops for welding booths in TR102	Fall 2022	\$5000	Expand student capacity and increase graduation rates
1,4	Improve lighting TR102 under mezzanine	Fall 2022	\$1000	Provide a working environment that enhances productivity
1	Improve acoustics in the classroom	Fall 2022	\$1000	Improve verbal comprehension through better acoustics

Section Four: Technology Planning

I. Technology

Description/Evaluation:

1. Describe and evaluate technology and technology support provided for instruction and instructional support.

The welding department currently has the latest smart board technology, which is used for power point and video presentations.

The department also has a computer station that is used to access Accudemia. Accudemia is a web-based program used to track students' attendance and hours.

2. Describe any technology and technology support needs identified by assessment of student learning outcomes.

None at this time.

Planning Agenda:

List recommendations and necessary actions necessitated by the above evaluation.

Complete Academic Planning, Facilities Planning, Technology Planning and Human Resource Planning Forms as appropriate for any recommendations requiring institutional action.

No action required.

II. Prioritized Recommendations

Prioritized Recommendations for Implementation by Program Staff

List all recommendations made in Section Four that do not require institutional action (ie. curriculum development) in order of program priority.

No action required.

Prioritized Recommendation for Inclusion in the Planning Process

List all recommendations made in Section Four that should be included in Lassen College's planning and budgeting process. See Attachment C, Master Plan Overview, in the IPR handbook to determine where recommendations are best placed.

Prioritized Recommendations Inclusion in Institutional Technology Master Plan

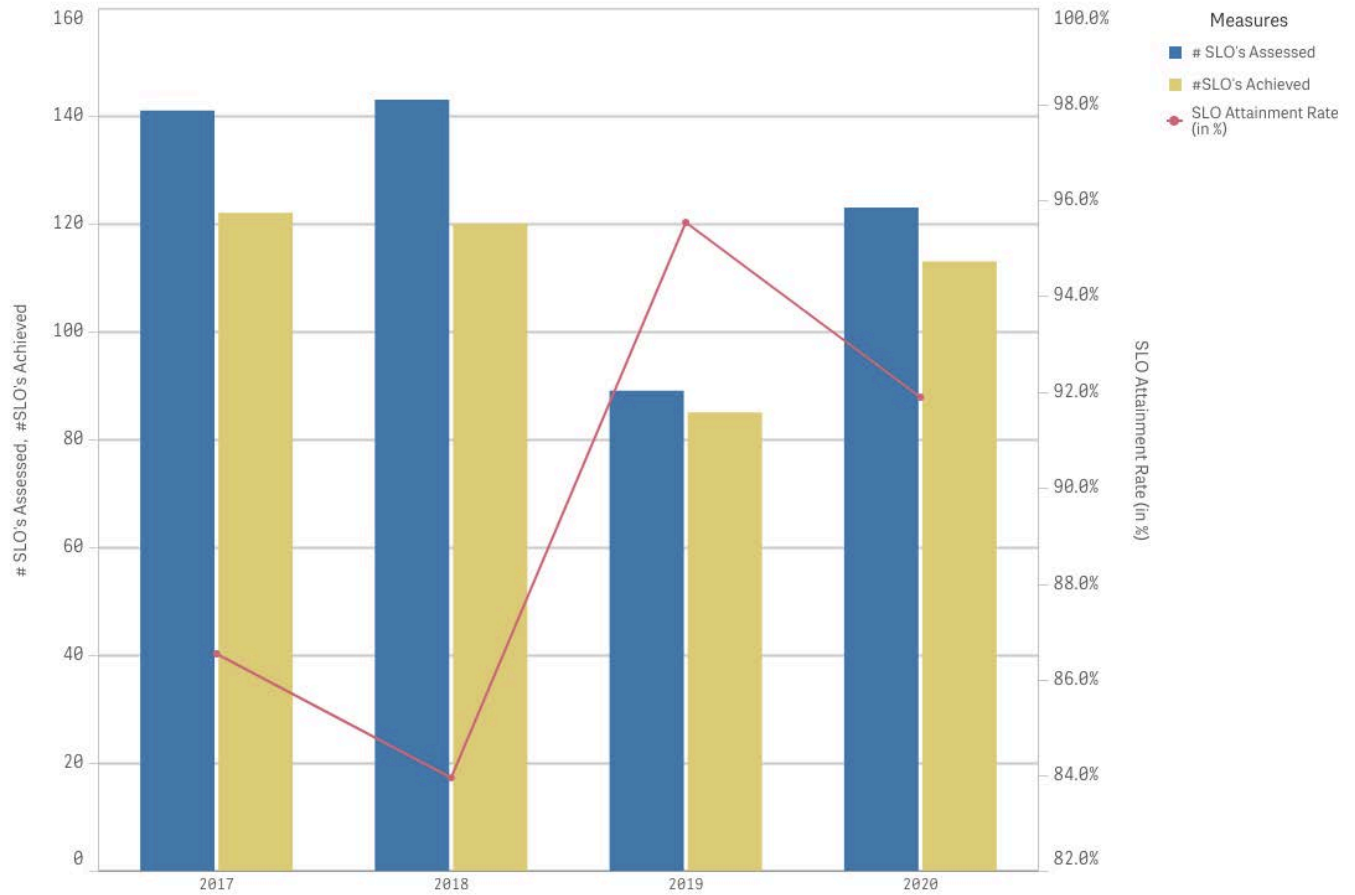
Welding Technology 2021: At this time, no information needs to be added to this chart

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost (implementation & ongoing)	Expected Outcome

Appendix A:

STUDENT LEARNING OUTCOMES (SLOs)

Number of SLO's Assessed and Achieved, with SLO Attainment Rate (%)

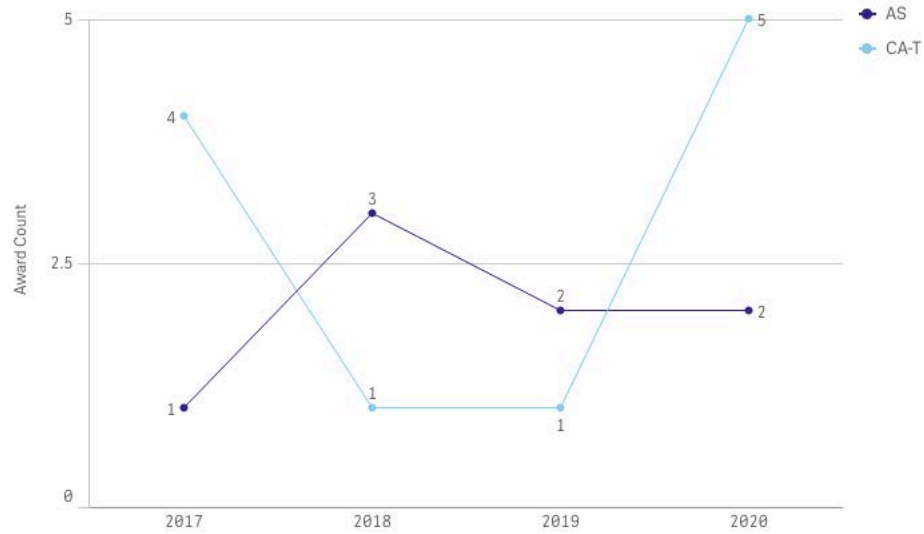


SLO Achievement Results by Academic Year

Measures	Academic Year ▼				
	Totals	2020	2019	2018	2017
# Assessed	496	123	89	143	141
# Achieved	440	113	85	120	122
SLO Attainment %	88.7%	91.9%	95.5%	83.9%	86.5%

Appendix B:

Degrees and Certificates Awarded By Academic Year



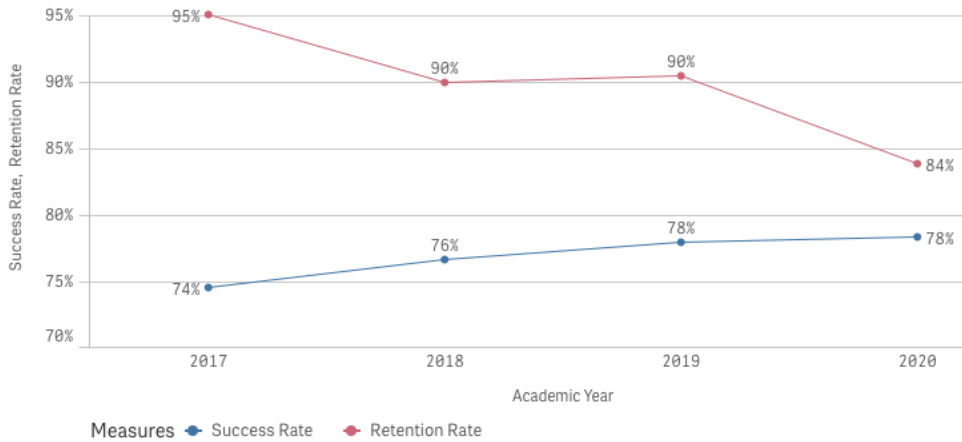
Awards by Academic Year

Academic Year	Award	Award Count
Totals		19
2017	AS Welding Technology	1
2017	Cert. of Achievement Welding Tech 1 Year	3
2017	Cert. of Achievement Welding Tech 2 Year	1
2018	AS Welding Technology	3
2018	Cert. of Achievement Welding Tech 1 Year	1
2019	AS Welding Technology	2
2019	Cert. of Achievement Welding Tech 1 Year	1
2020	AS Welding Technology	2
2020	Cert. of Achievement Welding Tech 1 Year	3
2020	Cert. of Achievement Welding Tech 2 Year	2

Certificates of Completion and Accomplishment	2020-21	2019-20	2018-19	2017-18
Welding Technology	4	1	2	3

Appendix C:

Student Success and Retention



Retention and Success by Academic Year

Academic Year	Census Enrollment	Retention Rate	Success Rate
Totals	599	90%	77%
2020	147	84%	78%
2019	135	90%	78%
2018	157	90%	76%
2017	160	95%	74%

Retention Rates by Course

Course	Academic Year		Semester		2017		2018		2019		2020		
	FA	SU	FA	SP	FA	SP	FA	SP	FA	SP	FA	SP	
	WT-20	76.0%	-	-	75.0%	88.0%	80.0%	100.0%	75.0%	75.0%	75.0%	75.0%	75.0%
WT-21	100.0%	-	-	100.0%	100.0%	83.3%	-	100.0%	50.0%	50.0%	50.0%	85.7%	
WT-22	100.0%	-	-	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	50.0%	
WT-23	100.0%	-	-	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
WT-31	100.0%	-	-	-	92.3%	-	-	100.0%	-	100.0%	-	100.0%	-
WT-32	-	-	-	94.4%	-	100.0%	-	-	100.0%	-	100.0%	-	100.0%
WT-36	100.0%	100.0%	-	50.0%	100.0%	100.0%	66.7%	100.0%	75.0%	50.0%	50.0%	50.0%	
WT-37	100.0%	100.0%	-	100.0%	100.0%	77.8%	90.9%	80.0%	83.3%	80.0%	80.0%	80.0%	
WT-38	100.0%	-	-	81.8%	100.0%	77.8%	100.0%	88.9%	83.3%	83.3%	83.3%	90.9%	
WT-39	100.0%	-	-	100.0%	100.0%	81.8%	75.0%	80.0%	83.3%	83.3%	83.3%	71.4%	
WT-40	-	-	-	100.0%	100.0%	-	-	-	-	-	-	-	
WT-42	100.0%	-	-	100.0%	100.0%	100.0%	100.0%	100.0%	66.7%	100.0%	66.7%	100.0%	
WT-43	100.0%	-	-	100.0%	100.0%	-	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
WT-44	100.0%	-	-	100.0%	100.0%	100.0%	50.0%	-	100.0%	100.0%	100.0%	100.0%	
WT-45	100.0%	-	-	100.0%	100.0%	100.0%	-	100.0%	-	100.0%	-	66.7%	
WT-51	100.0%	-	-	-	75.0%	-	-	90.0%	70.0%	70.0%	70.0%	-	
WT-52	-	-	-	-	-	-	-	100.0%	-	87.5%	-	-	

Appendix D:

Fall 2021 Instructional Program Review (IPR) - Student Evaluation SurveyMonkey

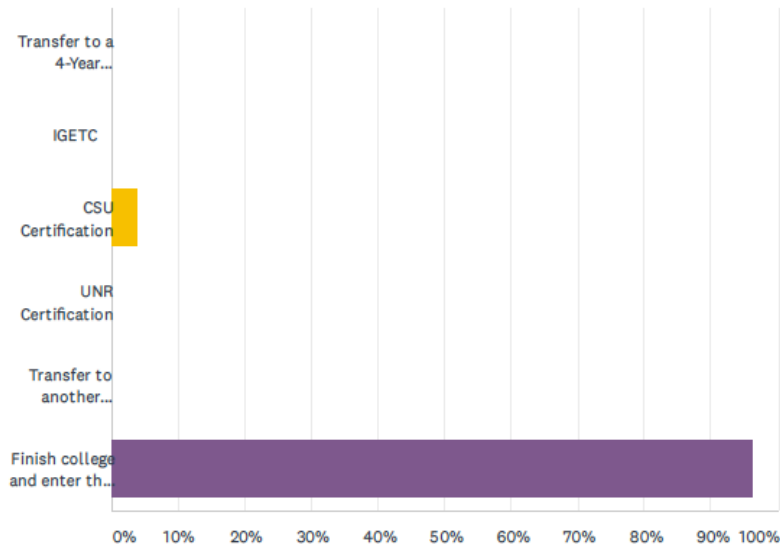
Administration of Justice/Correctional Science	0.00%
Agriculture	0.00%
Art History/Studio Art	0.00%
Automotive Technology	0.00%
Business	0.00%
Child Development	0.00%
Fire Technology	0.00%
Gunsmithing	0.00%
History/Sociology/Social Science/Psychology	0.00%
Humanities	0.00%
Human Services	0.00%
Mathematics/Natural Science	0.00%
Physical Education	0.00%
Vocational Nursing/Allied Health	0.00%
Welding Technology	100.00%
Developmental Studies	0.00%
Work Experience	0.00%

GIS

0.00% 0

Q4 Educational Goal: In relation to your general educational goal(s), what is your educational objective at Lassen Community (Check all that apply):

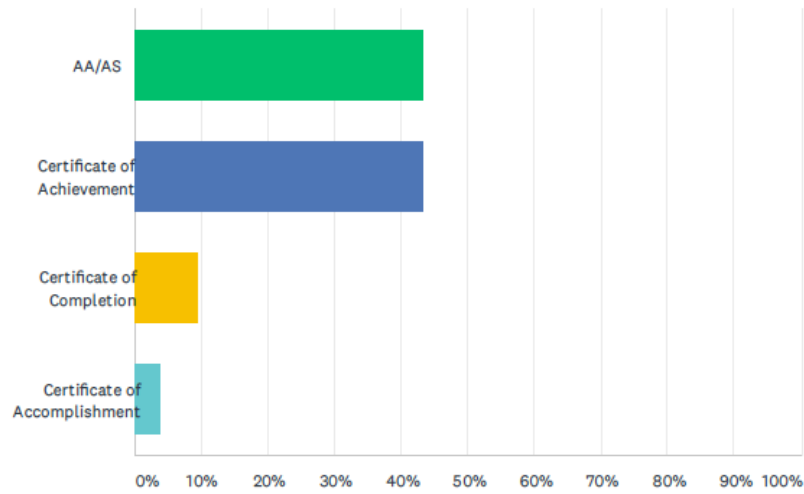
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES
Transfer to a 4-Year Institution	0.00% 0
IGETC	0.00% 0
CSU Certification	3.77% 2
UNR Certification	0.00% 0
Transfer to another community College	0.00% 0
Finish college and enter the work force	96.23% 51
Total Respondents: 53	

Q5 Educational Goal: In relation to your degree or certificate goal(s), what is your educational objective at Lassen Community (Check all that apply):

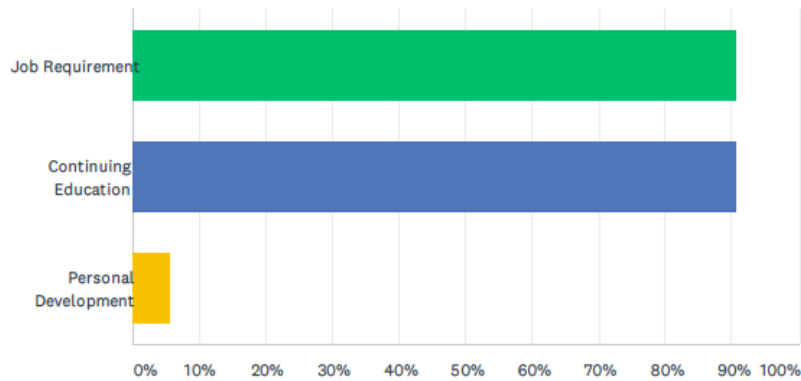
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES
AA/AS	43.40% 23
Certificate of Achievement	43.40% 23
Certificate of Completion	9.43% 5
Certificate of Accomplishment	3.77% 2
Total Respondents: 53	

Q6 Educational Goal: How would you describe your general interest for achieving your educational goal(s) at Lassen Community, (Check all that apply):

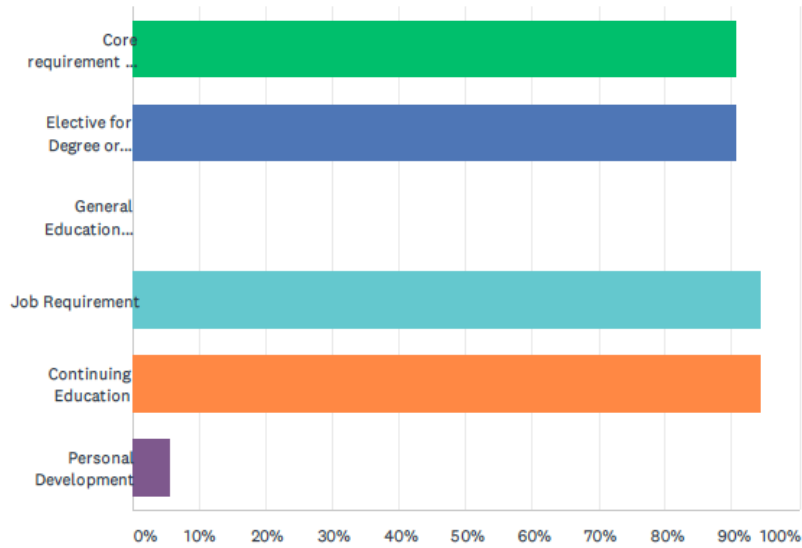
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Job Requirement	90.57%	48
Continuing Education	90.57%	48
Personal Development	5.66%	3
Total Respondents: 53		

Q7 You need this course: Why are you taking this course?

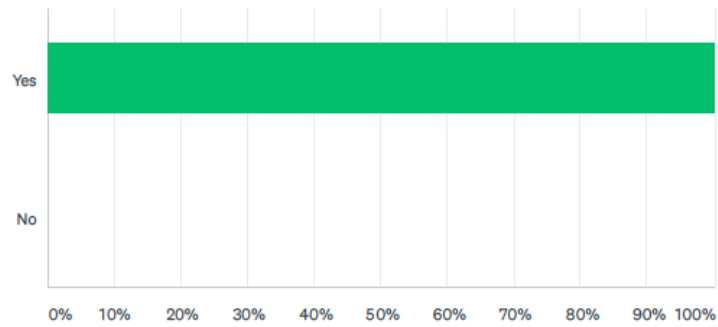
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Core requirement for degree or certificate	90.57%	48
Elective for Degree or Certificate	90.57%	48
General Education course for degree or transfer	0.00%	0
Job Requirement	94.34%	50
Continuing Education	94.34%	50
Personal Development	5.66%	3
Total Respondents: 53		

Q8 Does the course content reasonably compare with the catalog/schedule description?

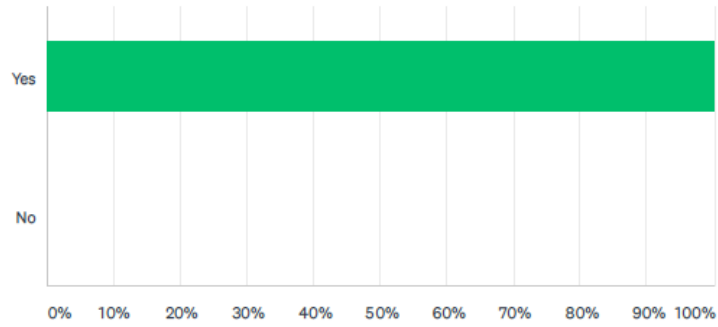
Answered: 52 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	100.00%	52
No	0.00%	0
TOTAL		52

Q9 Did the catalog clearly explain the order in which the courses in this program should be taken?

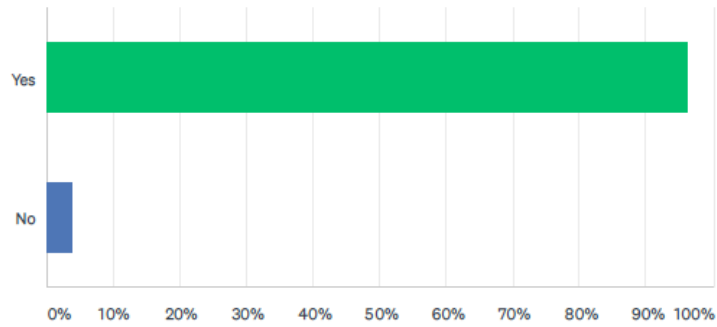
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	100.00%	53
No	0.00%	0
TOTAL		53

Q10 Was any cost for this course/program, beyond registration and books, clearly identified in the catalog?

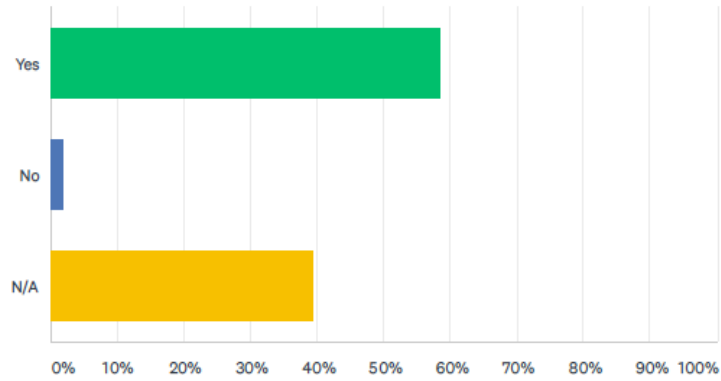
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	96.23%	51
No	3.77%	2
TOTAL		53

Q11 Did the instructors use the required textbooks in the program?

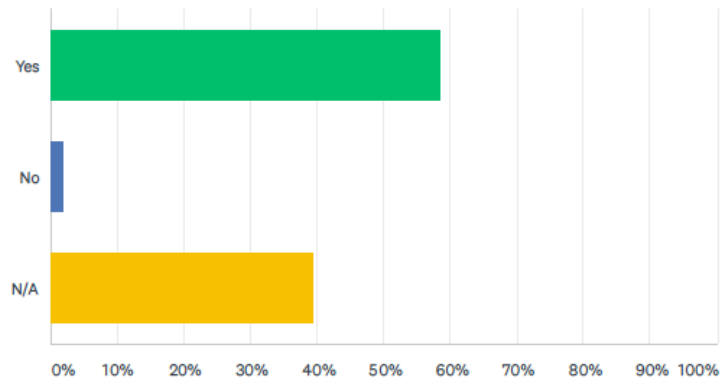
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	58.49%	31
No	1.89%	1
N/A	39.62%	21
TOTAL		53

Q12 Are the textbooks purchased for this course/program useful to you?

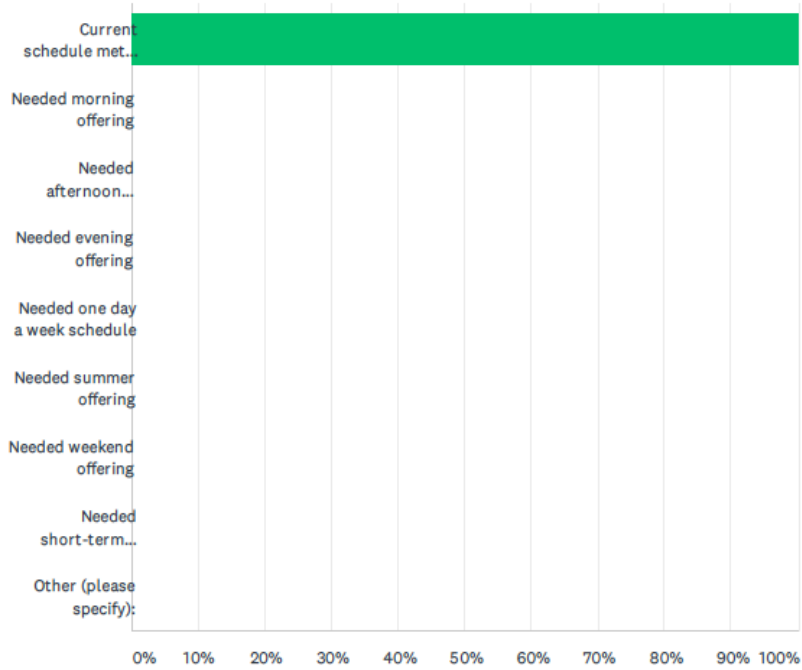
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	58.49%	31
No	1.89%	1
N/A	39.62%	21
TOTAL		53

Q13 Scheduling: Did the scheduling of the course meet your needs?

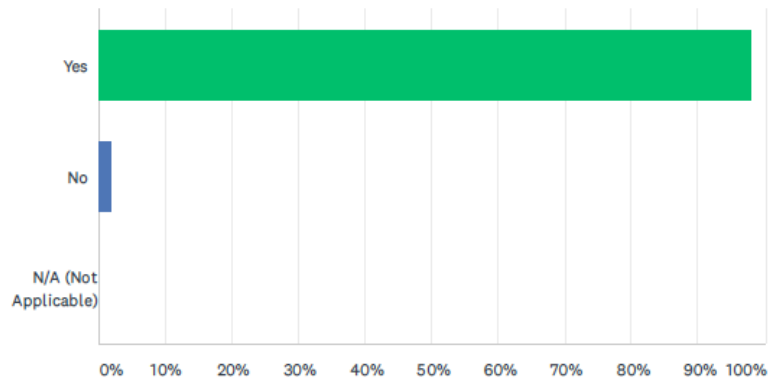
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Current schedule met my needs	100.00%	53
Needed morning offering	0.00%	0
Needed afternoon offering	0.00%	0
Needed evening offering	0.00%	0
Needed one day a week schedule	0.00%	0
Needed summer offering	0.00%	0
Needed weekend offering	0.00%	0
Needed short-term (less than semester) offering	0.00%	0
Other (please specify):	0.00%	0
TOTAL		53

Q14 I was provided with reasonable access to the facilities? (Not Applicable (N/A) for those who have not physically attended classes on campus)

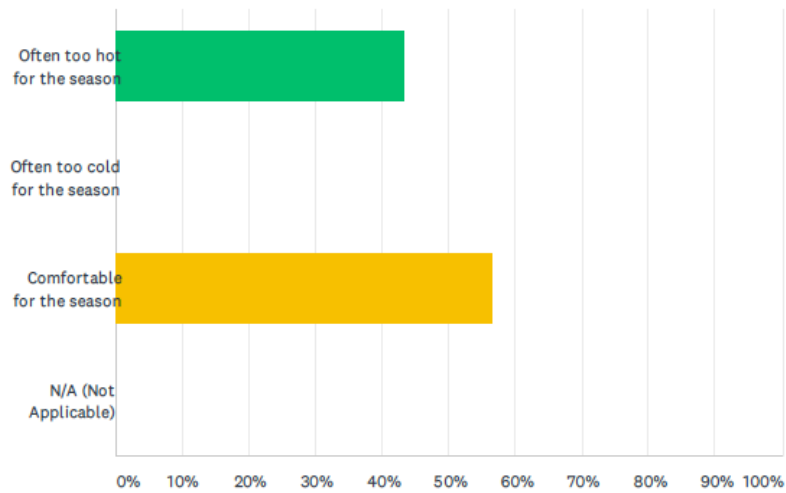
Answered: 52 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	98.08%	51
No	1.92%	1
N/A (Not Applicable)	0.00%	0
TOTAL		52

Q15 The temperature of the facilities in summer or fall is..... (Not Applicable (N/A) for those who have not physically attended classes on campus)

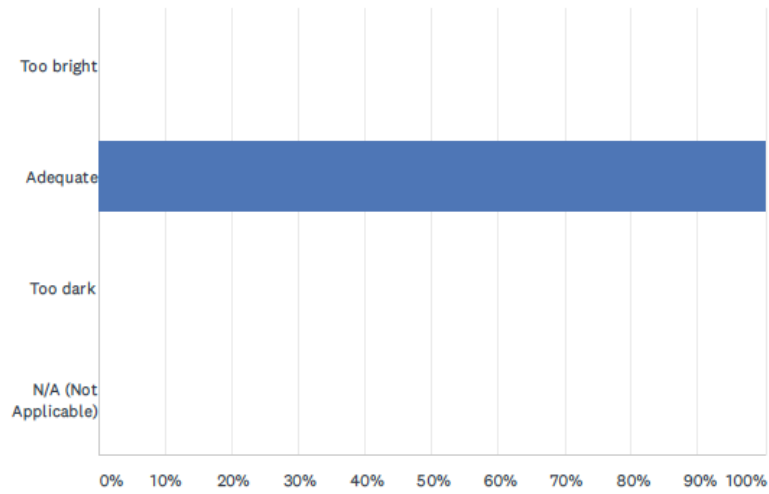
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Often too hot for the season	43.40%	23
Often too cold for the season	0.00%	0
Comfortable for the season	56.60%	30
N/A (Not Applicable)	0.00%	0
TOTAL		53

Q16 The lighting in the facilities is..... (Not Applicable (N/A) for those who have not physically attended classes on campus)

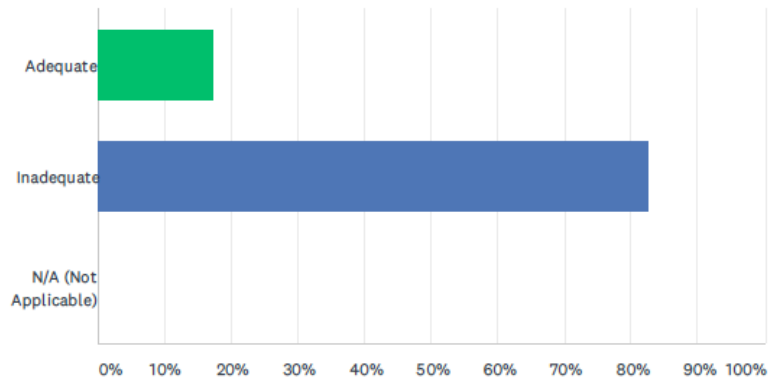
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Too bright	0.00%	0
Adequate	100.00%	53
Too dark	0.00%	0
N/A (Not Applicable)	0.00%	0
TOTAL		53

Q17 The chairs/tables/desks are? (Not Applicable (N/A) for those who have not physically attended classes on campus)

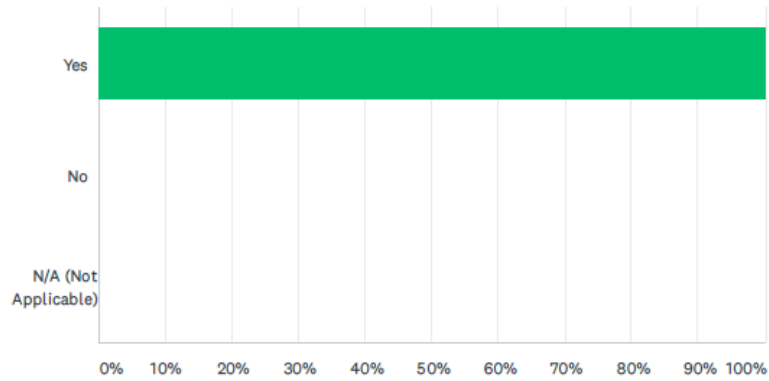
Answered: 52 Skipped: 1



ANSWER CHOICES	RESPONSES	
Adequate	17.31%	9
Inadequate	82.69%	43
N/A (Not Applicable)	0.00%	0
TOTAL		52

Q18 Is there enough space for you to do your work in class? (Not Applicable (N/A) for those who have not physically attended classes on campus)

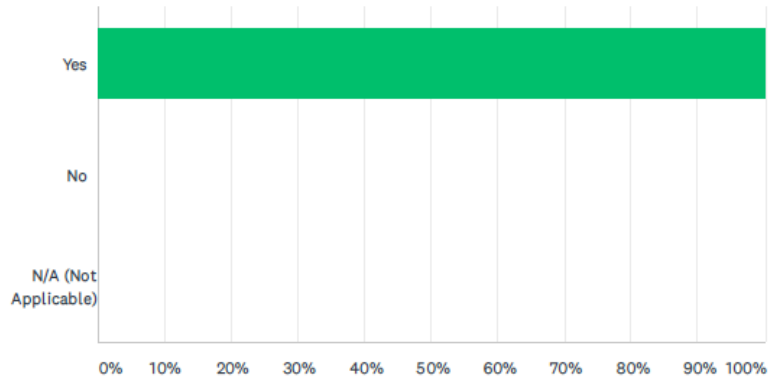
Answered: 51 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	100.00%	51
No	0.00%	0
N/A (Not Applicable)	0.00%	0
TOTAL		51

Q20 Did the course/program provide the necessary equipment?

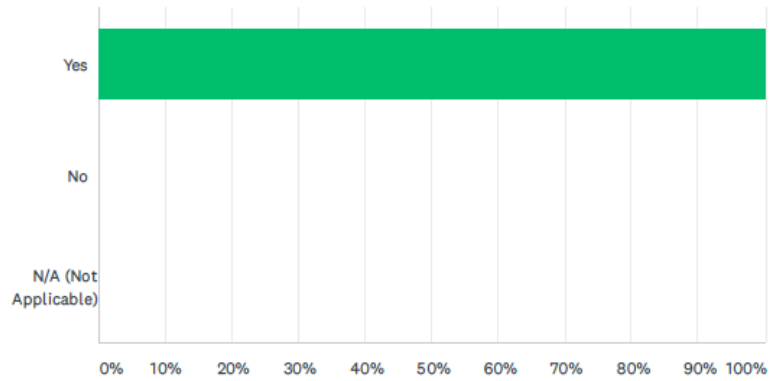
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	100.00%	53
No	0.00%	0
N/A (Not Applicable)	0.00%	0
TOTAL		53

Q21 Is enough time on equipment allowed for each student?

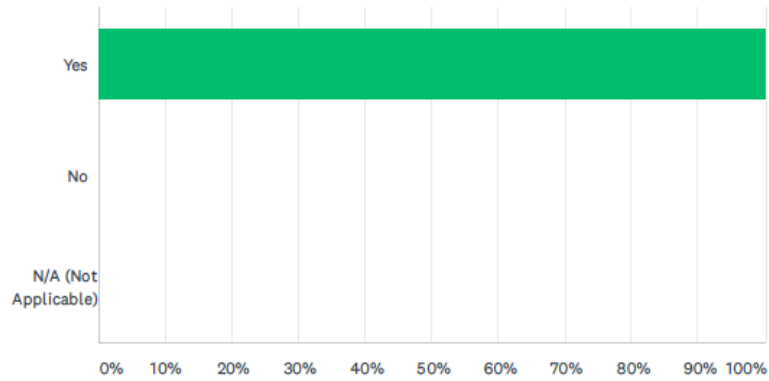
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	100.00%	53
No	0.00%	0
N/A (Not Applicable)	0.00%	0
TOTAL		53

Q22 Is equipment current?

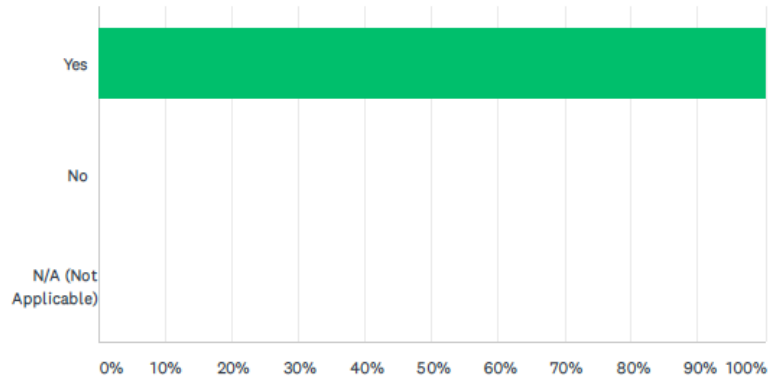
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	100.00%	53
No	0.00%	0
N/A (Not Applicable)	0.00%	0
TOTAL		53

Q23 Is equipment generally in good operation condition?

Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	100.00%	53
No	0.00%	0
N/A (Not Applicable)	0.00%	0
TOTAL		53

Describe how this course/program could be improved to better meet the needs of the students at Lassen Community College:

Open-Ended Response

no comments

no improvements

no improvement

no need great program.

no need

No need to improve very good.

it is fine how it is

They doing good job.

If the classroom had a way to make it easier to hear by maybe installing something like carpet or a way to absorb the echo.

good running order

the program seems to be running fine

program is good

program is doing good

program is good

program is doing good

staff seems to do a great job

Everything is perfect the way it is.

Everything is perfect the way it is.

Everything is perfect the way it is.

everyone is doing a great job friendly

staff seems to be doing a good job. Upgrades are occurring on a regular basis. keep it up.

program is good as is

program is good as is

program is good as is

program is good as is

program is good as is

The faculty are doing fine.

The faculty are doing fine.

The faculty are doing fine.

I think the faculty are doing fine.

Faculty seems to be running the program fine.

An echo in the classroom that makes it hard to hear instructor should be looked at.

Better chairs and tables

All good, nothing of concern

There is a weird echo in the classroom that makes instruction hard to hear. Please fix.

Course is fine as is

Course is fine as is

Course seems fine as is

Course seems good

course is fine as is.

Please provide any additional comments on the course or program:

Open-Ended Response

no comments
no comments
no comments

n/a

More water

The instructor and the TA are extremely helpful and attentive whenever I need assistance. The booths need better ventilation for overall health reasons.

more classes

the ventilation in the shop seems poor and outdated

new ventilation

new ventilation

ventilation in the shop is poor

the ventilation is poor

the ventilation is very poor

Need carpet in the classroom and new ventilation system

Carpet in the classroom and new ventilation system would be nice

We could use some carpet in the classroom to help dull out the echo sounds, that would help out a lot. Ventilation is kinda poor in the welding shop too, could use better ones.

the teachers are very nice and helpful

I appreciate the dedication of my teacher and staff to constantly improve the program, equipment, lighting, ventilation, and all the things that make the program constantly better.

Need more lighting in the TIG room

The faculty are doing fine.

The faculty are doing fine.

The faculty are doing fine.

Faculty are doing fine in this program.

Ventilation could use upgrading.

nothing further

no further comments

no further comment

No comments, everything already addressed.

Classroom is a little echoly

Classroom is a little echoly

Classroom is a little echoly

Classroom Echoly

Its a little echoly in the class room

The class is very instructive with learning welding and different types of welding

need carpet in the classroom because of the echo with the concrete floors makes it hard to hear Kory when he is giving a lecture

the echo in the classroom makes it hard to hear when Kory is teaching, carpet would reduce the echo

Welding is fun and all but the bra on my face does not help anything in this shop it makes it hard to breath and its a waste of school money. Nobody enjoys it and its a CYA for the school burka on my face. I don't mind the temp checks and question asking at the beginning of class but if I'm feeling ill I wont be coming in. Why cant we go back to the good old days when we

There is poor sound quality in the classroom because of the echo but also because we have to wear diapers on our face because of a fear of a virus that is the flu

the ventaltion could be upgraded and the class room has an echo and would benefit from carpet

the venelation could be upgraded and he class room has an echo in the class room i think carpet will help with that

Its hard to hear in the classroom by putting in carpet might help the problem. Also new tables and chars.

Its hard to here in the class room I think putting in carpet it might help the problem. The table and chairs are old and falling apart.

It's hard to hear in the class room putting in carpet might help with the problem, the ventilation sucks,

the venttion could be upgraed and it echoes in the class room and can here the enstructor in the back

Appendix E:

All eight voting members agreed to the following for WT-36

WT-36 - Proposal, inactivate our beginning oxy-acetylene welding (OAW) course. A new welding course will be created that will encompass OAW as well as shielded metal arc welding (SMAW). This new course will be structured to articulate with area high schools.

All eight voting members agreed to the following for WT-37

WT-37 – This is our beginning three-unit SMAW lab only course. Proposal is to offer it as a 0.5 -1 unit lecture/2-2.5 unit lab course (total 3-units). Objectives – Using SMAW 6010 and 7018 welding electrodes to weld lap, corner, T-joints and groove welds in the vertical and overhead positions.

All eight voting members agreed to the following for WT-38

WT-38 – This is our beginning three-unit Gas Metal Arc Welding (GMAW) and Flux Core Arc Welding (FCAW) lab only course. Proposal is to offer it as a 0.5 -1 unit lecture/2-2.5 unit lab course (total 3-units). Objectives would remain the same, with the exception of adding open root GMAW to plate.

All eight voting members agreed to the following for WT-39

WT-39 - This is our beginning three-unit Gas Tungsten Arc Welding (GTAW) lab only course. Proposal is to offer it as a 0.5 -1 unit lecture/2-2.5 unit lab course (total 3-units). No other changes.

All eight voting members agreed to the following for WT-40

WT-40 – Advanced oxy-acetylene welding. Proposal is to inactivate the class. This class was inactivated per board recommendations

All eight voting members agreed to the following for WT-42, with one recommendation to consider including Surface Tension Transfer (STT).

WT-42 – This class practices SMAW open root groove welds using 6010 and 7018 electrodes. Only one proposed change is to add the following objective - back gouging to the root pass followed with a back weld.

All eight voting members agreed to the following for WT-43

WT-43 – This class practices GTAW open root groove welds. No change.

Seven voting members agreed and one abstained, because they didn't use the welding process in WT-44.

WT-44 – This is our advanced GMAW and FCAW (running dual shield T-1 wire) three-unit lab only class. Proposal is to offer it as a 0.5 -1 unit lecture/2-2.5 unit lab course (total 3-units). Objectives – continue with GMAW spray and pulse on steel, but add aluminum pulse welding and GMAW welding of pipe. FCAW dual shield would be removed from objectives and added to a new course.

All eight voting members agreed to the following change for WT-45

WT-45 – This is our advanced GTAW class. Proposal is to inactivate the course.

All eight voting members agreed to the following for WT-20

WT-20 – This is our beginning pipe welding class, where 1G open-root pipe and plate work in all positions is performed using SMAW 6010/7018 electrodes. Proposal is to remove the plate-welding component and add 2G pipe. Hand beveling of the pipe will also be a component before students are allowed to use more automated methods.

All eight voting members agreed to the following for WT-21

WT-21 – This is our second pipe welding class in a series of four. Proposal is to change the objectives, where pipe welding in the 5G and 6G welding positions are covered using SMAW 6010/7018 electrodes.

All eight voting members agreed to the following for WT-22, with one recommendation to consider including Surface Tension Transfer (STT).

WT-22 – This is our third pipe welding class in a series of four. Proposal is to replace the current objectives with pipe welding in all positions (1G, 2G, 5G, 6G) using GTAW for the root pass followed by SMAW 7018.

All eight voting members agreed to the following for WT-23

WT-23 – This is our last pipe welding class in a series of four. The current objectives are what are being proposed for WT-22. Proposal is to create a specialty pipe welding class that covers pipe in the 4” and smaller diameters. The GTAW and GMAW processes will be used to complete the pipe from the root out to the cover pass.

All eight voting members agreed to the following for IT-22

IT-22 – This is our safety class. Proposal is to upgrade this class to an Occupational Safety and Health Administration (OSHA) 10 standard. OSHA 10 cards to be given at completion (passing).

All eight voting members agreed to the following for IT-72. One member recommended a concentrated effort towards maintenance in the manufacturing sector. A focused effort would be placed on critical thinking, electrical, hydraulics, pneumatics, machining, computer skills, reading schematics and electronics.

IT-72 – This is our facilities maintenance class. No change

The following are potential new course offerings

All eight voting members agreed that the following class be created.

Beginning and advanced classes in robotic welding

Curriculum was written and approved and the beginning robotic course has been offered every fall since 2019

All eight voting members agreed that the following class be created. One member recommended using the sheet metal module to design a product and then create a DXF file to cut the parts on our CNC plasma cutter. Then optimize the patterns to save material.

Beginning and advanced classes in CNC plasma cutting

All eight voting members agreed that the following class be created. One member recommended using the sheet metal module to design a product and then create a DXF file to cut the parts on our CNC plasma cutter. Then optimize the patterns to save material.

CAD, beginning and advanced using SolidWorks

Curriculum was written and approved for a beginning and advanced class using SolidWorks. Further training is needed before this class can be offered.

All eight voting members agreed that the following class be created. One recommended we integrate G-Code into the 3D printing class instead of offering G-Code on it's own. Another member recommended we have students write code to cut part on CNC plasma or create part on 3D printer.

G-Code

All eight voting members agreed that the following class be created. One member recommended jigs be made for QC or holding components to be welded with our robot.

3D Printing

A Stratasys F170 3D printer has been purchased, but I still need to create curriculum.

All eight voting members agreed that the following class be created. One member recommended students learn to calculate gain lengths and optimize a program to reduce process time.

CNC Press Brake

The following are new welding courses to replace the proposed inactivated ones.

All eight voting members agreed that the following class be created. One member noted that they didn't see a need for OAW

A new entry- level welding course that will articulate with area high schools. SMAW and OAW processes would be used, thus replacing WT-36

Seven voting members agreed and one abstained, because they didn't use the welding process in the proposed class.

A new welding course that will focus on using T-1 and T-8 wires for welding T-joints and groove welds in all positions. These wires are used in heavy equipment manufacturing and repair as well as bridge/building construction. T- 8 is seismic rated.

Eight new guns and drive rolls have been purchased so we can run the T-8 wire

All eight voting members agreed that the following class be created.

A 0.5 – 1 unit layout and pattern making class for pipe welding

All eight voting members agreed that the following class be created.

A 1 unit AWS D1.1 code class

Scheduling

Seven voting members agreed and one disagreed with concerns that a stand-alone class may not fill. Another member recommended transitioning into the new schedule slowly to help current students get on track.

Proposal is to stop stacking the welding classes when scheduling.

Offering a new Advanced Manufacturing certificate

All eight voting members agreed to the following proposal. One recommendation was to encourage students to bring this certificate when applying for a job.

Proposal is to offer a Certificate in Advanced Manufacturing

Equipment/Facility Needs

All eight voting members agreed to the following equipment and facility needs.

- Improve ventilation in the shop
- Improve lighting in the shop Much brighter Led lights have since been installed
- Run wiring and add electrical drops to new welding booths in construction trades Materials have been purchased for this job.
- Install ground rod for our CNC plasma cutting table Ground rod has since been installed.
- Continue the purchase of multi-process welding machines, to replace 20 plus year old single welding process units. Four new Miller XMT-350 multi process machines were purchased.
- Purchase 3D Printer – if needed for the certificate in advanced manufacturing A Stratasys F170 3D printer has been purchased
- Purchase CNC press brake - if needed for the certificate in advanced manufacturing

Other Recommendations from Members

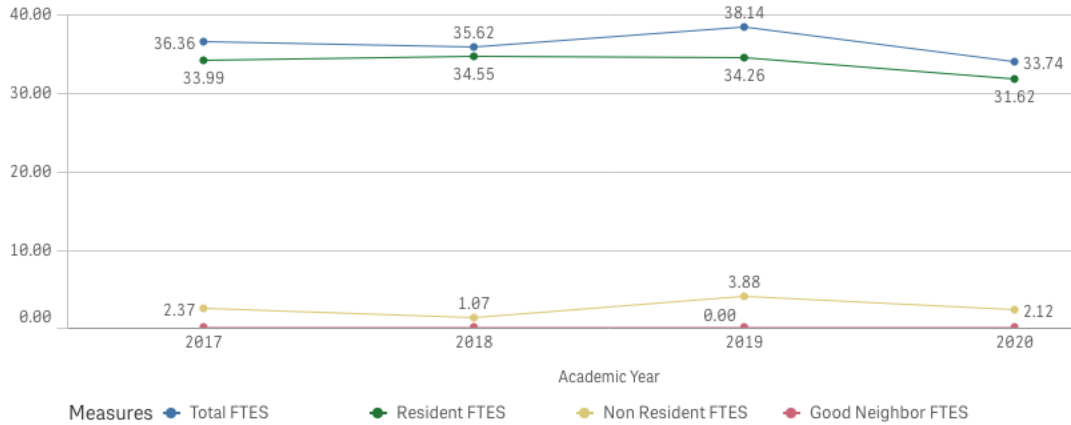
- I believe the vocational courses and curriculum at the high school and community college needs to be upgraded so they are relevant to industry standards. These new options will need to be advertised outside our community as well in order to pull in possible students. Contact power plants, Sierra Pacific Lumber, Collins, etc. to see if you can partner with them on training future employees.
- Recommend an activity to consider copper refrigeration pipe brazing with prequalified procedure.
- The ground rod should be done now! This has been completed
- In regards to advertising, use “career” instead of “job in your flyer.
- In regards to outreach, Quincy/Greenville area would be a good place to recruit new students. Feather River College doesn’t offer a similar program and the population is under-served.

Instructional Program Review (IPR) Data

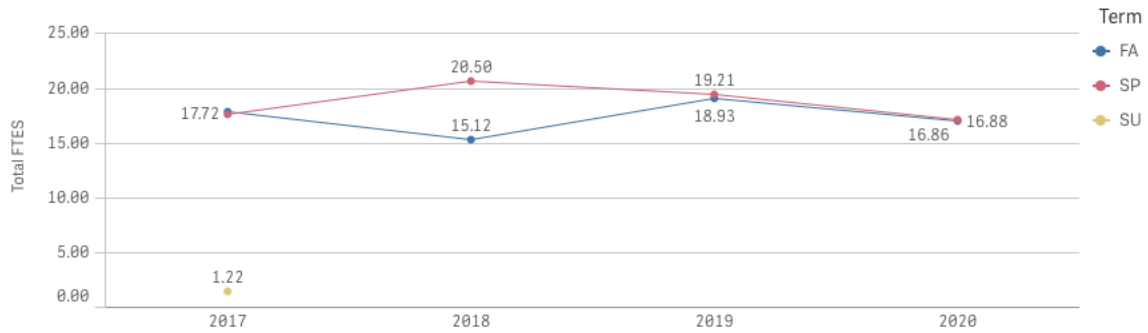
Program: Welding Technology

Academic Years: 2017 - 2020

FTES by Academic Year



FTES by Semester



FTES by Year

Academic Year	Q	Resident FTES	Non Resident FTES	Good Neighbor FTES	Total FTES	Total FTES YOY change
Totals		134.42	9.43	0.00	143.86	-
2020		31.62	2.12	0.00	33.74	-11.53%
2019		34.26	3.88	0.00	38.14	7.07%
2018		34.55	1.07	0.00	35.62	-2.03%
2017		33.99	2.37	0.00	36.36	-