

## LEVEL I MEMORANDUM

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**DATE:** October 24, 2014

**TO:** Chief Academic Officers, Montana University System

**FROM:** Neil Moisey, Deputy Commissioner for Academic, Research, & Student Affairs  
John Cech, Deputy Commissioner for Two-Year & Community College Education

**RE:** Level I Approvals and Announcements

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This memorandum is intended to inform you of the Level I changes in academic programs that have been approved in the Office of the Commissioner of Higher Education since the September 2014 meeting of the Board of Regents. It also includes announcements that may be of interest to the Board. Any comments regarding items below must be received by the Office of the Commissioner of Higher Education no later than **Wednesday, October 29**. If you have any questions, we would be happy to answer them with the help of our colleagues in academic affairs. Comments and questions should be directed to Elizabeth Baker, Assistant to the Deputy Commissioners.

### OCHE Approvals

#### **Flathead Valley Community College:**

- Request to retitle the Welding and Fabrication Professional Certificate  
[ITEM #165-301+R1114](#) | [Level I Request Form](#)
- Request to establish a Welding and Fabrication C.A.S  
[ITEM #165-303+R1114](#) | [Level I Request Form](#) | [Curriculum Proposal](#)

#### **Montana State University -Billings:**

- Request to retitle the M.S. in Rehabilitation and Mental Health Counseling  
[ITEM #165-2701+R1114](#) | [Level I Request Form](#)

#### **Great Falls College Montana State University:**

- Request to retitle the Welding and Fabrication Professional Certificate  
[ITEM #165-2903+R1114](#) | [Level I Request Form](#)

### Terminations, Moratoriums, and Consolidations

#### **Helena College University of Montana:**

- Request to terminate A.A.S. in Water Resources-Step 1  
[ITEM #165-1901+R1114](#) | [Level I Request Form](#)

### Campus Approval of Certificates

#### **Flathead Valley Community College:**

- Request to establish a Welding and Fabrication Tier II Professional Certificate  
[ITEM #165-302+R1114](#) | [Level I Request Form](#) | [Curriculum Proposal](#)

#### **Great Falls College Montana State University:**

- Request to establish a Welding and Fabrication Certificate of Technical Studies (Tier 2)  
[ITEM #165-2902+R1114](#) | [Level I Request Form](#) | [Curriculum Proposal](#)

## LEVEL I MEMORANDUM

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### **The University of Montana-Western:**

- Request to establish an Animal Grooming Certificate  
[ITEM #165-1601+R1114](#) | [Level I Request Form](#) | [Attachment #1](#)
- Request to establish a Farrier Science Certificate  
[ITEM #165-1602+R1114](#) | [Level I Request Form](#) | [Attachment #1](#)

**November 20-21, 2014**

**ITEM 165-301+R1114**

**Request for authorization to retitle Welding and Fabrication Professional Certificate to Welding and Fabrication Tier I Professional Certificate**

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**THAT**

Flathead Valley Community College proposes to retitle an 18 credit certificate program from “Welding and Fabrication Professional Certificate” to “Welding and Fabrication Tier I Professional Certificate.”

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**EXPLANATION**

The purpose of the proposed retitle is to align FVCC’s first semester certificate with that of Great Falls College.

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**ATTACHMENTS**

Level I Request Form

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Item Number: 165-301+R1114

Meeting Date: November 20-21, 2014

Institution: Flathead Valley Community College

CIP Code: 48.0508

Program Title: Welding and Fabrication Tier I Professional Certificate

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner for Academic and Student Affairs, by no later than five weeks prior to the final posting date for the next scheduled meeting of the Board. The Deputy Commissioner will review the proposal and respond to the proposing campus with any questions or concerns within one week, allowing the proposing campus one week to respond before the Item is posted for the BOR scheduled meeting.

**X A. Level I (place an X for all that apply):**

Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges. For Level I actions on degree programs or certificates, the process must begin when the proposing campus posts its intent on the MUS academic planning web site.

**X 1. Re-titling existing majors, minors, options and certificates**

       **2. Adding new minors or certificates where there is a major** (Submit with completed Curriculum Proposals Form)

       **3. Adding new minors or certificates where there is an option in a major** (Submit with completed Curriculum Proposals Form)

       **4. Departmental mergers and name changes**

       **5. Program revisions** (Submit with completed Curriculum Proposals Form)

       **6. Distance or online delivery of previously authorized degree or certificate programs**

       **7. Placement of program into moratorium** (No Program Termination Checklist at this time – document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

       **8. Filing Notice of Intent to Terminate/Withdraw existing majors, minors, options, and certificates** (No Program Termination Checklist at this time)

       **9. Terminate/withdraw existing majors, minors, options, and certificates** (Submit with completed Program Termination Checklist)

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

**B. Level I with Level II documentation:**

With Level II documentation circulated to all campus chief academic officers in advance, the Deputy Commissioner or designee may propose additional items for inclusion in the Level I process. For these items to move forward, the Deputy Commissioner or designee must reach consensus with the chief academic officers. When consensus is not achieved, the Deputy Commissioner or designee will move the item to the Level II review process.

**1. Options within an existing major or degree** (Submit with completed Curriculum Proposals Form);

**2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the Colleges of Technology where changes require Board action** (Submit with completed Curriculum Proposals Form)

**3. Consolidating existing programs and/or degrees** (Submit with completed Curriculum Proposals Form)

**C. Temporary Certificate or A.A.S. degree programs**

Certificate or Associate of Applied Science Degree Programs may be submitted as Level I proposals, with memo and backup documentation, when they are offered in cooperation with and /or at the request of private or public sector partners and the decision point to offer the program is not consistent with the regular Board of Regents program approval process. Level I approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the normal program approval process as Level II Proposals.

All other Level I Certificate or Associate Degree programs may be placed on submission at any Board of Regents meeting. They will be placed on action agendas at subsequent meetings. All campuses agree to insure that all other campuses receive program information well in advance of submission.

**D. Campus Certificates**

Although certificate programs of 29 credits or fewer may be implemented by the individual campuses without approval by the board of regents, those certificates do need to be reported to the office of the commissioner of higher education and listed on the Montana University System's official degree and program inventory. These Level I proposals will be listed as information items at the next regular meeting of the board.

**Specify Request:**

Flathead Valley Community College proposes to retitle its existing (first semester) Welding and Fabrication Professional Certificate program to Welding and Fabrication Tier I Professional Certificate.

**November 20-21, 2014**

**ITEM 165-303+R1114**

**Request for authorization to establish a Welding and Fabrication Certificate of Applied Science**

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**THAT**

Flathead Valley Community College proposes a 35 credit Welding and Fabrication Certificate of Applied Science, which is part of an existing AAS program, for spring 2015.

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**EXPLANATION**

The proposed CAS is a credential that leads either to placement in the workforce or continuation to an existing AAS degree in Welding Technology: Fabrication Option.

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**ATTACHMENTS**

Level I Request Form

Curriculum Proposal Form

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Item Number: 165-303+R1114

Meeting Date: November 20-21, 2014

Institution: Flathead Valley Community College

CIP Code: 48.0508

Program Title: Welding and Fabrication Certificate of Applied Science

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**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

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**D. Campus Certificates**

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**Specify Request:**

Flathead Valley Community College proposes a 35 credit Welding and Fabrication Certificate of Applied Science program beginning Spring, 2015. This CAS is a stackable credential leading either to placement in the workforce or continuation to an existing AAS degree. Please see attachment that identifies outcomes, curriculum, and costs.



Montana Board of Regents  
LEVEL I REQUEST FORM

**Welding and Fabrication**  
*Certificate of Applied Science*

This 35 credit certificate of applied science, which is embedded in the Welding Technology: Fabrication Option AAS degree, leads either to placement in the work force or continuation to the AAS degree.

Upon completion of this program, students will:

- Describe and demonstrate safe and proper use of each type of welding equipment
- Select and demonstrate various joining processes
- Read and interpret welding blueprints using a systemic process
- Demonstrate proficiency in OXYFUEL, SMAW, GMAW, GTAW, and FCAW processes
- Recognize, inspect, and document proper applications of welding processes
- Safely operate the PlasmaCAM system
- Apply advanced fabrication techniques including design, layout, and production of a metal cutout and welding project employing robotically controlled torches
- Meet AWS standards for each welding process
- Explain and apply AWS Welder Qualification Codes and Specifications
- Demonstrate an understanding of welding to API Pipe Code Standards
- Organize and develop logical written representations of one's thoughts; craft and execute a variety of professional quality correspondence, including a resume

**Fall Semester**

	<u>Course</u>	<u>No.</u>	<u>Title</u>	<u>Credits</u>
ECP	104		Workplace Safety	1
M	114*		Extended Technical Mathematics	3
WLDG	100		Introduction to Welding Fundamentals	4
WLDG	111*		Welding Theory I Practical	4
WLDG	117		Blueprint Reading and Welding Symbols	3
WLDG	145		Fabrication Basics I	<u>3</u>
<b>First Semester Total</b>				<b>18</b>

**Spring Semester**

	<u>Course</u>	<u>No.</u>	<u>Title</u>	<u>Credits</u>
CAPP	106		Short Courses: Computer Applications	1
BMGT	205C*		Professional Business Communication	3

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

WLDG 122*	Welding Theory III Practical	4
WLDG 146	Fabrication Basics II	3
WLDG 185*	Welding Qualification Test Preparation	2
WLD 112*	Introduction to Pipe Welding	<u>4</u>
<b>Second Semester Total</b>		<b>17</b>
<b>Total Credits</b>		<b>35</b>

**Program Information**

- Fees for this program are higher than average. Please see the program director for more details.
- Upon completion, students will receive a First Aid/CPR certification
- Upon completion, students should be qualified for the following:
  - AWS D 1.1 in 3/8" Plate Certification
  - AWS D 1.1 Unlimited Thickness Certification

**Opportunities after graduation**

- Career opportunities include a wide range of possibilities as a welding technician in the fabrication and manufacturing industries, construction, mining, bridge construction, and other production areas.

Advisor(s): For general information,

Mort Hill contact the Admissions office:

OT 131 (406) 756-3847.

(406) 756-3996

[rhill@fvcc.edu](mailto:rhill@fvcc.edu)

Sam Brown

OT 120A

(406) 756-4412

[sabrown@fvcc.edu](mailto:sabrown@fvcc.edu)

**Estimated Resident Program Costs**

Tuition and Fees \$3730

Lab Fees \$ 483

Books/Supplies \$ 720

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**1. Overview**

This is a proposal for a 35-credit Welding and Fabrication Certificate of Applied Science. It is the combination of two certificate programs, Welding and Fabrication Tiers I and II Professional Certificate, and is part of an existing AAS degree program.

**2. Provide a one paragraph description of the proposed program. Be specific about what degree, major, minor or option is sought.**

This is a 35-credit program in Welding and Fabrication. It includes 27 credits in welding, 6 credits in communication and math, and 2 credits in computer applications and workplace safety. It leads either to placement in the workforce or continuation to an existing AAS degree.

**3. Need**

**A. To what specific need is the institution responding in developing the proposed program?**

The program has already been developed and implemented as part of an existing AAS degree program. Separately packaging it as a CAS allows it to be a stackable credential.

**B. How will students and any other affected constituencies be served by the proposed program?**

It provides flexibility to a student, because it will allow a student to enter the workforce sooner with a CAS degree, while retaining the option to continue to pursue an AAS degree.

**C. What is the anticipated demand for the program? How was this determined?**

The demand was determined during initial stages of developing the SWAMMEI grant proposal.

**4. Institutional and System Fit**

**A. What is the connection between the proposed program and existing programs at the institution?**

It is part of an existing AAS degree program.

**B. Will approval of the proposed program require changes to any existing programs at the institution? If so, please describe.**

No changes are needed.

**C. Describe what differentiates this program from other, closely related programs at the institution (if appropriate).**

The difference between the proposed CAS program and the existing AAS program in which it is embedded is that it provides the student an additional option to receive a credential after a shorter training period, thereby allowing that person to enter the workforce at an earlier date.

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**D. How does the proposed program serve to advance the strategic goals of the institution?**

It directly meets one of FVCC's four core themes, namely Workforce Preparation.

**E. Describe the relationship between the proposed program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed program at an additional institution. Describe any efforts that were made to collaborate with these similar programs; and if no efforts were made, explain why. If articulation or transfer agreements have been developed for the substantially duplicated programs, please include the agreement(s) as part of the documentation.**

The proposed program is extremely similar to the Welding Technology and Fabrication CAS at Great Falls College. The welding, communication, and math courses are very similar. In addition to the safety training that is embedded in the welding courses, FVCC has added an explicit course in workplace safety, and also a course in computer applications. Within the past two years, there have been coordinated efforts to more closely align FVCC's welding program with that of GFC.

**5. Program Details**

**A. Provide a detailed description of the proposed curriculum. Where possible, present the information in the form intended to appear in the catalog or other publications. NOTE: In the case of two-year degree programs and certificates of applied science, the curriculum should include enough detail to determine if the characteristics set out in Regents' Policy 301.12 have been met.**

## **Welding and Fabrication**

### **Certificate of Applied Science**

*This 35 credit certificate of applied science, which is embedded in the Welding Technology: Fabrication Option AAS degree, leads either to placement in the work force or continuation to the AAS degree.*

*Upon completion of this program, students will:*

- *Describe and demonstrate safe and proper use of each type of welding equipment*
- *Select and demonstrate various joining processes*
- *Read and interpret welding blueprints using a systemic process*
- *Demonstrate proficiency in OXYFUEL, SMAW, GMAW, GTAW, and FCAW processes*
- *Recognize, inspect, and document proper applications of welding processes*
- *Safely operate the PlasmaCAM system*
- *Apply advanced fabrication techniques including design, layout, and production of a metal cutout and welding project employing robotically controlled torches*
- *Meet AWS standards for each welding process*
- *Explain and apply AWS Welder Qualification Codes and Specifications*
- *Demonstrate an understanding of welding to API Pipe Code Standards*
- *Organize and develop logical written representations of one's thoughts; craft and execute a variety of professional quality correspondence, including a resume*

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**Fall Semester**

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**Program Information**

- Fees for this program are higher than average. Please see the program director for more details.
- Upon completion, students will receive a First Aid/CPR certification
- Upon completion, students should be qualified for the following:
  - AWS D 1.1 in 3/8" Plate Certification
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**Opportunities after graduation**

- Career opportunities include a wide range of possibilities as a welding technician in the fabrication and manufacturing industries, construction, mining, bridge construction, and other production areas.

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**B. Describe the planned implementation of the proposed program, including estimates of numbers of students at each stage.**

As part of an existing AAS program, it is already implemented.

**6. Resources**

**A. Will additional faculty resources be required to implement this program? If yes, please describe the need and indicate the plan for meeting this need.**

No.

**B. Are other, additional resources required to ensure the success of the proposed program? If yes, please describe the need and indicate the plan for meeting this need.**

No.

**7. Assessment**

**How will the success of the program be measured?**

FVCC will monitor the number of graduates.

**8. Process Leading to Submission**

**Describe the process of developing and approving the proposed program. Indicate, where appropriate, involvement by faculty, students, community members, potential employers, accrediting agencies, etc.**

Welding courses appear in FVCC's 1991 catalog. The process of developing stacked credentials and the industry impetus for it began during 2011/12 in preparation for FVCC's submission of a round II TAACCCT grant proposal.

**November 20-21, 2014**

**ITEM 165-2701+R1114**

**Request for authorization to retitle the Master of Science in Rehabilitation and Mental Health Counseling to the Master of Science in Clinical Rehabilitation and Mental Health Counseling**

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**THAT**

The Board of Regents of Higher Education authorizes Montana State University Billings to retitle the Master of Science in Rehabilitation and Mental Health Counseling to the Master of Science in Clinical Rehabilitation and Mental Health Counseling.

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**EXPLANATION**

The Master of Science in Rehabilitation and Mental Health Counseling at MSU Billings is applying for dual accreditation (Clinical Rehabilitation Counseling and Clinical Mental Health Counseling) under the Council on Rehabilitation Counseling (CORE) and the Council for Accreditation of Counseling and Related Educational Programs (CACREP). As part of the application process, CACREP requires programs and degrees accurately reflect the program area under which accreditation is being sought. Therefore, this proposal is to change the program title/degree title from Master of Science in Rehabilitation and Mental Health Counseling to Master of Science in Clinical Rehabilitation and Mental Health Counseling.

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**ATTACHMENTS**

Level I Request Form

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Item Number: 165-2701+R1114

Meeting Date: November 20-21, 2014

Institution: Montana State University Billings

CIP Code: 51.2399

Program Title: Master of Science in Rehabilitation and Mental Health Counseling

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**B. Level I with Level II documentation:**



**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

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     **D. Campus Certificates**

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**Specify Request:**

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**November 20-21, 2014**

**ITEM 165-2903+R1114**

**Request for authorization to retitle the Welding and Fabrication Professional Certificate**

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**THAT**

The Welding and Fabrication Professional Certificate has been re-titled to the Welding and Fabrication Certificate of Technical Skills (Tier 1).

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**EXPLANATION**

The original item was moved forward prior to standardized names given to all SWAMMEI programs. Prior to that, all our professional certificates less than 29 credits were identified as Professional Certificates.

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**ATTACHMENTS**

Level I Request

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Item Number: **165-2903+R1114**

Meeting Date: **November 20-21, 2014**

Institution: **Great Falls College MSU**

CIP Code: **48.0508**

Program Title: **Welding and Fabrication Professional Certificate**

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- 6. Distance or online delivery of previously authorized degree or certificate programs**
- 7. Placement of program into moratorium** (No Program Termination Checklist at this time – document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)
- 8. Filing Notice of Intent to Terminate/Withdraw existing majors, minors, options, and certificates** (No Program Termination Checklist at this time)
- 9. Terminate/withdraw existing majors, minors, options, and certificates** (Submit with completed Program Termination Checklist)

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

**B. Level I with Level II documentation:**

With Level II documentation circulated to all campus chief academic officers in advance, the Deputy Commissioner or designee may propose additional items for inclusion in the Level I process. For these items to move forward, the Deputy Commissioner or designee must reach consensus with the chief academic officers. When consensus is not achieved, the Deputy Commissioner or designee will move the item to the Level II review process.

**1. Options within an existing major or degree** (Submit with completed Curriculum Proposals Form);

**2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the Colleges of Technology where changes require Board action** (Submit with completed Curriculum Proposals Form)

**3. Consolidating existing programs and/or degrees** (Submit with completed Curriculum Proposals Form)

**C. Temporary Certificate or A.A.S. degree programs**

Certificate or Associate of Applied Science Degree Programs may be submitted as Level I proposals, with memo and backup documentation, when they are offered in cooperation with and /or at the request of private or public sector partners and the decision point to offer the program is not consistent with the regular Board of Regents program approval process. Level I approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the normal program approval process as Level II Proposals.

All other Level I Certificate or Associate Degree programs may be placed on submission at any Board of Regents meeting. They will be placed on action agendas at subsequent meetings. All campuses agree to insure that all other campuses receive program information well in advance of submission.

**D. Campus Certificates**

Although certificate programs of 29 credits or fewer may be implemented by the individual campuses without approval by the board of regents, those certificates do need to be reported to the office of the commissioner of higher education and listed on the Montana University System's official degree and program inventory. These Level I proposals will be listed as information items at the next regular meeting of the board.

**Specify Request:**

The Welding Fabrication Professional Certificate has been re-titled to the Welding and Fabrication Certificate of Technical Studies (Tier 1). The original item was moved forward prior to standardized names given to all SWAMMEI programs. Prior to that, all our professional certificates less than 29 credits were identified as Professional Certificates.

**November 20-21, 2014**

**ITEM 165-1901+R1114**

**Request for authorization to terminate Associate of Applied Science in Water Resources-Step 1**

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**THAT**

The Board of Regents of Higher Education authorizes Helena College University of Montana to terminate the A.A.S. in Water Resources.

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**EXPLANATION**

The Water Resources 2011 program review revealed a number of reasons for a continuing decline in enrollment. Among those, the poor economy was cited as a major cause. However, improving economic conditions and renewed hiring in the water resources industry have not resulted in concomitant rebound of enrollment. Rather, enrollment in the program has continued to erode. College leadership believes a substantial rethinking of educational practices to serve the water resources industry is needed, and plans to work with industry leaders, high school program faculty, and other stakeholders to develop a new model to replace the current A.A.S.

Water Resources was placed in moratorium in November 2013. Discussions with industry and business indicate that they prefer a Bachelor's degree and the graduates are having difficulties finding employment in the field with the A.A.S degree. Additionally, the college offers a Geosciences transfer advising option that includes many of the same courses and provides students a clear pathway to the Bachelor's degree.

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**ATTACHMENTS**

Level I Request Form

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Item Number: 165-1901+R1114 Meeting Date: November 20-21, 2014  
Institution: Helena College University of Montana CIP Code: 14.0805  
Program Title: Water Resources

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner for Academic and Student Affairs, by no later than five weeks prior to the final posting date for the next scheduled meeting of the Board. The Deputy Commissioner will review the proposal and respond to the proposing campus with any questions or concerns within one week, allowing the proposing campus one week to respond before the Item is posted for the BOR scheduled meeting.

**X A. Level I (place an X for all that apply):**

Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges. For Level I actions on degree programs or certificates, the process must begin when the proposing campus posts its intent on the MUS academic planning web site.

- 1. Re-titling existing majors, minors, options and certificates
- 2. Adding new minors or certificates where there is a major (Submit with completed Curriculum Proposals Form)
- 3. Adding new minors or certificates where there is an option in a major (Submit with completed Curriculum Proposals Form)
- 4. Departmental mergers and name changes
- 5. Program revisions (Submit with completed Curriculum Proposals Form)
- 6. Distance or online delivery of previously authorized degree or certificate programs
- 7. Placement of program into moratorium (No Program Termination Checklist at this time – document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)
- 8. Filing Notice of Intent to Terminate/Withdraw existing majors, minors, options, and certificates (No Program Termination Checklist at this time)
- 9. Terminate/withdraw existing majors, minors, options, and certificates (Submit with completed Program Termination Checklist)

**B. Level I with Level II documentation:**

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

With Level II documentation circulated to all campus chief academic officers in advance, the Deputy Commissioner or designee may propose additional items for inclusion in the Level I process. For these items to move forward, the Deputy Commissioner or designee must reach consensus with the chief academic officers. When consensus is not achieved, the Deputy Commissioner or designee will move the item to the Level II review process.

\_\_\_ **1. Options within an existing major or degree** (Submit with completed Curriculum Proposals Form);

\_\_\_ **2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the Colleges of Technology where changes require Board action** (Submit with completed Curriculum Proposals Form)

\_\_\_ **3. Consolidating existing programs and/or degrees** (Submit with completed Curriculum Proposals Form)

\_\_\_ **C. Temporary Certificate or A.A.S. degree programs**

Certificate or Associate of Applied Science Degree Programs may be submitted as Level I proposals, with memo and backup documentation, when they are offered in cooperation with and /or at the request of private or public sector partners and the decision point to offer the program is not consistent with the regular Board of Regents program approval process. Level I approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the normal program approval process as Level II Proposals.

\_\_\_ **D. Campus Certificates**

Although certificate programs of 29 credits or fewer may be implemented by the individual campuses without approval by the board of regents, those certificates do need to be reported to the office of the commissioner of higher education and listed on the Montana University System's official degree and program inventory. These Level I proposals will be listed as information items at the next regular meeting of the board.

**Specify Request:**

Our Program Review of 2011 revealed a number of reasons for continuing decline in enrollment. Among those, the poor economy was cited as a major cause. However, improving economic conditions and renewed hiring in the water resources industry have not resulted in concomitant rebound of enrollment. Rather, enrollment in the program has continued to erode. College leadership believes a substantial rethinking of educational practices to serve the water resources industry is needed, and plans to work with industry leaders, high school program faculty, and other stakeholders to develop a new model to replace the current A.A.S.

Water Resources was placed in Moratorium in November 2013. Discussions with industry and business indicate that they prefer a Bachelor's degree and our graduates are having difficulties finding employment in this field with this A.A.S degree. Additionally, the College offers a Geosciences transfer advising option which includes many of the same courses and provides a clear pathway to the bachelor's degree.

**November 20-21, 2014**

**ITEM 165-302+R1114**

**Request for authorization to establish a Welding and Fabrication Tier II Professional Certificate**

---

**THAT**

Flathead Valley Community College proposes a 17 credit Welding and Fabrication Tier II Professional Certificate, which is part of an existing AAS program, for Spring, 2015.

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**EXPLANATION**

The Welding and Fabrication Tier II Professional Certificate is a stackable credential that leads either to placement in the workforce or continuation to an Associate of Applied Science degree in Welding Technology: Fabrication Option.

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**ATTACHMENTS**

Level I Request Form

Curriculum Proposal Form



**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Item Number: **165-302+R1114**

Meeting Date: **November 20-21, 2014**

Institution: **Flathead Valley Community College**

CIP Code: **48.0508**

Program Title: **Welding and Fabrication Tier II Professional Certificate**

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner for Academic and Student Affairs, by no later than five weeks prior to the final posting date for the next scheduled meeting of the Board. The Deputy Commissioner will review the proposal and respond to the proposing campus with any questions or concerns within one week, allowing the proposing campus one week to respond before the Item is posted for the BOR scheduled meeting.

**A. Level I (place an X for all that apply):**

Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges. For Level I actions on degree programs or certificates, the process must begin when the proposing campus posts its intent on the MUS academic planning web site.

- 1. Re-titling existing majors, minors, options and certificates**
- 2. Adding new minors or certificates where there is a major** (Submit with completed Curriculum Proposals Form)
- 3. Adding new minors or certificates where there is an option in a major** (Submit with completed Curriculum Proposals Form)
- 4. Departmental mergers and name changes**
- 5. Program revisions** (Submit with completed Curriculum Proposals Form)
- 6. Distance or online delivery of previously authorized degree or certificate programs**
- 7. Placement of program into moratorium** (No Program Termination Checklist at this time – document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)
- 8. Filing Notice of Intent to Terminate/Withdraw existing majors, minors, options, and certificates** (No Program Termination Checklist at this time)
- 9. Terminate/withdraw existing majors, minors, options, and certificates** (Submit with completed Program Termination Checklist)

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

**X B. Level I with Level II documentation:**

With Level II documentation circulated to all campus chief academic officers in advance, the Deputy Commissioner or designee may propose additional items for inclusion in the Level I process. For these items to move forward, the Deputy Commissioner or designee must reach consensus with the chief academic officers. When consensus is not achieved, the Deputy Commissioner or designee will move the item to the Level II review process.

**1. Options within an existing major or degree** (Submit with completed Curriculum Proposals Form);

**2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the Colleges of Technology where changes require Board action** (Submit with completed Curriculum Proposals Form)

**3. Consolidating existing programs and/or degrees** (Submit with completed Curriculum Proposals Form)

**C. Temporary Certificate or A.A.S. degree programs**

Certificate or Associate of Applied Science Degree Programs may be submitted as Level I proposals, with memo and backup documentation, when they are offered in cooperation with and /or at the request of private or public sector partners and the decision point to offer the program is not consistent with the regular Board of Regents program approval process. Level I approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the normal program approval process as Level II Proposals.

All other Level I Certificate or Associate Degree programs may be placed on submission at any Board of Regents meeting. They will be placed on action agendas at subsequent meetings. All campuses agree to insure that all other campuses receive program information well in advance of submission.

**D. Campus Certificates**

Although certificate programs of 29 credits or fewer may be implemented by the individual campuses without approval by the board of regents, those certificates do need to be reported to the office of the commissioner of higher education and listed on the Montana University System's official degree and program inventory. These Level I proposals will be listed as information items at the next regular meeting of the board.

**Specify Request:**

Flathead Valley Community College proposes a 17 credit Welding and Fabrication Tier II Professional Certificate beginning spring 2015. This certificate is a stackable credential leading either to placement in the workforce or continuing to the Associate of Applied Science degree. Please see attachment that identifies outcomes, curriculum, and costs.

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Upon completion of this program, students will:

- Correctly use (wear) protective gear and clothing to forestall burn hazards
- Demonstrate an understanding of welds in all positions with GMAW and GTAW welders
- Safely operate the PlasmaCAM system
- Apply advanced fabrication techniques including design, layout, and production of a metal cutout and welding project employing robotically controlled torches
- Meet AWS standards for each welding process
- Explain and apply AWS Welder Qualification Codes and Specifications
- Demonstrate an understanding of welding to API Pipe Code Standards
- Organize and develop logical written representations of one's thoughts; craft and execute a variety of professional quality correspondence, including a resume

**Spring Semester**

<u>Course</u>	<u>No.</u>	<u>Title</u>	<u>Credits</u>
CAPP 106		Short Courses: Computer Applications	1
BMGT 205C*		Professional Business Communication	3
WLDG 122*		Welding Theory III Practical	4
WLDG146		Fabrication Basics II	3
WLDG185*		Welding Qualification Test Preparation	2
WLD 112*		Introduction to Pipe Welding	<u>4</u>
<b>Total Credits</b>			<b>17</b>

**Estimated Resident Program Costs**

Tuition and Fees	\$1865
Lab Fees	\$ 510
Books/Supplies	\$ 389

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**1. Overview**

This is a proposal for a 17 credit Welding and Fabrication Tier II Professional Certificate that is associated with the Level I Request Form. Both it and the prior Tier I Professional Certificate are part of an AAS degree in Welding Technology: Fabrication Option.

**2. Provide a one paragraph description of the proposed program. Be specific about what degree, major, minor or option is sought.**

This is a 17-credit program that is part of an existing AAS degree program in Welding Technology: Fabrication Option. It includes a communication course, a workplace safety course, and four welding courses totaling 13 credits. It is a stackable credential that leads either to placement in the workforce or continuation to an existing AAS degree, or to a proposed CAS degree.

**3. Need**

**A. To what specific need is the institution responding in developing the proposed program?**

The program has already been developed and implemented as part of an existing AAS degree. Separately packaging it as a Professional Certificate thereby allows it to be a stackable credential.

**B. How will students and any other affected constituencies be served by the proposed program?**

It provides flexibility to a student, because it now will allow a student to enter the workforce sooner with a Professional Certificate, while still retaining the option to pursue an existing AAS degree, or a proposed CAS degree.

**C. What is the anticipated demand for the program? How was this determined?**

The demand was determined during initial stages of developing the SWAMMEI grant proposal.

**4. Institutional and System Fit**

**A. What is the connection between the proposed program and existing programs at the institution?**

It is part of an existing AAS degree.

**B. Will approval of the proposed program require changes to any existing programs at the institution? If so, please describe.**

No changes are needed.

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**C. Describe what differentiates this program from other, closely related programs at the institution (if appropriate).**

The difference between the proposed Tier II Professional Certificate program and the existing AAS program in which it is embedded is that it gives the student an additional option to receive a credential after a shorter training period and thereby enter the workforce at an earlier date.

**D. How does the proposed program serve to advance the strategic goals of the institution?**

It directly meets one of FVCC's four core themes, namely Workforce Preparation.

**E. Describe the relationship between the proposed program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed program at an additional institution. Describe any efforts that were made to collaborate with these similar programs; and if no efforts were made, explain why. If articulation or transfer agreements have been developed for the substantially duplicated programs, please include the agreement(s) as part of the documentation.**

The proposed program is extremely similar to the Welding and Fabrication 2 Professional Certificate at Great Falls College. The one difference that stands out is that FVCC's proposed program contains a 1 credit computer applications course which is not included in the GFC program. For FVCC students who continue toward an AAS degree, this course occurs just prior to an introductory CAD course in the third semester. The proposed program is part of a larger AAS program that has been in existence for some time. Last, there were coordinated efforts two years ago to more closely align FVCC's welding program with that of GFC.

**5. Program Details**

**A. Provide a detailed description of the proposed curriculum. Where possible, present the information in the form intended to appear in the catalog or other publications. NOTE: In the case of two-year degree programs and certificates of applied science, the curriculum should include enough detail to determine if the characteristics set out in Regents' Policy 301.12 have been met.**

## **Welding and Fabrication**

### **Tier II Professional Certificate**

*This 17 credit certificate, which is embedded in the existing Welding Technology: Fabrication Option AAS degree, leads either to placement in the work force or continuation to the AAS degree.*

*Upon completion of this program, students will:*

- *Correctly use (wear) protective gear and clothing to forestall burn hazards*
- *Demonstrate an understanding of welds in all positions with GMAW and GTAW welders*
- *Safely operate the PlasmaCAM system*

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

- *Apply advanced fabrication techniques including design, layout, and production of a metal cutout and welding project employing robotically controlled torches*
- *Meet AWS standards for each welding process*
- *Explain and apply AWS Welder Qualification Codes and Specifications*
- *Demonstrate an understanding of welding to API Pipe Code Standards*
- *Organize and develop logical written representations of one’s thoughts; craft and execute a variety of professional quality correspondence, including a resume*

**Spring Semester**

<u>Course</u>	<u>No.</u>	<u>Title</u>	<u>Credits</u>
CAPP 106		Short Courses: Computer Applications	1
BMGT 205C*		Professional Business Communication	3
WLDG 122*		Welding Theory III Practical	4
WLDG146		Fabrication Basics II	3
WLDG185*		Welding Qualification Test Preparation	2
WLD 112*		Introduction to Pipe Welding	4
<b>Total Credits</b>			<b>17</b>

**Program Information**

- Fees for this program are higher than average. Please see the program director for more details.
- Upon completion, students should be qualified for the following:
  - AWS D 1.1 in 3/8” Plate Certification
  - AWS D 1.1 Unlimited Thickness Certification

**Opportunities after graduation**

- Career opportunities include a wide range of possibilities as a welding technician in the fabrication and manufacturing industries, construction, mining, bridge construction, and other production areas.

Advisor(s): For general information,  
Mort Hill contact the Admissions office:  
OT 131 (406) 756-3847.  
(406) 756-3996  
[rhill@fvcc.edu](mailto:rhill@fvcc.edu)  
Sam Brown  
OT 120A

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

(406) 756-4412

sabrown@fvcc.edu

**B. Describe the planned implementation of the proposed program, including estimates of numbers of students at each stage.**

As part of an AAS program, it is already implemented.

**6. Resources**

**A. Will additional faculty resources be required to implement this program? If yes, please describe the need and indicate the plan for meeting this need.**

No.

**B. Are other, additional resources required to ensure the success of the proposed program? If yes, please describe the need and indicate the plan for meeting this need.**

No.

**7. Assessment**

**How will the success of the program be measured?**

FVCC will monitor the number of graduates.

**8. Process Leading to Submission**

**Describe the process of developing and approving the proposed program. Indicate, where appropriate, involvement by faculty, students, community members, potential employers, accrediting agencies, etc.**

Welding courses appear in FVCC's 1991 catalog. A Welding and Fabrication Certificate of Applied Science degree appears for the first time in the 2006 catalog. The process of developing stacked credentials, such as the Welding and Fabrication Tier II Professional Certificate program, and the industry impetus for it began during 2011/12 in preparation for FVCC's submission of a round II TAACCCT grant.

**November 20-21, 2014**

**ITEM 165-2902+R1114**

**Request for authorization to establish a Welding and Fabrication Certificate of Technical Studies (Tier 2)**

---

**THAT**

Great Falls College MSU will implement Welding and Fabrication Certificate of Technical Studies beginning Spring 2014.

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**EXPLANATION**

The Welding and Fabrication Certificate of Technical Studies (Tier 2) may result in a stand-alone industry recognized credential leading either to placement in the work force or, if built upon the Welding and Fabrication Certificate of Technical Studies (Tier 1), can lead to a Welding and Fabrication Technology Certificate of Applied Science (CAS). The Welding and Fabrication Certificate of Technical Studies is part of the Strengthening Workforce Alignment in Montana's Manufacturing and Energy Industries (SWAMMEI) initiative.

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**ATTACHMENTS**

Level I Request Form

Curriculum Proposal



**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Item Number: **165-2902+R1114**

Meeting Date: **November 20-21, 2014**

Institution: **Great Falls College MSU**

CIP Code: **48.0508**

Program Title: **Welding and Fabrication Certificate of Technical Studies (Tier 2)**

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner for Academic and Student Affairs, by no later than five weeks prior to the final posting date for the next scheduled meeting of the Board. The Deputy Commissioner will review the proposal and respond to the proposing campus with any questions or concerns within one week, allowing the proposing campus one week to respond before the Item is posted for the BOR scheduled meeting.

**A. Level I (place an X for all that apply):**

Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges. For Level I actions on degree programs or certificates, the process must begin when the proposing campus posts its intent on the MUS academic planning web site.

- 1. Re-titling existing majors, minors, options and certificates**
- 2. Adding new minors or certificates where there is a major** (Submit with completed Curriculum Proposals Form)
- 3. Adding new minors or certificates where there is an option in a major** (Submit with completed Curriculum Proposals Form)
- 4. Departmental mergers and name changes**
- 5. Program revisions** (Submit with completed Curriculum Proposals Form)
- 6. Distance or online delivery of previously authorized degree or certificate programs**
- 7. Placement of program into moratorium** (No Program Termination Checklist at this time – document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)
- 8. Filing Notice of Intent to Terminate/Withdraw existing majors, minors, options, and certificates** (No Program Termination Checklist at this time)
- 9. Terminate/withdraw existing majors, minors, options, and certificates** (Submit with completed Program Termination Checklist)

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

**X B. Level I with Level II documentation:**

With Level II documentation circulated to all campus chief academic officers in advance, the Deputy Commissioner or designee may propose additional items for inclusion in the Level I process. For these items to move forward, the Deputy Commissioner or designee must reach consensus with the chief academic officers. When consensus is not achieved, the Deputy Commissioner or designee will move the item to the Level II review process.

**X 1. Options within an existing major or degree (Submit with completed Curriculum Proposals Form);**

**2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the Colleges of Technology where changes require Board action (Submit with completed Curriculum Proposals Form)**

**3. Consolidating existing programs and/or degrees (Submit with completed Curriculum Proposals Form)**

**C. Temporary Certificate or A.A.S. degree programs**

Certificate or Associate of Applied Science Degree Programs may be submitted as Level I proposals, with memo and backup documentation, when they are offered in cooperation with and /or at the request of private or public sector partners and the decision point to offer the program is not consistent with the regular Board of Regents program approval process. Level I approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the normal program approval process as Level II Proposals.

All other Level I Certificate or Associate Degree programs may be placed on submission at any Board of Regents meeting. They will be placed on action agendas at subsequent meetings. All campuses agree to insure that all other campuses receive program information well in advance of submission.

**D. Campus Certificates**

Although certificate programs of 29 credits or fewer may be implemented by the individual campuses without approval by the board of regents, those certificates do need to be reported to the office of the commissioner of higher education and listed on the Montana University System's official degree and program inventory. These Level I proposals will be listed as information items at the next regular meeting of the board.

**Specify Request:**

The Welding and Fabrication Certificate of Technical Studies (Tier 2) may result in a stand-alone industry recognized credential leading either to placement in the work force or, if built upon the Welding and Fabrication Certificate of Technical Studies (Tier 1) can lead to a Welding and Fabrication Technology Certificate of Applied Science (CAS). The Welding and Fabrication Certificate of Technical Studies is part of the Strengthening Workforce Alignment in Montana's Manufacturing and Energy Industries (SWAMMEI) initiative.

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**1. Overview**

Great Falls College MSU will implement Welding and Fabrication Certificate of Technical Studies beginning Spring 2014

**2. Provide a one paragraph description of the proposed program. Be specific about what degree, major, minor or option is sought**

The Welding and Fabrication Certificate of Technical Studies (Tier 2) may result in a stand-alone industry recognized credential leading either to placement in the work force or, if built upon the Welding and Fabrication Certification of Technical Studies (Tier 1) can lead to a Welding and Fabrication Technology Certificate of Applied Science (CAS). The Welding and Fabrication Certificate of Technical Studies is part of the Strengthening Workforce Alignment in Montana's Manufacturing and Energy Industries (SWAMMEI) initiative.

**3. Need**

**A. To what specific need is the institution responding in developing the proposed program?**

The Welding and Fabrication CTS allows students to select the level of training needed to enter the workforce at levels commensurate to specific occupation that require the job skills taught at that level - in this case Tier 2.

**B. How will students and any other affected constituencies be served by the proposed program?**

Industry is in support of this change. Completion of Tier 2 will allow the students to earn specific NCCER certifications as they pass competency exams. This allows them access to the workforce as they complete the program, or continue their education, creating stackability. The credential becomes portable as students complete the stacks and gain the ability to move seamlessly into specialty welding programs offered by other SWAMMEI programs in the state.

**C. What is the anticipated demand for the program? How was this determined?**

Great Falls is gradually becoming a central location for a number of welding companies. And, as there is expansion in the Bakken Oil Fields and the Alberta Tar Sands, there is a need for welders. It is anticipated that at least 80 students will complete the CTS by spring semester of 2018.

**4. Institutional and System Fit**

**A. What is the connection between the proposed program and existing programs at the institution?**

This revision of our current program has no connection to any of our other existing programs.

**B. Will approval of the proposed program require changes to any existing programs at the institution? If so, please describe.**

The addition of the Welding and Fabrication CTS create a stand-alone industry recognized credential to the second semester of the Welding Technology and Fabrication CAS.

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**C. Describe what differentiates this program from other, closely related programs at the institution (if appropriate).**

The addition of the CTS is based upon the Montana SWAMMEI initiative and creates a new format and delivery system for our program and others in the consortium. The creation of the CTS allows for the stacking of the appropriate credentials leading to the CAS and beyond, as per the SWAMMEI vision.

**D. How does the proposed program serve to advance the strategic goals of the institution?**

The vision of GFC MSU states: "In the next decade, Great Falls College MSU will play a leading role in transforming the lives of our students, their communities and the economic prosperity of Montana by responding to learner and community needs through the use of partnerships, innovation, outreach and technology."

The Mission of GFC MSU is: "... to foster the success of our students and their communities through innovative, flexible learning opportunities for people of all ages, backgrounds, and aspirations resulting in self-fulfillment and competitiveness in an increasingly global society."

The CTS is based upon a model that creates accessible and portable learning opportunities for Montana citizens that result in industry recognized stackable credentials designed to prepare a sufficient number of welders for an ever expanding workforce.

**E. Describe the relationship between the proposed program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed program at an additional institution. Describe any efforts that were made to collaborate with these similar programs; and if no efforts were made, explain why. If articulation or transfer agreements have been developed for the substantially duplicated programs, please include the agreement(s) as part of the documentation.**

The addition of the CTS is based upon a commonly agreed upon set of learning outcomes able to articulate among 11 different 2-year campuses implementing parallel programs. For example, a student could complete the Welding and Fabrication CTS (Tier 1 and 2) which can lead to the Welding and Fabrication Technology CAS in Great Falls and then transfer to another SWAMMEI campus to engage in specialized training and/or earn the Associate of Applied Science. Or, a student could complete a CTS (SWAMMEI Tier 1 and/or Tier 2) in Great Falls and enter the workforce or transfer to another SWAMMEI campus to complete the CAS. It is very flexible and creates tremendous access to our Montana workforce.

**5. Program Details**

**A. Provide a detailed description of the proposed curriculum. Where possible, present the information in the form intended to appear in the catalog or other publications. NOTE: In the case of two-year degree programs and certificates of applied science, the curriculum should include enough detail to determine if the characteristics set out in Regents' Policy 301.12 have been met.**

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**WELDING TECHNOLOGY AND FABRICATION**  
**CERTIFICATE OF APPLIED SCIENCE DEGREE**

The theory component will be delivered on line and the hands on portion of the curriculum will be done at any of the participating SWAMMEI colleges.

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

**OUTCOMES: GRADUATES ARE PREPARED TO:**

- Meet safety requirements.
- Produce welds in all positions that meet industry standards using the following process (es):
  - Shielded Metal Arc Welding (SMAW)
  - Flux Cored Arc Welding (FCAW)
- Make cuts that meet industry standards in the following process (es):
  - Oxy-Fuel Cutting (OFC)
  - Plasma Arc Cutting (PAC)
  - Air Carbon Arc Cutting (CAC-C)
- Understand the use of measuring instruments and their purpose.
- Understand power sources and current types.
- Interpret welding blueprints and weld symbols.
- Utilize oral and written communication skills in the workplace, including terminology in the welding industry.

**ESTIMATED RESIDENT PROGRAM COST\*:**

Tuition and Fees	
\$3,085	
Application Fee	\$ 30
Program Fees	\$ 700
Tools/Clothing	\$ varies
Books/Supplies	\$ 619
<b>Total</b>	<b>\$ 4,434+</b>

**GFC MSU ADDITIONAL GRADUATION REQUIREMENT**

<b><u>COURSE</u></b>	<b><u>NO.</u></b>	<b><u>TITLE</u></b>	<b><u>CREDITS</u></b>
<b><u>GRADE/SEM</u></b>			
COLS	103	BECOMING A SUCCESSFUL STUDENT	1+

**FIRST SEMESTER / WELDING AND FABRICATION 1 (WELDING AND FABRICATION PROFESSIONAL CERTIFICATE)**

<b><u>COURSE</u></b>	<b><u>NO.</u></b>	<b><u>TITLE</u></b>	<b><u>CREDITS</u></b>	<b><u>GRADE/SEM</u></b>
M	191B**	Special Topics: Math for Welding	3+	
WLDG	170	Welding and Fabrication I	13	
		Subtotal	16	

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

**SECOND SEMESTER / WELDING AND FABRICATION 2. (WELDING AND FABRICATION PROFESSIONAL CERTIFICATE)**

<b>COURSE</b>	<b>NO.</b>	<b>TITLE</b>	<b>CREDITS</b>	<b>GRADE/SEM</b>
COMX	102	Interpersonal Skills in the Workplace	1+	
WRIT	104	Communication Skills in the Workplace	2+	
WLDG	270	Welding and Fabrication II	13	
Subtotal			16	

**TOTAL PROGRAM CREDITS 23**

~ Many students need preliminary math and writing courses before enrolling in the program requirements. These courses may increase the total number of program credits. Students should review their Math and English placement before planning out their full program schedules.

Please note: although M 191B, COMX 102, and WRIT 104 are listed as discrete courses, they are embedded in the WLDG 170 and 270 courses.

**B. Describe the planned implementation of the proposed program, including estimates of numbers of students at each stage.**

The SWAMMEI initiative required several consortium programs be implemented by Fall 2014. The initial number of students was based upon available equipment and dependent on ability to expand. GFC MSU received a grant from the US Economic Development Administration (EDA) to remodel and expand our welding facility. That project is currently underway. Once the EDA grant reallocation of classroom spaces is completed, the numbers of welding booths will double allowing much more flexibility in assigning student workspace. The college currently has the capacity to serve 60 students, using a three-cohort model working in three shifts.

**6. Resources**

**A. Will additional faculty resources be required to implement this program? If yes, please describe the need and indicate the plan for meeting this need.**

At this time the College can implement the revised program with the current faculty. Resources to develop new curriculum and create a Welding Certification and Training Center, recruit and train new faculty, and expand facilities will be funded in part by SWAMMEI, an EDA grant, and funding received from the state of Montana to expand welding programming in Montana. Those resources are in place.

**B. Are other, additional resources required to ensure the success of the proposed program? If yes, please describe the need and indicate the plan for meeting this need.**

The Welding and Fabrication programs should all be fully self-sustaining once student numbers double as proposed.

**7. Assessment**

**How will the success of the program be measured?**

**Montana Board of Regents**  
**CURRICULUM PROPOSALS**

Success of the Welding and Fabrication CTS will be measured by the successful completion and placement of graduates of the welding program.

**8. Process Leading to Submission**

**Describe the process of developing and approving the proposed program. Indicate, where appropriate, involvement by faculty, students, community members, potential employers, accrediting agencies, etc.**

The Welding and Fabrication CTS, as described, was created in consultation with the SWAMMEI welding and fabrication program directors across the state. In addition, the GFC MSU Welding CAS program has a strong advisory board, represented by our local and regional industry, which supports the proposed revisions. The GFC MSU Curriculum Committee reviewed and approved the changes to our welding program.

**November 20-21, 2014**

**ITEM 165-1601+R1114**

**Request for authorization to establish an Animal Grooming Certificate**

---

**THAT**

The Board of Regents of Higher Education authorizes The University of Montana Western to create an Animal Grooming Certificate.

---

**EXPLANATION**

UM Western is reporting the creation of a 24-credit Animal Grooming Certificate and requesting its addition to the MUS official degree and program inventory.

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**ATTACHMENTS**

Level I Request Form

Attachment #1-Course Descriptions



**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Item Number: 165-1601+R1114

Meeting Date: November 20-21, 2014

Institution: The University of Montana Western

CIP Code: 010504

Program Title: Animal Grooming Certificate

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner for Academic and Student Affairs, by no later than five weeks prior to the final posting date for the next scheduled meeting of the Board. The Deputy Commissioner will review the proposal and respond to the proposing campus with any questions or concerns within one week, allowing the proposing campus one week to respond before the Item is posted for the BOR scheduled meeting.

     **A. Level I (place an X for all that apply):**

Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges. For Level I actions on degree programs or certificates, the process must begin when the proposing campus posts its intent on the MUS academic planning web site.

- 1. Re-titling existing majors, minors, options and certificates**
- 2. Adding new minors or certificates where there is a major** (Submit with completed Curriculum Proposals Form)
- 3. Adding new minors or certificates where there is an option in a major** (Submit with completed Curriculum Proposals Form)
- 4. Departmental mergers and name changes**
- 5. Program revisions** (Submit with completed Curriculum Proposals Form)
- 6. Distance or online delivery of previously authorized degree or certificate programs**
- 7. Placement of program into moratorium** (No Program Termination Checklist at this time – document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)
- 8. Filing Notice of Intent to Terminate/Withdraw existing majors, minors, options, and certificates** (No Program Termination Checklist at this time)
- 9. Terminate/withdraw existing majors, minors, options, and certificates** (Submit with completed Program Termination Checklist)

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

     **B. Level I with Level II documentation:**

With Level II documentation circulated to all campus chief academic officers in advance, the Deputy Commissioner or designee may propose additional items for inclusion in the Level I process. For these items to move forward, the Deputy Commissioner or designee must reach consensus with the chief academic officers. When consensus is not achieved, the Deputy Commissioner or designee will move the item to the Level II review process.

     1. **Options within an existing major or degree** (Submit with completed Curriculum Proposals Form);

     2. **Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the Colleges of Technology where changes require Board action** (Submit with completed Curriculum Proposals Form)

     3. **Consolidating existing programs and/or degrees** (Submit with completed Curriculum Proposals Form)

     **C. Temporary Certificate or A.A.S. degree programs**

Certificate or Associate of Applied Science Degree Programs may be submitted as Level I proposals, with memo and backup documentation, when they are offered in cooperation with and /or at the request of private or public sector partners and the decision point to offer the program is not consistent with the regular Board of Regents program approval process. Level I approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the normal program approval process as Level II Proposals.

All other Level I Certificate or Associate Degree programs may be placed on submission at any Board of Regents meeting. They will be placed on action agendas at subsequent meetings. All campuses agree to insure that all other campuses receive program information well in advance of submission.

   **X D. Campus Certificates**

Although certificate programs of 29 credits or fewer may be implemented by the individual campuses without approval by the board of regents, those certificates do need to be reported to the office of the commissioner of higher education and listed on the Montana University System's official degree and program inventory. These Level I proposals will be listed as information items at the next regular meeting of the board.

**Specify Request:**

A Grooming Certificate will prepare a student for advancement and employment in the Pet Industry. All phases of self-employment with both office and computer skills will complement hands-on experiential grooming work on the live animals, both large and small. The Perkins Program awarded UMW a grant to develop two Certificate programs. This program responds to the Governor's request for more two-year educational programs that prepare students for the workforce. There is always a demand for good groomers

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

across the country and a shortage of groomers in Montana. This is compatible with the Big Sky Pathway for animal systems.

Total Credits – 24

EQUS 191A Grooming Basics – 4 credits

EQUS 191B Grooming Intermediate – 4 credits

EQUS 191C Grooming Advance - 4 credits

EQUS 191H Comparative Small Animal Clinical Anatomy - 4 credits

EQUS 191F Animal Behavior, Safety and Handling - 4 credits

EQUS 191G Animal Practice Office Skills

**Animal Grooming Certificate**  
**Course Descriptions**

**Course Description (EQUUS 191A: Grooming Basics)**

In this introductory course to Pet Grooming/Styling, students will have the opportunity to learn the basic principles of professional pet grooming techniques. Lecture topics will include pet stylist terminology, techniques, standards of professionalism, organization in a working salon, accurate record keeping, and how to handle an emergency situation in the salon. Key components of the course include discussion of grooming tools, shampoos, conditioners, finishing sprays and their uses. Basic pet styling principles – nail trimming, ear cleaning, gland expression, bathing techniques, de-matting, undercoat removal, trimming of the feet, belly, legs, rear, sanitary trimming, and the purposes behind each of these basic principles. The course also covers introduction to keeping a clean salon and tools, and the importance of this in a professional salon.

**Course Outcomes**

Upon completion of this course, students will:

1. Know the names of grooming tools and be able to describe and demonstrate their uses.
2. Be able to function in an organized fashion in the salon environment, keep accurate records on the pets they worked on, and have professional interactions with other students.
3. Demonstrate a proper bath, nails, cleaning and plucking ears, expression of anal glands, proper brush-out and undercoat/matting removal and teeth brushing.
4. Describe different uses for shampoos, conditioners and finishing sprays.
5. Demonstrate proper trimming on feet, legs, belly, rear, chest, and tails on a dog.
6. Be able to handle an emergency situation in the salon and determine if a veterinary call is needed.
7. Recognize different parasites on pets and remedies for getting rid of them.
8. Recognize different skin conditions and match shampoos to aid in their treatment.
9. Demonstrate using a clipper to trim out paw pads, removal of matting that is too tight to brush out and sanitary trimming.
10. Demonstrate disinfecting tools and cleaning in the salon.
11. Perform health screening at the check in process of a groom/bath. Recognize health situations that should require a pet be turned down for the grooming service for the safety of the pet.
12. Recognize dog behavior signals as to what a dog is thinking and know the appropriate response to those signals.

### **Course Description (EQUUS 191B: Grooming Intermediate)**

This hands on course builds on the techniques and principles presented in Grooming Basics I. Students have the opportunity to apply introductory shaving/clipping techniques as a component of the UMW grooming education. Basic face patterns, tail patterns, foot patterns, ear patterns and the proper techniques for applying them correctly to specific breeds, and to lay a solid foundation for further studies in Grooming Advanced Training 3. Proper use of clip-on combs for achieving longer clips will be learned. Students will work on efficiency through practice, and proficiency with equipment as well as sanitation, professionalism and respect for the art to further continue to enhance the students learning experience.

### **Course Outcomes**

Upon completion of this course, students will:

1. be able to demonstrate different holding and restraining techniques.
2. be able to demonstrate a full body clip that is smooth and pleasing to the eye.
3. demonstrate different face trims and know what ear, tail, and foot patterns will be applied on each specific breed.
4. choose face, ear, tail and foot patterns to compliment different mixed breeds based on their appearance.
5. be able to demonstrate the use of clip-on combs in a full body, long cut.
6. be able to perform a basic health screen on a pet at the check-in to be certain the pet is healthy enough for the grooming process.
7. be able to perform backbrushing and explain the importance of this technique in achieving a smooth clip on a pet.
8. be able to demonstrate how to handle a difficult pet in the salon and give examples of gentle techniques to get a difficult pet finished.
9. describe and demonstrate carding and blending techniques to hide and blend out lines left from shaving.
10. describe techniques used in full body clips and face, feet, tail and ear trims.

### **Course Description (EQUUS 191C: Grooming Advanced)**

This course builds on the techniques demonstrated in previous courses. Student will develop the skills in the identification and application of full body patterns, along with the continued practice of techniques learned in grooming basics I and grooming basics II. This course will also address the

importance of professional courtesy and behavior in the salon, specific record keeping, food/diet of pets and how it affects skin and coat health, educating customers with tact to be “the expert” in your customer’s eyes. Students will also be introduced to continuing education by joining a professional pet stylist organization and attending trade shows and seminars on pet styling. The course will also touch on tips for searching for job placement as a Pet Stylist.

### **Course Outcomes**

Upon completion of this course students will:

1. be able to describe and demonstrate clips for different breeds of dogs and apply them to compliment the breed profile.
2. be able to describe breed standards for the most common breeds and understand how to use the clips applied to pets to make them look more like the breed standard.
3. understand how to follow the descriptions of a clip from a book to complete a full haircut to the breed standard.
4. understand how diet and skin and coat care are tied together and will be able to make diet recommendations to clients to better their pets’ overall health.
5. be able to keep accurate and specific records of the clips completed on pets, their health history, problems that occurred during the groom and current diet.
6. be familiar with professional pet styling organizations and understand how a continued education can keep them informed on the changing styles.
7. research Creative Style competition and the techniques used in this fun art form.
8. Understand how to search for a job in the Grooming field. They will be able to confidently perform a test groom and job interview.
9. be familiar enough with the styles and clips to recommend cuts to owners. They will be able to talk to owners about what their needs and desires are regarding grooming and help them make decisions on what clips to choose based on those needs and wants.
10. be able to make shampoo recommendations based on each pet’s current needs.

### **Course Description (EQUUS 191F: Animal Behavior, Safety and Handling)**

In this course, the student will learn the fundamentals of animal behavior and safe handling, knowing each species. Specific defensive behaviors is required to know how to safely restrain the animal. Restraint is sometimes necessary for both grooming and treatment of the animal, so that both the animal and the restrainer do not get injured in the process. The student will understand how to approach each animal species, what sets off the fight/flight reaction and how to both catch and restrain the animal in a humane manner. Different knot tying techniques will be demonstrated for restraint for

work and treatment. Students will be evaluated based on knowledge of course content through class discussions of lecture material, course examinations, and other written and lab assignments.

### **Course Outcomes**

Upon completion of this course, students will:

1. know the basic way to approach any animal to keep the animal calm and reduce stress of handling.
2. be able to evaluate the animal's physical condition to determine normal or abnormal and know the signs of shock and the normal heart rate, respiratory rate and body temperature.
3. be able to estimate the animal's weight and body condition score.
4. know the types and functions of the different forms of restraint for each animal species and to make the best choice in each situation.
5. become proficient in the use of restraint equipment and knot tying.

### **Course Description (EQUUS 191G: Animal Practice Office Skills)**

Much of the learning in this course will be experiential. This course will consist of lecture, group discussion, guest speakers, lab/hands-on activities, role playing and Moodle for video presentations and several different types of learning opportunities. Supplemental Power Point presentations, web-links and any other relevant information will be posted on Moodle for student access.

### **Course Outcomes**

Content Knowledge:

1. Will know how to perform office skills
2. Be versed in dealing with clients.
3. Able to describe legal, ethical and HR issues

Application of Knowledge:

1. Be able to use the latest technology
2. Manage AP, AR and Inventory

Analysis and Problem Solving:

1. Calculations and Conversions
2. Dealing with the difficult or grieving clients.
3. Collections

### **Course Description (EQUUS 191H: Comparative Animal Anatomy and Physiology)**

In this course, the student will learn the fundamentals of animal anatomy, physiology and disease processes using a step-wise system approach. The normal anatomy and physiology of each system of various species will be discussed and compared. The basic concepts of disease and the important disease of each system in the various species will be emphasized. The first part of the course will cover important concepts of the animal as a whole and then will cover the various systems. Students will be evaluated based on knowledge of course content through class discussions of lecture material, course examinations and other written and lab assignments.

### **Course Outcomes**

Content Knowledge:

1. Know both the common and scientific names of the body parts of animals, including directional terminology.
2. Be able to evaluate the animal's physical condition to determine normal or abnormal and know the signs of shock and the normal heart rate, respiratory rate and body temperature of companion animals and livestock.



**November 20-21, 2014**

**ITEM 165-1602+R1114**

**Request for authorization to establish a Farrier Science Certificate**

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**THAT**

The Board of Regents of Higher Education authorizes The University of Montana Western to create a Farrier Science Certificate.

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**EXPLANATION**

UM Western is reporting the creation of a 24-credit Farrier Science Certificate and a requesting its addition to the MUS official degree and program inventory.

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**ATTACHMENTS**

Level I Request Form

Attachment #1-Course Descriptions

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

Item Number: 165-1602+R1114

Meeting Date: November 20-21, 2014

Institution: The University of Montana Western

CIP Code: 010507

Program Title: Farrier Science Certificate

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner for Academic and Student Affairs, by no later than five weeks prior to the final posting date for the next scheduled meeting of the Board. The Deputy Commissioner will review the proposal and respond to the proposing campus with any questions or concerns within one week, allowing the proposing campus one week to respond before the Item is posted for the BOR scheduled meeting.

     **A. Level I (place an X for all that apply):**

Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges. For Level I actions on degree programs or certificates, the process must begin when the proposing campus posts its intent on the MUS academic planning web site.

- 1. Re-titling existing majors, minors, options and certificates**
- 2. Adding new minors or certificates where there is a major** (Submit with completed Curriculum Proposals Form)
- 3. Adding new minors or certificates where there is an option in a major** (Submit with completed Curriculum Proposals Form)
- 4. Departmental mergers and name changes**
- 5. Program revisions** (Submit with completed Curriculum Proposals Form)
- 6. Distance or online delivery of previously authorized degree or certificate programs**
- 7. Placement of program into moratorium** (No Program Termination Checklist at this time – document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)
- 8. Filing Notice of Intent to Terminate/Withdraw existing majors, minors, options, and certificates** (No Program Termination Checklist at this time)
- 9. Terminate/withdraw existing majors, minors, options, and certificates** (Submit with completed Program Termination Checklist)

**Montana Board of Regents**  
**LEVEL I REQUEST FORM**

     **B. Level I with Level II documentation:**

With Level II documentation circulated to all campus chief academic officers in advance, the Deputy Commissioner or designee may propose additional items for inclusion in the Level I process. For these items to move forward, the Deputy Commissioner or designee must reach consensus with the chief academic officers. When consensus is not achieved, the Deputy Commissioner or designee will move the item to the Level II review process.

     **1. Options within an existing major or degree** (Submit with completed Curriculum Proposals Form);

     **2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the Colleges of Technology where changes require Board action** (Submit with completed Curriculum Proposals Form)

     **3. Consolidating existing programs and/or degrees** (Submit with completed Curriculum Proposals Form)

     **C. Temporary Certificate or A.A.S. degree programs**

Certificate or Associate of Applied Science Degree Programs may be submitted as Level I proposals, with memo and backup documentation, when they are offered in cooperation with and /or at the request of private or public sector partners and the decision point to offer the program is not consistent with the regular Board of Regents program approval process. Level I approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the normal program approval process as Level II Proposals.

   **X D. Campus Certificates**

Although certificate programs of 29 credits or fewer may be implemented by the individual campuses without approval by the board of regents, those certificates do need to be reported to the office of the commissioner of higher education and listed on the Montana University System's official degree and program inventory. These Level I proposals will be listed as information items at the next regular meeting of the board.

**Specify Request:**

A Farrier Certificate will prepare students for advancement and employment in the Farrier Industry. The Perkins Program awarded UMW a grant to develop two certificate programs. This i program responds to the Governor's request for more two-year educational programs that prepare students for the workforce. There is always a demand for good farriers across the country. This is compatible with the Big Sky Pathway for animal systems. The students are requesting more farrier classes plus there is demand from the horse industry for the production of skilled farriers.

## Farrier Science Certificate Course Descriptions

### **Course Description (EQUUS 191A: Farrier Science: Theory of Trimming)**

In this course, the student will be introduced to Farrier Science, which includes the long history and evolution of the farrier industry. Students will gain an understanding of why we shoe horses and the mechanics involved. Evaluation of medial/lateral balance, the hoof/pastern axis and the techniques of trimming will be discussed. The study of equine lower limb anatomy is essential for proper understanding of equine conformation and how it is impacted by the trim on the hoof. Discussion of safe handling and horsemanship will be included. Nutritional requirements of horses as it is related to hoof quality and hoof growth will be covered. The course will include assigned readings, video format, evaluation of trimming, assessment of balance and conclude a rationale for the trim or corrective action. Students will be evaluated based on knowledge of course content through class discussions of lecture material, course examinations and other written and lab assignments.

### **Course Outcomes**

#### Content Knowledge:

1. Understanding the history including current state of the Farrier Industry.
2. Be able to balance a foot by trimming.
3. Know basic lower limb conformation.
4. Understand relationship of hoof growth and hoof quality in relationship to equine nutrition.

#### Application of Knowledge:

1. Determine when a horse should be trimmed.
2. Determine when a horse might need shoes.
3. Safety while trimming the horse.

#### Analysis and Problem Solving:

1. Recognize different trimming techniques.
2. Evaluate conformation for balance.

### **Learning Experiences**

This course will consist of lecture, group discussion, guest speakers, lab/hands-on activities and Moodle for video presentations and several different types of learning opportunities. Supplemental Power Point presentations, web-links and any other relevant information will be posted on Moodle for student access. A lab out at the Center will be for trimming evaluation.

### **Course Description (EQUUS 191B: Farrier Science: Trimming)**

In this course, the student will gain hands on experience with the basics of trimming the balanced equine foot. The student will gain an understanding of tools used for trimming and how trimming can affect performance and/or cause lameness issues. Students are expected to demonstrate an understanding and comprehension of trimming and how to safely get around the horse and under the horse to work. The course will include evaluation of trimming, assessment of balance, and include a rationale for the trim or corrective action. Students will be evaluated based on knowledge of course content through class discussions, course examinations and other written and lab assignments.

### **Course Outcomes**

#### Content Knowledge:

1. Evaluate the proper trim on a horse's foot.
2. Identify the equine lower limb anatomy including: bones, joints, muscles, tendons and ligaments.
3. Explain the importance of the balanced foot in regards to conformation and motion.

#### Application of Knowledge:

1. Physically demonstrate hands on a live horse the steps taken to trim a horse's foot.
2. Be able to evaluate their own work.
3. Implement horse handling and safety.

#### Analysis and Problem Solving:

1. Evaluate a specific horse and its conformation and come up with a trimming plan and be able to explain the relationship of this horse's unique needs to trimming decisions.

### **Learning Experiences**

Much of the learning in this course will be experiential. This course will consist of lecture, group discussion, guest speakers, lab/hands-on activities and Moodle for video presentations and several different types of learning opportunities. Supplemental Power Point presentations, web-links and any other relevant information will be posted on Moodle for student access. A lab at the Montana Center for Horsemanship will be used for trimming evaluation.

### **Course Description (EQUUS 191C: Farrier Science: Theory of Horse Shoeing)**

In this course, the student will learn the principles of horse shoeing. The concepts of horse shoeing as it relates to normal and lame horses will be reviewed. Abnormal conditions of the equine foot will be discussed as it relates to lameness issues. Gait analysis for the lame horse and diagnostic techniques will be discussed. The student will gain an understanding of tools used for shoeing and the use and costs of

these tools. Students will be evaluated based on knowledge of course content through class discussions of lecture material, course examinations and other written and lab assignments.

### **Course Outcomes**

Content Knowledge:

1. Evaluate the proper shoeing of a horse's foot.
2. Identify and cost the tolls used for shoeing.
3. Recognize the different types of horseshoes

Application of Knowledge:

1. Evaluate a proper shoeing and describe.
2. Identify and describe the use of therapeutic horse shoes.
3. Recognize a lame horse and identify which leg the horse is lame in.

Analysis and Problem Solving:

1. Be able to identify common causes of lameness and apply horse shoeing principals.

### **Course Description (EQUUS 191D: Farrier Science: Horse Shoeing)**

In this course, the student will learn the principles of horseshoeing. The concepts of trimming and shoeing as it related to normal and lame horses will be reviewed. Hand tools for trimming and shoeing will be demonstrated. The student will gain a hands on understanding of tools used for horse shoeing and the use and costs of these tools. Students are expected to demonstrate a hands on understanding and comprehension of horse shoeing and how to safely get around the horse and under the horse to work. Students will be evaluated based on knowledge of course content through class discussions, course examinations and other written and lab assignments.

### **Course Outcomes**

Content Knowledge:

1. Evaluate the proper shoeing of a horse's foot.
2. Identify and cost of the tools used for shoeing.
3. Recognize the different types of horseshoes.

Application of Knowledge:

1. Physically demonstrate on a live horse the steps taken to shoe a horse's foot.
2. Be able to write out an invoice with charges.

3. Implement horse handling and safety.

Analysis and Problem Solving:

1. Evaluate a specific horse and its conformation and come up with a shoeing plan and be able to explain the relationship of this horse's unique needs to the shoeing decisions and shoe choice.

**Learning Experiences**

Much of the learning in this course will be experiential. This course will consist of lecture, group discussion, guest speakers, lab/hands-on activities and Moodle for video presentations and several different types of learning opportunities. Supplemental Power Point presentations, web-links and any other relevant information will be posted on Moodle for student access. A lab at the Montana Center for Horsemanship will be used for trimming evaluation.

**Course Description (EQUUS 191F Animal Behavior, Safety & Handling)**

In this course, the student will learn the fundamentals of animal behavior and safe handling. Knowing each species specific defensive behaviors is required to know how to safely restrain the animal. Restraint is sometimes necessary for both grooming and treatment of the animal, so that both the animal and the restrainer do not get injured in the process. The student will understand how to approach each animal species, what sets off the fight/flight reaction and how to both catch and restrain the animal in a humane manner. Different knot tying techniques will be demonstrated for equine restraint for both farrier work and treatment. Students will be evaluated based on knowledge of course content through class discussions of lecture material, course examinations, and other written and lab assignments.

**Course Outcomes**

Content Knowledge:

1. Know the basic way to approach any animal to keep the animal calm and reduce stress of handling.
2. Be able to evaluate the animal's physical condition to determine normal or abnormal and know the signs of shock and the normal heart rate, respiratory rate and body temperature.
3. Be able to estimate the animal's weight and body condition score.

Application of Knowledge:

1. Will become proficient in the use of restrain equipment and knot tying.
2. Be able to understand and explain the animal's defense behavior, use of the animal's unique defensive anatomy and apply that to the safest way to restrain the animal in a humane manner.

Analysis and Problem Solving:

1. Know how to use the types and functions of the different forms of restraint for each animal species and to make the best choice in each situation.

### **Course Description (EQUUS 191G Animal Practice Office Skills)**

In this course, the student will learn the fundamentals of running an office and dealing with the public. Computer skills, communication skills, HR, Accounts Receivable, Payable and Collections will be reviewed. Legal and ethical issues will also be addressed, as well as safety, inventory, billing and records management.

### **Course Outcomes**

Content Knowledge:

1. Will know how to perform Office Skills.
2. Be versed in dealing with clients.
3. Able to describe legal, ethical & HR issues.

Application of Knowledge:

1. Be able to use the latest technology.
2. Manage AP, AR and Inventory

Analysis and Problem Solving:

1. Calculations and Conversions.
2. Dealing with the difficult or grieving client.
3. Collections.

### **Learning Experiences**

Much of the learning in this course will be experiential. This course will consist of lecture, group discussion, guest speakers, lab/hands-on activities, role playing and Moodle for video presentations and several different types of learning opportunities. Supplemental Power Point presentations, web-links, and any other relevant information will be posted on Moodle for student access.