### **MEMORANDUM**

**DATE:** May 7, 2009

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

FROM: Sylvia Moore, Deputy Commissioner for Academic & Student Affairs &

Mary Moe, Deputy Commissioner of Two-Year Education

**RE:** Level I Approvals and Announcements

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 March 2009 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 my office no later than May 14<sup>th</sup>. If you have any questions, I would be happy to answer them with the help of my colleagues in academic affairs.

## Flathead Valley Community College:

 Flathead Valley Community College filed a request to offer the Customer Service Certificate, the Marketing/Sales Certificate and the AA in Substance Abuse Counseling to the Department of Corrections sites via interactive television ITEM 143-302+R0509 ITEM 143-302+R0509 sm

## **University of Montana - Missoula:**

- University of Montana Missoula filed a request to to establish a "2+2" Bachelor's Degree in Social Work with Flathead Valley Community College ITEM 143-1005+R0309
- University of Montana Missoula requests permission to retitle the Master's degree in Journalism to a Master's degree in Environmental Science and Natural Resource Journalism ITEM 143-1006+R0509
- University of Montana Missoula requests permission to change the name of the School of Education to the College of Education and Human Sciences ITEM 143-1007+R0509

## **Montana Tech of the University of Montana:**

- Montana Tech of The University of Montana requests permission to offer a Minor in Statistics to other degree programs at Montana Tech ITEM 143-1501+R0509
- Montana Tech of The University of Montana requests permission to offer a Certificate of Applied Science in Sustainable Energy Technology – Wind ITEM 143-1505+R0509

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

- Montana State University-Billings requests permission to change a department name in the College of Arts and Sciences from Native American Studies, Political Science and Sociology to Sociology, Political Science, Native American and Environmental Studies to better reflect the curriculum and intent of the Academic Programs ITEM 143-2702+R0509
- Montana State University-Billings requests permission to add a minor to the existing Criminal Justice major program ITEM 143-2703+R0509
- Montana State University-Billings requests permission to reorganize The College of Education from two departments and the field experience office into one academic unit ITEM 143-2707+R0509
- MSU Billings College of Technology requests approval for a temporary A.A.S. degree in Welding and Metal Fabrication (and) an Applied Certificate in Welding for Energy Technology ITEM 143-2708+R0509 ITEM 143-2708+R0509\_sm ITEM 143-2708+R0509\_sm2
- Montana State University-Billings requests permission to change a department name in the College of Arts and Sciences from English and Philosophy to English, Philosophy, and Modern Languages ITEM143-2709+R0509 ITEM143-2709+R0509\_sm

## **Montana State University-Northern:**

- Montana State University-Northern requests permission to deliver the existing Bachelor of Science in Business Administration degree online in addition to the existing traditional, on-campus offering ITEM143-2801+R0509
- Montana State University-Northern requests permission to change the name of its existing Community Service minor to Community Leadership minor, a name that has been found to be clearer in focus and more amenable to potential employers and students ITEM143-2802+R0509

Level I Memorandum, cont.: Page 3

 Montana State University-Northern requests permission to change the name of its existing Bachelor of Arts in Community Service to Bachelor of Arts in Community Leadership; a name that has been found to be clearer in focus and more amenable to potential employers and students ITEM143-2803+R0509

## Montana State University-Great Falls COT:

 Montana State University-Great Falls College of Technology seeks approval from the Montana Board of Regents to phase out the College's Auto Body Repair and Refinishing AAS degree and move to a Certificate of Applied Science in Collision and Refinishing Technology ITEM143-2852+R0509 ITEM143-2852+R0509\_sm ITEM143-2852+R0509\_sm2

## **Announcements:**

- FVCC In response to local workforce needs, the Flathead Valley Community
  College Board of Trustees has approved a new 30- credit Certificate of Applied
  Science in Cabinet and Furniture Technology ITEM 142-301+R0509
- FVCC will place in moratorium the Administrative Assistant CAS & AAS ITEM 142-303+R0509
- MSU Billings The College of Education has been approved to offer Board Certification in Applied Behavior Analysis (BCaBA) ITEM 143-2704+R0509
- MSU Billings offers majors in both Political Science and General Science with Teaching Options. These majors and the teaching options have been previously approved by the Montana Board of Regents. At its March meeting in Helena, the Montana Board of Public Education approved both programs for licensure ITEM 143-2705+R0509
- MSU Billings offers an undergraduate minor in Early Childhood Education and a
  Master of Education in Educational Technology. Both have been previously
  approved by the Montana Board of Regents. At its March meeting in Helena, the
  Montana Board of Public Education approved MSU Billings offering both programs
  as Areas of Permissive Special Competency (APSC) ITEM 143-2706+R0509

ITEM 143-302 +R0509 Program Delivery to Department of Corrections Facilities;

Flathead Valley Community College

**THAT:** Flathead Valley Community College seeks approval to offer the

Customer Service Certificate, the Marketing/Sales Certificate and the AA in Substance Abuse Counseling to the Department

of Corrections sites via interactive television.

**EXPLANATION:** The Montana Department of Corrections has federal funding to

provide education to eligible inmates and has asked FVCC to provide classes via interactive television to sites in Shelby, Glendive, Great Falls, Deer Lodge and Billings. The college has existing ITV capacity and available faculty to offer these

already approved programs.

## LEVEL I REQUEST FORM

Item No.:	143-302+R0509	Date of Meeting:	May 28-29, 2009
Institution:	Flathead Valley Community College		
Program Title:	Program Delivery To Department Of Corrections Facilties		

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.

Com	missione	er of High	er Education by means of a memo to the Deputy Commissioner.
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		1. 2.	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology); Eliminating existing majors, minors, options and certificates via a Program
		3.	Termination Checklist; Adding new minors or certificates where there is a major;
		4. 5.	Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes;
		6.	Program revisions; and
	$\bowtie$	7.	Distance delivery of previously authorized degree programs.
	chi ite or	ief acadei ms for inc designee	Level II documentation: With Level II documentation circulated to all campus mic officers in advance, the Commissioner or designee may propose additional clusion in the Level I process. For these items to move forward, the Commissioner must reach consensus with the chief academic officers. When consensus is not be Commissioner or designee will move the item to the Level II review process.
		1. 2.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of
		3.	Technology where changes require Board action; Consolidating existing programs and/or degrees.
	Sc do pu reg pro	ience Deg cumentat blic secto gular Boa ovision wi	Certificate or A.A.S. degree programs: Certificate or Associate of Applied gree Programs may be submitted as Level I proposals, with memo and backup ion, when they are offered in cooperation with and/or at the request of private or r partners and the decision point to offer the program is not consistent with the rd of Regents program approval process. Level I approval for programs under this II be limited to two years. Continuation of a program beyond the two years will normal program approval process as Level II Proposals.

All other 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.

Item No.: 143-302+R509 Institution: Flathead Valley Community College
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## **Specify Request:**

Flathead Valley Community College has been asked by the Montana Department of Corrections to offer its previously authorized degree programs, including Customer Service Certificate, Marketing/Sales Certificate and AA in Substance Abuse Counseling, via interactive television to Shelby, Glendive, Great Falls, Deer Lodge and Billings. FVCC has the ITV capacity and the available faculty to offer these courses from both the Flathead and Lincoln County Campuses and requests authorization from the Board of Regents to meet this request.

## **LEVEL I REQUEST FORM**

Item No.:	143-1005+R0509	Date of Meeting:	May 28-29, 2009
Institution:	The University of Monta	na - Missoula	
Program Title:	Bachelor's Degree In So	cial Work	

Level I proposals are those that may be approved by the Commissioner of Higher Education or the

the n	ext regu	lar meetii	nee. The approval of such proposals will be conveyed to the Board of Regents at ng of the board. The institution must file the request with the Office of the er Education by means of a memo to the Deputy Commissioner.
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		1.	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
		2.	Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
		3.	Adding new minors or certificates where there is a major;
		4. 5.	Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes;
		6.	Program revisions; and
	$\boxtimes$	7.	Distance delivery of previously authorized degree programs.
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		1.	Options within an existing major or degree;
		2.	Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action;
		3.	Consolidating existing programs and/or degrees.
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			All other Certificate or Associate Degree programs may be placed on submission at any Board of Regents meeting.

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campuses receive program information well in advance of submission.

Item No.: 143-1005+R0509	Institution: The University of Montana - Missoula
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## **Specify Request:**

This proposal is to establish a "2+2" Bachelor's Degree in Social Work with Flathead Valley Community College. This is a Level I Proposal, as it falls under the category of Distance Delivery. The School of Education at UM has an accredited baccalaureate degree and FVCC has an accredited AA degree. In this proposal, FVCC graduates who have an AA degree in Social Work may complete the BSW in situ at the College through distance delivery.

## **LEVEL I REQUEST FORM**

Item No.:	143-1006+R0509	Date of Meeting:	May 28-29, 2009
Institution:	The University of Monta	na - Missoula	
Program Title:	Master's Degree In Envir Journalism	ronmental Science and	l Natural Resource

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		1. 2.	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology); Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
		3. 4. 5. 6.	Adding new minors or certificates where there is a major; Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes; Program revisions; and
		7.	Distance delivery of previously authorized degree programs.
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		1. 2. 3.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action; Consolidating existing programs and/or degrees.
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campuses receive program information well in advance of submission.

Item No.: 143-1006+R0509	Institution: The University of Montana - Missoula
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## **Specify Request:**

The University of Montana - Missoula requests permission to retitle the Master's degree in Journalism to a Master's degree in Environmental Science and Natural Resource Journalism. Program revisions (establishing a new course, eliminating a course, and requiring students to take additional cognate courses outside of Journalism) will allow the School to educate journalists to meet the compelling need for society to better understand science and policy questions surrounding environmental and natural resource issues.

## **LEVEL I REQUEST FORM**

Item No.:	143-1007+R0509	Date of Meeting:	May 28-29, 2009
Institution:	The University of Monta	na - Missoula	
Program Title:	Change name to College School of Education)	e of Education and Hur	man Sciences (from the

Com	missio ext reg	ner's desig gular meeti	those that may be approved by the Commissioner of Higher Education or the inee. The approval of such proposals will be conveyed to the Board of Regents at ng of the board. The institution must file the request with the Office of the iner Education by means of a memo to the Deputy Commissioner.
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		1.	Re-titling existing academic unit, majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
		2.	Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
		3.	Adding new minors or certificates where there is a major;
		4.	Adding new minors or certificates where there is an option in a major;
		5.	Departmental mergers and name changes;
		6.	Program revisions; and
		7.	Distance delivery of previously authorized degree programs.
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		1. 2.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action;
	Ш	3.	Consolidating existing programs and/or degrees.
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meetings. All campuses agree to insure that all other campuses receive program information well in advance of submission.

Item No.: 143-1006+R0509 Institution: The University of Montana - Missoula	
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## **Specify Request:**

The University of Montana - Missoula requests permission to change the name of the School of Education to the College of Education and Human Sciences. Not only have there been significant changes in the School since its establishment in 1930, but the retitling of Schools to Colleges clearly represents a trend that is becoming standard practice in American universities and will allow us to keep step with national norms. UM-Missoula also requests permission to rename the Western Montana RiteCare Language and Literacy Clinic to The University of Montana RiteCare Speech, Language and Hearing Clinic.

Coupled with this proposal, and to be submitted in July 2009, is a Level II proposal to change the name of the Division of Educational Research and Services to the Institute for Educational Research and Services.

## LEVEL I REQUEST FORM

Item No.:	143-1501+R0509	Date of Meeting:	May 28-29, 2009	
Institution:	Montana Tech of The University of Montana			
Program Title:	Minor in Statistics			

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.

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		1. 2.	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology); Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
		3. 4. 5. 6.	Adding new minors or certificates where there is a major; Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes; Program revisions; and
		7.	Distance delivery of previously authorized degree programs.
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		1. 2.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action;
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	Sc do pu re pr	cience Deg cumentati ablic sector gular Boar ovision wil	Certificate or A.A.S. degree programs: Certificate or Associate of Applied gree Programs may be submitted as Level I proposals, with memo and backup on, when they are offered in cooperation with and/or at the request of private or partners and the decision point to offer the program is not consistent with the d of Regents program approval process. Level I approval for programs under this I be limited to two years. Continuation of a program beyond the two years will normal program approval process as Level II Proposals.

All other 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.

## Item No.: 143-1501+R0509

#### **Specify Request:**

Montana Tech of The University of Montana requests permission to offer a Minor in Statistics to other degree programs at Montana Tech. The Department of Mathematical Sciences has been offering a Minor in Mathematics since 1999 and awards roughly 30-50 minors a year. In the past 5 years the number of math minors has ranged from 30 to 50 a year with roughly half taking a 4000 level math course and the other half taking a 4000 level statistics class. The department feels it is important to distinguish between students taking 4000 level Math classes and 4000 level Statistics classes for the minor, and would like to create a Statistics Minor to better reflect the 4000 level course taken to earn the minor. The Statistics Minor will fit in well with several programs at Montana Tech including the programs in Environmental Engineering, Petroleum Engineering, Chemistry, Biochemistry, Biology, and Computer Science.

No new courses are needed for the Statistics Minor, and the number of Statistics Minors awarded each year is expected to be in the 15 to 25 range.

The minor would be awarded after the completion of the student's Baccalaureate degree in their chosen field and with the completion of a minimum of 18 credits of Math and Statistics courses. The coursework for the Statistics Minor could be satisfied by completing the coursework in either Option 1 or Option 2.

	Credits
Option I: Students must complete all of the following courses	
Math 1520 Calculus I	3
Math 1530 Calculus II	3
Math 2510 Calculus III	4
Math 2236 Differential Equations	4 3
Math 3316 Introduction to Statistical Methods	3
Watti 3310 Introduction to Statistical Wethods	3
And one of the following courses	
Math 4316 Experimental Design	3
Math 4326 Regression and Model Building	3
Math 4356 Statistical Computing and Exploratory Data Analysis	3
ivialit 4556 Statistical Computing and Exploratory Data Arialysis	3
Option II: Students must complete all of the following courses	
Math 1316 Biostatistics or Math 3316 Introduction to Statistical Methods	3
Math 1520 Calculus I	3
Math 1530 Calculus II	3
Iviatii 1330 Calculus II	3
And all of the following courses	
Math 4316 Experimental Design	3
Math 4326 Regression and Model Building	2
	3 3
Math 4356 Statistical Computing and EDA	3

## LEVEL I REQUEST FORM

Item No.:	143-1505+R0509	Date of Meeting:	May 28 – 29, 2009
Institution:	Montana Tech COT		
Program Title:	Sustainable Energy Technology - Wind		

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.

	initiative mission	A. <u>Level I action requested (check all that apply):</u> 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.			
		Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);			
		2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;			
		3. Adding new minors or certificates where there is a major;			
		4. Adding new minors or certificates where there is an option in a major;			
		5. Departmental mergers and name changes;			
		6. Program revisions; and			
		<ol> <li>Distance delivery of previously authorized degree programs.</li> </ol>			
	chief ac for inclu designe	el I with Level II documentation: With Level II documentation circulated to all campus idemic officers in advance, the Commissioner or designee may propose additional items iton in the Level I process. For these items to move forward, the Commissioner or a must reach consensus with the chief academic officers. When consensus is not I, the Commissioner or designee will move the item to the Level II review process.			
		<ol> <li>Options within an existing major or degree;</li> <li>Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action;</li> </ol>			
		3. Consolidating existing programs and/or degrees.			
$\boxtimes$		nporary Certificate or A.A.S. degree programs: Certificate or Associate of Applied Degree Programs may be submitted as Level I proposals, with memo and backup			

Page 1 of 3

normal program approval process as Level II Proposals.

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

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

Item No.: 143-1505+R0509 Institution: Montana Tech COT

### **Specify Request:**

Montana Tech of The University of Montana requests permission to offer a Certificate of Applied Science in Sustainable Energy Technology – Wind.

Renewable energy sources will continue to become one of the largest priorities for US Energy Policy and are critical to reducing the nation's reliance on fossil fuels. Montana, as a state, ranks fifth in potential wind power capacity. It has been estimated that every 50-100 MW of wind power generates 2-5 permanent jobs in operations and maintenance. As a result, there are potentially more than a thousand new wind technician jobs in Montana alone. In fact, wind energy employers are in such great need for technicians, they have hired students from our Lineman Program.

Along with consortium partners MSU-Great Falls, Montana State University-Northern and Montana State University-Billings College of Technology, Montana Tech's College of Technology received a grant from the Department of Labor to develop a state-wide curriculum for training programs in Industrial Trades and Wind Energy Technology with specific development of an AAS degree in Wind Energy Technology.

After the publicity regarding the consortium wind energy grant, the Montana Tech COT has been receiving numerous phone calls from students and employers about this program. Given the demand from the public regarding wind energy education, we felt that it was important to move forward with something. To that end, we have developed a CAS program as a two year, pilot experimental program. It will be a 30 credit hour program and extend over a 2 semester period. Another reason we felt it important to expedite this CAS request is to allow Fall, 2009 registration to move forward officially with students who are waiting to enter this program.

It is important to note, however, that as the Wind Energy Technology Consortium develops both a CAS and AAS degree in Wind Energy Technology over the next two years, the Montana Tech CAS will evolve in order to maintain its alignment with and strong support of the state wide consortium effort.

Regarding Letters of Support: This CAS effort is intended to be part of the greater Wind Energy Technology Grant initiative which has appropriate letters of support.

Attachment: Proposed CAS Curriculum

## Sustainable Energy Technology - Wind

Sustainable energy as defined by Renewable Energy and Efficiency Partnership (REEP) is "effectively, the provision of energy such that it meets the needs of the future without compromising the ability of future generations to meet their own needs. Sustainable Energy has two key components: renewable energy and energy efficiency." Sustainable energy encompasses renewable resources such as biofuels, wind, solar, geothermal, wave and tidal power. The first year of this program is designed to prepare students for employment in high skill, high demand jobs as wind, solar, geothermal, electronic and power generation as entry level technicians. During the second year students will concentrate their studies in the fields of: wind, solar and geothermal.

### **Outcomes**

- Demonstrate communication, problem solving and technical skills with individual and team learning exercises.
- Develop a sense of pride in the students work and the desire to progress and excel in the Wind Energy Technology profession.
- Students demonstrate the use of equipment and techniques typically used in the Wind Energy Technician field.
- Obtain the skills that will promote occupational growth and life-long learning.

## Assessment

Hands-on skills tests Student evaluations Student portfolios Noel-Levitz Student Satisfaction Survey Graduate Placement Survey Survey of seniors Alumni Capstone Courses Advisory Board

		1st Semester		3rd Semester
PSYX	100	Intro to Psychology	3	
SET	100	Introduction to Sustainable Energy	2	
SET	110	Introduction to Electricity	3	
CAPP	131	Basic MS Office	3	
M	95	Intermediate Algebra	3	
		Tota	ıl 14	
		2nd Semester		4th Semester
WRIT	101	College Writing I	3	
M	121	College Algebra	3	
SET	120	Introduction to Programmable Logic Controllers (PLC)	3	
SET	130	Advanced Electrical Applications	4	
SET	140	Motors, Generators & Transmissions	3	
		Tota	ıl 16	
		Total for Cert	30	

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## **LEVEL I REQUEST FORM**

Item No.:			143-2702+R0509	Date of Meeting: May 28-29, 2009			
Institution:			Montana State University- Billings				
Name Change to Department of Sociology, Political Science, Native American and Environmental Studies From Native American Studies Program Title:  Sociology and Political Science							
Commisthe nex	ssioner's t regular	designee meeting o	se may be approved by the Co e. The approval of such propo of the board. The institution n Education by means of a men	osals will be conveyed nust file the request wi	to the Board of Regents at the Office of the		
	initiative mission	es typically ; and (c) t	on requested (check all that or characterized by (a) minima the absence of significant progrey System and Community Co	l costs; (b) clear adhe grammatic impact on o	rence to approved campus		
		2. E T 3. A 4. E 5. F	Re-titling existing majors, mind Mechanized Agriculture to B.S. Eliminating existing majors, mind Fermination Checklist; Adding new minors or certification Departmental mergers and nather or certification Program revisions; and Distance delivery of previously	i. in Agricultural Opera inors, options and certi tes where there is a m me changes;	tions Technology); ificates via a Program ajor;		
	chief ac for inclu designe	ademic of sion in the e must re d, the Cor	Level II documentation: Wificers in advance, the Commie Level I process. For these is ach consensus with the chief mmissioner or designee will not be ach consensus.	issioner or designee material items to move forward, academic officers. Whove the item to the Le	nay propose additional items , the Commissioner or hen consensus is not		
		2. E d 7	Options within an existing majiciliminating organizational unitivisions and colleges or schofechnology where changes reconsolidating existing progran	s within larger institution ols with the exception equire Board action;			
	Science docume public s	Degree F entation, w ector part	Certificate or A.A.S. degree Programs may be submitted a when they are offered in coope ners and the decision point to program approval process. L	as Level I proposals, we eration with and/or at the offer the program is n	ith memo and backup he request of private or not consistent with the regular		

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.

Item No.: 143-2702+R0509 Institution: Montana State University-Billings

All other 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.

### **Specify Request:**

Montana State University-Billings requests permission to change a department name in the College of Arts and Sciences from Native American Studies, Political Science and Sociology to Sociology, Political Science, Native American and Environmental Studies to better reflect the curriculum and intent of the Academic Programs.

## **LEVEL I REQUEST FORM**

Item No.:	143-2703+R0509	Date of Meeting:	May 28-29, 2009	
Institution:	Montana State University-Billings			
Program Title:	Minor In Criminal Justice			

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.

		her Education by means of a memo to the Deputy Commissioner.
A.	typically chand (c) the	ion requested (check all that apply): Level I proposals include campus initiatives aracterized by (a) minimal costs; (b) clear adherence to approved campus mission; absence of significant programmatic impact on other institutions within the Montana System and Community Colleges.
	_	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology); Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
	3. 4. 5. 6.	Adding new minors or certificates where there is a major; Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes; Program revisions; and
	7.	Distance delivery of previously authorized degree programs.
B.	chief acade items for in or designe	h Level II documentation: With Level II documentation circulated to all campus emic officers in advance, the Commissioner or designee may propose additional aclusion in the Level I process. For these items to move forward, the Commissioner e must reach consensus with the chief academic officers. When consensus is not the Commissioner or designee will move the item to the Level II review process.
	1. 2.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action;
L	3.	Consolidating existing programs and/or degrees.
C.	Science Do documenta public sect regular Bo provision v	y Certificate or A.A.S. degree programs: Certificate or Associate of Applied egree Programs may be submitted as Level I proposals, with memo and backup ation, when they are offered in cooperation with and/or at the request of private or or partners and the decision point to offer the program is not consistent with the ard of Regents program approval process. Level I approval for programs under this will be limited to two years. Continuation of a program beyond the two years will normal program approval process as Level II Proposals.
		All other Certificate or Associate Degree programs may be

All other 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.

Item No.: 143-2703+R0509	Institution: Montana State University-Billings
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## **Specify Request:**

Add minor to existing Criminal Justice major program. Proposal for requirements attached.

The College of Arts & Sciences
The Department of Native
American Studies, Political
Science, and Sociology



## Minor in Criminal Justice (Proposed)

	Credits
Required Courses	
*SOCL 101 Introduction to Sociology	3
SOCL 205 Principles and Methods of Social Science Inquiry (with Lab)	4
*SOCL 221 Social Problems	3
CRIM/SOCL 225 Introduction to Crime and Justice	3
Total required course credit	13
Restricted Electives At least 3 classes from the list below. Minimum 8 credits an 6 credits must be upper division.	nd at least
CRIM/SOCL 226 Introduction to Probation	3
CRIM/SOCL 227 Introduction to Policing	3
CRIM/SOCL 228 Race, Class, Gender and Crime	3
CRIM/SOCL 324 Criminology	3
CRIM/SOCL 325 Sociology of Deviance	3
CRIM/SOCL 326 Juvenile Delinquency	3
CRIM/SOCL 421 Criminal Justice Ethics	3
CRIM/SOCL 423 Introduction to Corrections	4
Other Courses which may be used to satisfy the Restr Electives Requirement include the following:	ricted
SOCL 491 Independent Study	1-5
SOCL 292/492 Seminar	1-3
SOCL 293/493 Workshop	1-6
Restricted Elective total	8
Electives The total number of elective credits required for the minor will be determined by the number of courses a student elects to take which fulfill both the General Education requirements and the minor requirements. Electives should be chosen in consultation with an academic advisor.	V 0-6
Total minimum credits required for minor	21
*May satisfy General Education requirements.  Certain courses in this program have prerequisites; student	s should

check the course descriptions for required prerequisites.

## **LEVEL I REQUEST FORM**

Item No.:	143-2707+R0509	Date of Meeting:	May 28-29, 2009	
Institution:	Montana State University-Billings			
Program Title:	College Of Education Departmental Merger And Name Change			

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.

		ng of the board. The institution must file the request with the Office of the er Education by means of a memo to the Deputy Commissioner.		
A. <u>Level I action requested (check all that apply)</u> : 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.				
	1. 2.	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology); Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;		
	3. 4. 5. 6.	Adding new minors or certificates where there is a major; Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes; Program revisions; and		
	7.	Distance delivery of previously authorized degree programs.		
chi iter or	ef acade ms for ind designee	<u>a Level II documentation</u> : With Level II documentation circulated to all campus mic officers in advance, the Commissioner or designee may propose additional clusion in the Level I process. For these items to move forward, the Commissioner must reach consensus with the chief academic officers. When consensus is not ne Commissioner or designee will move the item to the Level II review process.		
	1. 2.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action;		
	3.	Consolidating existing programs and/or degrees.		
Sci dod pul reg pro	ience De cumenta blic secto gular Boa ovision wi	Certificate or A.A.S. degree programs: Certificate or Associate of Applied gree Programs may be submitted as Level I proposals, with memo and backup tion, when they are offered in cooperation with and/or at the request of private or partners and the decision point to offer the program is not consistent with the rd of Regents program approval process. Level I approval for programs under this the limited to two years. Continuation of a program beyond the two years will normal program approval process as Level II Proposals.		
		All other Certificate or Associate Degree programs may be		

All other 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

Item No.: 143-2707+R0509	Institution: Montana State University-Billings
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## **Specify Request:**

The College of Education at MSU Billings is in the process of reorganizing from two departments and the field experience office into one academic unit. There are several cogent reasons for this reorganization:

- 1. The current academic departments within the COE are Educational Theory and Practice (ETP) and Special Education, Counseling, Reading and Early Childhood (SECREC). In order to model inclusive education as practiced in K to 12 schools, the College is reorganizing into one unit including preparation programs for both regular educators and those who will specialize in special education, school counseling, reading or early childhood.
- 2. The Office of Licensure Standards and Clinical Practice is a stand-alone entity, separate from academic programs. Because formative field experiences and summative clinical practice experiences are integral to educator preparation at any level, merging LSCP with academic programs models and reinforces best practice.
- 3. With increasing assessment demands by accrediting agencies—the Northwest Commission on Colleges and Universities (NWCCU) and the National Council on Accreditation of Teacher Education (NCATE)—designating an individual responsible for continuing assessment has become essential. Designating an individual as the COE Assessment Coordinator using existing resources means review and reassignment of administrative responsibilities within the College. Rather than two departments with department chairs and an office with a director, the COE will have one unit program chair, an assessment coordinator and two individuals who will share field experience placement, coordination and supervisory responsibilities. Revising and reassigning responsibilities with existing personnel is the only efficient and effective means toward achieving necessary ends in the current economic climate.

## **LEVEL I REQUEST FORM**

Item No.:		143-2708+R0509 Date of Meeting: May 28-29, 2009				
Institution: Program Title:		Montana State University Billings- College of Technology				
		Temporary Associate of Applied Science (AAS) Welding and Metal Fabrication Technology (and) Applied Certificate in Welding for Energy Technology				
Committee nex	ssioner's des t regular mee	those may be approved by the Commissioner of Higher Education or the ignee. The approval of such proposals will be conveyed to the Board of Regents at ting of the board. The institution must file the request with the Office of the gher Education by means of a memo to the Deputy Commissioner.				
A. Level I action requested (check 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 Montana University System and Community Colleges.						
	<ul><li>□ 1.</li></ul>	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);				
	<u> </u>	Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;				
	<ul><li></li></ul>	Adding new minors or certificates where there is a major;				
	☐ 4. ☐ 5.	Departmental mergers and name changes; Program revisions; and				
	6.	Distance delivery of previously authorized degree programs.				
	chief acader for inclusion designee mu achieved, th	with Level II documentation: With Level II documentation circulated to all campus nic officers in advance, the Commissioner or designee may propose additional items in the Level I process. For these items to move forward, the Commissioner or ust reach consensus with the chief academic officers. When consensus is not e Commissioner or designee will move the item to the Level II review process.  Options within an existing major of degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action;				
	<u> </u>	Consolidating existing programs and/or degrees.				
	Science Dec documentati public sector	rary Certificate or A.A.S. degree programs: Certificate or Associate of Applied gree Programs may be submitted as Level I proposals, with memo and backup on, when they are offered in cooperation with and/or at the request of private or partners and the decision point to offer the program is not consistent with the regular gents 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.

Item No.: 143-2708+R0509 Institution: Montana State University Billings

**College of Technology** 

All other 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.

### **Specify Request:**

The department of Transportation and Industry at the MSU Billings College of Technology requests approval for a temporary A.A.S. degree in Welding and Metal Fabrication (and) an Applied Certificate in Welding for Energy Technology.

#### **NEW ACADEMIC PROGRAM PROPOSAL SUMMARY**

1. How does this program advance the campus' academic mission and fit priorities? The proposed temporary Associate of Applied Science program in Welding and Metal Fabrication and Applied Certificate in Welding for Energy Technology supports the mission of the Montana State University Billings College of Technology to develop the Montana workforce and provide students with access to well-paying jobs.

- 2. How does this program fit the Board of Regents' goals and objectives?

  The proposed temporary Associate of Applied Science program in Welding and Metal Fabrication and Applied Certificate in Welding for Energy Technology responds to Goal II Assist in the expansion and improvement of the economy by increasing responsiveness to workforce development needs by expanding and developing programs in high demand fields in the state.
- 3. How does this program support or advance Montana's needs and interests? The program increases the number of trained employees in an area of rapid job growth. Providing a career opportunity for Montanans with the potential for an above average salary with benefits advances Montana's needs and interests.
- 4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.) The expansion of commercial construction projects in Montana as well as the Governor's policy to grow an "energy economy" has created a need for trained technicians in Welding and Metal Fabrication associated with traditional, emerging and alternative energies. A well-trained workforce is a necessary component in supporting these industries.
- 5. What is the program's planned capacity? 50
- Break-even point 35 FTE students
- Enrollments / year 25Graduates / year 20MT jobs / year 350+
- 6. Resource Allocation:
- Total program budget? \$109,699 (DOL Energy grant providing approximately \$48,285 for AY10 salary)
- Faculty FTE? 2 first year/2 second year
- Staff FTE? 0 first year/0 second year
- 7. Does this program require new resources? Yes

If yes, what is the amount? \$48,285 beginning in AY10 (Planned reallocation from closure of HVACR program in AY10)

8. How will the campus fund the program?

The Welding and Metal Fabrication program will initially be funded through a US-Department of Labor Grant.

9. If internal reallocation is necessary, name the sources.

Following the termination of the US-Department of Labor Grant, internal reallocation will occur from the closure of the Heating, Ventilation, and Air Conditioning AAS degree which will be taught out in AY10.

#### Associate of Applied Science Degree in Welding and Metal Fabrication

#### I. Objectives and Needs

#### 1. Description of Program:

The expansion of commercial construction, conventional and alternative energy and production in Montana as well as the Governor's policy to grow an "energy economy" has created a need for trained welding and metal fabrication technicians. The Montana State University Billings College of Technology has been awarded funding for one year through a Department of Labor Grant to train Welding Technicians for the energy industry and construction.

The Transportation and Industry department of the MSU Billings College of Technology seeks temporary approval to begin offering both an Associate of Applied Science degree in Welding and Metal Fabrication and a Certificate of Applied Science degree in Welding for Energy Technology. The Associate of Applied Science degree is usually completed in four semesters. The Applied Certificate will be completed in two semesters and is comprised of the courses offered during the second year of the AAS plan of study. The welding and metal fabrication AAS curricula emphasizes the fundamentals of all welding, cutting, print reading, layout, fabrication, testing and CNC processes associated with the welding field of study and prepares students for employment in the structural steel and pipe welding industries. The Applied Certificate in Energy Technology will be marketed to prospective students who already possess the requisite skills or have the experience necessary to place them in the second year of the program. This applied certificate provides foundational skills for employment as a welding technician in the energy industry.

The program will gain NCCER (National Center for Construction Education and Research) and AWS (American Welding Society) certification in all areas of instruction. Graduates find employment as entry level employees in structural steel fabricating shops with heavy equipment rebuilders and manufacturers, mining, refineries, process pipelines, and other energy related enterprises in the region. Also, graduates may qualify for advanced placement in the Ironworkers, Pipefitters or Boilermakers Unions. The learner objectives for the program are:

Upon successful completion of this program a student will be able to:

- Describe and demonstrate welding and metal fabrication safety
- Follow written and oral directions related to welding procedures and fabrication
- Read and draw blueprints
- Set-up and operate hand, semi-automatic, and automatic cutting processes
- Identify material shapes and sizes
- Weld in all positions with a variety of welding processes current with the welding and energy industry
- Weld ferrous and non-ferrous metals with a variety of welding processes
- Operate fabrication equipment common in a welding and fabrication environment

- Identify, select and match filler metals to base metals
- Apply fabrication principles and practices
- Prepare parts for assembly and welding
- Understand and apply welding metallurgy to weldments
- Understand and apply CNC processes to fabrication and welding
- Formulate a plan for assembly and welding of weldments
- Comprehend and apply inspection and testing methods
- Earn NCCER (National Center for Construction Education and Research) Certification

#### 2. Documented Need:

"Economy, energy and infrastructure are top priorities for our nation" states Montana's U.S. Senator John Tester, who continues that "our infrastructure, especially in rural America, has been neglected for too long" (*Billings Gazette*, Nov. 16, 2008). Despite the recent economic downturn, Montana remains in the midst of a strong industrial and commercial economy. Most of the growth is tied to national expansion within the energy sector. In the past three years statewide, there have been nearly fifty new energy-related projects ranging from wind farms, natural gas and coal-fired generation projects, waste recovery generation, transmission lines, pipelines, manufacturing plants, biofuels plants, oil production and refinery upgrades, and coal mining and new technologies.

In response to a changing global economy and a desire to secure a long-term, reliable, sustainable and affordable energy future, Montana is becoming a leader in the new wave of energy-related projects. In addition, a renewed emphasis on regional infrastructure development (roads, rail lines, bridges, etc.) is anticipated, which requires a pipeline of workers who possess industrial and commercial construction skills including welding technology.

The infrastructure development in the Montana Energy Corridor is poised to help our nation move toward energy independence and to provide the bridge from traditional fossil fuels use to green energy technologies. The already announced projects (Table below) demonstrate the need for increased capacity to produce a well-trained workforce with strong commercial and industrial construction skills. It is critical to provide trained workers in large-scale commercial, industrial construction, and construction and reconstruction of energy related and alternative energy (wind energy) industries at our community college partner institutions.

Commercial and/or Industrial Construction Workers Projected Need in Eastern Montana						
Energy-Related Project	Type of Activity	Estimated Number of Workers	Time Frame When Workers are Needed			
Many Stars Coal to Liquid Plant and Coal Mine	Construction	4,000 <sup>[1]</sup>	2012 - 2016			
Many Stars Coal to Liquid Plant and Coal Mine	Mine and Plant Operation	900 <sup>[2]</sup>	2016 - 2056			
Signal Peak Rail Spur	Construction	250 <sup>[3]</sup>	2008 - 2009			
Signal Peak Loading Facility	Construction	250 <sup>[4]</sup>	2008 - 2009			
Signal Peak Mine	Mine Operation	220 <sup>[5]</sup>	2008 - 2108			
Keystone Pipeline system (TransCanada and ConocoPhillips Project)	Construction	1,500 <sup>[6]</sup>	2010 - 2012			
Highwood Generating Station	Construction	650 <sup>[7]</sup>	2008 - 2012			
Highwood Generating Station	Plant Operation	75 <sup>[8]</sup>	2012 - 2062			
Montana Alberta Tie Line (MATL)	Construction	55 <sup>[9]</sup>	2009 - 2010			
Wind Hunter, NaturEner and Invenergy Wind Farms	Construction	600 <sup>[10]</sup>	2010 - 2020			
TOTAL		8,500				

Source: South Central JobLINC, see attachment, Nov. 2008

We anticipate announcements for new projects including additional wind farms, expansion of the oil refining capacity, bio-fuels plants and clean coal projects that are in the planning and permitting phase. These projects, along with anticipated road, bridge and other infrastructure development, will expand the demand for trained workers. Thus, there will be a continued need for large scale industrial and commercial construction workers in the Montana Energy Corridor into the middle of the 21<sup>st</sup> century to meet the nation's energy independence goals.

As the nation struggles with the recent economic challenges, it is crucial to provide workforce training for new workers, incumbent workers, displaced workers, returning veterans, etc. A week prior to this proposal submission, a major metals underground mining facility that produces platinum and palladium for automobile catalytic converters (and other products) announced significant lay-offs of workers. These highly skilled workers will need retraining to enter the energy and construction arena that will provide continued employment despite hard economic times related to the domestic automobile industry. We must integrate our community and tribal colleges, our workforce service One-Stop Centers, our labor unions, community organizations and business partners to build the capacity to train and re-train our domestic workforce to be competitive in today's economy.

Area	<b>‡</b> Code <b>‡</b> Industry	Est Yr- Proj Yr	2006 Estimated Employment	2016 Projected Employment	Annual Growth Rate	Numeric Change	Percent Change
MONTANA	101200 Construction	2006- 2016	37 397	42,888	2.8	10,496	32.4
MONTANA	236000 Construction of Buildings	2006- 2016	8,910	12,400	3.4	3,490	39.2
MONTANA	Fabricated 332000 Metal Produc Manufacturing		1 408	1,800	2.5	392	27.8

Additional Employers:

Berry Y & V – 200+ Welders and Fabricators – Hire Date August 2009

Teton Steel – 8 Employees in Billings – providing rebar for the Wind Industry in Montana

Texas firm Wind Hunter - the Butte plant is expected to employ 150 people, many of them electricians and welders. It also could be expanded to manufacture the 150-foot blades on wind machines, creating an additional 600 jobs.

#### 3. Additional Courses:

All courses have been either fully developed or partially developed. Several have been successfully offered as experimental special topics. New courses will be developed through support from the US-Department of Labor grant. Standard MSUB curricular processes have been used to review and approve all new courses.

## II. Adequacy, Accreditation, Assessment, and Facilities

#### 1. Adequacy of Present Faculty, Facilities, Equipment, and Library Holdings

Working with the Assistant Director of the MSU Billings Library, a review of existing and new periodical and journal subscriptions will be investigated. Increased use of the University's subscriptions to research databases is anticipated.

Students will be expected to utilize the existing open computer labs and a dedicated computer lab for completion of homework and instruction in solid modeling.

Equipment sufficient to start this newly proposed program exists. The US-DOL Engery grant has been instrumental in assisting the program faculty to purchase new and additional equipment in anticpation of implementing a 2-year AAS in Welding Technololgy. In addition, regional businesses and industries have expressed a desire to assist the College to maintain the currency of equipment for program instruction.

Current facilities will be adequate to support program expansion and projections.

#### 2. Accreditation

## AWS Accreditation for this program will be sought after the first full year of instruction: 2010

#### 3. Assessment Plan

NCCER and AWS standards. Students will be able to successfully pass the AWS.

Entry level: entering students should have the ability to read, write, and have basic math skills.

Intermediate assessment: intermediate students should have developed skills in SMAW all positions, FCAW and GMAW in all positions, blueprint reading, various cutting process, basic layout for structural steel, and be able to develop and implement a plan for building a structure or project.

End of instruction assessment: students will possess a variety of welding, layout, and fabrication skills leading to successful employment in the energy industry as determined by graduate and employer surveys.

Program Review will include: annual reports will be developed using MSU Billings' process; 7-year program review process will be used for Board of Regents compliance.

Assessment of student knowledge skills will include: objective quizzes, tests, exams; written essays; practical exams (weld tests); weld test certification.

Benchmarking against best practices: Because this program has aligned its curriculum with national standards-based curricula, ongoing program review and program updates will be instituted to maintain these alighments.

Plan for implementation for assessment: Students' weld test scores will be recorded and reported in the program's annual report. These scoress will be aggratated over a three-year period and percentages will be extrapolated to create a baseline or expected measure of student success. In addition to this information and that derived from NCCER and AWS, program improvements will be considered each year.

Program advisory committee: A program advisory committee is already in existence for the current Welding Applied Certificate Program. This committee will serve a vital role in the program assessment and curricular review process.

## III. Impact on Faculty, Costs, Enrollment, Other Campus Programs

#### 1. Impact on Faculty

US Department of Labor grant funding will provide the additional faculty needed to support the creation and scheduling of topics and additional sections of traditional courses.

## 2. Cost Analysis

To be included in appendix

#### 3. Enrollment Impact

Initial enrollment goals will be 20 students annually. Prospective students will only be accepted during fall or spring semesters.

#### 4. Relationship to Other Campus Programs

This new program contributes to the wealth of educational opportunities available for students and incumbent workers in the University's service area.

### 5. Relationship to Other Institutions

Nearly 75% of the MSU Billings COT students enroll from a sixty mile radius of Billings. It is anticipated that this program will serve primarily a local and regional need. Efforts will be made to collaborate with other two-year welding and metal fabrication programs in the state to ensure transferability and possible future collaborative grants.

### **IV. Proposal Development Process**

The proposal has been developed through the research work of a number entities at MSU Billings including, the College of Technology's Welding Program Advisory Committee, the successful completion of a DACUM study (develop a curriculum study) through the participation of five local industries and through the support of the US-Department of Labor Energy for Tomorrow grant.

#### ITEM:

### **Course Descriptions**

## Welding and Metal Fabrication Technology Associate of Applied Science Degree.

The Transportation and Industry department of the MSU Billings College of Technology seeks temporary approval to begin offering both an Associate of Applied Science degree in Welding and Metal Fabrication and a Certificate of Applied Science degree in Welding for Energy Technology. The Associate of Applied Science degree is usually completed in four semesters. The Applied Certificate will be completed in two semesters and is comprised of the courses offered during the second year of the AAS plan of study. The welding and metal fabrication CAS/AAS curricula emphasizes the fundamentals of all welding, cutting, print reading, layout, fabrication, testing and CNC processes associated with the welding field of study and prepares students for employment in the structural steel and pipe welding industries. The Applied Certificate in Energy Technology will be marketed to prospective students who already possess the requisite skills or have the experience necessary to place them in the second year of the program. This applied certificate provides foundational skills for employment as a welding technician in the energy industry.

The program will gain NCCER (National Center for Construction Education and Research) and AWS (American Welding Society) certification in all areas of instruction. Graduates find employment as entry level employees in structural steel fabricating shops with heavy equipment rebuilders and manufacturers, mining, refineries, power plants and other energy related enterprises in the region. Also, graduates may qualify for advanced placement in the Ironworkers, Pipefitters or Boilermakers Unions. In addition, the program will provide skills necessary to assist with the construction of new "wind energy" units.

Required Courses72 Credits
COMT 109 Human Relations3
ENGL 140 Business Writing
MATH 122 College Math for Technology3
CMP 105 Introduction to Computers and Applications3
METL 111 Welding Technology, Theory, and Safety3
METL 112 Blueprint Reading and Welding Symbols3

METL 113 Cutting and Shielded Metal Arc Welding Lab	5
METL 114 Shield Metal Arc Welding Lab	4
METL 151 Layout and Pattern Making Fundamentals	3
METL 152 Metal Fabrication Basics	2
METL 153 Metal Fabrication Lab	3
METL 154 Semi-Automatic Welding	2
METL 155 Semi-Automatic Welding and SMAW Lab	5
METL 211 Pipe Welding and Layout	3
METL 212 Pipe Welding Lab	5
METL 213 Gas Tungsten Arc Welding	
METL 214 Advanced Weld Technology and Theory	2
METL 251 Special Welding Processes	5
METL 252 CNC Process for Metal Fabrication	5
METL 253 Testing and Certification	2
METL 254 Testing and Certification Lab	3-6
Total Minimum Credits Required	72

# Welding for Energy Technology Certificate of Applied Science

The Transportation and Industry department of the MSU Billings College of Technology seeks temporary approval to begin offering both an Associate of Applied Science degree in Welding and Metal Fabrication and a Certificate of Applied Science degree in Welding for Energy Technology. The Associate of Applied Science degree is usually completed in four semesters. The Applied Certificate will be completed in two semesters and is comprised of the courses offered during the second year of the AAS plan of study. The welding and metal fabrication CAS/AAS curricula emphasizes the fundamentals of all welding, cutting, print reading, layout, fabrication, testing and CNC processes associated with the welding field of study and prepares students for employment in the structural steel and pipe welding industries. The Applied Certificate in Energy Technology will be marketed to prospective students who already possess the requisite skills or have the experience necessary to place them in the second year of the program. This applied certificate provides foundational skills for employment as a welding technician in the energy industry.

The program will gain NCCER (National Center for Construction Education and Research) and AWS (American Welding Society) certification in all areas of instruction. Graduates find employment as entry level employees in structural steel fabricating shops with heavy equipment rebuilders and manufacturers, mining, refineries, power plants and other energy related enterprises in the region. Also, graduates may qualify for advanced placement in the Ironworkers, Pipefitters or Boilermakers Unions. In addition, the program will provide skills necessary to assist with the construction of new "wind energy" units.

Required Courses39	Credits
COMT 109 Human Relations	3
ENGL 102 English Essentials for Technical Writers	3
MATH 103 Essential Math for the Trades	3
METL 211 Pipe Welding and Layout	3
METL 212 Pipe Welding Lab	5

METL 213 Gas Tungsten Arc Welding	5
METL 214 Advanced Weld Technology and Theory	2
METL 251 Special Welding Processes	5
METL 252 CNC Process for Metal Fabrication	5
METL 253 Testing and Certification	2
METL 254 Testing and Certification Lab	3
Total Minimum Credits Required	39

### **AAS Degree Welding and Metal Fabrication Technology**

#### & Applied Certificate in Welding for Energy Technology

### **Course Descriptions**

#### METL 111 - Welding Technology, Theory, and Safety (3 lecture credits)

Examines and presents welding and shop safety, oxy-fuel safety, base metal preparation, weld quality, SMAW equipment and set-up, electrode selection, and joint design and fit-up. Other topics introduced are air carbon arc cutting, plasma cutting and beginning pipe welding.

## METL 112 - Blueprint Reading and Welding Symbols (3 lecture credits)

Introduces the student to structural steel, piping, and mechanical blueprint reading. Hand sketching of orthographic and isometric drawings are taught along with weld symbols, and solid modeling for blueprint design.

### METL 113 – Cutting and Shielded Metal Arc Lab I (5 lab lecture credits)

SMAW process. Student learning includes manual and semi automated oxy-acetylene leads the student toward American Welding Society D1.1 and American Society of Mechanical Engineers Section IX structural certification for 6010 electrodes using the cutting, air carbon arc cutting, plasma arc cutting, and equipment set-up. Welding shop safety and quality are emphasized.

## METL 114 – Shielded Metal Arc Lab II (5 lab lecture credits)

Continues METL 113, which leads the student toward American Welding Society D1.1 and American Society of Mechanical Engineers Section IX structural certification for 6010 and 7018 electrodes in all positions. Equipment set-up, operation, weld quality and safety are emphasized.

### METL 151 – Layout and Pattern Making Fundamentals (3 lecture credits)

Provides layout and fitting skills applicable to an industrial welding and fabrication shop, includes reading prints, estimating, and ordering materials. Employs simple layout, parallel line development, radial line development, and triangulation for pattern development.

#### METL 152 – Metal Fabrication Basics (2 lecture credits)

Introduces metal fabrication procedures and safe operation of fabrication equipment, including shears, press-brakes, ironworkers, punches, drill presses and CNC plasma table. Common terminology, fabrication theory, material use and equipment safety are taught.

#### METL 153 – Metal Fabrication Lab (3 lab lecture credits)

Techniques learned in METL 151, METL 152, and METL 154 are used to perform layout, cutting and fabrication, fitting pieces into assemblies, and weld-out procedures applicable to fabricating a finished product or project, includes the proper use of fabrication equipment and shop practices. Safety, accuracy, quality and a commitment to excellence are emphasized. Projects are assigned.

### METL 154 – Semi-Automatic Welding (2 lecture credits)

Prepares and teaches students in the basic knowledge of Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW) shielded and non-shielded, and GMAW-Pulsed. Equipment needs, setup, joint design, filler metals, shielding gases, welding techniques and safety will be taught.

#### METL 155 – Semi-Automatic and SMAW Lab III (4 lab lecture credits)

Continuation of METL 103 with the introduction of semi-automatic wire feed processes. This course leads to AWS and ASME certification of plate (all positions) with the SMAW, GMAW, GMAW-P, and FCAW-G, and FCAW processes. Safe practices and weld quality are major considerations

#### METL 211 – Pipe Welding and Layout (2 credits lecture 1 credit lab)

Provides the second year welding student with an introduction to pipe layout, fitting, and welding. Instructs students in piping information, basic pipe layout practices, use of pipe layout tools and basic pipe welding techniques for 1G rolled position, 2G, 5G and 6G fixed position using 6010 and 7018 electrodes. Safety, quality and proper welding techniques according to industrial standards are stressed.

#### METL 212 – Pipe Welding Lab I (5 lab lecture credits)

METL 202 is a continuation of METL 201. Students will practice pipe layout, fitting, and welding techniques in the 1G rolled position, the 2G, 5G, and 6G fixed position using 6010, 7018 welding electrodes and semi-automatic wire processes. Quality and safety will be emphasized.

#### METL 213 – Gas Tungsten Arc Welding (2 credits lecture 3 lab credits)

Provides an intense course in all aspects of manual gas tungsten arc welding (GTAW). Course covers welding techniques and applications, equipment setup, and procedures for ferrous and non-ferrous metals. Quality and safety will be stressed.

#### METL 214 – Weld Theory II (2 lecture credits)

Introduces the student to weld ability of metals, welding metallurgy, welding automation and robotics, related cutting and welding processes.

#### METL 251 – Specialty Welding Processes (2 credits lecture 3 credits lab)

Provides welding students with the practices and difficulties welding high carbon and low alloy steels, cast iron, stainless steel, and aluminum with SMAW, GTAW, GMAW, and FCAW. Welding safety will be a proponent of this course.

#### METL 252 – CNC Processes for Metal Fabrication (2 credits lecture 3 credits lab)

Introduces the student to CNC processes used in metal fabrication. Students will learn how to understand and use machine post processors and controllers. Covers programming of metal shears, metal brakes, plasma cutting tables and programming basic operations on CNC lathes and mills. Master Cam CNC programming software and Solid Works solid modeling software will be taught and used.

#### METL 253 – Weld Testing and Certification (2 lecture credits)

Prepares the student for weld testing and certification. Covers destructive and nondestructive testing for weld inspection. Students learn the weld certification process and welding codes governing welding.

#### METL 254 – Weld Testing and Certification Lab (3 lab credits)

Students prepare, practice and certify for plate and pipe according to AWS D1.1, API 1104, and ASME Section IX codes and standards.

# **LEVEL I REQUEST FORM**

item No.:		145-2709+R0509 Date of Meeting: May 26-29, 2009
Institution:		Montana State University-Billings
Program Title:		Name Change to Department of English, Philosophy, and Modern Languages From English and Philosophy
evel l	nronosals a	those may be approved by the Commissioner of Higher Education or the
Commi the nex	ssioner's de t regular me	gnee. The approval of such proposals will be conveyed to the Board of Regents at ing of the board. The institution must file the request with the Office of the ner Education by means of a memo to the Deputy Commissioner.
$\boxtimes$	initiatives ty mission; an	ction requested (check all that apply): Level I proposals include campus cally characterized by (a) minimal costs; (b) clear adherence to approved campus (c) the absence of significant programmatic impact on other institutions within the versity System and Community Colleges.
	1.	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
	<u> </u>	Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
	☐ 3.	Adding new minors or certificates where there is a major;
	<ul><li> 4.</li><li> 5.</li><li> 6.</li></ul>	Departmental mergers and name changes;
	□ 5.	Program revisions; and
	6.	Distance delivery of previously authorized degree programs.
	chief acade for inclusion designee m	vith Level II documentation: With Level II documentation circulated to all campus ic officers in advance, the Commissioner or designee may propose additional items in the Level I process. For these items to move forward, the Commissioner or st reach consensus with the chief academic officers. When consensus is not Commissioner or designee will move the item to the Level II review process.
	1	Options within an existing major of degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of
	☐ 3.	Technology where changes require Board action; Consolidating existing programs and/or degrees.
	Science De documenta public secto	ary Certificate or A.A.S. degree programs: Certificate or Associate of Applied ree Programs may be submitted as Level I proposals, with memo and backup on, when they are offered in cooperation with and/or at the request of private or partners and the decision point to offer the program is not consistent with the regular ents 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.

Item No.: 143-2709+R0509 Institution: Montana State University-Billings

All other 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.

## **Specify Request:**

Montana State University-Billings requests permission to change a department name in the College of Arts and Sciences from English and Philosophy to English, Philosophy, and Modern Languages. The Department of Modern Languages and Literatures has merged with the Department of English and Philosophy and the proposed name change will better reflect the curriculum and intent of the Academic Programs.

# LEVEL I REQUEST FORM

Item No.: 143-2801+R0509		Date of Meeting:	May 28-29, 2009	
Institution:	Montana State University-Northern			
Program Title: Online Delivery Of Bach		elor Of Science In Bus	iness Administration	

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

	eeting of the board. The institution must file the request with the Office of the Higher Education by means of a memo to the Deputy Commissioner.
typically and (c)	action requested (check all that apply): Level I proposals include campus initiatives characterized by (a) minimal costs; (b) clear adherence to approved campus mission; the absence of significant programmatic impact on other institutions within the Montanaity System and Community Colleges.
<ul><li>□ 1.</li><li>□ 2.</li></ul>	Mechanized Agriculture to B.S. in Agricultural Operations Technology);
□ 3. □ 4. □ 5. □ 6.	Adding new minors or certificates where there is a major; Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes;
⊠ 7.	Distance delivery of previously authorized degree programs.
chief ac items fo or desig	with Level II documentation: With Level II documentation circulated to all campus cademic officers in advance, the Commissioner or designee may propose additional or inclusion in the Level I process. For these items to move forward, the Commissioner gnee must reach consensus with the chief academic officers. When consensus is not ed, the Commissioner or designee will move the item to the Level II review process.
☐ 1. ☐ 2.	Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action;
☐ 3.	Consolidating existing programs and/or degrees.
Science docume public s regular provisio	rary Certificate or A.A.S. degree programs: Certificate or Associate of Applied Degree Programs may be submitted as Level I proposals, with memo and backup entation, when they are offered in cooperation with and/or at the request of private or ector partners and the decision point to offer the program is not consistent with the Board of Regents program approval process. Level I approval for programs under this on will be limited to two years. Continuation of a program beyond the two years will the normal program approval process as Level II Proposals.
	All other 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

Item No.: 143-2801+R0509 Institution: Mo	ntana State University-Northern
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## **Specify Request:**

Montana State University-Northern requests permission to deliver the existing Bachelor of Science in Business Administration degree online in addition to the existing traditional, on-campus offering. Eleven of the eighteen courses required in the business degree are already offered online. The remaining five business courses required for the degree are in the process of being converted to an online format. If approved, the online degree offering will begin in the Fall 2009 term.

# **LEVEL I REQUEST FORM**

Item No.:	143-2802+R0509	Date of Meeting:	May 28-29, 2009
Institution:	Montana State University-Northern		
Program Title:	Approval For Community Service Minor Name Change To Community Leadership Minor		Change To Community

Com the n	missi ext r	ioner's desig egular meet	those that may be approved by the Commissioner of Higher Education or the gnee. The approval of such proposals will be conveyed to the Board of Regents at ing of the board. The institution must file the request with the Office of the ner Education by means of a memo to the Deputy Commissioner.
	A.	typically ch and (c) the	ion requested (check all that apply): Level I proposals include campus initiatives aracterized by (a) minimal costs; (b) clear adherence to approved campus mission; absence of significant programmatic impact on other institutions within the Montana System and Community Colleges.
		_	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology); Eliminating existing majors, minors, options and certificates via a Program
		3. 4. 5. 6.	Termination Checklist; Adding new minors or certificates where there is a major; Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes; Program revisions; and
		7.	Distance delivery of previously authorized degree programs.
	B.	chief acade items for in or designed	h Level II documentation: With Level II documentation circulated to all campus emic officers in advance, the Commissioner or designee may propose additional clusion in the Level I process. For these items to move forward, the Commissioner e must reach consensus with the chief academic officers. When consensus is not he Commissioner or designee will move the item to the Level II review process.
		1. 2.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action; Consolidating existing programs and/or degrees.
	C.	Temporary Science De documenta public sect regular Boa provision w	y Certificate or A.A.S. degree programs: Certificate or Associate of Applied egree Programs may be submitted as Level I proposals, with memo and backup attion, when they are offered in cooperation with and/or at the request of private or partners and the decision point to offer the program is not consistent with the ard of Regents program approval process. Level I approval for programs under this will be limited to two years. Continuation of a program beyond the two years will normal program approval process as Level II Proposals.
			All other 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

Item No.: 143-2802+R509	Institution: Montana State University-Northern
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# **Specify Request:**

Montana State University-Northern requests permission to change the name of its existing Community Service minor to Community Leadership minor, a name that has been found to be clearer in focus and more amenable to potential employers and students.

# LEVEL I REQUEST FORM

Item No.:	143-2803+R0509	Date of Meeting:	May 28-29, 2009
Institution:	Montana State University-Northern		
Program Title:	Bachelor Of Arts In Community Service Name Change To Bachelor Of Arts In Community Leadership		

Level I proposals are those that may be approved by the Commissioner of Higher Education or the

Com the r	missionext re	oner's designation	gnee. The approval of such proposals will be conveyed to the Board of Regents at ing of the board. The institution must file the request with the Office of the her Education by means of a memo to the Deputy Commissioner.
		typically chand (c) the	<b>Lion requested (check all that apply):</b> Level I proposals include campus initiatives aracterized by (a) minimal costs; (b) clear adherence to approved campus mission; absence of significant programmatic impact on other institutions within the Montana System and Community Colleges.
	$\boxtimes$	1.	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
		2.	Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
		3.	Adding new minors or certificates where there is a major;
		4.	Adding new minors or certificates where there is an option in a major;
		5.	Departmental mergers and name changes;
		6.	Program revisions; and
		7.	Distance delivery of previously authorized degree programs.
		items for ir or designe	emic officers in advance, the Commissioner or designee may propose additional aclusion in the Level I process. For these items to move forward, the Commissioner e must reach consensus with the chief academic officers. When consensus is not the Commissioner or designee will move the item to the Level II review process.
		] 1. ] 2.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of
			Technology where changes require Board action;
		3.	Consolidating existing programs and/or degrees.
		Science Do documenta public sect regular Bo provision v	y Certificate or A.A.S. degree programs: Certificate or Associate of Applied egree Programs may be submitted as Level I proposals, with memo and backup ation, when they are offered in cooperation with and/or at the request of private or or partners and the decision point to offer the program is not consistent with the ard of Regents program approval process. Level I approval for programs under this will be limited to two years. Continuation of a program beyond the two years will normal program approval process as Level II Proposals.
			All other 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

Item No.: 143-2803+R509 Institution: Montana State University-Northern	
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# **Specify Request:**

Montana State University-Northern requests permission to change the name of its existing Bachelor of Arts in Community Service to Bachelor of Arts in Community Leadership; a name that has been found to be clearer in focus and more amenable to potential employers and students.

# **LEVEL I REQUEST FORM**

Item No.:	143-2852+R0509	Date of Meeting:	May 28-29, 2009
Institution: Montana State University-Great Falls CO		y-Great Falls COT	
Program Title:	Certificate Of Applied So	cience In Collision And	Refinishing Technology

Com the r	missione ext regu	er's desig ılar meeti	nose that may be approved by the Commissioner of Higher Education or the nee. The approval of such proposals will be conveyed to the Board of Regents at ng of the board. The institution must file the request with the Office of the er Education by means of a memo to the Deputy Commissioner.
	tyr an	oically chand (c) the	on requested (check all that apply): Level I proposals include campus initiatives aracterized by (a) minimal costs; (b) clear adherence to approved campus mission; absence of significant programmatic impact on other institutions within the Montana System and Community Colleges.
		1. 2.	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology); Eliminating existing majors, minors, options and certificates via a Program
		۷.	Terminating Checklist;
		3.	Adding new minors or certificates where there is a major;
		4.	Adding new minors or certificates where there is an option in a major;
		5.	Departmental mergers and name changes;
	$\bowtie$	6.	Program revisions; and
		7.	Distance delivery of previously authorized degree programs.
	ch ite or	ief acade ms for ind designee	Level II documentation: With Level II documentation circulated to all campus mic officers in advance, the Commissioner or designee may propose additional clusion in the Level I process. For these items to move forward, the Commissioner must reach consensus with the chief academic officers. When consensus is not ne Commissioner or designee will move the item to the Level II review process.
		1. 2.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of
			Technology where changes require Board action;
		3.	Consolidating existing programs and/or degrees.
	Sc do pu re pr	cience De ocumenta oblic secto gular Boa ovision w	Certificate or A.A.S. degree programs: Certificate or Associate of Applied gree Programs may be submitted as Level I proposals, with memo and backup tion, when they are offered in cooperation with and/or at the request of private or or partners and the decision point to offer the program is not consistent with the ard of Regents program approval process. Level I approval for programs under this till be limited to two years. Continuation of a program beyond the two years will normal program approval process as Level II Proposals.
			All other 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

Item No.: 143-2852+R509 Institution: Montana State University-Great Falls COT
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# **Specify Request:**

Montana State University-Great Falls College of Technology seeks approval from the Montana Board of Regents to phase out the College's Auto Body Repair and Refinishing AAS degree and move to a Certificate of Applied Science in Collision and Refinishing Technology.

# COLLISION AND REFINISHING TECHNOLOGY MSU-GREAT FALLS COLLEGE OF TECHNOLOGY

Curriculum Proposal

#### 1. Overview

Montana State University-Great Falls College of Technology (herein after "the College") is requesting approval by the Montana Board of Regents to offer a Certificate of Applied Science in Collision and Refinishing Technology.

#### 2. Need

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

The College currently offers an Auto Body Repair and Refinishing AAS degree. Student retention between first and second year has varied over the past six years, but the recent trend has been down, making the program unsustainable because of the low number of students in this specialty field. Although there are no hard data to support it, the college's recruiter reports students potentially interested in the field are often discouraged when told they must complete two years of college. Many of them come from high school programs or have some limited experience. Additionally, the instructor and advisory board members note it is difficult to encourage students to return after a summer break.

Official placement data measure only those students who graduate so, even though placement is good (60% or higher), the low number of students means the program is succeeding in placing only a handful of graduates.

Advisory board members have advised the program director that they value the skill set the students learn above the actual AAS degree. Switching the AAS program to a one-year CAS program will allow students to focus on essential skills and still give them an employable skill set. This is supported by the Montana Department of Labor, which reports auto body repairers need at least 12 months of on-the-job training and job-seekers with some formal training will be more employable than those without.

An additional opportunity has arisen with the location of Avmax, an aircraft refinishing business, in Great Falls. Students in the Auto Body program do some of their training at the facility and because the skill set is so similar, the firm has employed several Autobody Repair and Refinishing students as technicians. Changing the name to the more generic Collision and Refinishing Technology will more clearly identify the skills of these technicians and will improve the college's recruitment success.

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

Collision and Refinishing Technology CAS graduates will be able to complete the program in two semesters, giving them a faster path into the workplace. The two-semester program is modeled after programs at Wyoming Tech and Universal Technical Institute. Those programs offer certificates based on 900-1000 hours of training. Students who continue on past the certificate learn management. The instructor further reports improvements in technology have eliminated some previously labor-intensive techniques that are no longer used. These technology changes have meant that by the final semester, much of the instruction and practice are repetitive. By streamlining the curriculum, the learning will be more focused on the specific skills that will be most useful.

Employers will get entry-level skilled workers with a basic skill set to fill anticipated demand and reduce on-the-job training requirements.

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

There are approximately 50 auto body repair businesses listed in the telephone directory from the Great Falls and surrounding area, with more businesses that do not advertise. The College contacted a sample of them to determine a significant local demand for graduates with collision and refinishing skills. Many local businesses are concerned about an aging workforce needing to be replaced over the next five years. The Montana Department of Labor reports there are 920 auto body repairers in the state and projects a growth rate of 23%, faster than the statewide average for all occupations, through the year 2016. The department projects 43 job opening statewide each year. This does not include the aircraft refinishers.

#### 3. Institutional and System Fit

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

The College currently offers an Auto Body Repair and Refinishing AAS degree. The Collision and Refinishing Technology CAS contains an updated curriculum and an industry appropriate name change. The program will occupy the same space as the previous program and retain the same faculty member. The College has no other automotive-related programming, but does offer programming in Construction Carpentry and Welding Technology and is developing industrial trades and wind energy technician programs. The Collision and Refinishing instructor also serves as department chair. The College does not anticipate the change will impact the instructor's program chair duties. In fact, having to teach both first and second year students was difficult for one faculty member to manage.

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

The proposal is to phase out the College's Auto Body Repair and Refinishing AAS degree and move to a certificate program. Current students will complete the AAS no later than Spring 2010, when the program will be placed in moratorium. Students entering Fall 2009 and later will enter the CAS in Collision and Refinishing Technology.

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

There are no closely related programs. The College offers two other trades programs: a Welding Technology CAS and Construction Technology Carpentry CAS and AAS programs.

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

In alignment with the strategic plan of the Montana Board of Regents, the College is committed to increasing participation of students in post-secondary education, specifically two-year programming, as well as increasing the number of students earning a credential. The switch to a one-year CAS program will lead to more graduates while maintaining employability.

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.

Montana State University – Northern has an AAS in Automotive Technology: Automotive Body and a CAS in Automotive Technology with an Auto Body option.

Montana State University – Billings College of Technology has an AAS in Automobile Collision Repair and Refinishing Technology and CAS programs in Automobile Refinishing Technology and Automobile Collision Repair

Since the College has had an AAS in Auto Body Repair and Refinishing and is replacing it with the CAS in Collision and Refinishing Technology, there is no additional duplication within the Montana University System. The program also develops the aircraft refinishing, which is a specialize niche only in Great Falls.

## 4. 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.

The programs' curricula are included in Appendix A.

#### 5. 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 additional faculty resources are required to implement this program. Existing Auto Body Repair and Refinishing faculty will teach in the Collision and Refinishing Technology CAS program.

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 additional resources are required. Existing Auto Body Repair and Refinishing facilities, equipment, and classrooms will be used for the Collision and Refinishing Technology CAS program.

#### 6. Assessment

The proposed program will be assessed using the College's institutional outcomes assessment practices. These include assessing standard performance metrics such as graduation/completion rates, student retention, and enrollments. The program also will undergo an internal program review as required by Board of Regent Policy and standard College practice. In addition, the program's student learning outcomes will be assessed to evaluate student success in obtaining the skills identified as goals of the program.

#### 7. Process Leading to Submission

The College's Auto Body Repair and Refinishing AAS advisory board has approved the curriculum changes. Great Falls area auto collision and refinishing and airplane refinishing businesses were contacted to determine a significant local demand for graduates with collision and refinishing skills. The curriculum has been approved by the College's Curriculum Committee as of April 2009.



# Appendix A Collision and Refinishing Technology Certificate of Applied Science

#### **PROGRAM OUTCOMES**

Graduates are prepared to:

- Identify and demonstrate proper safety practices and procedures;
- Formulate a repair plan based on currently accepted practices;
- Straighten and align damaged sheet metal panels;
- Prepare and apply accepted filler materials;
- Remove, align and install bolt-on components;
- Execute proper sheet metal welding techniques;
- Prepare a vehicle for spot or complete refinishing;
- Mix and apply modern automotive refinish materials;
- Demonstrate a clear understanding of both written and verbal communication skills.

#### **FALL SEMESTER**

Course No.	Title	Credits
TBXXX	Intro to Collision Repair	4
TBXXX	Non-Structural Collision Repair	4
WELDXXX	Welding Sheet Metal	1
TBXXX	Intro to Refinishing	4
M111	Technical Mathematics	3

**Subtotal 16** 

#### **SPRING SEMESTER**

Course No.	Title	Credits
TBXXX	Structural Collision Repair	6
TBXXX	Plastic and Composite Repair	3
TBXXX	Advanced Refinishing	4
COMMXXX	Interpersonal Skills in the Workplace	1
WRITXXX	Communicating in the Workplace	2

**Subtotal 16** 

**Total Program Credits – 32** 

## Collision and Refinishing Technology Certificate of Applied Science

#### **COURSE DESCRIPTIONS**

### Intro to Collision Repair - TBXXX

4 Credits (2 lecture credits - 30 hours, 2 lab credits - 90 hours)

Co requisite: All first semester Collision Repair courses

Covers shop safety, the handling of hazardous materials and toxic waste, basic methods and tools used in the repair of automotive sheet metal, proper methods of metal identification and automobile construction. Students are also introduced to estimating, damage analysis, the proper use and care of tools, measuring devices, fasteners and shop manuals.

#### Non- Structural Collision Repair - TBXXX

4 Credits (1 lecture credit - 15 hours, 3 lab credits - 135 hours)

Co requisite: All first semester Collision Repair courses

Covers proper assessment, removal, replacement and alignment methods used on today's vehicles. Students are also trained in the proper set up and use of Metal Inert Gas (MIG) welding equipment.

#### Welding Sheet Metal - WELDXXX

1 Credit (1 lab credit – 45 hours)

Co requisite: All first semester Collision Repair courses

Covers the basic methods and techniques used when Metal Inert Gas (MIG) welding sheet metal. This class focuses on the thinner gauge metals used on today's automobiles.

## Intro to Refinishing – TBXXX

4 Credits (1 lecture credit – 15 hours, 3 lab credits – 135 hours)

Co requisite: All first semester Collision Repair courses

Introduces students to proper preparation and application techniques, including blending of color coats, used when applying modern undercoats and refinish topcoats, with a strong emphasis on personal safety. Students also learn the causes, prevention and repair methods associated with various paint defects.

#### **Structural Collision Repair – TBXXX**

6 Credits (2 lecture credits – 30 hours, 4 lab credits – 180 hours)

Prerequisite: All first semester Collision Repair courses Co requisite: All second semester Collision Repair courses

Covers methods used in the inspection, measurement, and repair of structural body damage. This class adheres to guidelines as prescribed by vehicle manufacturers, I-CAR and ASE.

#### Plastic and Composite Repair – TBXXX

3 Credits (1 lecture credit - 15 hours, 2 lab credits - 90 hours)

Prerequisite: All first semester Collision Repair courses Co requisite: All second semester Collision Repair courses

Covers identification, pretreatment, and the repair of plastics and composites that are used in the manufacture of modern automobiles. Students are also trained in the proper refinishing methods required for these materials.

## Advanced Refinishing – TBXXX

4 Credits (1 lecture credit - 15 hours, 3 lab credits - 135 hours)

Prerequisite: All first semester Collision Repair courses Co requisite: All second semester Collision Repair courses

Covers more advanced refinishing topics including the basics of color theory, tinting, and multistage finishes.

May 28-29, 2009

ITEM 143-301-R0509 Cabinet and Furniture Technology Certificate of Applied

Science; Flathead Valley Community College

**THAT:** In response to local workforce needs, the Flathead Valley

Community College Board of Trustees has approved a new 30-credit Certificate of Applied Science in Cabinet and Furniture

Technology.

**EXPLANATION:** 

May 28-29, 2009

ITEM 143-303-R0509 Administrative Assistant CAS and AAS in Moratorium;

Flathead Valley Community College

**THAT:** Flathead Valley Community College Board of Trustees has

approved placing the Administrative Assistant Certificate of Applied Science and the Administrative Assistant Associate of Applied Science in moratorium. This action was recommended

by the program advisory committee and the curriculum

committee due to low enrollments.

**EXPLANATION:** 

# **LEVEL I REQUEST FORM**

Item No.:	143-2704+R0509	Date of Meeting:	May 28-29, 2009
Institution:	Montana State Universit	y-Billings	
Program Title:	Applied Behavioral Analysis Three-Course Sequence Approved For National Certificate		

Level I proposals are those that may be approved by the Commissioner of Higher Education or the

the ne	ext re	egular meetin	nee. The approval of such proposals will be conveyed to the Board of Regents at a g of the board. The institution must file the request with the Office of the er Education by means of a memo to the Deputy Commissioner.
	A.	typically cha and (c) the a	on requested (check all that apply): Level I proposals include campus initiatives racterized by (a) minimal costs; (b) clear adherence to approved campus mission; absence of significant programmatic impact on other institutions within the Montana ystem and Community Colleges.
			Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology); Eliminating existing majors, minors, options and certificates via a Program
		3. 4. 5.	Termination Checklist; Adding new minors or certificates where there is a major; Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes; Program revisions; and
		7.	Distance delivery of previously authorized degree programs.
	В.	chief acader items for inc or designee	Level II documentation: With Level II documentation circulated to all campus nic officers in advance, the Commissioner or designee may propose additional lusion in the Level I process. For these items to move forward, the Commissioner must reach consensus with the chief academic officers. When consensus is not e Commissioner or designee will move the item to the Level II review process.
		] 1. ] 2.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action;
		3.	Consolidating existing programs and/or degrees.
	C.	Science Deg documentati public sector regular Boar provision wil	Certificate or A.A.S. degree programs: Certificate or Associate of Applied gree Programs may be submitted as Level I proposals, with memo and backup on, when they are offered in cooperation with and/or at the request of private or partners and the decision point to offer the program is not consistent with the d of Regents program approval process. Level I approval for programs under this I be limited to two years. Continuation of a program beyond the two years will formal program approval process as Level II Proposals.
		of Regents n	tificate or Associate Degree programs may be placed on submission at any Board neeting. They will be placed on action agendas at subsequent meetings. All gree to insure that all other campuses receive program information well in advance in.

## LEVEL I REQUEST FORM

Item No.:	143-2705+R0509	Date of Meeting:	May 28-29, 2009
Institution:	Montana State Universit	y-Billings	
Program Title:	College Of Education Majors In Political Science And General Science Teaching Options - MBPE Approval		

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.

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$\boxtimes$	typ an	oically cha d (c) the	on requested (check all that apply): Level I proposals include campus initiatives aracterized by (a) minimal costs; (b) clear adherence to approved campus mission; absence of significant programmatic impact on other institutions within the Montana system and Community Colleges.
		1. 2.	Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology); Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
		3. 4. 5. 6.	Adding new minors or certificates where there is a major; Adding new minors or certificates where there is an option in a major; Departmental mergers and name changes; Program revisions; and
	ch ite or	ief acade ms for inc designee	Distance delivery of previously authorized degree programs.  Level II documentation: With Level II documentation circulated to all campus mic officers in advance, the Commissioner or designee may propose additional clusion in the Level I process. For these items to move forward, the Commissioner must reach consensus with the chief academic officers. When consensus is not ne Commissioner or designee will move the item to the Level II review process.
		1. 2. 3.	Options within an existing major or degree; Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools with the exception of the five Colleges of Technology where changes require Board action; Consolidating existing programs and/or degrees.
	So do pu reg pro	cience De cumentat blic secto gular Boa ovision wi	Certificate or A.A.S. degree programs: Certificate or Associate of Applied gree Programs may be submitted as Level I proposals, with memo and backup ion, when they are offered in cooperation with and/or at the request of private or partners and the decision point to offer the program is not consistent with the rd of Regents program approval process. Level I approval for programs under this II be limited to two years. Continuation of a program beyond the two years will normal program approval process as Level II Proposals.

All other 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

Item No.: 143-2705+R0509	Institution: Montana State University-Billings
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#### **Specify Request:**

The College of Arts and Sciences in collaboration with the College of Education offers majors in both Political Science and General Science with Teaching Options. These majors and the teaching options have been previously approved by the Montana Board of Regents.

At its March meeting in Helena, the Montana Board of Public Education approved both programs for licensure. This approval means two things:

- 1. The programs will undergo an accreditation review through the MBPE and the Montana Office of Public Instruction with our NCATE/State accreditation review scheduled April 10th through the 14th, 2010.
- 2. The COE can recommend to the MOPI Licensure Division that individuals completing these programs qualify for teaching endorsements in these areas on their elementary or secondary Montana Teaching License.

Item No.: 143-2704+R0509 Institution: Montana State University-Billings

## **Specify Request:**

The College of Education has been approved to offer Board Certification in Applied Behavior Analysis (BCaBA). This national recognition can be earned through a nine-credit, three-course series. The courses have been previously approved through the Board of Regents as part of the Master of Science in Special Education: Advanced Studies Option. The attached brochure provides detailed descriptions of the course sequence and a web address for information regarding the certificate.

# LEVEL I REQUEST FORM

Item No.:	143-2706+R0509	Date of Meeting:	May 28-29, 2009
Institution:	Montana State Universit	y-Billings	
Program Title:	COE Early Childhood Education and Educational Technology - Areas of Permissive Special Competency (APSC)		

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.

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typic and	cally characte (c) the abse	equested (check all that apply): Level I proposals include campus initiatives erized by (a) minimal costs; (b) clear adherence to approved campus mission; nce of significant programmatic impact on other institutions within the Montanam and Community Colleges.
	Me 2. Elir Ter	ctitling existing majors, minors, options and certificates; (e.g. from B.S. in chanized Agriculture to B.S. in Agricultural Operations Technology); minating existing majors, minors, options and certificates via a Program mination Checklist;
	<ol> <li>4. Ad</li> <li>5. De</li> <li>6. Pro</li> </ol>	ding new minors or certificates where there is a major; ding new minors or certificates where there is an option in a major; partmental mergers and name changes; ogram revisions; and
B. <u>Lev</u> chie item or d	el I with Lever a cademic on some for inclusion esignee mus	el II documentation: With Level II documentation circulated to all campus fficers in advance, the Commissioner or designee may propose additional n in the Level I process. For these items to move forward, the Commissioner treach consensus with the chief academic officers. When consensus is not mmissioner or designee will move the item to the Level II review process.
	2. Elir div <i>Te</i> e	tions within an existing major or degree; minating organizational units within larger institutions such as departments, sions and colleges or schools with the exception of the five Colleges of chnology where changes require Board action; nsolidating existing programs and/or degrees.
Scie doci pub regu prov	ence Degree umentation, v lic sector par ular Board of vision will be	ificate or A.A.S. degree programs: Certificate or Associate of Applied Programs may be submitted as Level I proposals, with memo and backup when they are offered in cooperation with and/or at the request of private or the the decision point to offer the program is not consistent with the Regents program approval process. Level I approval for programs under this limited to two years. Continuation of a program beyond the two years will all program approval process as Level II Proposals.
		All other Certificate or Associate Degree programs may be

All other 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

Item No.: 143-2706+R0509	Institution: Montana State University-Billings
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#### **Specify Request:**

The College of Education offers an undergraduate minor in Early Childhood Education and a Master of Education in Educational Technology. Both have been previously approved by the Montana Board of Regents.

At its March meeting in Helena, the Montana Board of Public Education approved MSU Billings offering both programs as Areas of Permissive Special Competency (APSC). This approval means two things:

- 1. The programs will undergo an accreditation review through the MBPE and the Montana Office of Public Instruction with our NCATE/State accreditation review scheduled April 10th through the 14th, 2010.
- 2. The COE can recommend to the MOPI Licensure Division that individuals completing these programs qualify to have the ASPC noted on their Montana Teaching License.

Montana State University Billings has formally requested that the Montana Board of Public Education consider a proposal to approve the following special permissive competences for inclusion on teacher licenses. The Education faculty believes that the addition of these special permissive competencies will improve our program, better prepare our teacher candidates.

Early Childhood Special Permissive Competency Educational Technology Special Permissive Competency

As a comprehensive, regional, public university serving the educational needs of Montanans and accessible to all who are qualified, Montana State University Billings (MSUB) has the primary mission of preparing students of all ages to be productive and responsible citizens, with special focus on the integration of education with service and an applied rather than basic research mission. The purpose of this proposal is to offer special permissive competencies in Early Childhood Education and Educational Technology. The additional, specialized knowledge, skills, and dispositions that are acquired with completion of these two programs of study positively impact the learning of P-12 students.