

Instructional Program Review Welding Technology

LASSEN COMMUNITY COLLEGE

Written by: Kory Konkol, Welding Instructor

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CONTENTS

SECTION 1: ACADEMIC PLANNING	1
I. PROGRAM OVERVIEW, OBJECTIVES, AND STUDENT LEARNING OUTCOMES.....	1
DESCRIPTION/EVALUATION:	1
PLANNING AGENDA:	2
II STUDENT OUTCOMES	3
A. TRENDS AND PATTERNS IN STUDENT OUTCOMES	3
DESCRIPTION/EVALUATION:	3
PLANNING AGENDA:	4
B. STUDENT LEARNING OUTCOME ASSESSMENT	5
DESCRIPTION/EVALUATION:	5
PLANNING AGENDA:	5
C. STUDENT EVALUATION SUMMARY	5
DESCRIPTION/EVALUATION:	6
PLANNING AGENDA:	6
III. CURRICULUM	7
A. DEGREES AND/OR CERTIFICATES	7
DESCRIPTION/EVALUATION:	7
PLANNING AGENDA:	10
B. COURSES.....	10
DESCRIPTION/EVALUATION	10
PLANNING AGENDA:	14
C. ARTICULATION/INTEGRATION OF CURRICULUM	14
DESCRIPTION/EVALUATION:	14
PLANNING AGENDA:	14
III. SCHEDULING AND ENROLLMENT PATTERNS.....	14
DESCRIPTION/EVALUATION:	14
PLANNING AGENDA:	15
IV. EQUIPMENT	16
DESCRIPTION/EVALUATION:	16
PLANNING AGENDA:	17
V: OUTSIDE COMPLIANCE ISSUES (IF APPROPRIATE FOR PROGRAM)	17
DESCRIPTION:	18
EVALUATION:	18
PLANNING AGENDA:	18
VI. PRIORITIZED RECOMMENDATIONS	18
A. PRIORITIZED RECOMMENDATIONS FOR IMPLEMENTATION BY PROGRAM STAFF	18
B. PRIORITIZED RECOMMENDATIONS FOR INCLUSION IN THE PLANNING PROCESS	19
PRIORITIZED RECOMMENDATIONS FOR INCLUSION IN EDUCATION MASTER PLAN.....	19
PRIORITIZED RECOMMENDATION FOR INCLUSION IN STUDENT SERVICES MASTER PLAN	19
PRIORITIZED RECOMMENDATIONS FOR INCLUSION IN INSTITUTIONAL EFFECTIVENESS MASTER PLAN..	20

SECTION TWO: HUMAN RESOURCE PLANNING	21
I. PROGRAM STAFFING.....	21
DESCRIPTION/EVALUATION:	21
PLANNING AGENDA:	21
II. PROFESSIONAL DEVELOPMENT	21
DESCRIPTION/EVALUATION:	21
PLANNING AGENDA:	22
III. STUDENT OUTCOMES	22
DESCRIPTION/EVALUATION:	22
PLANNING AGENDA:	22
IV. PRIORITIZED RECOMMENDATION	22
PRIORITIZED RECOMMENDATIONS FOR IMPLEMENTATION BY PROGRAM STAFF	22
PRIORITIZED RECOMMENDATIONS FOR INCLUSION IN THE PLANNING PROCESS	23
PRIORITIZED RECOMMENDATIONS FOR INCLUSION IN HUMAN RECOURSE MASTER PLAN	23
SECTION THREE: FACILITIES PLANNING	24
I. FACILITIES	24
DESCRIPTION/EVALUATION:	24
PLANNING AGENDA:	25
II. PRIORITIZED RECOMMENDATIONS.....	25
PRIORITIZED RECOMMENDATIONS FOR IMPLEMENTATION BY PROGRAM STAFF	25
PRIORITIZED RECOMMENDATIONS FOR INCLUSION IN THE PLANNING PROCESS	25
PRIORITIZED RECOMMENDATIONS FOR INCLUSION IN THE FACILITIES MASTER PLAN	25
SECTION FOUR: TECHNOLOGY PLANNING	27
I. TECHNOLOGY	27
DESCRIPTION/EVALUATION:	27
PLANNING AGENDA:	27
II. PRIORITIZED RECOMMENDATIONS.....	27
PRIORITIZED RECOMMENDATIONS FOR IMPLEMENTATION BY PROGRAM STAFF	27
PRIORITIZED RECOMMENDATION FOR INCLUSION IN THE PLANNING PROCESS	27
PRIORITIZED RECOMMENDATIONS INCLUSION IN INSTITUTIONAL TECHNOLOGY MASTER PLAN	28
APPENDIX A:	29
APPENDIX B:	30
APPENDIX C:	31
APPENDIX D:	32
APPENDIX E:	39

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 Oxyacetylene Welding (OAW), Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW), 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.

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 2013-2016, 82% of the welding technology department's students have met their student learning outcomes. 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, a blue print reading class has been added to the fall semester line-up. The blue print reading class is one part of our advanced

manufacturing program objective. Along with our computer numerically controlled (CNC) cutting table and recently purchased robotic welder and SolidWorks drafting software, we've now acquired the necessary pieces to assemble our advanced manufacturing program.

There have been no annual updates since the last review.

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

Two weeks prior to the start of the semester, a print ad is run in the Lassen Times advertising the welding program. A similar ad is also run on the website SusanvilleStuff.com.

Other areas of marketing and outreach include the following:

- 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
- College and Career Fair, hosted by Modoc High School.

When analyzing the various avenues of outreach, the Lassen Times tends to reach our adult and senior population, while the younger demographic responds best to the high school visits.

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 classes in order to create an advanced manufacturing program.
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	2010/2011	2012	2013	2014/2015	2016
Certificate of Accomplishment	3	1			
Certificate of Achievement 1yr.	1		1	1	1
Certificate of Achievement 2yr.				1	1
A.S. Degree	1	1	1		
Total	5	2	2	2	2

- b. Transfer numbers for the last four years

No data was provided regarding transfer numbers. Students who enroll in the welding technology program are there to increase their employability and have not sought to transfer.

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

	2013	2014	2015	2016
Retention	86%	90%	92%	94%
Success	68%	62%	76%	73%

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. Basically, they needed a skill set and not a piece of paper to get them a high paying job. The one piece of paper that does translate into getting the student a high paying job is their welding qualification papers. The following table shows those students who successfully passed a welding qualification test.

	2014	2015	2016
Successfully passed a welding qualification test	98	101	139

In regards to our retention and success rates, the table shows that our retention of students has continually increased, while their success has plateaued. As a result, a student's success is directly related to their attendance and completion of their objectives in this hands-on course. 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 a for SLO assessment.
 2. My analysis is that over the past four years 547 students were assessed and of that number, 484 students met the SLO for an average of 82%. 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 Attachment F, 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.

- Costs for the course, beyond registration and books, needs to be identified in the course catalog.
- 52% 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.
- 28.57% of students noted that lighting in the shop was too dark.

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.

Actions to be taken: Note in course catalog, that in addition to the cost of registration and books, the student will need to provide themselves safety glasses and gloves. Approximate cost \$20.

Improve lighting in the welding shop.

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 Attachment G, Degrees/Certificates by Program). 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.

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
WT 20	Power Plants and Field Pipe Welding I	3.0
WT 21	Power Plants and Field Pipe Welding II	3.0
WT 22	Power Plants and Field Pipe Welding III	3.0
WT 23	Power Plants and Field Pipe Welding IV	3.0
WT 36	Welding Theory and Practice: Oxyacetylene	3.0
WT 37	Welding Theory and Practice: Shielded Metal Arc Welding	3.0
WT 38	Welding Theory and Practice: Gas Metal Arc Welding	3.0
WT 39	Welding Theory and Practice: Gas Tungsten Arc Welding	3.0

Required Electives: 18 Units

BUS 2	Introduction to Business	3.0
CA 31	Computer Applications I	2.0
IT 22	Operations Maintenance and Safety	1.0
IT 72	Facilities Maintenance: Welding	2.0
WT 40	Oxyacetylene Welding	3.0
WT 42	Intermediate Shielded Metal Arc Welding	3.0
WT 43	Advanced Shielded Metal Arc Welding	3.0
WT 44	Gas Metal Arc Welding	3.0
WT 45	Gas Tungsten Arc Welding	3.0
WT 51	Blueprint and Symbol Reading for Welders	2.0

Electives: 8 units Courses must be numbered 1-99
General Education Requirements: 18 Units

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
IT 22	Operations Maintenance and Safety	1.0
IT 72	Facilities Maintenance: Welding	2.0
WT 20	Power Plants and Field Pipe Welding I	3.0
WT 21	Power Plants and Field Pipe Welding II	3.0
WT 22	Power Plants and Field Pipe Welding III	3.0
WT 23	Power Plants and Field Pipe Welding IV	3.0
WT 36	Welding Theory and Practice: Oxyacetylene	3.0
WT 37	Welding Theory and Practice: Shielded Metal Arc Welding	3.0
WT 38	Welding Theory and Practice: Gas Metal Arc Welding	3.0

WT 39	Welding Theory and Practice: Gas Tungsten Arc Welding	3.0
WT 51	Blueprint and Symbol Reading for Welders	2.0

Required Electives: 15 Units

BUS 2	Introduction to Business	3.0
CA 31	Computer Applications I	2.0
WT 40	Oxyacetylene Welding	3.0
WT 42	Intermediate Shielded Metal Arc Welding	3.0
WT 43	Advanced Shielded Metal Arc Welding	3.0
WT 44	Gas Metal Arc Welding	3.0
WT 45	Gas Tungsten Arc Welding	3.0

Program Student Learning Outcomes

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

2. 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 36	Welding Theory and Practice: Oxyacetylene 3.0
IT 72	Facilities Maintenance: Welding	2.0	WT 40	Oxyacetylene Welding 3.0
WT 20	Power Plants and Field Pipe Welding I	3.0	WT 42	Intermediate Shielded Metal Arc Welding 3.0
WT 21	Power Plants and Field Pipe Welding II	3.0	WT 43	Advanced Shielded Metal Arc Welding 3.0
WT 37	Welding Theory and Practice: Shielded Metal Arc Welding	3.0	WT 44	Gas Metal Arc Welding 3.0
WT 38	Welding Theory and Practices: Gas Metal Arc Welding	3.0	WT 45	Gas Tungsten Arc Welding 3.0
WT 51	Blueprint and Symbol Reading for Welders	2.0		

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, D1.1.

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 Plants and Field Pipe Welding I	3.0	IT 22	Operations Maintenance and Safety 3.0
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
		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.

At this time the above classes and degrees/certificates, meets the current employer skill requirement in the welding field.

A need for the following courses was noted in my 2015 welding IPR (in quotes below) as emerging technologies. Ultimately, those new courses will become part of our advanced manufacturing program. In order to continue to offer all of the welding courses as well as starting new advanced manufacturing courses, a new full-time faculty member will need to be hired. At present, the blueprint reading class (WT-51) is offered every fall.

“In the future, I would like to develop a certificate around emerging technologies. The courses that would make up the certificate would be: Beginning and advanced CNC operation, beginning and advanced robotic welding, blueprint reading and a course on Occupational Safety and Health Administration (OSHA).”

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 (listed above) along side our existing welding technology courses, a new full-time faculty member will be required.

B. Courses

Description/Evaluation

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

Since the 2015 welding IPR, WT-51, Blue Print Reading has been added to the program.

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, there are no changes or additions necessary.

Below is the status of the curriculum review as provided to me.

Welding Instructional Program Review:

Status of Curriculum Review May 8, 2019

Course	Curriculum Committee Review Completed	Curriculum Committee Review <u>Not</u> Completed
IT 22 Operation Maintenance an safety	04/02/2019	
IT 72 Facilities Maintenance-Welding Safety	04/02/2019	
WT 20 Power Plant & Field Pipe Welding I	05/07/2019	
WT 21 Power Plant & Field Pipe	05/07/2019	

Welding II		
WT 22 Power Plant & Field Pipe Welding III	05/07/2019	
WT 23 Power Plant & Field Pipe Welding IV	05/07/2019	
WT 25 SolidWorks	04/02/2019 New	
WT 31 GTAW For Gunsmiths	04/02/2019	
WT 32 Advance GTAW for Gunsmithing	04/02/2019	
WT 36 Welding theory & Practice-Oxyacetylene	04/02/2019	
WT 37 Welding theory & Practice-Shield Metal Arc Welding	04/02/2019	
WT 38 Welding theory & Practice Gas Metal Arc Welding	04/02/2019	
WT 39 Welding theory & Practice Gas Tungsten Arc Welding	04/02/2019	
WT 40 Oxyacetylene Welding	04/02/2019	
WT 42 Intermediate Shield Arc Welding	04/02/2019	
WT 43 Advance Shield Arc Welding	04/02/2019	
WT 44 Gas Metal Arc Welding	04/02/2019	
WT 45 Gas Tungsten Arc Welding	04/02/2019	
WT 50 Welding for Artists (design and Fabrication	04/02/2019	
WT 51 Blue Print and Symbol Reading for Welders	04/02/2019	

WT 52 Robotic Operations and Programing	02/11/2019 (New)	
WT 53 Robotic Welding Operation and Programing (Advanced)	02/11/2019 (New)	
AS Welding Technology	04/02/2019	
CA Welding Technology (one-year)	04/02/2019	
CA Welding Technology (Two-year)	04/02/2019	
COA – Welding Technology	04/02/2019	

_____ Date: _____

Kory Konkol Subject Area Faculty Signature

_____ Date: _____

Chad Lewis Curriculum/Academic Standards Committee Chair Signature

_____ Date: _____

Dr. Trevor Albertson, Dean of Instructional Services

Planning Agenda:

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

In order to continue to offer all of the welding courses as well as starting new advanced manufacturing courses, a new full-time faculty member will need to be hired.

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. 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 E for enrollment and FTE data.

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.

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+
(8) Miller Dynasty 200 TIG/Stick welders	8
(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	3
(1) Dynatorch CNC cutting table	4

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.

Item II C. - Costs for the course, beyond registration and books, needs to be identified in the course catalog.

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 II C. - Improve lighting in the welding shop.

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

Prioritized Recommendations for Inclusion in Education Master Plan

Welding Technology 2017:

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 2017: 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 2017: 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 aide.

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.

There is still a need for work-study students in order to fill any gaps of the instructional aides' schedule.

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.

Continue the use of work-study students as instructional support.

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 2016-2017 flex activity, I completed two new course outlines for our upcoming robotic welding class, which will be part of our advanced manufacturing program.

Besides the flex activity, I attended a week of training in the operation of our Fanuc robotic welder.

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.

There is still a need for work-study students in order to fill any gaps of the instructional aides’ schedule.

Prioritized Recommendations for Inclusion in Human Recourse Master Plan

Welding Technology 2017

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 air conditioning in the shop. Please see my response to this in II C. under the evaluation section. Better lighting was also noted during the evaluation.

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

Install a ground rod for our CNC cutting table and improve the poor lighting conditions in the shop. 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).
- Improve lighting in existing welding shop (previous student evaluations).
- Install carpeting in the classroom to eliminate poor acoustics. (Peer evaluation recommendation)

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/TR103
- Install ground rod for CNC cutting table TR103
- Address the outside compliance issues from section V.
- Install carpeting in the classroom between TR102 and TR103

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 2017

Strategic Goal	Planning Agenda Item	Implementation Time Frame	Estimated Cost (implementation & ongoing)	Expected Outcome
1,4	Install ventilation for welding booths in TR102	Someday when it's convenient	\$80,000	Health and Safety and expand student capacity
1,4	Improve the current ventilation system in TR103	Someday when it's convenient	\$40,000	Health and Safety
1	Add electrical drops for welding	Someday when it's convenient	\$5000	Expand student capacity

	booths in TR102			and increase graduation rates
1,4	Improve lighting TR102/TR103	Someday when it's convenient	\$5000	Provide a working environment that enhances productivity
1,2	Install ground rod for CNC cutting table TR103	Someday when it's convenient	\$5000	Add needed class for our advanced manufacturing certificate

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

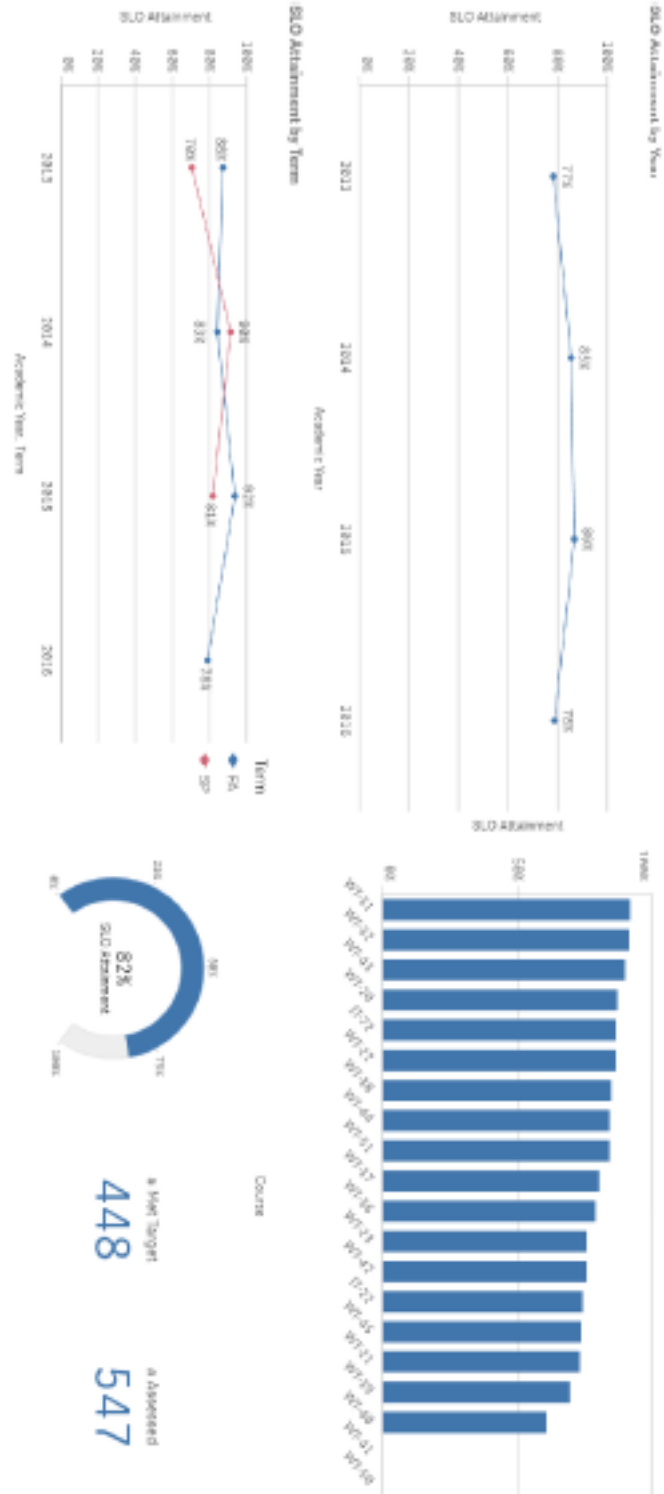
List all recommendations made in Section Four that should be included in Lassen College's planning and budgeting process. See Attachment C, Master Plan Overview, in the IPR handbook to determine where recommendations are best placed.

Prioritized Recommendations Inclusion in Institutional Technology Master Plan

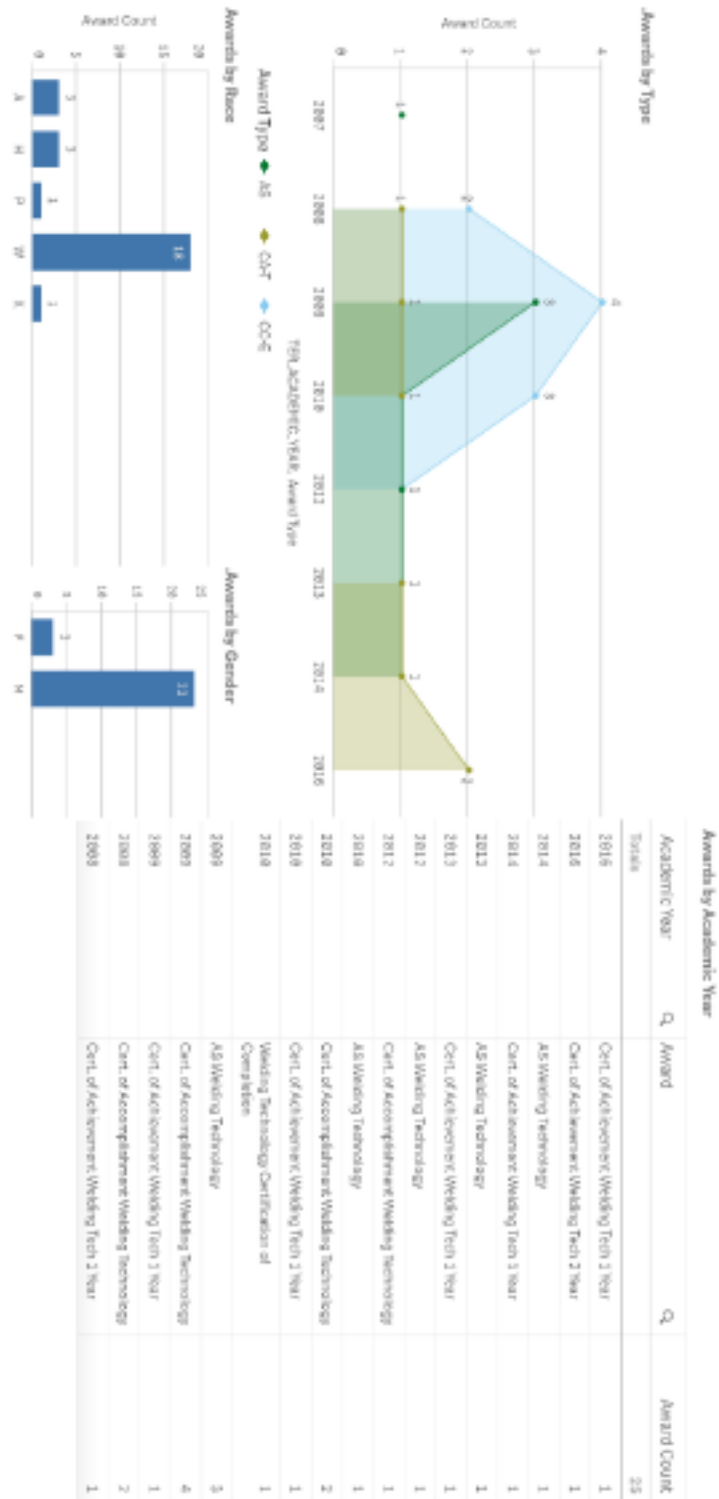
Welding Technology 2017: At this time, no information needs to be added to this chart

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

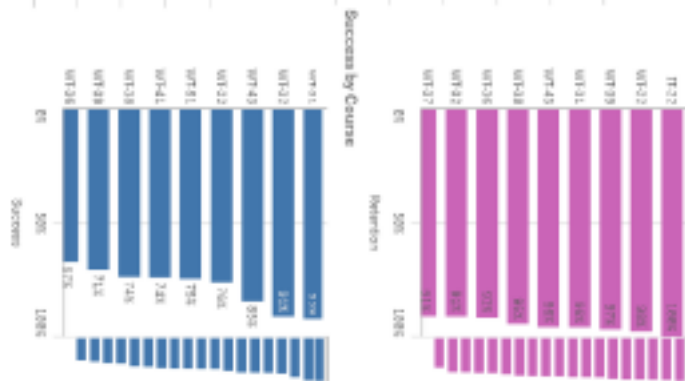
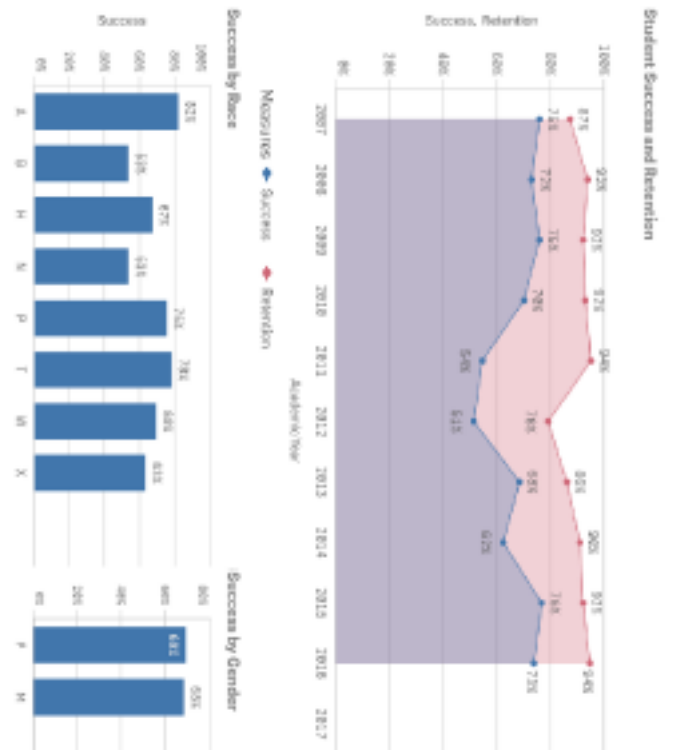
Appendix A:



Appendix B:

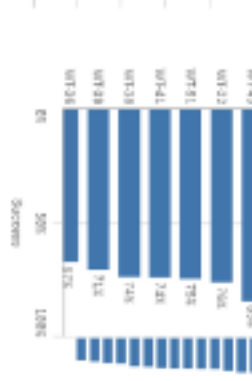
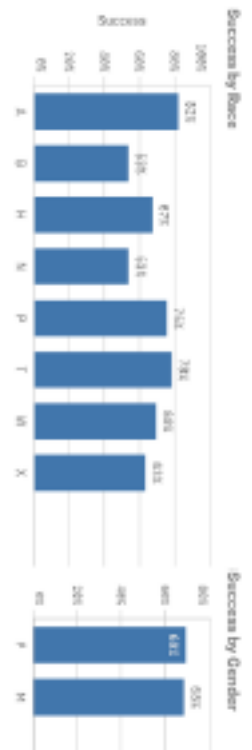


Appendix C:



Enrollment by Academic Year

Academic Year	Q1 Enrollment	Q1 Retention	Success
2017	0	80%	83%
2016	184	94%	13%
2015	208	93%	7%
2014	230	85%	6%
2013	180	85%	6%
2012	185	76%	5%
2011	235	94%	5%
2010	297	93%	7%
2009	279	93%	7%
2008	311	93%	7%
2007	272	87%	7%



Retention
90.0%

Success
68.0%

Course	Name of Program	Date Completed		Scheduling										9. The scheduling of this course							
				Current schedule met my needs	needed morning offering	needed afternoon offering	needed evening offering	needed one day a week schedule	needed summer offering	needed week-end offering	needed short-term (less than a semester) offering	Other - Please specify	resulted in no scheduling conflicts	conflicted with other core (required) courses in the program	conflicted with elective courses in the program	conflicted with general education courses					
WT-20	Power Pipe/rd Pipe	8/30/17	1	X													X				
		8/31/17	1	X													X				
		8/31/17	1	X													X				
		8/31/17	1	X													X				
		8/31/17	1	X													X				
WT-22	Power Pipe/rd Pipe	8/31/17	1							X										X	
WT-37	Welding Theory - SMAW	8/30/17	1	X														X			
		8/30/17	1	X														X			
WT-38	Welding Theory - GMAW	8/30/17	1	X														X			
WT-38	Welding Theory - GMAW	8/30/17	1	X														X			
WT-38	Welding Theory - GMAW	8/30/17	1	X														X			
WT-38	Welding Theory - GMAW	8/30/17	1	X														X			
WT-38	Welding Theory - GMAW	8/30/17	1	X														X			
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WT-38	Welding Theory - GMAW	8/30/17	1	X														X			
WT-38	Welding Theory - GMAW	8/30/17	1	X														X			
WT-38	Welding Theory - GMAW	8/30/17	1	X	</																

		Facilities/Equipment													10. Do the on-campus	
		facilities for the course/program adequately meet your needs?														
Course	Name of Program	Date Completed	provided with reasoarable access to	facilities were available	The temp was comfortable	The temp was frequently too hot	The temp was frequently too cold	Not Applicable	The lighting was adequate	The lighting was too bright	The lighting was too dark	Not applicable	The charisabi esidesks adequate	The charisabi esidesks inadequate	Not applicable	Phase Specify
WT-20	Power Pipe/Pipe	8/30/17	X		X				X				X			need A/C in class
		8/31/17	X						X				X			
		8/31/07	X						X				X			
		8/31/17	X		X				X				X			Odient
WT-22	Power Pipe/Pipe	8/31/17	X							X				X		Old & Bent
WT-37	Welding Theory - SMAW	8/30/17	X	X	X	X			X				X			Light usually ok, sometimes dark.
WT-38	Welding Theory - SMAW	8/30/17	X		X				X				X			Lighting in booths need to be better. Chairs need to be replaced, and desks need some tinki. Also needs a way to cool shop.
WT-39	Welding Theory - SMAW & Blueprint Reading	8/30/17	X			X					X			X		
WT-22	Power Pipe/Pipe	8/31/17	X		X				X				X			
WT-42	Power Pipe/Pipe	8/31/17	X						X				X			
WT-42	Power Pipe/Pipe	8/31/17	X						X				X			
WT-42	Power Pipe/Pipe	8/31/17	X						X				X			
WT-45	GMWV, GTRW	8/30/17	X		X				X				X			
	No course number selected/identified	8/30/17	X						X				X			Tables jacked up
		8/30/17	X						X				X			
		8/31/07	X			X			X				X			I like this school. The scheduling of this course will make a great welder out of me, so I can pursue the careers and jobs I want. Stools in welding shop are worn out. All welding classes being on two days of the week is inconvenient.
		21	90.48%	4.76%	47.62%	52.38%	4.76%	0.00%	71.43%	4.76%	28.57%	4.76%	80.95%	14.29%	0.00%	

Appendix E:

Insert information as needed