

Great Falls College Montana State University Welding Technology & Fabrication Program



Student Information and Application Packet

AAS degree

Fall 2017

(Application is subject to change year to year)



**GREAT FALLS
COLLEGE**

**MONTANA STATE
UNIVERSITY**

Dear Prospective Welding Technology & Fabrication AAS student,

I am pleased by your interest to continue in the Welding Technology & Fabrication AAS program at Great Falls College Montana State University. The Associate of Applied Science degree will expand your knowledge and skill for the welding industry and open some new possibilities of possible supervision duties within the industry.

Our welding program is recognized by both the American Welding Society (AWS) and the Canadian Welding Bureau (CWB). The skills that you will have as a graduate of the Welding Technology & Fabrication program are highly valued by these industry standard organizations and also by employers. As a graduate, you will be better prepared to produce welds in all positions that meet industry standards using the following processes:

Shielded Metal Arc Welding (SMAW)
Gas Metal Arc Welding (GMAW)
Flux Cored Arc Welding (FCAW)

The AAS degree is designed to build on the skill and knowledge gained while completing the CAS program. Students will spend a greater amount of time working with and interpreting welding blueprints and weld symbols, while building fabrication skills on a variety of metals.

The Welding Technology & Fabrication program has a limited enrollment capacity. Twelve students are enrolled in each intake which provided for small class size this is an advantage to you as a student, allowing you more individualized attention and more opportunity for hands-on experience. Students will be selected for the program on a first come, first served and points based system. The points are generated for prior educational experience and work experience.

Information regarding the profession, the program, and application materials is enclosed in this packet. Please read the materials carefully. For additional information, answers to specific questions, or to set up an appointment, please contact Admissions at (406) 268-3700 or Joel Sims, Trades Division Director, (406) 268-3719.

Sincerely,

Joel Sims, CWI – CWE
Trades Division Director
Great Falls College Montana State University
2100 16th Ave S
Great Falls, MT 59405
(406)268-3719

Great Falls College Montana State University
Welding Technology & Fabrication
Two -year Associate of Applied Science (AAS) Program

Job Description and Occupational Outlook:

If you are looking for a two year education that will lead to a career in high demand, Welding Technology & Fabrication might be for you. Welders are typically employed in settings that have shift work, some overtime, and may require work indoors and outdoors. You will oversee welding tasks before, during, and after the process to make sure that a quality job is done. Typical job tasks include interpreting welding blueprints and weld symbols, preparing metal fabrication components and performing industry standard welds in all positions with a variety of processes (SMAW, GMAW, FCAW). If you have good concentration skills, good hand eye coordination, the ability to work unsupervised, and high standards of accuracy, this is the career for you.

According to the Montana Department of Labor, the 2009 hourly wage ranged from \$13.87-\$21.15. Great Falls area employers tell us that their entry-level welders and fitters will start in the \$13-15 per hour range with a full benefits package.

Welding Technology & Fabrication AAS Curriculum Outcomes:

GRADUATES ARE PREPARED TO:

- Learn to set up and weld aluminum using spool guns in all positions on plate of various thicknesses including groove, fillet and spot welds
- Weld aluminum plate using TIG process in all positions and various thicknesses including groove, fillet and spot welds
- Learn the benefits of PULSE ARC technology and how it effects the weld, base metal and the welder
- Learn to weld aluminum using spot gun Pulse in all positions on plate of various thicknesses including groove, fillet and spot welds
- Learn how to troubleshoot and fix problems with machines, spools guns, TIG torches and assemblies, base metal conditions and shielding gasses
- Demonstrate the ability to take general arrangements blueprints and break them down into shop drawings.
- Include weld symbols into shop drawings
- Demonstrate machine set-up for the successful welding of aluminum, stainless steel, carbon steel
- Demonstrate machine tool set-up operation...press brake, Shear, lathe, milling machine, various welding machines, for the successful forming, machining and welding of metals
- Demonstrate the ability to plan, design and construct a project to industry standards
- For graphic design and documentation, Autocad will be used
- Demonstrate fillet and groove welding to American Welding Society standards
- Properly dimension and details shop drawings.
- Use Computer Aided Design software to:
 - o Draw and edit a 2D object

- o Annotate a drawing
- o Plot and scale drawings
- Will be exposed to:
 - o Pipe groove joints
 - o Pipe layout tools
 - o Metal Identification
 - o Braze and weld cast iron
- Produce welds in all positions that meet industry standards using the following process(es) with 3”-6” scheduled 80 pipe:
 - o GTAW
 - o SMAW
 - o GMAW
 - o FCAW

Welding Technology & Fabrication AAS Curriculum:

See the Great Falls College MSU Catalog for specific information on the Welding Technology & Fabrication Program:

<http://catalog.gfcmsu.edu/academic-programs/welding-technology/>

This program follows the National Center for Construction Education and Research (NCCER) curriculum.

The first year of the program requires students to complete the Welding Technology & Fabrication CAS curriculum. **TO COMPLETE THESE COURSES PLEASE SEE THE Welding program website at:**

<http://www.gfcmsu.edu/webs/Welding/index.html>

GFC MSU Additional Graduation Requirement

Course	Title	Credits	Grade/Sem
COLS 103	Becoming a Successful Student +	1	_____
Fall			
Credits			
Grade/Sem			
First Semester - After Formal Acceptance (Students who complete the first semester of courses are eligible for the Welding & Fabrication Tier 1 Certificate of Technical Studies degree.)			
M 191B	Special Topics: Math for Weld *.+	3	_____
WLDG 110	Welding Theory I +	3	_____
WLDG 111	Welding Theory I Practical +	6	_____
WLDG 117	Blueprint Rdng Weldng Symbols +	2	_____
WLDG 145	Fabrication Basics +	2	_____
Term Credits		16	
Spring			
Credits			
Grade/Sem			
(Students who complete the second semester of courses are eligible for the Welding & Fabrication Tier 2 Certificate of Technical Studies degree.)			
COMX 102	Interprsnl Skills in Workplace +	1	_____
WRIT 104	Workplace Communications +	2	_____
WLDG 120	Welding Theory II *.+	2	_____
WLDG 121	Welding Theory II Practical *.+	4	_____
WLDG 130	Intro to Structural Welding *.+	2	_____
WLDG 185	Welding Qualification Tst Prep *.+	4	_____
WLDG 205	Applied Metallurgy *.+	1	_____
Term Credits		16	
Total Credits		32	

* Indicates prerequisites needed.

** Placement in course(s) is determined by placement assessment.

+ A grade of C- or above is required for graduation.

Welding Technology & Fabrication AAS after formal acceptance

<u>Course Number</u>	<u>Course Title</u>	<u>Credits</u>
WLDG 212	Pipe Welding and Layout	4
WLDG 260	Repair and Maint Welding	3
DDSN 114	Computer Aided Design	3
WRIT 121	Technical Writing	3
Pick one of the following:		
BGMT 299	Entrepreneurship	
OR		
WLDG 298	Internship	<u>3</u>
TOTAL:		16

(Students who complete the third semester of courses are eligible for the Welding & Fabrication Tier 3 Certificate of Technical Studies.)

<u>Course Number</u>	<u>Course Title</u>	<u>Credits</u>
WLDG 237	Aluminum Welding Processes	4
WLDG 280	Weld Testing Certification	3
WLDG 281	Weld Testing Certification Lab	2
WLDG 245	Metal Fab Design/Construction	5
WLDG 217	Advanced Blueprint	<u>2</u>
TOTAL:		16

(Students who complete the fourth semester of courses are eligible for the Welding & Fabrication Tier 4 Certificate of Technical Studies.)

TOTAL PROGRAM CREDITS: 64

Program Expenses:

Welding students should begin planning early for financial aid or other arrangements to meet their educational needs.

Estimated Resident Program Cost:

Tuition and Fees	\$	6,260
Application Fee	\$	30
Program Fees	\$	2,600
Tools/clothing		varies
Books/Supplies	\$	1,107
TOTAL	\$	9,997

This training program is supported in part by a \$24.9 million grant award from the U.S. Department of Labor. Because of this support, veterans and eligible spouses may qualify for Veterans Priority of Service in this program. For more information, please contact Joel Sims.

This workforce program is supported in part by a \$24.9 million grant awarded by the U.S. Department of Labor's Employment and Training Administration. The program does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. More information can be found at the following link <http://www.gfcmu.edu/swammei/disclaimer.html>. Unless otherwise noted, this work is licensed under a Creative Commons Attribution 3.0 Unported License (<http://creativecommons.org/licenses/by/3.0/us/>).

Welding Technology & Fabrication Program AAS Admissions Process

Admission to Great Falls College MSU:

Students **must** be admitted to the College **prior** to the submission of the Welding program application and be in good academic standing with the institution. Therefore, no applications will be reviewed until applicants have been admitted to GFC MSU.

Acceptance to GFC MSU requires a completed admissions application file, which may be obtained by visiting the campus, calling the College (406) 268-3700 or 1-800-446-2698, or applying online at <http://admissions.gfcmsu.edu/apply.html>

Admission to Great Falls College MSU Welding Technology & Fabrication AAS Program:

The Welding Technology & Fabrication AAS Program admissions committee will review completed application packets after May 1, 2017. Welding cohort courses are restricted entry courses. Only students who have been admitted into the program will be able to enter these courses.

Completed Welding Technology & Fabrication program application packets must be submitted to:

Welding Admissions Committee
Dental Clinic Manager
Great Falls College Montana State University
2100 16th Avenue South
Great Falls, MT 59405

Note: Applications will be date and time stamped as they are received. The first 12 completed applications, who meet the admissions criteria, will be accepted into the program. Only complete applications will be considered. See Application Packet & Check-off Sheet for specific requirements for program admission.

Priority Admissions:

Priority applicants will need to have the application to the committee by May 1, 2017. Notification of acceptance to the fall semester will be May 26, 2017 for priority applicants.

Applications received after the priority deadline of May 1st will be considered only if any of the 12 admission positions remain open. Again, the earliest date and time stamps on completed Welding Technology and Fabrication applications will determine admission for any of these remaining openings. *No incomplete applications will be considered until they are completed.*

Welding applications will not be accepted after August 15, 2017.

Student Health Insurance:

Program students entering the Welding program are strongly advised to carry their own medical insurance. Students will be financially responsible for their health care if they become ill or injured.

Student Health Insurance Option (*Subject to change*)

All GFC MSU students enrolled for 6 or more credits are required to have health insurance. For students without coverage, GFC MSU offers a program developed especially for students by Blue Cross/Blue Shield of Montana. This plan provides coverage for injuries and illnesses on or off campus. Please contact Student Central for more information. **Please see <http://students.gfcmsu.edu/insurance.html> for more information.**

Student Central
Great Falls College MSU
Phone: 406-771-4304

Equal Opportunity Policy:

Great Falls College MSU is committed to the provision of equal opportunity for education, employment, and participation in all College programs and activities without regard to race, color, religion, national origin, creed, service in the uniformed services (as defined in state and federal law), veteran status, gender, age, political ideas, marital or family status, physical or mental disability, genetic information, gender identity, gender expression, or sexual orientation.

The College's Equal Opportunity Officer is the Chief Student Affairs & Human Resources Officer, 2100 16th Avenue South, Great Falls, MT 59405. Telephone: 406-771-4300

Information Regarding Transferable Courses:

Coursework taken at other educational institutions may be designated as equivalent courses for Great Falls College MSU. For a current listing of approved equivalent courses, visit the Transfer Guide under Student Information at: https://atlas.montana.edu:9001/pls/gfagent/hwzkxfer.p_selstate

If you have additional questions about transferability of courses, send a written request for evaluation of your prior transcript to the Registrar at Great Falls College MSU. Please include appropriate course descriptions and official transcripts from former colleges with your request for evaluation.

All transfer work has to be from a regionally accredited institution.

Send official transcript to GFC MSU Registrar's Office:

Registrar's Office
Great Falls College MSU
2100 16th Ave S
Great Falls, MT 59405
406-771-4312

WELDING TECHNOLOGY & FABRICATION AAS PROGRAM

Fall 2017 INTAKE

APPLICATION PACKET COVER AND CHECK-OFF SHEET

Name _____

Address _____

City _____ State _____ Zip Code _____

Telephone (Home) _____ (Cell/Other) _____

E-Mail Address _____

GFC MSU Student ID Number _____

PLEASE REVIEW TIMES for the AAS:

In the Fall of 2017 the AAS program will be at night from 6:00 p.m. to 10:30 pm, AUG 28 – DEC 15

In the Spring of 2018 the AAS program moves to the afternoon and will run 12:30 pm to 6:30 pm, JAN 10 – MAY 4

CHECK-OFF LIST

√	Item
	Complete and submit your Welding Technology & Fabrication AAS Application Packet Cover & Check-off sheet. <i>Personal information must be complete.</i> (page 8-9)
	Good Academic Standing. <ol style="list-style-type: none">1. All GFC MSU students must be in Good Academic Standing which means they are not on academic probation OR academic probation continued, OR academic suspension.2. A student with Good Academic Standing has a cumulative GPA that is greater or equal to 2.0 at GFC MSU.3. Good Academic Standing will be verified by the Registrar and any applicants, who are not in good academic standing will not be admitted to the program.4. Currently enrolled students, who are not in Good Academic Standing at time of Welding application submission, will only be eligible for conditional admission if there are intake spots available after acceptance of applicants currently in Good Academic Standing.5. Applicants are encouraged to check with the Registrar's or Admissions Office to confirm that they are in Good Academic Standing.

<p>All applicants must have a Complete Admissions File. A completed admissions file includes:</p> <ol style="list-style-type: none"> 1. Completed application to GFC MSU 2. Payment of the \$30 application fee (if applicable) 3. Copies of high school/GED/HiSET transcripts or diplomas or equivalent 4. Proof of MMR shots 5. Completion of placement testing or submission of official college transcript(s) verifying placement. <p>Complete admissions files will be verified by the Registrar’s Office and applicants with incomplete admissions files will not be admitted to the program. Students are encouraged to check with the Admissions Office to confirm that their admissions file is complete.</p>
<p>Submit a math placement test score or Official College Transcript(s) that shows completion of Math 065 or higher level math. Applicants must have either completed M065, Pre-Algebra, or have a math placement score that places them in M065, Pre-Algebra, or a higher level math course.</p>
<p>Sign and submit the <i>Technical Standards</i> (page 10-11)</p>

Note: Turn all application materials in at one time so as not to risk misplacement of any items. Incomplete welding applications will not be reviewed.

Program Admissions Process:

The Welding Admissions Committee reviews application packets and uses established admissions criteria to rank applicants for admission. The Application Evaluation form used by the committee is enclosed. Criteria for selection emphasize academic performance in prerequisite courses, previous education, and welding work experience.

Current students may apply during the spring semester before the fall program intake. They can apply before finishing their prerequisites and may be considered for conditional acceptance if space is available. Final determination will be made after satisfactory completion of the prerequisite courses.

**APPLICATION EVALUATION FORM
ASSOCIATE OF APPLIED SCIENCE WELDING TECHNOLOGY AND FABRICATION PROGRAM
GREAT FALLS COLLEGE MSU**

Please Complete

Applicant Name: _____ **GFC MSU Student ID:** _____

Application Scoring:

Eligibility Assessment: (Place “Y” in blank to indicate requirement has been met)

- * Admitted to Great Falls College MSU and admissions file complete _____
- * In good academic standing _____
- * Each Prerequisite course (CAS courses) completed with minimum grade of “C-” or higher _____

Admissions Criteria Score:

A. Performance in Prerequisite Courses

Cumulative GPA at GFC MSU _____ x 2 = _____

Cumulative GPA at other institutions _____ x 1 = _____

Certificate of Applied Science in Welding _____

(add 5 points) = _____

List which college and where

Verification required –official transcript with degree posted must be on file with Registrar

B. Performance in Welding Qualifications

(Proof of qualifications are required to receive points – please provide copies)

OSHA 10 Class _____ add 2 = _____

OSHA Construction class _____ add 3 = _____

Other Welding Qualifications (list all and provide proof of each to receive points)

Add 2 for each process _____

C. Year of Work Experience in Welding Field

Verification required (See attached form)

Years of Work Experience in Welding Field	Points
Less than 1 year	1
1 to 5 years	2
More than 5 years	3

Total for years' experience Score = _____

TOTAL POINTS: _____

- ✓ In case of a tie, date received will be used as a tie breaker.
- ✓ If still tied, then GFC MSU Cumulative GPA will be used

Welding Technology & Fabrication AAS Technical Standards

The Welding Technology & Fabrication AAS Program is a popular program at GFC MSU . Therefore, it is important that all students who start the program are serious about completing it and are aware of program expectations. The welding program is operated much like a production welding lab in industry. This is your job, breaks will be scheduled, attendance is required and you are expected to be productive during classroom and lab sessions. Students are exposed to and will need to be comfortable in an industrial work setting.

During the course of the program student will be required to work for prolonged periods while exposed to:

- Extreme noise
- Extreme heat
- Sharp tools and materials
- Electrical equipment
- Hot metal and flying sparks
- Dust and fumes
- Machinery with moving parts
- Slippery or uneven surfaces

While in this environment students will need to demonstrate specific technical functions, with or without reasonable accommodation, students must also demonstrate their competency in carrying out these tasks in a safe and effective manner. To successfully complete the Welding program student will be required to:

- Follow safety procedures and safely operate necessary tools, equipment, and machinery.
- Perform a variety of tasks at varying heights requiring physical agility.
- Perform procedures according to proper specifications.
- Conduct destructive tests of welding work.
- Lift and transport equipment and materials.
- Take precise measurements of 1/16th of an inch and do conversions.
- Distinguish indicators of poor vs. quality construction and detect fabrication problems.
- Identify names and uses of tools and machines, survey and select appropriate materials, tools, and equipment for welding work.
- Understand/interpret information from textbooks, handouts, diagrams, charts, and tables.
- Recognize welding terminology and symbols.
- Effectively interpret blueprints and sketches.
- Distinguish shapes, forms, and patterns, including three-dimensional objects.
- Calculate slopes, circumferences, and decimal equivalents.
- Effectively respond to and communicate information from a variety of sources.

I understand that I will be expected to demonstrate competency in the technical standards stated above in order to successfully complete the Welding program. I also understand that I will be learning in a work environment setting exposed to hazards and will conduct myself in a safe manner.

Name (print)

GFC MSU Student ID number

Signature

Date

WELDING PROGRAM VERIFICATION OF WORK EXPERIENCE in Welding field
For
Great Falls College Montana State University
2100 16th Ave S
Great Falls, MT 59405

Applicants please make copies of this form if you have been employed at multiple sites.

_____ was employed _____
(PRINT) *Last Name, First, Middle Initial* *Business name*

From _____ to _____ working an average of _____ hours per week.
Month/day/year *Month/day/year*

Total hours of Occupational Experience: _____ **JOB TITLE** _____

COMMENTS/DESCRIPTION OF DUTIES:

Signature of Employer/Supervisor/HR Representative **Date**

Name of Employer (Please Print)

Mailing Address (Street Address, P.O. Box)

City, State, Zip Code

OFFICE USE ONLY

TYPE: _____ **AMOUNT:** _____

REVIEWED BY: _____ **DATE:** _____