
Metal Fabrication/Welding

Cycles included in report:
Cycle #3 8/1/14 to 7/31/15

Program Name: Metal Fabrication/Welding
Program Cycle: #3 8/1/14 to 7/31/15

1 Program Summary

For the last three academic years, JCCC Institutional Research (IR) reports the following:
The student completion rate ranges from 94.1% to 96.1%.

IR reports the following staff numbers per year:

Year 2011/12 - 2 full time / 7 adjunct

Year 2012/13 - 3 full time / 9 adjunct

Year 2013/14 - 2 full time / 9 adjunct

Student credit hours generated by MFAB courses were:

Year 2011/12 - 1,073 credit hours

Year 2012/13 - 1,358 credit hours

Year 2013/14 - 1,268 credit hours

The MFAB program costs per credit hour were:

Year 2011/12 - not given

Year 2012/13 - \$230.65 per credit hour

Year 2013/14 - \$217.50 per credit hour

The department went through KBOR realignment in 2011 and the curriculum was updated at that time, resulting in the success that we are currently seeing in high completion rates.

HandbookProgramReviewFall2014 [PDF 2,136 KB 9/11/14]

Metal Fab Welding [PDF 709 KB 9/11/14]

1.1 Degree Offerings

We currently offer an Associate of Applied Science in Metal Fabrication / Welding Technology with two options, a Manufacturing option and a Structural option. The MFAB Advisory Committee is currently considering combining the two options since so many students seek to complete both options.

1.2 Certificate Offerings

Intro to Manufacturing Certificate -14 hours

General Basic Welding Certificate - 15 hours

Metal Fabrication Welding Certificate - 29 hours

The MFAB Advisory Committee has recommended we drop the Intro to Manufacturing and General Basic Welding Certificates because they do not properly prepare students for entry level employment in the Metal Fabrication Industry. Three (3) students in the last three years, who have sought employment with the 14 or 15 hour certificates have had difficulty obtaining entry level employment.

2 Program Resources

Full time Staff - Richard Tremain - Department Chair

Part-time - Mioshi Neal - FCAW & SMAW

Marlow Westerbeck - GMAW & SMAW

Jimmy Stoufer - Intro to Welding

Nick Young - Intro to Welding

Gary Pommier - Blueprint Reading

Jeff Tanking - Machine Tool

Jeff Lipko - Lab Practices 1 & 2

Mark Davidson - GMAW, SMAW, OFC

Brandon Sprague - GTAW

3 Reflection on Institutional Data

The information provided by IR on MFAB staff was not correct. MFAB has one full-time instructor who teaches a full load and serves as the Department Chair. Three adjunct instructors currently teach more than one course each with work loads up to 10 hours. All other adjunct instructors teach 1 course with 2 to 5 work load hours. Total sections and section size remain stable depending on the availability of adjunct instructors. Completion rates and demand for MFAB classes remains high.

4 Student Success

4.1 Define Student Success

Student Success is defined by one or more of the following:

- 1) Student obtains desired skill level in chosen welding process and/or (AWS Certification)
- 2) Student obtains entry-level employment
- 3) Student obtains job advancement or promotion
- 4) Student completes a welding certificate
- 5) Student completes a AAS Degree
- 6) Student transfers to a University

4.2 Achieve/Promote Student Success

Students achieve success because JCCC facilities, curriculum, and staff are high quality. JCCC is known for great facilities and up to date equipment. Curriculum is of high caliber because the MFAB Department utilizes and follows the American Welding Society (AWS) SENSE Program. MFAB Instructors are highly qualified and are vested in their students success. Instructors spend a great deal of time with students, in and out of class, answering questions, related and non-related to coursework. In addition to advising students on coursework, instructors assist students with career networking, resume writing and job placement. Long term relationships and friendships are often developed. We promote student success by doing small things. We staple a one-dollar bill to each test that a student receives a perfect score on to suggest that knowledge is \$\$\$\$\$. We make sure students complete their American Welding Society SENSE Certifications. We make sure students receive job interviews. We make sure students complete their certificates and AAS Degree in a timely manner.

4.3 Successful Transfer

We currently have 2 + 2 articulation agreements with Pittsburg State University and Kansas State University. We have more students considering this and taking advantage of this option.

5 Assessment of Student Learning Outcomes

Assessment&CurriculumChart [XLS 41 KB 9/11/14]

5.1 Reflection on table provided on assessment.

No information was provided.

5.2 Significant Assessment Findings

Assessment on course sequence has been taking place by student interviews by the Department Chair. The data provided by the students have resulted in course sequence changes that started Fall 2014 Semester. The initial response from the students and the instructor have been very positive, but it is early in the assessment cycle. The new course sequence will be offered again for Spring 2015 Semester and the outcomes will be assessed.

5.3 Ongoing Assessment Plans

The Department will continue to assess the effectiveness of (1) course sequencing and curriculum. This will be done by measuring student success outcomes.

6 Curriculum Reflection

The curriculum is constantly being reviewed and updated. All courses are being supplemented with American Welding Society (AWS) SENSE Program information and exams. Students are leaving the program with more than the KBOR required 1F, 2F, 1G, 2G, 6G AWS certifications.

6.1 Honors Contract(s)

There are currently no MFAB Honors Contracts at this time.

6.2 New Course Offerings

MFAB does not have any new course offerings at this time, but is in the process of fine-tuning our current offerings to fully include the AWS SENSE Level 1 and parts of AWS SENSE level 2. This direction was suggested by our Advisory Committee and should also improve our student satisfaction ratings.

7 Faculty Success

7.1 Departmental Accomplishments

- 1) Completed KBOR realignment in 2012
- 2) Implemented new curriculum
- 3) Implemented AWS SENSE Programs Level 1 and 2
- 4) Increased AWS weld certification exams
- 5) Increased Student Satisfaction rates
- 6) Increased Student Success rates
- 7) Increased Student Completion rates

7.2 Faculty Accomplishments

- 1) Chair was awarded Certified Welding Educator Status by the American Welding Society
- 2) Chair attended 40 hour American Welding Society Seminar
- 3) Chair serves on Olathe Advance Technical Center (OATC) Welding Program Advisory Board

7.3 Innovative Research, Teaching or Community Service

- 1) We now offer classes in a new format. Instead of students learning three different welding processes at the same time for an entire semester, we are now offering classes four days a week for four weeks. Fall 2014 is the first time that this option has been offered. Student survey results have been very positive.
- 2) The Chair participates in the Competitive Technology Event (CTE) each January hosting local area high school students who compete in written and hands-on welding skills/knowledge contest. The chair donates approximately 16 hours to this event.
- 3) The Chair provides Boy Scout merit badges in Welding, one Saturday a year at JCCC.

8 Goal Setting and Action Plan

8.1 Long-term Goals

- 1) Modify and update the current machine lab (ATB 146) to more effectively support the welding program, currently the lab is only used two nights a week (KPI Student Persistence, Student Satisfaction and General Learning Outcomes)
- 2) Update current welding lab with new equipment, most of the equipment is past the replacement dates (KPI Student Persistence, Student Satisfaction and General Learning Outcomes)
- 3) Add a second full time instructor, this would double the quality of the program short-term and eliminate staff transition problems which have hurt the program in the past (KPI Student Persistence, Student Satisfaction and General Learning Outcomes)

8.1.1 Actions/Resources Required

- 1) Gain approval from Advisory Committee and College Administration
- 2) Gain budget approval from Administration
- 3) Gain approval for a second full time instructor from Administration

8.1.2 Updates on Long-Term Goals

None at this time.

8.2 Short-Term Goals

- 1) Update our fuelgas manifold system to use Acetylene. This will allow the MFAB Department to expand and improve the student learning process, impacting the entire MFAB curriculum, resulting in a quicker skill acquisition rate for all MFAB students.
- 2) Impliment AWS SENSE Level 2 into the curriculum. This too will allow the MFAB Department to expand and improve the student learning process, impacting the entire MFAB Curriculum, resulting in a higher skill acquisition level for our MFAB completers.
- 3) Add a tool cabinet in the welding lab.
- 4) Improve student locker space in the welding lab.

8.2.1 Actions/Resources Required

- 1) To update our fuelgas manifold system to acetylene will require @ \$4,000 in funding.
- 2) Re-structure the curriculum and course outlines to take full advantage of what the AWS SENSE Program has to offer students. This goal will require additional staff time to develop and implement. An second full time faculty member would speed the implementation and completion of this goal.
- 3) Purchase or build a lockable tool cabinet for the welding lab. This will require @ \$1,500 in funding.
- 4) Purchase or build lockers for student storage while they are in the lab. This will require @ \$3,000 in funding.

8.2.2 Updates on Short-Term Goals

No updates at this time.

8.3 Short-Term Goals

- 1) Improve the student retention rate in the MFAB Department.
- 2) Improve the student 3-year graduation rate in the MFAB Department.
- 3) Improve the student satisfaction rate in the MFAB Department.

8.3.1 Actions/Resources Required

- 1) By restructuring the current MFAB course offerings, students will be able to complete more courses in a shorter amount of time, resulting in a higher student retention rate, resulting in an improved JCCC KPI. To accomplish this goal, a second full time instructor is needed during the day.
- 2) By restructuring the current MFAB course offerings, students will be able to complete their certificates and degrees in less time, well within the 3-year time frame used by KBOR, resulting in an improved JCCC KPI. To accomplish this goal, a second full time instructor is needed during the day.
- 3) By restructuring the current MFAB course offerings, and students completing courses, certificates and degrees quicker, student satisfaction rates will improve, resulting in an improved JCCC KPI. To accomplish this goal, a full time instructor is needed during the day.

8.3.2 Updates on Short-Term Goals

No updates at this time.

9 Accreditation Standards

AQIP Category One: Helping Students Learn - The MFAB Department continuously evaluates the effectiveness of the teaching-learning process resulting in modified curriculum, equipment and pedagogy to keep student satisfaction and completion rates high. The KBOR 2012 re-alignment process started major positive changes, resulting in a more "internationalized" American Welding Society (AWS) curriculum.

AQIP Category Three: Understanding Students' and Other Stakeholders' Needs - The MFAB Department surveys students and advisory committee members continuously on issues of

concern and what improvements can be made to resolve them. This input has resulted in improvements in the way we offer or schedule our courses and the content that is covered in them. Because of the survey results, we have expanded the AWS SENSE program offerings.

9.1 Specialized Accreditation

We are accredited by the American Welding Society (AWS) as a level 1 and level 2 SENSE program.

Benefits of SENSE-Accreditation for JCCC

- 1) National validation of our welding program
- 2) Enhanced credibility by demonstrating our welding program meets national standards
- 3) Increased potential for program funding from Perkins and other sources
- 4) Enhanced potential for student recruitment through demonstrated program excellence
- 5) Our program receives National recognition from the American Welding Society
- 6) Student transferability/advancement through the SENSE program
- 7) Enhanced employment opportunities for graduates

Benefits of SENSE-Accreditation for Students & Employers

Benefits to Students:

- 1) Certificate or diploma from an SENSE-accredited program provides graduates with an important credential for employment and continuing education
- 2) Students can be assured the training they receive is based on national standards and guidelines

Benefits to Employers:

- 1) Employers know your graduates possess the skills required for success
- 2) Less on-the-job training means reduced cost of employment and increased competitiveness

10 Resource Request/Adjustment

BudgetChart [XLS 2,000 KB 9/11/14]

10.1 Long-range Adjustment to Resources

- 1) As we update our curriculum and provide more AWS Certification Testing as requested by KBOR, the cost of the program consumables increases. An additional \$5,000 in funding will be required to keep up with this demand.
- 2) To meet our student satisfaction goals, a second full-time instructor is needed. With increased record keeping for the AWS Certifications and AWS SENSE Program, it is impossible for one full-time instructor/chair to keep up with everything while teaching a full load.
- 3) The department is requesting additional release time for the department chair. My first year at JCCC, I was given 4 workload release time hours per semester for chair duties. Last year, department chair release time was cut in half. As far as we know, we were the only division to which this drastic cut was implemented. Reasons for the cut were never given. Duties for chairs were not reduced.

10.2 Educational Technology Support

- 1) The MFAB Department uses the computer lab in ATB 155 with planned usage increasing in the future.
- 2) The MFAB Department uses D2L and plans to increase usage in the future.

End of report