Articulation Agreement
2017-2018

University Alaska Fairbanks
Interior Alaska Campus
4280 Geist Road
Fairbanks, Alaska 99709

Alaska Gateway School District
PO Box 226
Tok, Alaska 99780

Purpose:
In addition to the current Tech Prep Agreement between University of Alaska Fairbanks and Alaska Gateway School District, we have agreed to add the following course that is within CRCD Welding (WMT) program.

1. Alaska Gateway School District will follow a UAF WMT curriculum in coordination with the administration and faculty of the University of Alaska Fairbanks pertaining to the following courses on the course below.
2. Alaska Gateway School District will teach for the attached outcomes.
3. The attached syllabus will follow the learning outcomes of the university-approved course listed.

<table>
<thead>
<tr>
<th>UAF Course Number</th>
<th>UAF Course Title</th>
<th>Number of UAF Credits</th>
<th>Alaska Gateway School District Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMT 105</td>
<td>Welding 2</td>
<td>3 credits</td>
<td>Welding 2</td>
</tr>
</tbody>
</table>

1. The attached syllabus will be followed.
2. Alaska Gateway School District will provide necessary support for students to be successful in this course which may include computer support, reference books and academic assistance.
3. Interior Alaska Campus will process the registrations.
4. In order to receive concurrent credit, the student will register for the Tech Prep class during the semester in which the competencies will be completed.
Approvals:

Arvid Weflen
Director of Aviation Programs
UAF Community and Technical College
University of Alaska Fairbanks

Signed by: [Signature]
March 26, 2018

Bryan Uher
Interim Director
University of Alaska Fairbanks
Interior Alaska Campus
Fairbanks, Alaska

Signed by: [Signature]
March 26, 2018

Scott MacManus
Asst. Superintendent
Alaska Gateway School District
Tok, Alaska

Signed by: [Signature]
April 24, 2018
Mary Pete  
Dean-College of Rural and Community Development  
P.O. Box 6500  
University of Alaska Fairbanks  
Fairbanks, AK 99775-6500

Michele Stalder  
Dean-Community and Technical College  
604 Barnette Street  
University of Alaska Fairbanks  
Fairbanks AK 99701

Susan Henrichs, Provost  
P.O. Box 7580  
University of Alaska Fairbanks  
Fairbanks, AK 99775-7580
WMT 105
Welding 2 Tech Prep Syllabus

COURSE INFORMATION
Course: Welding 2
Course #: WMT F105
Credits: 3
Prerequisites: Welding 1
Meeting Time: Monday through Friday 12:45 to 3:10 p.m. (Sept 18 thru May 24 (2017-18)

INSTRUCTOR INFORMATION
Instructor: Mr. Leland Monroe Certified Welding Educator
Certificate No. 0205002E
Location: Tok High School Vocational Education Lecture Rm
Telephone: 907-883-5161
E-Mail: lmonroe@agsd.us
leedonmonroe@hotmail.com

COURSE READINGS AND MATERIALS
Course Text Book: AWS Welding Volume 1 and 2.
Text Author: NCCER
Publisher: Prentice Hall

COURSE DESCRIPTION
Students will learn SMAW/GMAW welding techniques in horizontal, vertical, and overhead positions while welding with electrodes of various types. Students will complete 4 basic weld joints including the Tee Fillet single pass, Corner Joint, Butt Joint, Lap Joint single pass, and V-Groove joint with multi-pass. Students will be required to test in one or more of these joints through CWI inspections. Students will also be introduced to various grinders, plasma, and oxy-acetylene cutting equipment that will be used in future job related areas. Small projects will be used from time to time to reinforce the various welding and cutting concepts. Projects will require students to draw/read plans and understand the symbols used in the trade.
COURSE GOALS
Students will be able to use advanced welding and cutting concepts that will help to prepare them for potential employment opportunities in the construction, agriculture, aviation, petroleum, and mining trades. Students will gain a AWS position certification which lets the potential employer know that time has been spent, knowledge has been gained, and the interest is there for potential employee.

STUDENT LEARNING OUTCOMES
Students will be able to:
1. Demonstrate horizontal, vertical, and overhead welding techniques and procedures using the SMAW process
2. Work safely in the welding shop according to class rules, school and OSHA regulations
3. Describe correct welding procedures
4. Demonstrate GMAW welding
5. Demonstrate TIG welding
6. Determine the correct electrodes to use
7. Set welders according to metal, joint, and electrode being used
8. Demonstrate plasma and oxy-acetylene cutting procedures
9. Demonstrate proper use of the various power tools and hand tools used in the metal shop.
10. Demonstrate their knowledge in Drafting procedure and Welding Symbols

INSTRUCTIONAL METHODS
A variety of instructional methods will be used to help students understand the basic principles of welding and cutting. These methods include:
1. Instructor led lectures
2. Instructor led discussions
3. Assigned text readings and worksheets
4. Instructor demonstration
5. Students led discussions and demonstrations
6. Individual (independent) instruction
7. Instructional Videos
8. Field Trips
COURSE CALENDAR
Classes will start the third week of Sept and end the last week of May in each school year. (See Course Calendar)

Classes will run for approximately 2hr and 25 minutes each day for 5 days a week for 2 week periods. This will allow students to accumulate approximately 12 hours per week of instructional/Skill development time. Students will test at the end of the school year for 2 complete days with a Certified Welding Inspector. (Usually in mid May)

COURSE SUBJECT BREAKDOWN
Competency tests are given in each of these course areas

- Welding Symbols
- Reading Welding Detail Drawing
- Project Planning
- Welding Safety Review
- SMAW Welding-Project/Certification Prep
- Horizontal, Vertical, Overhead welding using various joint fit up
- GMAW Welding
- TIG Welding
- Plasma Cutting
- Certification Test

Course Calendar for Welding 2 First/Second Semester 2017-18

<table>
<thead>
<tr>
<th>Week of</th>
<th>MTWT F</th>
<th>12:45-3:10 (2 hrs 25 min)</th>
<th>2 hrs 25 min x 5 days = 12 hrs 08 minutes</th>
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<tbody>
<tr>
<td>Sept 18</td>
<td>MTWT F</td>
<td>12:45-3:10 (2 hrs 25 min)</td>
<td>2 hrs 25 min x 5 days = 12 hrs 08 minutes</td>
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<tr>
<td>Sept 25</td>
<td>MTWT F</td>
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<td>2 hrs 25 min x 5 days = 12 hrs 08 minutes</td>
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<td>MTWT F</td>
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<td>Nov 6</td>
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<tr>
<td>Date</td>
<td>Days</td>
<td>Time</td>
<td>Hours (2 hrs 25 min)</td>
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</tr>
<tr>
<td>Dec 11</td>
<td>MTWTF</td>
<td>12:45-3:10</td>
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<tr>
<td>Dec 18</td>
<td>MTWTF</td>
<td>12:45-3:10</td>
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<tr>
<td>Feb 5</td>
<td>MTWTF</td>
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<td>Feb 12</td>
<td>MTWTF</td>
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<tr>
<td>Mar 26</td>
<td>MTWTF</td>
<td>12:45-3:10</td>
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<tr>
<td>Apr 2</td>
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<td>May 14</td>
<td>MTWTF</td>
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<td>May 21</td>
<td>MTWTF</td>
<td>12:45-3:10</td>
<td>2 hrs 25 min</td>
</tr>
</tbody>
</table>

**Total hours**

| Total hours | hrs | Total |

Total first semester hrs: 72.48 hrs
Total second semester hrs: 72.48 hrs **Total Hours for Welding 2 course = 144.96 hrs**

**Course Subject Breakdown**

General Shop Safety hours 20
Plasma Cutting 8 hours
Welding Symbols 6 hours
Reading Welding Detail Drawings 6 hours
Project Planning 6 hours
GMAW Welding review 12 hours
SMAW V-Groove Welding (no backing) 12 hours
Shop Time GTAW, SMAW, Plasma Cutting
60 hours Certification Test 15 hours

Total Hours for Welding 2 Course 145 hours

Grading Breakdown
1. Shop Safety/Exercises 20%
2. Class/Shop Participation 60%
3. Test/Quiz 20%

A=90% to 100%
B=80% to 89%
C=70% to 79%
D=60% to 69%
F=59% and below