LEVEL II MEMORANDUM

DATE: April 29, 2015

TO: Chief Academic Officers, Montana University System

FROM: John Cech, Deputy Commissioner for Academic and Student Affairs

RE: Level II Proposals

The campuses of the Montana University System have proposed new academic programs or changes under the Level II approval process authorized by the Montana Board of Regents. The Level II proposals are being sent to you for your review and approval. If you have concerns about a particular proposal, you should share those concerns with your colleagues at that institution and try to come to some understanding. If you cannot resolve your concerns, raise them at the Chief Academic Officer's conference call on **May 6**. Issues not resolved at that meeting should be submitted in writing to OCHE by noon on **Friday, May 8**. If no concerns are received, OCHE will assume that the proposals have your approval.

Level II Items

Montana State University Bozeman:

- Request for Authorization to Establish a Building Energy Systems Minor
  Item # 167-2016-R0515 | Academic Proposal Request Form | Curriculum Proposal Form
- Request for Authorization to Establish a Ph.D. in Psychological Science
  Item # 167-2017-R0515 | Academic Proposal Request Form | Curriculum Proposal Form
- Request for Authorization to Establish the Center for Health and Safety Culture
  Item # 167-2020-R0515 | Academic Proposal Request Form | Research Center Proposal Form | Attachment #1
- Request for Authorization to Reinstate the Directed Interdisciplinary Degree
  Item # 167-2022-R0515 | Academic Proposal Request Form | Curriculum Proposal Form |Attachment #1
- Request for Authorization to Establish the Center for the Communication of Science
  Item # 167-2023-R0515 | Academic Proposal Request Form | Research Center Proposal Form | Attachment #1

The University of Montana Missoula:

- Request for Authorization to Offer a M.Ed. and Ph.D. in International Educational Leadership
  Item # 167-1001-R0515 | Academic Proposal Request Form | Curriculum Proposal Form
- Request for Authorization to Offer Options in Communication Studies and Professional Communication in the A.A. degree
  Item # 167-1003-R0515 | Academic Proposal Request Form | Curriculum Proposal Form

The University of Montana Western:

- Request for Authorization to Offer a Bachelor of Science in Early Childhood Education: Pre-Kindergarten through Grade 3
  Item # 167-1601-R0515 | Academic Proposal Request Form | Curriculum Proposal Form
- Request for Authorization to Offer a Minor in Government
  Item # 167-1602-R0515 | Academic Proposal Request Form | Curriculum Proposal Form

Helena College of the University of Montana

- Request for Authorization to Establish a Computer Software Professional Certificate of Applied Science
  Item # 167-1904-R0515 | Academic Proposal Request Form | Curriculum Proposal Form | Attachment #1 | Attachment #2 | Attachment #3

May 21-22, 2015

ITEM 167-2016-R0515

Request for Authorization to Establish a Building Energy Systems Minor; Montana State University

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THAT

We propose a new Minor in Building Energy Systems for the students majoring in Mechanical, Mechanical Engineering Technology, Electrical, Civil, Construction Engineering Technology and Architecture (ME, MET, EE, CE, CET, Arch) at Montana State University. The Minor will complement the ongoing cross-disciplinary activities of the College of Engineering and College of Art and Architecture, providing opportunities for students from M&IE, EE, CE and Arch departments.

EXPLANATION

The objective of the proposed Minor program is to identify a key set of existing courses in the undergraduate curricula of ME, MET, CE, CET, EE, and Arch, so that interested students can acquire the cross-disciplinary knowledge and skills necessary for building design. Students in the relevant majors do not ordinarily take courses focusing on the built environment that cross the established discipline boundaries. Therefore, the proposed Building Energy Systems Minor provides a credential recognizing the integration of ME, MET, CE, CET, EE, and Arch, within contemporary architecture and engineering design methodologies.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **167-2016-R0515** Meeting Date: **May 21-22, 2015**

Institution: **Montana State University** CIP Code: **14.1901**

Program Title: **Building Energy Systems Minor**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

___ **A. Notifications:**

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

___ **1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

___ **1b. Withdrawing a program from moratorium**

___ **2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)

___ **3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**

___ **4. BAS/AA/AS Area of Study**

___ **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

___ **1. Re-titling an existing major, minor, option or certificate**

___ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

___ **3. Revising a program** (Curriculum Proposal Form)

___ **4. Distance or online delivery of an existing degree or certificate program**

___ **5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

___ **Temporary Certificate or AAS Degree Program**

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

___ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ **1. Adding an option within an existing major or degree** (Curriculum Proposal Form)

___ **2. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

X **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

X **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

___ **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

___ **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:

The Minor will complement the ongoing cross-disciplinary activities of the College of Engineering and College of Art and Architecture, providing opportunities for students from M&IE, EE, CE and Arch departments.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

A Building Energy Systems Minor at MSU is being sought.

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

We propose a new Minor in Building Energy Systems for the students majoring in Mechanical, Mechanical Engineering Technology, Electrical, Civil, Construction Engineering Technology and Architecture (ME, MET, EE, CE, CET, Arch) at Montana State University. The Minor will complement the ongoing cross-disciplinary activities of the College of Engineering and College of Art and Architecture, providing opportunities for students from M&IE, EE, CE and Arch departments.

3. Need

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

Building Energy Systems is a growing focus area for engineers and architects focused on sustainable and energy efficient building design. Through the integrated design process practicing engineers and architects must work together from the inception of a building project to produce the most sustainable, energy efficient, and high-performing building possible while meeting owner requirements. Traditional approaches to designing buildings centered on each discipline working within their individual silos. In this method architects would design the building with limited input from other disciplines. Once the building was designed, the architects would then contract structural engineers to make sure their design would meet structural requirements. Then the mechanical, electrical, and plumbing engineers would be brought onto the team to ensure the structure would have sufficient heating, ventilating, and air-conditioning, electrical, and plumbing to meet building codes. According to the Department of Energy's 2011 Data Book, residential and commercial buildings account for over 40% of the energy consumed in the United States. As the world population continues to grow the built environment must keep pace with demand while becoming more energy efficient in the process. Just like the automotive industry and other technology industries, the built environment is seeing an increase of smarter and more sustainable products through technological advancements. Architects and engineers can no longer design buildings using traditional methods learned in standalone architecture and engineering educational programs. Industry is demanding students gain experience working in cross-disciplinary teams while being exposed to multiples perspectives when designing the built environment.

The objective of the proposed Minor program is to identify a key set of existing courses in the undergraduate curricula of ME, MET, CE, CET, EE, and Arch, so that interested students can acquire the cross-disciplinary knowledge and skills necessary for building design. Students in the relevant majors do not ordinarily take courses focusing on the built environment that cross the established discipline boundaries. Therefore, the proposed Building Energy Systems Minor provides a credential recognizing the integration of ME, MET, CE, CET, EE, and Arch, within contemporary architecture and engineering design methodologies.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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

Based on national and regional demands, several universities have initiated green engineering and energy systems education. For example, South Dakota State University (http://catalog.sdstate.edu/preview_program.php?catoid=24&poid=4974&returnto=2241) offers a Sustainable Energy Systems Minor and Virginia Tech (http://www.eng.vt.edu/green/electives) offers a Green Engineering Minor. These minors and similar ones found at other universities tend to focus only on engineering students while missing the architecture and construction students. The proposed minor program consists of 4 required courses, 5 electives and 4 prerequisites. The course listings are given in the *Program Details* section of this document.

To our knowledge, there are no institutions in Montana, Washington, Wyoming, Colorado, South Dakota and North Dakota that offer a Minor in Building Energy Systems. Regionally, the University of Colorado offers a Master Degree in Building Systems and South Dakota State University offers a Minor in Sustainable Energy Systems. Thus, a Minor in Building Energy Systems at MSU will serve Montana residents and will potentially lower the barrier for students from other states to choose to attend MSU.

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

No explicit analysis of the demand has been conducted, but prospective students mention an interest in Building Energy Systems routinely during campus visits, and also in interviews with ME, MET, CET, and Arch students. Campus clubs, such as the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), United States Green Building Council (USGBC), American Institute of Architecture (AIA), and the American General Contractors Association (AGC) have expressed a strong desire to have a minor focused on the built environment. Virtually every architecture and engineering workplace has become cross-disciplinary in nature in recent years. MSU's College of Engineering and College of Arts and Architecture also promote a cross-disciplinary approach in education and practice.

4. Institutional and System Fit

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

The proposed Minor is a combination of architecture and civil, construction, electrical, and mechanical engineering. Currently, MSU does not have any similar programs.

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

Two new courses will need to be developed to start the proposed Minor program. The Minor is designed to utilize existing courses, instructors, and lab facilities for the majority of it's curriculum.

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

There is no counterpart of this Building Energy Systems Minor at MSU.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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

This proposed Minor will add to the diverse learning environment of the university as stated in the university's mission statement. Engineering has always been a key component of land grant institutions such as MSU. This proposed Minor will allow architecture and engineering students to expand their opportunities and knowledge base to be productive professionals in a wide variety of job descriptions throughout the communities of Montana.

MSU's College of Engineering (COE) Strategic Plan for the 2014-2019 period: INTEGRATION, Goal: By integrating learning, discovery and engagement, and by working across disciplines, the MSU community will improve the world. Based on the cross-disciplinary nature of current work in academia and industry, the proposed Building Energy Systems Minor is directly aligned to COE's objective to increase work across disciplines and contribute to the metric of number of students completing interdisciplinary programs.

The proposed Minor is inherently cross-disciplinary because of the combination of major courses in six traditional disciplines (ME, MET, CE, CET, EE, and Arch). The proposed Minor will promote cross-disciplinary course enrollments and senior design project participation by students from different discipline majors. Thus, the Minor in Building Energy Systems will enhance and complement the ongoing cross-disciplinary activities at MSU.

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.

To our knowledge, there is no similar program in the Montana University System.

5. Program Details

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

The students seeking Minor in Building Energy Systems must *satisfy the degree requirements for an ME, MET, CE, CET, EE or Arch degree* plus the following courses to obtain a Minor in Building Energy Systems.

Montana State University, Bozeman, proposes to offer a non-teaching minor in building energy systems called the Building Energy Systems Minor. This minor provides a suite of courses from a wide variety of disciplines, which are relevant to the built environment. This minor requires a minimum of **23** credits comprised of **8** credits of required core coursework and **15** credits of elective coursework chosen from each of the 5 categories.

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CURRICULUM PROPOSAL FORM

Students seeking the Building Energy Systems Minor must satisfy the core and additional course requirements, 23 credits total, as outlined below:
Required Pre-requisite Courses (credits not counted towards minor)

It is assumed these pre-requisites will be completed in order for students to satisfy primary degree requirements.

Course		Credits
M 165 or M171	Calculus for Technology I	3
M 166 or M172	Calculus for Technology II	3
PHSX 205 or PHSX 220 or PHSX 240	College Physics I	4
PHSX 207 or PHSX 222 or PHSX 242	College Physics II	4
		14

Required Courses

This minor requires a minimum of **23** credits comprised of **8** credits of required core coursework and **15** credits of elective coursework chosen from each of the 5 categories.

Core Courses		Credits
ARCH 231	Issues in Sustainability *(Potential name change)*	3
EGEN 324 or EMEC 321	Applied Thermodynamics	3
ETME 424	Thermal Processes Lab	1
ETME #TBD	Energy Audit Lab *(New course)*	1
		8

Building Energy Systems Minor Courses

Course Category	Credits
Integrated Building Design	4-5
Power Systems	3-4
Environmental Controls/HVAC	3-4
Building Construction/Design	3-4
Building Information Modeling	2-3
	15-20

Integrated Building Design (Students take at least one of the following:)

ARCH 450	Community Design Center	(Arch. students)
ETME 423	Building Energy Systems Capstone *(Name change)*	(Eng. students)

Power Systems (Students take at least one of the following:)

EELE 250	Circuits, Devices, and Motors
EELE 354	Electric Power Applications
EELE 355	Electric Machinery Fundamentals
EELE 408	Photovoltaic Systems
EELE 455	Alternative Energy Power Generation
EELE 454	Power Systems Analysis
ETME 470	Alternative Energy Applications

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Environmental Controls/HVAC (Students take at least one of the following:)

ARCH 331	Environmental Controls I
ARCH 332	Environmental Controls II
ETME 422	Principles of HVAC I
ETME 425	Building Systems

Building Construction/Design (Students take at least one of the following:)

ARCH 241	Building Construction I
ARCH 340	Building Construction II
ECIV 308	Construction Practice
ECIV 320	Geotechnical Engineering

Building Information Modeling (Students take at least one of the following:)

ARCH 363	Architectural Graphics III
ECIV 310	BIM for Construction *(New permanent course)*
ETME #TBD	BIM for MEP *(New course)*

Example Paths for Identified Programs

Students pursuing a Bachelor of Science in Mechanical Engineering, Mechanical Engineering Technology, Civil Engineering, Construction Engineering Technology, Electrical Engineering or Architecture at MSU will have to take 14-20 additional course credits (including prerequisites) to obtain a Minor in Building Energy Systems. Additional courses needed to be taken by ME, MET, CE, CET, EE and Arch students are tabulated below:

ME Additional Courses:

Course#	Course Title	Credits
ARCH 231	Introduction to Building Energy Systems	3
ETME 424	Thermal Processes Lab	1
ARCH 241	Building Construction I	3
		7

*ME students would take the following courses to satisfy program elective requirements.

ETME 422	Principles of HVAC I
ETME 423	Building Energy Systems Capstone
ETME #TBD	*BIM for MEP*
ETME #TBD	*Energy Audit Lab (combined with ETME #TBD to count as 3 cr.)*

MET Additional Courses:

Course#	Course Title	Credits
ARCH 231	Introduction to Building Energy Systems	3
ARCH 241	Building Construction I	3
		6

Montana Board of Regents
CURRICULUM PROPOSAL FORM

*MET students would take the following courses to satisfy program elective requirements.

ETME 423	Building Energy Systems Capstone
ETME #TBD	*BIM for MEP*
ETME #TBD	*Energy Audit Lab (combined with ETME #TBD to count as 3 cr.)*

CE Additional Courses:

Course#	Course Title	Credits
ARCH 231	Introduction to Building Energy Systems	3
ETME 424	Thermal Processes Lab	1
ETME #TBD	Energy Audit Lab	1
Power Systems Elective		3
Environmental Controls/HVAC Elective		3
ETME 423	Building Energy Systems Capstone	3
		14

*CE students would take the following courses to satisfy program elective requirements.

EGEN 324	Applied Thermodynamics
ECIV 310	BIM for Construction

CET Additional Courses:

Course#	Course Title	Credits
ARCH 231	Introduction to Building Energy Systems	3
ETME 424	Thermal Processes Lab	1
ETME #TBD	Energy Audit Lab	1
ETME 423	Building Energy Systems Capstone	3
		8

*CET students would take the following courses to satisfy program elective requirements.

EGEN 324	Applied Thermodynamics
ECIV 310	BIM for Construction

EE Additional Courses:

Course#	Course Title	Credits
ARCH 231	Introduction to Building Energy Systems	3
ETME 424	Thermal Processes Lab	1
ETME #TBD	Energy Audit Lab	1
Building Construction/Design Elective		3
Building Information Modeling Elective		2
		10

Montana Board of Regents
CURRICULUM PROPOSAL FORM

*EE students would take the following courses to satisfy program elective requirements.

EGEN 324	Applied Thermodynamics
ETME 422	Principles of HVAC I
ETME 423	Building Energy Systems Capstone

Arch Additional Courses:

Course#	Course Title	Credits
ARCH 231	Introduction to Building Energy Systems	3
ETME 424	Thermal Processes Lab	1
ETME #TBD	Energy Audit Lab	1
Power Systems Elective		3
		8

*Arch students would take the following courses to satisfy program elective requirements.

M 165	Calculus for Technology I *(Prerequisite of M 151 or Math Placement Test within last 12 months, if tested into M 165 Arch student does not need to take M 151)*
M 166	Calculus for Technology II
PHSX 207	College Physics II
EGEN 324	Applied Thermodynamics

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

The Building Energy Systems Minor is primarily applicable to students majoring in Mechanical Engineering, Mechanical Engineering Technology, Civil Engineering, Construction Engineering Technology, Electrical Engineering, and Architecture, although students majoring in Business could potentially be interested. Thus, it is difficult to state with precision the total number of students who might be interested in the Minor. However, it is estimated that a dozen or more students may be enrolled in the Minor shortly after its commencement.

While filling the *Application for Baccalaureate Degree* for the major, students pursuing the Minor in Building Energy Systems will also have to submit the *Application for a Non-teaching Minor* by the deadlines set forth in the University Catalog. The Minor will be housed in the Mechanical and Industrial Engineering Department where Professor Amende will serve as the Minor certifying officer. He will certify that the students have completed the required course credits (as given in Section 5a) for the Minor in Building Energy Systems.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

6. Resources

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

As outlined in the course catalog description in above (5a), the majority of courses taken by Building Energy Systems students already exist at MSU. However, the Minor requires two new courses, 1-credit energy audit lab and 2-credit building information modeling lab. In addition, the ARCH 231 Issues in Sustainability course will require a name change to Introduction to Building Energy Systems. Approximately 25% of the course content in ARCH 231 will need to be changed to incorporate new material relevant to Building Energy Systems. This course will still maintain content to meet Core class requirements.

One time funding for course development is needed in the form of course buyouts or summer salary for faculty. Both internal and external grant opportunities will be applied for to provide funds for course development. If Adjunct Faculty is needed to enable the 1-credit Energy Audit lab and 2-credit BIM lab, the approximate cost to cover 3-credits is $5,000. This will be done on an "as needed" basis. Costs will be covered under the current MSU funding model.

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.

Existing MSU classrooms and laboratory facilities will be used for course delivery. The initial need for course development will be met with funds available through the MSU Foundation. No additional resources will be required for the minimal increase in departmental administrative overhead necessary to process the *Application for a Non-teaching Minor* paperwork when the student is ready to graduate. This additional work is modest, and occurs just once for each student at the time of graduation. The impact on additional resources at MSU is described below.

i). Library – the library has sufficient holdings for the courses offered for the Building Energy Systems Minor courses. In special instances, books have been purchased and put on reserve for students enrolled in classes.

ii). Computer services – all of the computer services and needs are in place to adequately offer the courses. Computer labs administered within the COE, CAA, and ITC all contain the latest Autodesk Revit products. This software will be primarily used in the new 2-credit BIM laboratory class.

iii). Telecommunications – none will be specifically needed, but we may engage architecture and engineering firms in teleconferences to help guide our course offerings. If there is a substantial interest from other MUS institutions in participating in the MSU Building Energy Systems Minor, telecommunications may be an effective way to engage them.

Iv). Equipment – some new equipment will need to be purchased for the Energy Audit laboratory course. The Jack Goe HVAC foundation account will be used to purchase the equipment needed to run this lab. The EFAC process will continue to be used to enhance our teaching laboratories as equipment wears out or technology progresses.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

v). Space/Capital Requirements – None are requested to implement the Building Energy Systems Minor.

vi). Support Services – No support services are requested to implement the Building Energy Systems Minor. A minimal increase in departmental administrative overhead will be needed to process the *Application for a Non-teaching Minor* paperwork when the student is ready to graduate.

vii). Student Services – No additional student services are needed to accommodate the Building Energy Systems Minor.

A summary of the impact is provided in Table 1. These are projected expenditures. No revenues specific to the program are anticipated.

Table 1. Resource Allocations Needed for the MSU Building Energy Systems Minor

Item	First Year	Second Year	Third Year
Course(s) Development	1-month FTE (summer) $5,000*	-	-
Faculty FTE	1/3 – $5,000*	1/3 – $5,000*	1/3 – $5,000*
Staff FTE	-	-	-
Equipment	$2,000	-	-

*If Adjunct Faculty is needed to enable the 1-credit Energy Audit lab and 2-credit BIM lab, the approximate cost to cover 3-credits is $5,000. This will be done on an "as needed" basis. Costs will be covered under the current MSU funding model.

7. Assessment

How will the success of the program be measured?

Mechanical and Industrial Engineering and the other departments in the COE incorporate a systematic assessment plan (http://www.montana.edu/wwwprov/assessment/assessmentplans.html) for all of the academic programs and courses. We continually assess objectives and outcomes at the program and course levels. These assessments are mandatory for our continued national accreditation (ABET), and we must demonstrate the assessment and evaluation processes as part of the periodic accreditation review. Therefore, our current assessment plans and evaluation methods will be applied consistently to the Building Energy Systems Minor.

In addition, we will provide specialized assessment based on student, employer, and alumni satisfaction towards the Minor through appropriate surveys. The M&IE Department has been doing this kind of survey for many years to assess the outcomes of the Mechanical Engineering Program. Any changes in student enrollment or graduation rate will be monitored, reviewed, and the program will be revised accordingly.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

8. Process Leading to Submission

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

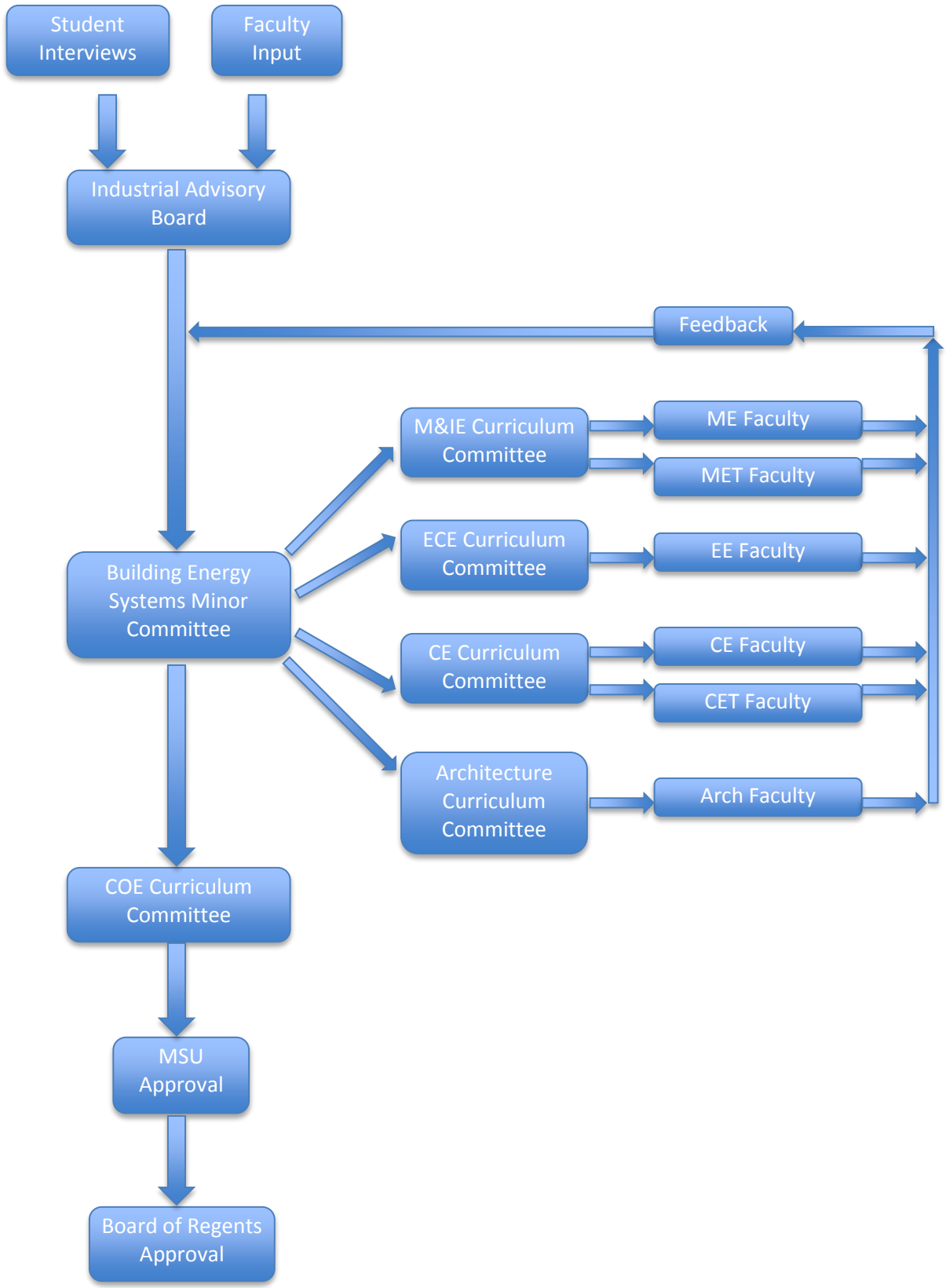
The present Building Energy Systems Minor proposal was presented before the departmental Industrial Advisory Board (IAB) for the Mechanical and Industrial Engineering Department. The IAB was very receptive to the proposal and they responded strongly in favor of the proposal. Several members said that they wish they had the opportunity of having some more exposure to Building Energy Systems when they were students at MSU.

The proposed Minor was developed with input from faculty representatives from Mechanical and Industrial Engineering, Civil Engineering, Electrical Engineering, and Architecture departments. Student interviews within these majors show that they feel that a Minor in Building Energy Systems will add value to the engineering and architecture programs at MSU.

The following flow diagram depicts the step-by-step procedure leading to the final approval of the proposed Minor in Building Energy Systems at MSU.

Montana Board of Regents

CURRICULUM PROPOSAL FORM



May 21-22, 2015

ITEM 167-2017-R0515

Request for Authorization to Establish a Ph.D. in Psychological Science; Montana State University

THAT

The Department of Psychology at Montana State University, located in Bozeman, proposes to offer a Ph.D. in Psychological Science.

EXPLANATION

This Ph.D. program will prepare students for research and teaching careers in academia, government, industry, education and the non-profit sector. Graduates will be trained as productive research professionals who will be able to compete successfully in state, regional, national and international job markets in both teaching and research, and who will bring recognition to the State of Montana, the Montana University System and to Montana State University as a center of post-graduate educational excellence in accord with the 2012 MSU Strategic Plan.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **167-2017-R0515** Meeting Date: **May 21-22, 2015**

Institution: **Montana State University** CIP Code: **42.0101**

Program Title: **Ph.D. in Psychological Science**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

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___ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

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Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

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___ **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

X **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

___ **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:

The Department of Psychology at Montana State University, located in Bozeman, proposes to offer a Ph.D. in Psychological Science. This Ph.D. program will prepare students for research and teaching careers in academia, government, industry, education and the non-profit sector. Graduates will be trained as productive research professionals who will be able to compete successfully in state, regional, national and international job markets in both teaching and research, and who will bring recognition to the State of Montana, the Montana University System and to Montana State University as a center of post-graduate educational excellence in accord with the 2012 MSU Strategic Plan.

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MONTANA STATE UNIVERSITY, PROPOSED PH.D. IN PSYCHOLOGICAL SCIENCE

1. Overview

The Department of Psychology at Montana State University, located in Bozeman, proposes to offer a Ph.D. in Psychological Science. This Ph.D. program will prepare students for research and teaching careers in academia, government, industry, education and the non-profit sector. Graduates will be trained as productive research professionals who will be able to compete successfully in state, regional, national and international job markets in both teaching and research, and who will bring recognition to the State of Montana, the Montana University System and to Montana State University as a center of post-graduate educational excellence in accord with the 2012 MSU Strategic Plan.

The field of Psychology is naturally partitioned into two distinct subfields: Clinical practice and Psychological Science. Psychological Science is the core subfield that involves the discovery and application of scientific findings about human and animal behavior. Psychological Science can be regarded as a core academic field that produces research widely cited by other fields (including medicine, math, physics, earth science, and chemistry)[1]. With an emphasis on theory-driven scientific hypothesis testing, Psychological Science is also distinct from the other social sciences (such as Sociology and Political Science), and is more closely allied with biomedical sciences, neuroscience, and public health.

The proposed Ph.D. in Psychological Science will advance the 2012 strategic plan of Montana State University:

- ***Learning,*** via a hands-on active, student centered program to increase the number of PhD graduates at MSU[2].
- ***Discovery,*** via original empirically-based psychological science that creates new knowledge and elevates MSU's status as a leading Land Grant high research activity university. MSU strives to "raise its national and international prominence in research, creativity, innovation and scholarly achievement, and thereby fortify the university's standing as one of the nation's leading public research universities."[3] The PhD in Psychological Science will position MSU more firmly among its peers as a Carnegie Very High Research Activity University. Of the 108 Carnegie Very High Research Universities, 105 offer a Psychology PhD with an emphasis on Psychological Science. At the same time MSU ranks 106th out of the 108 schools in doctoral conferrals among the Carnegie top research universities.[4] Thus, a PhD in Psychological Science is an obvious solution for increasing MSU's status as a Carnegie tier 1 university. The Psychological Science Ph.D. will also contribute to the *Discovery* metrics by increasing the number of doctoral conferrals , attracting and retaining faculty members with national recognition as well as memberships of faculty on government review panels.[5] Importantly, the program will contribute to all metrics of Objective D.3. "Expand the scale, breadth

[1] Caccioppo, 2007, Psychology is a hub science, APS Observer, 20(8). Boyack et al. (2005), Mapping the backbone of science. Scientometrics, 64, 351-374.
[2] Objective L.2, Increase Graduation Rates at MSU, Metric L.2.2, By 2019 … increase the number of doctoral degrees granted per year from 56 to 80 per year. (p.4, 2012 MSU Strategic Plan).
[3] p. 7, 2012 MSU Strategic Plan.
[4] This statistic is found in Metric D.1.3, p. 8, 2012 MSU Strategic Plan
[5] Metrics D.1.1 to D.1.3, p. 8, 2012 MSU Strategic Plan

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and quality of doctoral education."[6] Because our M.S. students currently are highly successful in presenting research at national and international conferences and publishing their work in peer refereed journals, our doctoral students will contribute even more strongly to Metric D.3.4.[7]

- ***Engagement***, via the theoretical and applied advances in psychological science about the human condition that will offer students the enhanced ability to answer scientific questions related to local, national and international social and interpersonal problems.
- ***Integration***. The Psychological Science PhD will help MSU meet Metric I1.4, increasing faculty scholarly products in collaboration with undergraduate and graduate students.[8] Psychology faculty are currently productive mentors of both undergraduate and graduate students. In the last 5 years alone, graduate students in our M.S. program co-authored 62 presentations at national and international conferences and 29 peer-refereed scientific publications; our undergraduates co-authored 61 presentations and 6 peer-reviewed publications. Ph.D. students will simultaneously take their science skills into teaching practice through co-mentoring of undergraduate students, classroom teaching, and collaborative research with other graduate students.
- ***Access***. As a Land-Grant and Carnegie Very High Research Activity University, increasing access to graduate education is paramount.[9] In the Western U.S., access to research-based doctoral education in Psychological Science is limited. Only one Big Sky Conference university had a Psychology "research doctoral" program ranked by the National Academy study (UC-Davis).[10] [11]

Current faculty and M.S. student quality. Faculty of the Psychology Department at MSU are highly active in research in several major areas of Psychological Science. The 10 Psychology Department faculty published 85 papers in peer-reviewed journals from 2011-2013. Department faculty brought in $13.2 million in grant dollars as Principal Investigators or Co-Investigators between 2008 and 2012. The strong record of research productivity of the graduates of our M.S. program in Psychological Science (see *Integration* above and section 4.A. below) and their excellent record of admission to other PhD programs bodes well for the future success of a PhD in Psychological Science at MSU.

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

Degree: Ph.D. in Psychological Science.

The Ph.D. in Psychological Science will emphasize closely mentored independent doctoral research with supporting coursework, research discovery expectations, and advanced training in the teaching of psychology. The program strengths will be in the basic scientific approaches to psychology in the core areas of cognitive, social, developmental and biological psychology. Psychology Department faculty have expertise in memory

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[6] Metric D.3., p. 9, 2012 MSU Strategic Plan

[7] Metric D.3.4, "The number and proportion of graduate students presenting at national and international meetings, publishing in eminent academic outlets … ", p. 9, 2012 MSU Strategic Plan.

[8] Metric I.1.4, p. 15, 2012 MSU Strategic Plan, increase by 50% by 2019.

[9] Metric A.1.3, p. 17, 2012 MSU Strategic Plan. Also note that one-half of the Public Carnegie Very High Research Universities are Land Grant.

[10] http://www.nap.edu/rdp/, A data-based assessment of research-doctorate programs in the United States, National Academies Press, 2010, ISBN 978-0-309-16030-8

[11] Among Big Sky Conference universities, 5 schools with a PhD in aspects of Psychological Science (UC-Davis, U. of North Dakota, Idaho State University, U. of Montana, Portland State University) and 3 that offer a PhD in Clinical Psychology (Idaho State University, U. of Montana, U. of North Dakota). Only UC-Davis appears in the National Academy rankings.

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(including aging and memory), attention (including the development of cognitive control in both adults and children), social psychology (including attitudes and values, social cognition, goals and motivation, stereotyping, and prejudice), and the biological substrates of behavior (including biological processes of psychosocial stress, motivation, addictions, memory, attention, anxiety, and the effects of stroke and other physical trauma on functioning). Psychological Science as a field continues to expand the incorporation of neuroscience and biological measures into social and behavioral science research. The Psychology Department laboratories will provide Ph.D. students with access to state-of-the-art equipment needed for cutting-edge research methods in cognitive, social, affective, and behavioral neuroscience across the lifespan and across species. This equipment includes advanced EEG methods, pupillometry, oculomotor behavior, and mobile systems for electrodermal responses, heart rate, heart rate variability, vagal tone, genetics, tissue histology, and sophisticated computer data collection tools including Anymaze, Qualtrics, Empirisoft, and E-prime. A further important aspect of the program is that PhD students will participate in mentored teaching of undergraduates in both lab and lecture settings, as well as in research projects.

3. Need

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

Bureau of Labor Statistics data indicate that psychology is a growing profession, especially industrial and organizational psychology, i.e., scientists who can address issues of human variables in organizations, human interactions with technology, and enhancing the morale and function of employees in the workplace. Further, data indicate that job prospects are best for "candidates with a doctoral or specialist degree and post-doctoral work experience". [12] Within science, engineering, and health fields, unemployment among Psychology PhDs is especially low.[13] Job prospects are also very good for graduates with strengths in neuroscience and the science of aging[14]; these are two strengths of the MSU Psychology Department faculty.

In the Western U.S., PhD programs in Psychological Science are lacking. Excluding California, the *National Academy of Sciences* study of U.S. Research Doctoral programs had only 13 research doctoral Psychology programs in the 9 western states.[15] Idaho and Montana had no Psychology research doctoral programs in the the National Academy rankings. (The University of Montana Psychology Department PhD was not included as a research doctoral program in the National Academy study. [16]) The National Academy report emphasizes the important role of public universities in doctoral education, "The health of research and doctoral education in the United States depends strongly on the health of public education." [17] As mentioned earlier, among the schools of Big Sky athletic conference, only UC-Davis has a National Academy ranked research doctoral program in Psychology.

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

Approximately 70% of students earning the M.S. in Psychological Science at MSU (2005-2013) applied to other universities for PhD programs, and 93% were admitted. Changing universities en route to a Ph.D. disrupts a

[12] http://www.bls.gov/ooh/life-physical-and-social-science/psychologists.htm#tab-6
[13] From National Center for Science and Engineering Statistics. http://www.nsf.gov/statistics/infbrief/nsf14317/
[14] http://www.apa.org/gradpsych/2011/03/cover-sunny.aspx

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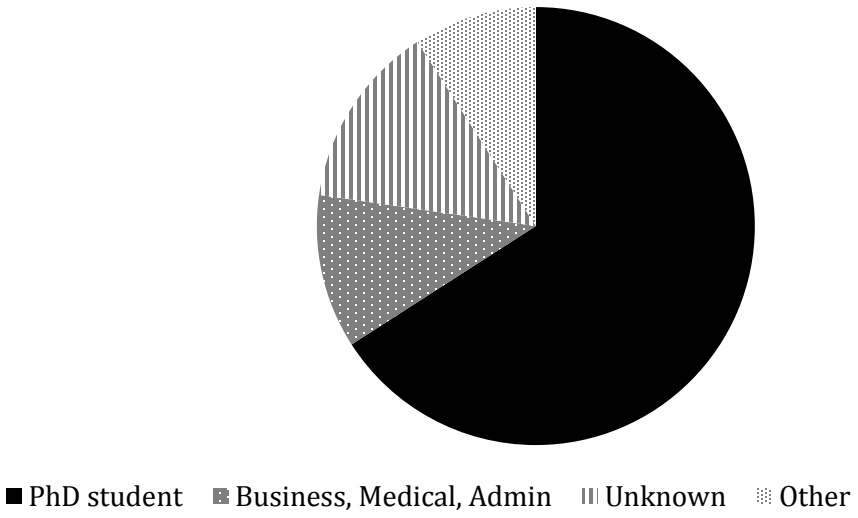
student's research productivity and places the student at a disadvantage on the job market later. Students in MSU's M.S. in Psychological Science have an excellent record of publications in refereed journals and scientific

Figure 1. 65% of M.S. graduates since 2005 have become PhD students at other universities.



[15] http://www.nap.edu/rdp/, A data-based assessment of research-doctorate programs in the United States, National Academies Press, 2010, ISBN 978-0-309-16030-8. Excluding California, the nine states in the Western region of the National Academy study are Washington, Oregon, Nevada, Arizona, New Mexico, Utah, Idaho, Wyoming, and Montana.
[16] The University of Montana reported data for the National Academy survey for 3 PhD programs: Forestry, Organismal Biology and Ecology, and Chemistry. Montana State University reported data to the National Academy in 11 areas: Plant Sciences, Biochemistry, Chemistry, Biology, Earth Sciences, Mathematics, Physics, Fish and Wildlife Biology, Immunology and Infectious Disease, Microbiology, and Engineering.
[17] http://www.nap.edu/rdp/, A data-based assessment of research-doctorate programs in the United States, National Academies Press, 2010, ISBN 978-0-309-16030-8, p. 6.

presentations at national and regional conferences (see *Integration* above). The Ph.D. in Psychological Science will facilitate the students' career advancement and will prepare them for the job market in a timely manner (likely with fewer student loans) with qualifications for an entirely different set of careers than the M.S.

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

Based on regional university graduate application statistics available online, we anticipate receiving approximately 20-25 complete applications per year, while admitting between 4 and 6 students per year (a ratio of demand to admissions of approximately 4 to 1). Most of our current M.S. students applied to other Ph.D. programs and are seeking the M.S. to enhance their credentials for admission to the Ph.D. elsewhere. Hence, we anticipate more applications for our Ph.D. program than we receive for our M.S. program (currently approximately 18-20 complete applications per year). The nearest neighbor Ph.D. programs in Psychological Science (or other research-based psychology doctoral program) report receiving an average of 20 (Idaho State) and 10 (U. North Dakota) student applications per year over the last 4 years. They report acceptance rates around 20%.

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4. Institutional and System Fit

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

The existing M.S. program in Psychological Science will form the foundation for the Ph.D. in Psychological Science. Specifically, because we want students capable of doing doctoral-quality work, students will no longer apply for the M.S. program, but instead will apply for our Ph.D. program. Once admitted into our Ph.D. program, students will receive a M.S. degree en route to the Ph.D. The Ph.D. program's first two years will resemble the current M.S. degree and consist of a combination of coursework and faculty-mentored research, culminating in a Master's thesis at the end of their second year. Following a successful Master's thesis defense, students will begin taking the additional coursework and dissertation credits required for the Ph.D.

The Psychology Department faculty have proven that they are highly committed to, and effective in, mentoring graduate students in research. Excluding the three faculty members hired in 2013-2014, all our faculty have mentored students (see Table 1) and voted unanimously in support of the currently proposed Ph.D. program. The three newest faculty also strongly support the proposed Ph.D. program. Also, in the last 5 years, students in the two-year M.S. Psychological Science program were co-authors on 62 presentations and 29 publications in peer-refereed journals.

There are no other existing programs at MSU that will be either directly connected to, similar to, or in competition with this program. However, existing programs at MSU are expected to benefit from a Ph.D. in Psychological Science. Psychology faculty maintain collaborations on campus (e.g., in Cell Biology and Neuroscience) that will enhance interdisciplinary work. A list of current, past, and potential collaborations among Psychology faculty and other MSU faculty is given in Appendix A. Note that this includes all 5 colleges within the university and reinforces the assertion that Psychology is indeed a hub science.[1] The proposed PhD program will strengthen our future role in interdisciplinary research and coursework at MSU. This integration with other programs is also highlighted in section 5 below.

Table 1. *Psychology faculty participation in mentoring students for our M.S. program.*

Faculty Mentor	M.S. Awarded 2006-2014	New M.S. Students 2014-2015
Babcock	7	0
Block	2	1
Brooker	na	1
Handley	7.5	3
Hutchison	7	1
Lynch	5	0
Meade	5	1
Skewes	na	0
Smith	6.5	2
Vess	na	3

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

No, the M.S. program in Psychological Science program will continue as part of the Ph.D. program, and we anticipate that indeed a majority of students will continue for the Ph.D. after receiving the M.S. Because the M.S. degree is already modelled after the first two years of a research-based Ph.D. program, with rigorous graduate seminar courses and faculty-supervised research culminating in a thesis, the needed resources in terms of coursework and first two years of Ph.D. funding are already in place. In fact, we already have more graduate courses than can be completed in a M.S. program alone (see Appendix B). Including the three hires this year, 8/10 faculty have already taught courses in our M.S. program. We currently offer 1 graduate research methods course and 1-2 graduate seminar-style content courses each semester. Because these courses are already designed as Ph.D. courses, they are appropriate for students in a Ph.D. program.

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

There are no closely related programs at MSU. The most closely related program is the PhD in Engineering, option in Industrial and Management Engineering with a research focus on either Human Factors or Service Systems Engineering.[18] In order to take advantage of the interdisciplinary resources available on campus, students in the Psychological Science Ph.D. will be encouraged to take additional courses outside of our department. Some sample courses include EDLD 530 (College Teaching), BIOB 510 (Topics in Neurobiology), BIOB 524 (Ethical Practice of Science), EIND 554 (Design of Experiments for Engineers), EIND 557 (Regression

[18] http://www.coe.montana.edu/ie/gradprog/PhD_program.htm

and Multivariate Analysis), LAC 502 (Psychopharmacology and Addictions), LAC 504 (Alcohol and Drug Studies), STAT 511 and 512 (Methods of Data Analysis I and II), STAT 528 (Biostatistics), STAT 532 (Bayesian Data Analysis), and STAT 541 (Experimental Design).

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

Figure 2 illustrates the ways in which the Psychological Science Ph.D. will meet the goals of MSU's 2012 Strategic Plan. MSU is one of the smallest enrollment land-grant universities to achieve the Carnegie Foundation Very High Research Activity designation, and produces a relatively small number of Ph.D.s per year. MSU's strategic plan 2012 calls for an increase of in the number of Ph.D.s awarded per year.

A second central part of MSU's strategic plan is that more undergraduates integrate learning and engagement. The Ph.D. in Psychological Science will facilitate undergraduate Integration of Learning and Engagement through enhanced undergraduate involvement in research lab groups led jointly by faculty and their graduate students. The Psychology Department is already highly successful in mentoring undergraduates in hands-on research, teaching 945 cr hours during the last 5 years. We anticipate that this will increase.

Figure 2. Interfaces of the proposed Ph.D. in Psychological Science with the MSU Strategic Plan

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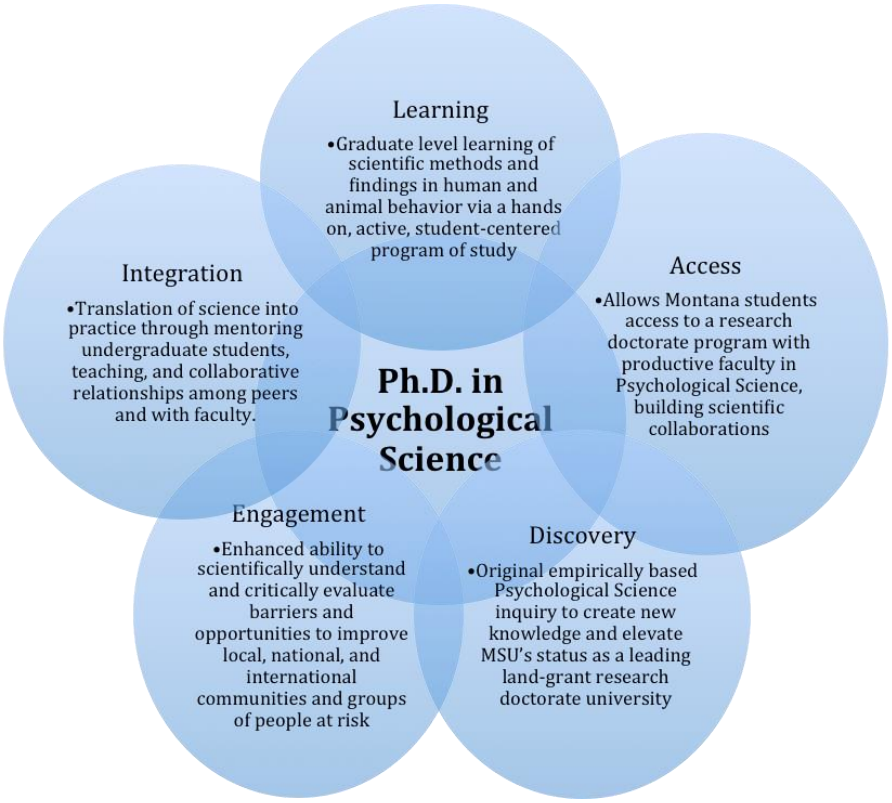

E. Describe the relationship between the proposed program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed program at an additional institution. Describe any efforts that were made to collaborate with these similar programs;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

The scholarship in the MSU and U of M Psychology Departments emphasizes quite different aspects of Psychology. Psychology is a very diverse discipline. U of M Psychology has an emphasis on training practitioners in Clinical and School Psychology, whereas MSU emphasizes Psychological Science and research, and does not offer clinical training. U of M currently has a Ph.D. program in Clinical Psychology that is accredited by the American Psychological Association and that produced 31 graduates in the 7 years between 2005 and 2011.[19] Training clinical practitioners is clearly the strength of the U of M Psychology Department. The U of M, after the 2011 program review of the Psychology Department, combined the non-practitioner Ph.D. options (formerly titled Psychology, Animal Behavior, and Developmental Psychology, with 4, 5 and 4 Ph.D.s in 7 years, respectively) into one 'Experimental Psychology' Ph.D. The two non-clinical options that produced the most Ph.D.s in U of M's Program Review (Animal Behavior and Developmental Psychology) have virtually no overlap with the MSU proposed Ph.D. in Psychological Science.

As mentioned in section 3.A., the U of M Psychology Ph.D. was *not* included in the National Academy study of "research doctoral" programs, though programs from other departments at U of M were included. The

absence of the U of M Psychology Ph.D. from the National Academy rankings of research doctorate programs punctuates the clinical practitioner emphasis of the U of M Psychology Ph.D. program.

U of M Psychology faculty insight and advice was incorporated at the earliest stages in our development of this proposal. In 2010, three MSU faculty members visited Missoula and met with faculty from the U of M Psychology Department to discuss the possibility of a Psychology Ph.D. at MSU. During this meeting, faculty at U of M said they were supportive of MSU developing a program in Psychological Science and provided helpful suggestions (e.g., adding a significant teaching component) that we have incorporated in this proposal. In 2013, Provost Perry Brown wrote that U of M Psychology faculty recognize the distinct differences between the two departments, and "… they are willing to support a Ph.D. initiative when you are ready to go forward with it."[20]

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[19] M.U.S Program Review documents, 2011-12, p. 2.
[20] Email, Perry Brown to Martha Potvin, April 24, 2013.

5. Program Details

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

The Graduate School requires that Ph.D. candidates complete a minimum of 60 total credit hours beyond the bachelor's degree. This may include a maximum of 30 cr from a previously earned master's degree. Credits from a master's degree from another university with a focus on psychological science may be accepted toward the Ph.D. in Psychological Science subject to approval by the department. At least 12 credits of coursework must be beyond the master's degree and the Graduate School requires that 18 to 28 credits must be dissertation credits.

Each student admitted to the program will be assigned a major professor and a mentoring committee of 3 faculty members (major professor plus two others). At least two members of the mentoring committee must have their primary appointment in the Psychology Department. We encourage integration and collaboration with other departments throughout MSU and anticipate many third committee members from the list of collaborators in Appendix A. The student's individual coursework program, beyond the core requirements described below, will be developed in partnership with the mentoring committee. The mentoring committee will evaluate the student's satisfactory progress toward the degree each semester and will forward their progress recommendation to the Department.

Requirements of the Ph.D. curriculum in Psychological Science:

- Two graduate level research methods courses in Psychology (Psyx 501 and 502), plus one other graduate level research methods/statistics course from either the Psychology Department or another department with approval of the mentoring committee.
- At least one 3 cr graduate course from each of three foundational areas (Cognitive, Social, and Biological), total 9 cr.

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- At least 3 graduate courses in Psychology beyond the M.S. degree (9 cr, not including the Teaching course requirement)
- 2 cr of the Teaching of Psychology course
- The remaining coursework should be selected in consultation with the mentoring committee. With approval of the mentoring committee, graduate level courses from outside the department may be counted toward the Ph.D. in Psychological Science.
- Each student must present a written dissertation proposal, give an oral presentation of the proposal to the dissertation committee, and take an oral exam on the proposal. The proposal document can be written in the form of an NIH or NSF grant proposal, or other format determined by the committee.
- The Comprehensive Exam should be taken during the first semester of the 4th year of study.
- Each student must be productively involved in research in every semester of enrollment.
- Each student must attend the department weekly research symposium ('brown bag'), and is expected to give a presentation annually.
- Each student must meet the Psychology Department Ethical Practices in Science training requirement. This can be met by completing the relevant CITI modules, plus any other training required by the mentoring committee.

The outline below shows the approximate curriculum sequence for a student in the PhD program. See Appendix B for the list of required Psychology courses, Psychology graduate content courses, and alternative content courses external to the Psychology Department.

First year

- semester 1, 6 or 7 cr, Psyx Advanced Design and Statistics I, graduate content course, possibly 1+ cr Masters Thesis Psyx 590.
- semester 2, 6 or 7 cr, Psyx Advanced Design and Statistics, graduate content course, possibly 1+ cr Masters Thesis Psyx 590.

Second year

- semester 1, 9 cr: Two graduate content courses, 3 cr Masters Thesis Psyx 590.
- semester 2, 10 cr: graduate content course, 7 cr Masters Thesis Psyx 590, 1 cr Teaching of Psychology. Successfully defend M.S. thesis.

(Cumulative credits to M.S. degree = 31 or 32 cr)

Third year

- semester 1, 9 cr: graduate content course, 3rd research methods course, 1 cr Teaching of Psychology, 2 cr Doctoral Thesis Psyx 690. Qualifying exam (dissertation proposal).
- semester 2, 9 cr: graduate content course, 6 cr Doctoral Thesis Psyx 690.

Fourth year

- semester 1, 6 cr: graduate content course, 3 cr Doctoral Thesis Psyx 690, Pass Psychology Department Ph.D. Comprehensive Exam
- semester 2, 7 cr Doctoral Thesis, Psyx 690.

Fifth year: Doctoral Thesis Psyx 690 credits, optional coursework

(Minimum cumulative credits to PhD degree = 63 cr)
(Note: the Graduate School rules for curricula are found here:
http://www.montana.edu/gradschool/policy/degreq_doctoral.html

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Table 2: *Outline of requirements for PhD in Psychological Science (minimum requirements; * indicates 690 dissertation credits for those continuing dissertation work)*

	Year 1		**Year 2**		**Year 3**		**Year 4**		**Year 5**	
	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Research methods	3	3			3					
Content Courses	3	3	6	3	3	3	3			
Teaching of Psychology course				1 cr	1 cr					
Psyx 590 MS thesis (min 10 cr)			3	7						
Psyx 690 Diss.					2	6	3	7	*	*
Other milestones	Research ethics training		Submit MS Prog of study	Defend M.S. thesis	Establish Doctoral Comm/ Diss proposal	Submit PhD Prog of Study	PhD Comp exam	(defend diss. possibly this early)		
Credits/sem	6	6	9	11	9	9	6	7		
Cumulative cr	6	12	21	32	41	50	56	63		

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

Once our proposal is accepted, we anticipate advertising the availability of the program to outlets such as the APA, APS, COGDOP (Council of Graduate Departments of Psychology), as well as pamphlet distribution at professional conferences likely to be attended by top undergraduate students, and by personal communication to faculty at other institutions. We anticipate advertising our program during fall 2015 and accepting our first students during Spring of 2016 to start fall 2016. We anticipate the initial class to consist of some students entering straight from a bachelor's degree and others entering upon completion of a Master's degree. If any initial students enter with a Master's degree, it is possible we could have our first Ph.D. graduates as early as May 2018. Because we anticipate accepting students into our Ph.D. program during spring of 2016, our last M.S. students will be accepted during spring 2015 with anticipated graduation May 2017. Thus, there will be a 1-year overlap in programs with 2nd year M.S. students combined with 1st year Ph.D. students. This initial overlap is necessary to maintain enough GTA support for our courses (including the 20+ sections of Introductory Psychology lab). Because of this 1-year overlap in programs, members of the M.S. class of 2015 will have the opportunity of applying for acceptance into the Ph.D. program upon successful defense of the M.S. thesis. In subsequent years, all students will apply to the Ph.D. program only. Based on current faculty resources (10 tenure-track faculty), the department expects to eventually have a total of 16-22 students enrolled in the Ph.D. program at one time (financial support for 11 as GTAs, 5-7 third or fourth year students supported through GRAs, and potentially 1-2 third or fourth year students supported by adjunct teaching). Obviously, with additional GTA positions to support our undergraduate teaching mission, and/or tuition remission funding, we could increase our Ph.D. enrollment to approximately 20-26 enrolled at one time (2 or 3 students per tenure-track faculty member). We anticipate about 5 new students entering our

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program each year and detail in section 6B below both our departmental plan to increase GRA funding and our anticipated enrollment growth and GRA/GTA distribution.

6. Resources

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

The Ph.D. in Psychological Science can be initiated with current tenure-track faculty (10 FTE) and GTA (11, 50%) appointments. See also section 6.B. below.

The Ph.D. program will enhance current faculty's ability to obtain research grants from NSF and NIH. Although doctoral programs are not formally required for grant funding from NIH, NSF, and other federal agencies, grant reviewers consider a Ph.D. program to be an important component of the "institutional resources available to faculty" criterion. The resources of federal grants are important to the State of Montana and MSU not only as an economic stimulus, but also for enhancing faculty research productivity and for enhancing opportunities for undergraduate and graduate students in research engagement and integration of engagement and learning through hands-on activity in faculty research labs. Faculty in the Psychology Department are already highly research active in both the number of external grants funded and number and quality of peer-reviewed journal publications. These data are shown in Tables 3 and 4. As can be seen in Table 3, Psychology faculty have submitted 30 external grants as Principal Investigators or Co-Investigators since 2009 and have had 13 of these funded for a total of over $16 million in federal funds. Although some of these grants either were not large enough or did not allow GRA funding, most of them (10/13) could have been used to fund a GRA position. Also, A new Psychology faculty member hired in 2013 brought in an NIH grant at the time of hire, and faculty have submitted 12 grant proposals to external funding agencies in the past 12 months.

Table 3: *Psychology Department grant activity and possible GRAs funding (2009-present).*

Year	External Grants Submitted	External Grants Funded	Funded Amount	# Possible GRAs	Funded Researchers
2009*	8	6	8,345773	3	Babcock, Lynch, Hutchison, Handley, Smith
2010	4	2	523,213	2	Smith
2011	3	2	3,453,363	2	Moore, Smith Moore
2012	2	1	3,372,864	1	Smith
2013	6	2	680,091	0	Brooker, Smith Becky
2014**	6	0	0	2	Brooker, Skewes
Total	**30**	**13**	**$16,375,304**	**10**	

*The 2009 data includes grants on their 2nd or 3rd year of funding.
**Brooker and Skewes both COBRE funding to support GRAs starting this year.

All faculty members in the Psychology Department are research-active, have supervised M.S. graduate students and undergraduate students in labs, presented at national, international and regional conferences with students as co-authors, and publish in refereed journals. In fact, as can be seen in Table 4, Psychology

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faculty have published 101 peer-reviewed articles since 2009 in top-tier journals. Moreover, this number is increasing, with Psychology Department faculty publishing 53 peer-reviewed articles in the last 2 years.

Table 4: *Number of Faculty Peer-Reviewed Publications (2009-present).*

Year	# of Faculty	Publications
2009*	7	8
2010	7	10
2011	8	19
2012	8	11
2013	10	25
2014**	10	28
Total		**101**

*Dr. Striegel-Moore was department chair from 2009-2010. Her 14 publications in that time are not included in the table.
**Includes publications "in press."

The undergraduate major has grown from approximately 250 to 400 students in less than 5 years. In 2013, three established professors from prominent psychology programs at other universities conducted an independent review of the Psychology Department at MSU. The 2013 external program review described the Psychology Department as under-resourced for the undergraduate program. The addition of two more tenure-track faculty would bring the department to 12 FTE TT, a number that is more commensurate with the number of majors. Additional GTAs would help the undergraduate major while providing support for graduate students to increase the number of Ph.D. students produced by this program.

It is important that faculty retirements be replaced with tenure-track faculty in order to foster the growth of the undergraduate major while also building the reputation and productivity of the Ph.D. 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.

The Ph.D. in Psychological Science can be initiated with current resources.

Graduate student financial support. The limiting factor regarding number of students admitted to the Ph.D. program will be availability of funding with tuition remission. Graduate student support is important in the National Academy ranking of research doctorate graduate programs. To foster excellence in MSU's Ph.D. in Psychological Science, additional funding for graduate students is highly desirable. At present the Psychology

Department has 11 50% GTA positions with tuition remission. GTA positions provide essential instructional support for undergraduate education while simultaneously providing financial support for graduate students pursuing their degrees. About four students per year can be sustainably admitted to the Ph.D. program by using 11 50% GTA positions plus having graduate students serve as adjunct instructors as part of their 3rd and 4th years of study.

However, research-funded GRA positions will be essential to growing a healthy and self-sustaining program that does not simply rely on GTA funding from the university. As such, the department is committed to aggressively seeking GRA funding to grow our program. In fact, the department has already submitted 5

federal grants in the last 4 months, with over $2 million in direct costs. Several more grant proposals are currently being written and include many interdisciplinary collaborators listed in Appendix A. These grants could include either separate GRAs per department or a stipend split between departments to support the interdisciplinary project. Further, although faculty have occasionally used federal funding to hire post-docs in the past, the department has agreed that, once the PhD proposal is accepted, any new grant containing a post-doc salary must also contain at least one GRA. Moreover, the department has researched several funding options for graduate students beyond simply relying on traditional NSF/NIH support (which we will of course also pursue). These alternative funding sources are listed in Appendix C.

Given the departmental commitment to growing our Ph.D. program, we anticipate 7-10 grant applications per year that include at least one GRA. Of course, the extent to which we can offer GRAs will depend upon the number of applications submitted and the current funding climate. Given that applicants will use reviewer feedback on initial submissions to resubmit improved grants the following year, we anticipate the success rate of these proposals (and hence our number of GRAs) to increase each year. We therefore project to enroll five students in each of our first two years and support them with GTA stipends. If we assume our funding success rate will increase from a very conservative 0% our first year, to 25% our second year (2 GRAs), to 33% our third year (3 GRAs) and beyond, then this would allow us to transition our initial 5 students from GTAs to GRAs by year 3, freeing up 5 openings for new Ph.D. students. This same model would apply to year four, with potentially 1-2 remaining unfunded Ph.D. students supported through adjunct teaching. Using this model, we project between 16-20 students in our program by year 4 (11 GTAs + 5-7 GRAs, + potentially 1-2 adjuncts) with a sustained and healthy program in which graduating students and additional GRA funding frees up positions for new students.

In addition to the GRAs, one strength of our Ph.D. proposal is training in the teaching of psychology. Students will begin with GTA duties in Introductory Psychology labs. In their 4th and 5th semesters, students will take the 1cr Teaching of Psychology course, with the option of also taking EDLD 530 (College Teaching) if available. During their first Teaching of Psychology semester students will prepare a syllabus for an undergraduate course, and during the second semester of the course the students will be the adjunct instructor for an undergraduate course while receiving mentoring from both peers and the professor in charge of the course. Teaching undergraduate courses as the 'instructor of record' will enhance our students' marketability at graduation. It would be highly advantageous for these students to receive tuition remission while serving as adjunct instructors.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

7. Assessment

How will the success of the program be measured?

Variables from the *National Academy of Sciences* ratings of research doctoral programs will be the primary outcomes for the Ph.D. in Psychological Science: research activity, student support and outcomes, and diversity of educational environment. [21] Methods similar to the National Academy study can be used internally for most of the variables below. In addition, student satisfaction will be measured.

- percentage of students who complete the program within 5 or 6 years of first enrollment
- percentage of students with financial support, including tuition remission, during the academic year
- per capita rate of student-authored and co-authored research presentations at national, international and regional conferences
- per capita rate of student-authored and co-authored publications in refereed journals
- percentage of graduates receiving post-doctoral appointments or full-time employment related to their specific expertise after graduation
- percentage of students receiving outside fellowships (NSF, NIH pre-doctoral, or other)
- faculty productivity in grant funding, publications, conference presentations, editorships and service on review panels
- faculty and graduate student involvement in interdisciplinary scholarship
- diversity of the educational environment (gender of students and faculty, racial/ethnic identity of students and faculty, international students and faculty)

In order to achieve realistic expectations for our program, we solicited graduation and job placement information from the Experimental Psychology Ph.D. program at the University of North Dakota.[22] At UND, there are only "a handful" of students who did not graduate within 5 years. Of their most recent 14 graduates, 11 hold faculty positions at academic institutions, 2 hold postdoctoral positions, and 1 is working in a non-academic setting.

8. Process Leading to Submission

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

Students in the M.S. program regularly request that our department develop a Ph.D. program and express their desires to continue graduate study in our department. As stated earlier, our M.S. students have good success in admission to Ph.D. programs at other institutions (nearly 70% apply to Ph.D. programs elsewhere and 93% are accepted; see section 3.B above).

The recruiting of tenure-track faculty in the last 10 years has included discussion and promise of the possibility of a Ph.D. program, and all those hired have expressed enthusiasm about developing the Ph.D. in Psychological Science. The Ph.D. program will enhance faculty retention. The Psychology Department faculty have actively discussed developing a Ph.D. in Psychological Science since 2009. In 2010 a meeting was held with some

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[21] http://www.nap.edu/rdp/, A data-based assessment of research-doctorate programs in the United States, National Academies Press, 2010, ISBN 978-0-309-16030-8 p. 13

[22] We also solicited Idaho State University's PhD program, but they did not share that information with us.

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CURRICULUM PROPOSAL FORM

members of the U of M Psychology Department. When hiring a new department chair in 2011, candidates discussed potential plans for a Ph.D. program with the current department faculty and with the Dean of the College of Letters and Science.

The 2013, an external review panel reviewed and consulted our department and examined our potential for a successful Ph.D. program. The panel rated the Psychology Department's potential for the specific Ph.D. program in Psychological Science that we are proposing as **very favorable**, based on the high research productivity of current faculty and graduate students. The committee further recommended converting our M.S. program into a Ph.D. program for four reasons: (1) MSU places very high priority on continuing to increase annual research expenditures and the number of doctoral programs, (2) the major division of the discipline of psychology coincides perfectly with the existing clinical/school psychology program at U of M and the proposed Psychological Science Ph.D. at MSU, (3) all the TT faculty are productive researchers, and (4) the record of external funding for a master-level program in psychology is already remarkable, with seven of the eight faculty who are not in their first year at MSU having already received either NIH or NSF funding. They further recommended resources to assist in this program as it develops which included (1) an increase in TT faculty over the next seven years, (2) a comparable increase in NTT faculty, (3) an increase in the number of GTAs, and (4) additional laboratory space. Our faculty are hopeful the university will take heed of the review committee's recommendations.

The Department Chair discussed potential plans with the Dean of the College of Letters and Science following the external program review, and was encouraged to develop the proposal because of the potential of the Psychological Science Ph.D. to further the goals of MSU's Strategic Plan. The MSU Psychology Faculty began actively developing the conceptual framework in Spring 2013 while preparing for External Program Review. The Psychology faculty have worked intensively as a team on the details of this proposal following the External Program Review in Fall 2013 until its submission in March 2014 and present revision based upon UGC feedback.

May 21-22,2015

ITEM 167-2020-R0515

Request for Authorization to Establish the Center for Health and Safety Culture; Montana State University

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THAT

The purpose of the Center for Health and Safety Culture is to understand and transform the cultural factors that threaten quality of life in terms of traffic safety, substance abuse, and domestic violence. This aligns with the university vision to "inspire people to engage with the university to improve the human prospect".

EXPLANATION

The Center's core objectives can be summarized in its primary research questions:

- How does culture influence health and safety?
- How do we define, measure, and modify cultural influences?
- What are effective processes to guide cultural strategies at the national, state and local levels?
- How do we effectively build the capacity of practitioners to improve health and safety using cultural strategies?

ATTACHMENTS

Academic Proposal Request Form
Research Center Proposal Form
Attachment #1- Appendix: Center for Health and Safety Culture

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

In Item Number: **167-2020-R0515** Meeting Date: **May 21-22, 2015**

Institution: **Montana State University** CIP Code:

Program Title: **Establishing Center for Health and Safety Culture**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

___ **A. Notifications:**

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

___ **1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

___ **1b. Withdrawing a program from moratorium**

___ **2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)

___ **3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**

___ **4. BAS/AA/AS Area of Study**

___ **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

___ **1. Re-titling an existing major, minor, option or certificate**

___ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

___ **3. Revising a program** (Curriculum Proposal Form)

___ **4. Distance or online delivery of an existing degree or certificate program**

___ **5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

___ **Temporary Certificate or AAS Degree Program**

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

___ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ **1. Adding an option within an existing major or degree** (Curriculum Proposal Form)

___ **2. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

X **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

___ **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

___ **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

X **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:

A request is made to establish the Center for Health and Safety Culture.

The purpose of the Center for Health and Safety Culture is to understand and transform the cultural factors that threaten quality of life in terms of traffic safety, substance abuse, and domestic violence. This aligns with the university vision to "inspire people to engage with the university to improve the human prospect." The mission of the Center for Health and Safety Culture (CHSC) is to be an interdisciplinary center serving communities and organizations through research, training and guidance (e.g., support services) to cultivate healthy and safe cultures. The Center's core objectives can be summarized in its primary research questions:

- How does culture influence health and safety?
- How do we define, measure, and modify cultural influences?
- What are effective processes to guide cultural strategies at the national, state and local levels?
- How do we effectively build the capacity of practitioners to improve health and safety using cultural strategies?

More details about the proposed Center are included in its Research Center Proposal Form.

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RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

1. State the proposed Institute/Center's name and purpose.

The purpose of the Center for Health and Safety Culture is to understand and transform the cultural factors that threaten quality of life in terms of traffic safety, substance abuse, and domestic violence. This aligns with the university vision to "inspire people to engage with the university to improve the human prospect".

[See Appendix for full narrative of center application]

2. A comprehensive statement of the Institute/Center's mission and its relationship to the University mission.

A. State the Institute/Center's mission.

The mission of the Center for Health and Safety Culture (CHSC) is to be an interdisciplinary center serving communities and organizations through research, training and guidance (e.g., support services) to cultivate healthy and safe cultures.

B. Identify the Institute/Center's goals and objectives.

The Center's core objectives can be summarized in its primary research questions:

- How does culture influence health and safety?
- How do we define, measure, and modify cultural influences?
- What are effective processes to guide cultural strategies at the national, state and local levels?
- How do we effectively build the capacity of practitioners to improve health and safety using cultural strategies?

C. What specific need is being responded to in developing the proposed Institute/Center?

Whereas there are psychological (e.g., personality), biological (e.g., genetic), and environmental determinants (e.g., access to resources) of health and safety behaviors, the unique purpose of the CHSC is to examine the cultural influences of our social environments on our decisions to engage in risky and protective behaviors. The influence of the social environment is a pervasive and inherent part of our decision-making process so that we feel accepted (rather than rejected) by our cultures. In many cases, our decision to engage in dangerous or unhealthy behaviors is predicated on our perception that such behaviors are "normal" and even rewarded in our cultures. Thus, understanding the cultural context of behavioral choices is critical to achieve our health and safety goals in society.

D. Describe how the Institute/Center benefits the department, college, or institution.

As per item E, the center benefits the departments and colleges involved by supporting the missions of discovery, learning and engagement. This center is housed in the Western Transportation Institute and supports this institute's mission to research and improve traffic safety in rural areas.

Montana Board of Regents

RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

E. Describe the Institute/Center's relationship to the University mission.

The Center's primary research focus is **discovering** how culture influences health and safety and, based on this understanding, what processes guide the effective deployment of cultural-based strategies to change these influences. This research involves developing a comprehensive understanding of culture, how culture influences behavior, and how to measure these cultural influences. Next, interventions must be designed and tested. Intervention design involves research in leadership and community-level change processes, experiment and evaluation design, and community-based research.

Clearly, the Center cannot influence cultural change directly. Authentic cultural change will always require the engagement of local stakeholders. Therefore, the Center must create opportunities for local stakeholders in health and safety to **learn** about these approaches, factors within their own cultures that influence health and safety, and how to modify these factors. Therefore, a critical role for the Center is to foster learning. Strategies to foster learning include conducting applied research that addresses the specific needs of stakeholders (as opposed to "laboratory research" addressing fictitious scenarios to test theories). This kind of research results in discovery that has very tangible and immediate application by stakeholders.

In addition, the Center recognizes a clear need to **create learning opportunities in the classroom** about its discoveries so that our future workforce learns about the cultural influences of health and safety and their role in creating these cultural influences. A new class in the Sociology Department was introduced this past year by a faculty member working with the Center (Steve Swinford), and graduate students have been engaged to work on Center projects. Thus, the Center works with teaching faculty in our research activities so that these discoveries are brought back to the classroom and MSU's students.

The Center recognizes that, even with leading research efforts, the health and safety of our communities will not improve without active **engagement** by local leaders and change agents. Therefore, creating effective technology transfer is a major objective of the Center. We must explore the most cost-effective and time-effective methods for taking best practices out of academia and into the hands of those doing the work. It is important to recognize that even this aspect of the work – technology transfer – has a significant cultural component with many factors within organizations that may encourage or inhibit new learning. In this way, the exploration of culture becomes central to all aspects of the Center's objectives

3. Briefly describe the Institute/Center's anticipated activities.

The Center engages in discovery activities by conducting specific research projects funded by a variety of stakeholders including national research entities (such as the National Cooperative Highway Research Program), states (such as the Oregon Health Authority and the Idaho Transportation Department) and community level organizations (TEAM For West Virginia Children, Drug-Free Action Alliance of Ohio). These funders ask the Center to address a particular issue such as impaired driving, underage drinking, or child maltreatment. Research projects may also include general synthesis of existing research and the development of resources for practitioners to use.

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RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

Activities addressing learning include publishing, presenting, training, and hosting conferences. We have published articles and contributed to several important academic journals.

Content-oriented activities include our active projects in three issue areas: traffic safety, substance abuse, and violence. However, while the Center recognizes that publishing is critical, we must go beyond just publishing – as scientific journals are often read by other researchers but rarely read by practitioners. Therefore, presenting at conferences, hosting conferences, hosting training, and providing on-going support for practitioners are critical activities. Since 2010, we have conducted over 38 trainings and three conferences involving more than 2,000 people.

Activities addressing engagement include web-based resources, community cohort projects, and on-going support services. Several of our projects involve multi-year efforts engaging a cohort of community-level change agents. In an effort to support their engagement and learning, we create private, online communities of practice. These private communities are designed for those we serve and are facilitated by Center staff. They provide a structure to share information, reports, tools and facilitate dialogue among individuals.

In addition, the Center provides on-going support to individual change-agents (e.g., community prevention coordinators) for a year at a time. This service includes monthly phone calls, intermittent emails, access to a private community of practice, and a summary report completed by a trained "Guide." This guide has extensive knowledge of our research and practices and seeks to build the capacity of an individual through a sustained teaching / coaching relationship. Since 2010, we have served 82 communities with guide services.

A. Identify faculty expertise available for participation in the Institute/Center's activities.

The follow table summarizes the faculty expertise involved in addressing the Center's research questions. The center will be engaging faculty from multiple colleges and departments to help complement our knowledge and expertise.

Research Questions	Sociology	Anthropology	Psychology	Leadership	Communication	Nursing	Art
How does culture influence health and safety?	X	X	X	X	X	X	
How do we define, measure, and modify cultural influences?	X	X	X				
What are effective processes to guide cultural strategies at the national, state and local levels?	X		X	X	X	X	
How do we effectively build the capacity of practitioners to improve health and safety using cultural strategies?				X	X	X	X

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RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

B. Which departments on campus will be involved and how will the Institute/Center contribute to the academic programs of the institution?

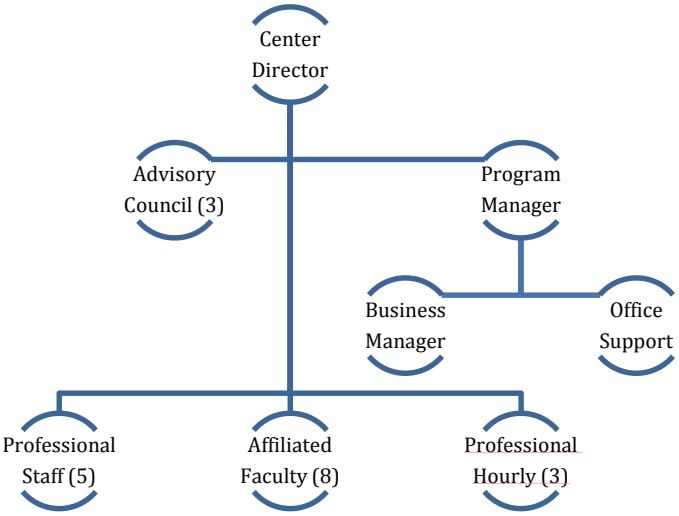
In addition to the director Nicholas Ward (Mechanical and Industrial Engineering), the Center has developed affiliations with faculty from multiple disciplines including Eric Austin (Political Science), William Schell (Mechanical and Industrial Engineering), Steve Swinford (Sociology), Kaylin Green (Sociology), Matt Vess (Psychology), Ian Handley (Psychology), Monica Skewes (Psychology), and Judge Vaughan (Art).

Affiliated faculty contributes specific expertise for Center projects that overlap with their research interests. In addition, the Center may collaborate with faculty on research proposals, and faculty may be supported represent the Center at conferences.

Research with the center may also support graduate students within the participating documents and be integrated with department courses.

4. Identify the organizational structure of the Institute/Center within the institution.

The Center uses a traditional organization structure as shown here.



A. Identify all agencies, organizations and/or institutions that will be involved.

This center is housed in the Western Transportation Institute as part of the College of Engineering and Montana State University, Bozeman. In order for the Center to remain relevant to those communities and organizations it serves, we are proactive and strategic in collaboration with other agencies, organizations, and institutions. Whereas we do not have a standing arrangement with any single partner, we do make collaborative arrangements on a project basis to strengthen our proposals and grant applications. Typically, these partnerships are with other entities that provide community access or expertise in a health and safety domain. Most often, we are approached by

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RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

other groups to partner because of our national reputation as a center of excellence for health and safety culture. For example, we recently partnered with the Montana Department of Transportation (MnDOT) to create a Pooled Fund Program to study traffic safety culture with nine other states. The Pooled Fund has already raised $975,000 dedicated to research in traffic safety culture. In this partnership, we are the lead research organization and support MnDOT in the management of the program.[1]

B. Identify advisory council information.

In addition, the CHSC has established an advisory council to provide input to our research, education, and engagement strategies. The members of the advisory council were also selected to assist us in accessing funding agencies that can support our activities in our primary content areas (traffic safety, substance abuse and violence):

- Barry Watson, Ph.D., Chief Executive Officer, Global Road Safety Partnership (http://www.grsproadsafety.org/)
- Maureen Sheeran, Chief Program Officer, Family Violence and Domestic Relations, National Council of Juvenile and Family Court Judges (www.ncjfcj.org)
- David Sleet, Ph.D., Associate Director for Science, Division of Unintentional Injury Prevention, National Center for Injury Prevention and Control, CDC.

5. Identify first year and continuing finances necessary to support the Center/Institute, including the sources of funding.

Annual expenses since fiscal year 2011 are shown in the table below.

	Fiscal Year (July 1 – June 30)					
	2011	**2012**	**2013**	**2014**	**2015***	**Total**
Salaries	317,574	463,971	468,038	263,658	269,074	1,782,317
Benefits	98,377	140,065	147,787	84,969	87,793	558,991
Contracted Svs	144,428	212,078	72,660	90,641	88,400	608,206
Supplies	7,987	12,953	24,080	14,030	6,900	65,950
Travel	37,065	60,581	84,652	37,606	36,449	256,354
Communications	5,908	7,834	33,518	19,318	5,001	71,580
Other Expenses	39,950	37,716	98,376	63,610	16,377	256,029
Indirect Costs	46,207	85,677	61,145	60,508	135,833	389,369
Total	**654,369**	**938,665**	**937,732**	**578,163**	**511,599**	**3,620,527**

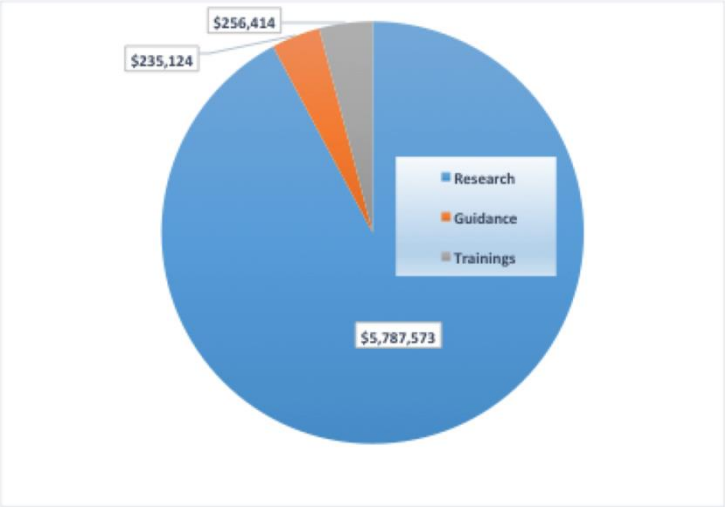
*through 1/31/2015

[1] http://www.pooledfund.org/

Montana Board of Regents

RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

These expenses have been covered by external research contract and other income generated by the center related to guidance services and training events (totaling more than $6 million since fiscal year 2011) as summarized in the figure below.



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

No.

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

No.

6. Describe other similar Centers/Institutes or research capacities in the state and surrounding region.

A review of university centers and institutes in the northwest region dedicated to "health and safety" identified several programs. However, these centers focus primarily on occupational safety and hazards in the physical environment. Thus, these programs are not similar to our center because the exclude the social environment that is the focus of our activities and exclude our health and safety domains of traffic safety, substance abuse, and domestic violence.

A. Describe the relationship between the proposed Center/Institute and any similar Centers/Institutes, programs, or research capacities within the Montana University System.

There are no programs at the University of Montana comparable to the CHSC in terms of cultural perspectives on traffic safety, substance abuse, and domestic violence.

Montana Board of Regents

RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

B. In cases of substantial duplication, explain the differences between these and the need for the proposed Center/Institute at an additional institution. Describe any efforts that were made to collaborate with these Centers/Institutes, programs or research capacities. If no efforts were made explain why.

Na.

7. Assessment: How will the success of the program be measured?

Because this is primarily a research center, success will initially be assessed in terms of amount of research expenditure. However, because the mission for the center is to improve the human prospect in communities, success will also be assessed by the number of participating communities.

8. State the internal campus review and approval process which has occurred prior to submission to the Commissioner's Office. Indicate, where appropriate, involvement by faculty, students, community members, professional constituencies, etc.

This application has been reviewed and approved by the Dean of the College of Engineering, Vice President of Research, Provost, Dean's Council, Faculty Senate, and the President's Executive Council.

Appendix:
Center for Health and Safety Culture

INTRODUCTION

In 2010, the Western Transportation Institute within the College of Engineering launched an initiative to lay the foundation for a future center to address behavioral safety in transportation. In the past four years, that initiative has built a core multi-disciplinary staff, engaged in over $3.5 million in activities, and worked in over 20 states and 82 communities.

Recently, a new director was appointed to lead this center. During transition, it was noted that the center was approved by the former Vice President of Research (McCoy), but had not obtained formal Board of Regents (BOR) approval. Thus, the center is now applying for BOR approval as per university regulations (Policy 218 – Institutional Organization).

This document provides a brief overview of the background of this initiative, the center's proposed purpose and objectives, its current activities and partnerships, structure, finances and faculty expertise. Finally, similar programs and the proposed center's relationship to the University are discussed.

BACKGROUND

The Western Transportation Institute (WTI) conducts applied research in transportation-related issues to support the needs of federal, state, and local partners. Research areas include safety, maintenance, road ecology, mobility and public transportation, logistics and freight management, and transportation planning and economics.

While tremendous progress has been made in improving traffic safety through better engineering practices and vehicle design, a significant portion of fatalities and serious injuries are due to the behavioral choices of transportation users. In 2010, WTI recognized the need to augment its safety research beyond road design and infrastructure to address behavioral factors of transportation users. Thus, an initiative was created called the Center for Health and Safety Culture within WTI to conduct applied research on the behavioral factors influencing traffic safety and provide key stakeholders guidance on how to address these issues.

WTI's initiative was launched while the national strategic approach to traffic safety was shifting. National organizations were promoting an approach called "Towards Zero Deaths" – a strategy developed by other countries around the world – that sought to shift transportation safety from only a transportation related issue to a public health issue. In light of this, WTI's initiative

began with a broader scope than just traffic safety issues and included related issues such as substance abuse (since substance abuse is a leading contributing factor to traffic safety).

Over the past four years, this initiative has engaged in over $3.5 million in research activities on behalf of federal, state and local agencies. It has refined its purpose to address safety from a cultural perspective; has embraced a comprehensive set of objectives that address discovery, learning and engagement; and has developed a dedicated, multi-disciplinary staff and cadre of partners. Figure 1 is a map of project locations from 2010 to 2014. This initiative is now ready to pursue center designation by Montana State University.

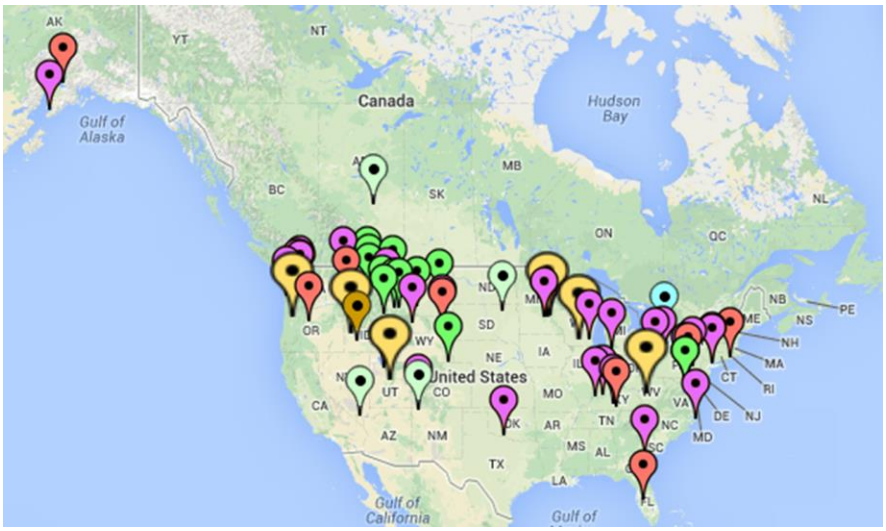


Figure 1. Map of Projects and Services from 2010 to 2014

MISSION

> *"It is unreasonable to expect that people will change their behavior easily when so many forces in the social, cultural, and physical environment conspire against such change. If successful programs are to be developed to prevent disease and improve health, attention must be given not only to the behavior of individuals, but also to the environmental context within which people live."*[1]

The mission of the Center for Health and Safety Culture (CHSC) is to be an interdisciplinary center serving communities and organizations through research, training and guidance (e.g.,

[1] http://www.ncbi.nlm.nih.gov/books/NBK222839/pdf/TOC.pdf

support services) to cultivate healthy and safe cultures. This purpose aligns closely with Montana State University's core vision to "improve the human prospect."[2]

Whereas there are psychological (e.g., personality), biological (e.g., genetic), and environmental determinants (e.g., access to resources) of health and safety behaviors (see Figure 2), the unique purpose of the CHSC is to examine the cultural influences of our social environments on our decisions to engage in risky and protective behaviors. The influence of the social environment is a pervasive and inherent part of our decision-making process so that we feel accepted (rather than rejected) by our cultures. In many cases, our decision to engage in dangerous or unhealthy behaviors is predicated on our perception that such behaviors are "normal" and even rewarded in our cultures. Thus, understanding the cultural context of behavioral choices is critical to achieve our health and safety goals in society.

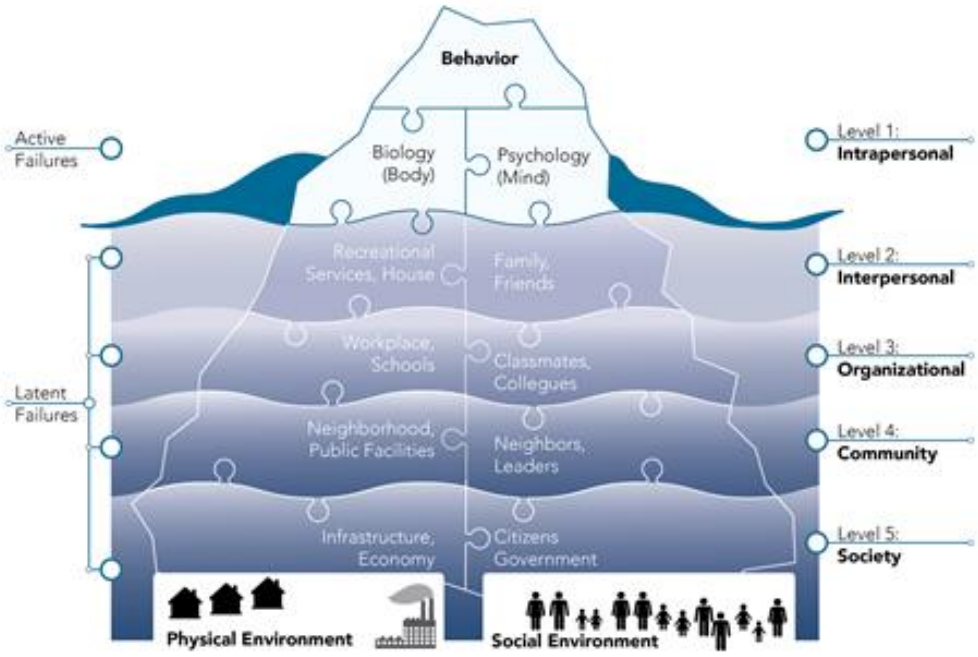


Figure 2. Factors Influencing Human Behavior

Understanding these cultural influences is necessary but not sufficient to change behaviors. In addition, strategies based on these understandings must be developed and disseminated. Therefore, research activities must include efforts to understand cultural influences on

[2] http://www.montana.edu/strategicplan/vision.html

behavior and determine opportunities for changing these influences. Intervention design and testing are thus additional critical areas of research.

The CHSC is committed to transferring this knowledge to those in positions to apply it. While publishing is important for the scientific community, the CHSC recognizes that we must also create more readily accessible mechanisms to build the capacity of federal, state and local change agents. Therefore, research in effective technology transfer is critical as well.

This cultural approach offers a number of theoretical and practical advantages. First, because the social environment is intrinsic to the human experience, cultural-based strategies can produce behavioral changes that are sustainable. Second, by recognizing the influence of various social layers (peers, families, schools, workplaces, communities, states, etc. – see Figure 3), strategies can be integrated to align and support the health and safety goals by multiple stakeholders. In other words, when improved health and safety becomes a part of "who we are and what we do," it is transferred to future generations by existing cultural mechanisms (such as parents teaching children, school and workplace policies, laws and regulations, etc.).

Figure 3. Social Ecological Influences on Behavior

OBJECTIVES

The Center's core objectives align with MSU's strategic plan – namely, discovery, learning and engagement.

The Center's primary research focus is **discovering** how culture influences health and safety and, based on this understanding, what processes guide the effective deployment of cultural-

based strategies to change these influences. This research involves developing a comprehensive understanding of culture, how culture influences behavior, and how to measure these cultural influences. Next, interventions must be designed and tested. Intervention design involves research in leadership and community-level change processes, experiment and evaluation design, and community-based research.

Clearly, the Center cannot influence cultural change directly. Authentic cultural change will always require the engagement of local stakeholders. Therefore, the Center must create opportunities for local stakeholders in health and safety to **learn** about these approaches, factors within their own cultures that influence health and safety, and how to modify these factors. Therefore, a critical role for the Center is to foster learning. Strategies to foster learning include conducting applied research that addresses the specific needs of stakeholders (as opposed to "laboratory research" addressing fictitious scenarios to test theories). This kind of research results in discovery that has very tangible and immediate application by stakeholders.

In addition, the Center recognizes a clear need to **create learning opportunities in the classroom** about its discoveries so that our future workforce learns about the cultural influences of health and safety and their role in creating these cultural influences. A new class in the Sociology Department was introduced this past year by a faculty member working with the Center (Steve Swinford), and graduate students have been engaged to work on Center projects. Thus, the Center works with teaching faculty in our research activities so that these discoveries are brought back to the classroom and MSU's students.

The Center recognizes that, even with leading research efforts, the health and safety of our communities will not improve without active **engagement** by local leaders and change agents. Therefore, creating effective technology transfer is a major objective of the Center. We must explore the most cost-effective and time-effective methods for taking best practices out of academia and into the hands of those doing the work. It is important to recognize that even this aspect of the work – technology transfer – has a significant cultural component with many factors within organizations that may encourage or inhibit new learning. In this way, the exploration of culture becomes central to all aspects of the Center's objectives.

The Center's core objectives can be summarized in its primary research questions:

- How does culture influence health and safety?
- How do we define, measure, and modify cultural influences?
- What are effective processes to guide cultural strategies at the national, state and local levels?

- How do we effectively build the capacity of practitioners to improve health and safety using cultural strategies?

ACTIVITIES

`Table 1 summarizes research activities completed or currently underway since 2010.

Table 1. Summary of Research Activities 2010-2014

Research Project	Funder	Issue
Phase II of a Positive Community Norms Approach to Increasing Public Support of Edmonton's Intersection Safety Cameras	City of Edmonton, CA	Traffic Safety
Using the Positive Community Norms Model to Support Suicide Prevention in Wyoming	Wyoming Department of Health	Mental Health
Wyoming Reform the Norm Project	Wyoming Department of Health	Substance Abuse
Exploring the Integration of Normative Clarification with Media Literacy Curriculum	Montana Office of Public Instruction	Substance Abuse
Transforming the Prevention of Child Maltreatment in Wisconsin	Children's Trust Fund of Wisconsin	Child Maltreatment
Oregon Department of Human Services Positive Community Norms Project	Oregon Health Authority	Substance Abuse
Media Messages and Tools to Reduce Fatalities and Serious Injuries from Single Run-off-the-Road (ROR) Crashes	Idaho Transportation Department	Traffic Safety
The Road to Zero: Impacting Motor Vehicle Safety in Ontario's Workplaces through the Positive Community Norms Approach	Health Services Ontario	Traffic Safety
Measuring Minnesota's Traffic Safety Culture	Minnesota Department of Transportation	Traffic Safety
Using the Positive Community Norms Approach to Increase Seatbelt Usage in Rural Utah	Department of Public Safety, Utah	Traffic Safety
Development of a Positive Community Norms Survey to Reduce Child Maltreatment in Wisconsin	Children's Trust Fund of Wisconsin	Child Maltreatment
Idaho Transportation Department Media Messages and Tools Pilot Implementation	Idaho Transportation Department	Traffic Safety
Using the Positive Community Norms to Foster Community Engagement in West Virginia	TEAM For West Virginia Children	Child Maltreatment
Idaho Transportation Department Constructive Culture Project	Idaho Transportation Department	Culture
West Virginia Technical Assistance on Positive Community Norms	DBS, Inc.	Substance Abuse
West Virginia's Strategic Prevention Framework Partnerships for Success Positive Community Norms Project	West Virginia Department of Health and Human Resources	Substance Abuse

A Strategic Approach to Transforming Traffic Safety Culture to Reduce Deaths and Injuries	NCRHP	Traffic Safety
Alaska Wellness Coalition Positive Community Norms Cohort Project	Alaska Wellness Coalition	Substance Abuse
Using the Positive Community Norms Framework to Foster Community Engagement in Improving Childhood in West Virginia Phase II	TEAM For West Virginia Children	Child Maltreatment
Training and Tools to Support Social Norms Messaging in Ohio	Drug Free Action Alliance of Ohio	Substance Abuse
Traffic Safety Culture Pooled Fund Support Project	Montana Department of Transportation	Traffic Safety

Process-oriented activities addressing learning include publishing, presenting, training, and hosting conferences. We have published articles and contributed to several important academic journals. For example, some recent publications include:

- Linkenbach, J. W., Keller, S., Otto, J., Swinford, S., & Ward, N. (2012). Media Messages and Tools to Reduce Serious Single Vehicle Run-Off-the-Road Crashes Resulting from Impaired Driving.
- Linkenbach, J. & Otto, J. (2014). Promoting Positive Community Norms – A Supplement to CDC's Essentials for Childhood: Steps to Create Safe, Stable, Nurturing Relationships and Environments. Centers for Disease Control and Prevention.
- Otto, J., Ward, N., Swinford, S., & Linkenbach, J. (2014). Engaging worksite bystanders to reduce risky driving. *Transportation Research Part F: Traffic Psychology and Behaviour*.
- Wambeam, R. A., Canen, E. L., Linkenbach, J., & Otto, J. (2014). Youth misperceptions of peer substance use norms: a hidden risk factor in state and community prevention. *Prevention Science: The Official Journal of the Society for Prevention Research*, *15*(1), 75–84.
- Ward, N. J., Otto, J., & Linkenbach, J. (2014). A Primer for Traffic Safety Culture. *ITE Journal Institute of Transportation Engineers*,*84*(5), 41-47.

However, while the Center recognizes that publishing is critical, we must go beyond just publishing – as scientific journals are often read by other researchers but rarely read by practitioners. Therefore, presenting at conferences, hosting conferences, hosting training, and providing on-going support for practitioners are critical activities. Since 2010, we have conducted over 38 trainings and three conferences involving more than 2,000 people (see Tables 2 and 3).

Table 2. Summary of Training Activities 2010-2014: Onsite Training

Training Name	Location	Attendees
Maryland PCN Training	MD	21
P&I Grantee Training	MN	68

OHA PCN Training	OR	32
SAMSHA PCN Training	D.C.	35
Long Beach PCN Training	WA	55
ITD PCN Training	ID	43
WI PCN Training	WI	55
PCN Training for Latah County	ID	12
PCN Training for Spearfish	SD	19
PCN Training for Newport	WA	17
UT PCN Seat Belt Training	UT	75
Canvas Health PCN Training	MN	22
OHA PCN Training	OR	75
Sumner PCN Training	WA	27
PCN Training for Brunswick	ME	60
ITD PCN Training	ID	45
VARSA PCN Training	WA	60
OK PCN Training	OK	42
Ossining PCN Training	NY	20
P&I Grantee Training	MN	30
PCN Seat Belt Training for UT	UT	40
PCN Training for Gainesville	GA	54
AK Statewide PCN Training	AK	200
WV PCN Training	WV	62
PCN Training for Adanta	KY	40
PCN Training for Elkhart	IN	34
PCN Training for Larchmont	NY	39
WV PCN Training	WV	30
Minnetonka PCN Training	MN	35
AK Statewide PCN Training	AK	60
Chariho PCN Training	RI	28
WV PCN Training	WV	10
Totals: 32 onsite trainings	**18 states**	**1,445**

Table 3. Summary of Conference Activities 2010-2014

Training Name	Location	Attendees

Montana Summer Institute 2011	MT	113
Winter PCN Training	CO	28
Spring PCN Training	MT	18
Montana Summer Institute 2012	MT	190
Winter PCN Training	GA	39
Spring PCN Training	MT	16
Montana Summer Institute 2013	MT	150
Winter PCN Training	GA	43
Winter PCN Training	NV	29
Totals: 9 events	**4 states**	**626**

Process-oriented activities addressing engagement include web-based resources, community cohort projects, and on-going support services. Several of our projects involve multi-year efforts engaging a cohort of community-level change agents. In an effort to support their engagement and learning, we create private, online communities of practice. These private communities are designed for those we serve and are facilitated by Center staff. They provide a structure to share information, reports, tools and facilitate dialogue among individuals.

In addition, the Center provides on-going support to individual change-agents (e.g., community prevention coordinators) for a year at a time. This service includes monthly phone calls, intermittent emails, access to a private community of practice, and a summary report completed by a trained "Guide." This guide has extensive knowledge of our research and practices and seeks to build the capacity of an individual through a sustained teaching / coaching relationship. Since 2010, we have served 82 communities with guide services.

Our content-oriented activities focus on three core issues: traffic safety, substance abuse, and violence.

- The World Health Organization (WHO) recognized fatal crashes to be an international public health issue with an estimated 1.2 million people worldwide killed in traffic crashes annually with a global cost of $518 billion. By the year 2020, traffic crashes are expected to become the third leading cause of years of lost life worldwide. Typically, over 30,000 people are killed every year in the U.S. in car crashes. Of concern to rural states such as Montana, this loss of life is highest on rural-classified roads.[3] And relevant to the student population of Montana State University, traffic crashes are the leading

[3] NHTSA, 2012. Rural/Urban comparison (DOT HS 811637). USDOT: Washington, DC.

cause of death for children and young drivers under the age of 34 years.[4] Behavioral factors are a major contributing factor to these fatal crashes with impaired driving, speeding, and not wearing a seat belt at the top of the list. Only recently has the U.S. begun to shift its safety focus from purely an engineering-approach (road and vehicle design) to a behavioral / cultural approach. The Center has several current projects addressing traffic safety.

- According the National Institute of Drug Abuse, substance abuse costs the U.S. approximately $600 billion every year[5] and is the second leading cause of years of potential life lost. Furthermore, substance abuse is a major contributing factor to traffic safety as alcohol related crashes are a leading cause of death among young adults (age 15-24). Cultural-based strategies have been embraced by the substance abuse prevention field for several years and there is much to be learned from successes addressing this issue that can be applied to other issues. The Center has several current projects addressing substance abuse.
- Violence costs the U.S. approximately $70 billion every year[6] and is a contributing factor to substance abuse and other health related issues. Violence includes violent acts with strangers, interpersonal violence, and child maltreatment. Recent research into the impact of adverse childhood experiences including child maltreatment has shown a connection to negative health outcomes in adulthood including heart disease, diabetes, obesity, substance abuse, and additional violence. The Center has two current projects addressing violence.

The Center recognizes that addressing multiple issues greatly improves the quality of our research. By examining multiple issues, we get a much more well-rounded understanding of how culture influences behavior, we are able to learn from one field and apply it to another, and we foster the break-down of silos – a goal many leaders have recognized is critical to advancing health in the U.S. and elsewhere.

PARTNERSHIPS

In order for the Center to remain relevant to those it serves and customer-focused, we are proactive and strategic in collaboration with other agencies, organizations, and institutions.

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[4] NHTSA (2006). Motor Vehicle Traffic Crashes as a Leading Cause of Death in the United States, 2003. NHTSA Traffic Safety Facts (DOT HS 810 568).

[5] http://www.drugabuse.gov/related-topics/trends-statistics

[6] Corso, P. S., Mercy, J. A., Simon, T. R., Finkelstein, E. A., & Miller, T. R. (2007). Medical Costs and Productivity Losses Due to Interpersonal and Self-Directed Violence in the United States. *American Journal of Preventive Medicine*, *32*(6), 474–482.e2.

Whereas we do not have a standing arrangement with any single partner, we do make collaborative arrangements on a project basis to strengthen our proposals and grant applications. Typically, these partnerships are with other entities that provide community access or expertise in a health and safety domain. Most often, we are approached by other groups to partner because of our national reputation as a center of excellence for health and safety culture.

We partnered with a private, non-profit agency in Canada responsible for providing health and safety services to businesses in the Province of Alberta. This project developed and evaluated a workplace tool to foster bystander engagement in reducing risky driving behaviors among employees.

We partnered with the Montana Department of Transportation (MnDOT) to create a Pooled Fund Program to study traffic safety culture with nine other states. The Pooled Fund has already raised $975,000 dedicated to research in traffic safety culture. In this partnership, we are the lead research organization and support MnDOT in the management of the program.[7]

We were recently approached by the Motorcycle Safety Foundation to collaborate on a research proposal submitted to AAA Foundation for Traffic safety to measure the influence of motorcycle rider subcultures on high risk riding behaviors. This partnership gave us unprecedented access and credibility within the motorcycle riding community.

We are currently exploring a joint National Institutes of Health (NIH) project with the Pacific Institute for Research and Evaluation (PIRE) – a leading research organization on substance abuse which is interested in working with us because of our focus on culture.

In addition, the CHSC has established an advisory council to provide input to our research, education, and engagement strategies. The members of the advisory council were also selected to assist us in accessing funding agencies that can support our activities in our primary content areas (traffic safety, substance abuse and violence):

- Barry Watson, Ph.D., Chief Executive Officer, Global Road Safety Partnership (http://www.grsproadsafety.org/)
- Maureen Sheeran, Chief Program Officer, Family Violence and Domestic Relations, National Council of Juvenile and Family Court Judges (www.ncjfcj.org)
- David Sleet, Ph.D., Associate Director for Science, Division of Unintentional Injury Prevention, National Center for Injury Prevention and Control, CDC.

[7] http://www.pooledfund.org/

STRUCTURE

The Center uses a traditional organization structure (see Figure 4).

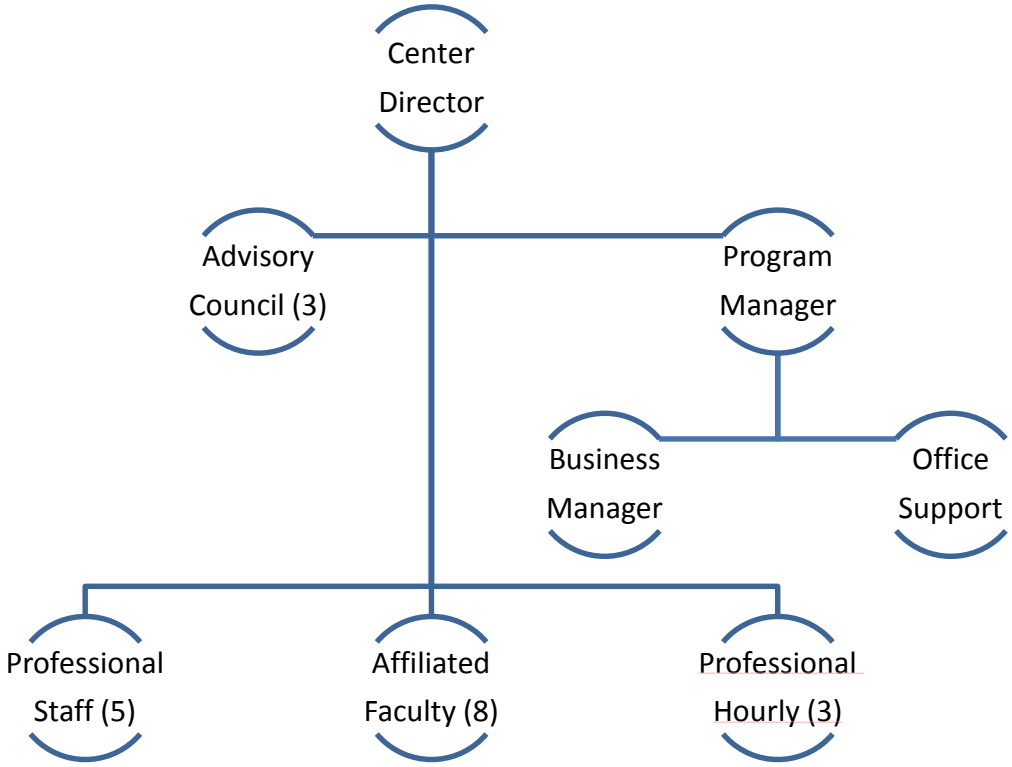

Figure 4. Center Organizational Structure

The Center Director is responsible for leading the strategic direction; networking with key stakeholders and partners at the international, national, state and local levels; providing guidance on research elements of all significant projects; and grant writing. Currently, the Center's director is Nicolas Ward, Ph.D., a nationally and internationally recognized leader in traffic safety culture. Ward has had year-round faculty appointment with MSU since November of 2007 and has been director of the Center since May of 2014.

The Advisory Council represents key stakeholders from a variety of sectors that would benefit from the research efforts of the Center – in essence, the Center's "customers." Their role is to provide input on research questions, long term strategic feedback, and provide guidance and facilitate networking with potential funding agencies. The current Advisory Council includes representatives of traffic safety, injury prevention, and violence prevention.

The Program Manager is responsible for overseeing all projects including research components, contractual obligations, and finances. The Program Manager seeks to integrate projects

activities and facilitate synergies and enhance learning among staff by overseeing all budgets and distribution of labor. Currently, the Center's Program Manager is Jay Otto, M.S. Otto has over 10 years of experience managing grant funded organizations and has been involved in all of the Center's projects since 2010.

The Business Manager oversees all contracts and purchasing, handles all financial accounting activities, and monitors practices to assure alignment with all purchasing and human resource policies. Currently, the Center's Business Manager is Debra Strachan. Strachan has over 40 years of accounting experience and has been with MSU in a similar role for 11 years and with the Center since 2010.

Office support handles day to day activities, connects incoming requests (phone and email) with appropriate staff and assists with accounting and planning activities.

Professional Staff provide technical expertise and perform services in support of the various research projects. Critical activities include identifying, reviewing and synthesizing published research; technical writing; survey design and analysis; evaluation; developing and delivering presentations and training; managing research projects in collaboration with federal, state, and community partners; and designing and implementing conferences hosted by the Center. Currently, the Center has five professional staff: Jamie Arpin (B.S., Sociology) supports survey design, implementation and analysis and evaluation activities; Katie Dively (Master of Health Promotion) provides one-on-one support and coaching (Guide Services), develops and conducts training, and leads cohort projects; Kari Finley (Ph.D., Behavior Specialist) focuses on behavioral aspects including intervention development and testing; Kelly Green (Masters of Public Administration) focuses on research activities of all projects and assists with evaluation; and Annmarie McMahill (Masters of Prevention) oversees several state-wide projects on all phases including initial assessments, material development, training, and evaluation.

Affiliated faculty contributes specific expertise for Center projects that overlap with their research interests. In addition, the Center may collaborate with these faculty on research proposals, and these faculty may represent the Center at conferences. In addition to the director Nicholas Ward (Mechanical and Industrial Engineering), the Center has affiliations with faculty from multiple disciplines including Eric Austin (Political Science), William Schell (Mechanical and Industrial Engineering), Steve Swinford (Sociology), Kaylin Green (Sociology), Matt Vess (Psychology), Ian Handley (Psychology), Monica Skewes (Psychology), and judge Vaughan (Art).

The Center also has professional hourly staff that provides specialized resources for projects on a very intermittent "as-needed" basis. This staff helps the Center garner specialized talent on an as-needed basis.

FINANCES

The vast majority (92%) of the Center's funding comes from grant funded projects (either competitive or sole-source). The Center also receives income from training and support services (see Figure 5). The Center's funding comes from sources outside of MSU.

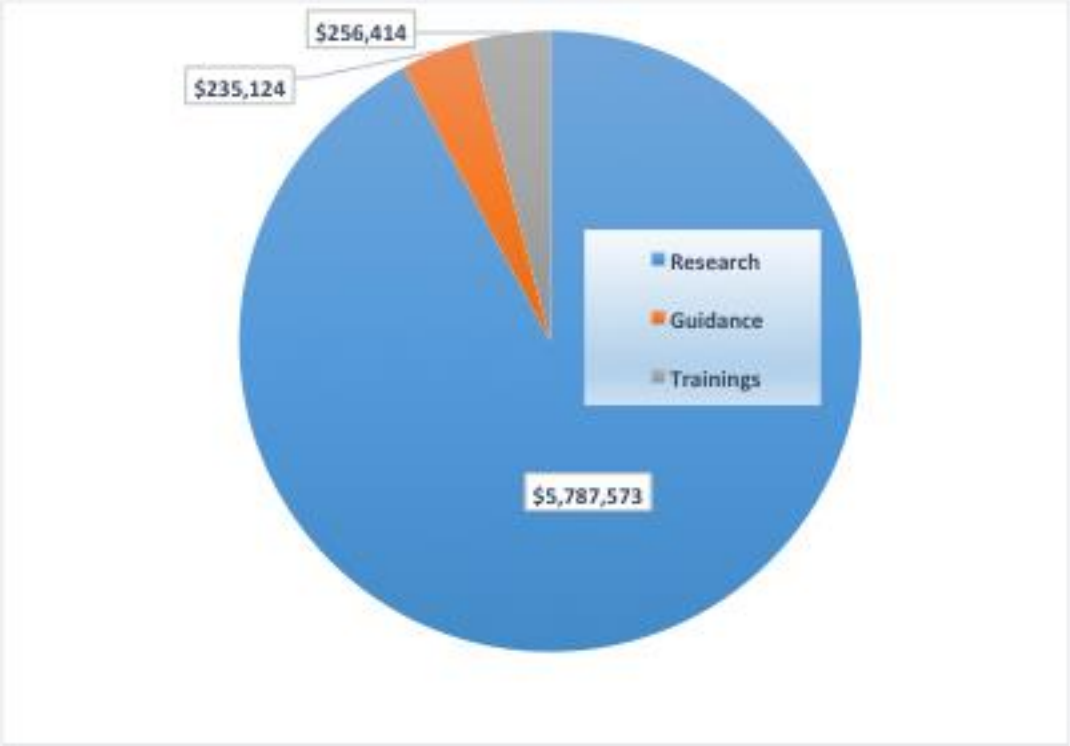

Figure 5. Sources of Center's Income (2010 to present)

Annual expenses for the Center since fiscal year 2011 are shown in Table 4. Since its inception, the Center has been self-funded.

Table 4. Center Expenses by Year

	Fiscal Year (July 1 – June 30)					
	2011	**2012**	**2013**	**2014**	**2015***	**Total**
Salaries	317,574	463,971	468,038	263,658	269,074	1,782,317
Benefits	98,377	140,065	147,787	84,969	87,793	558,991

Contracted Svs	144,428	212,078	72,660	90,641	88,400	608,206
Supplies	7,987	12,953	24,080	14,030	6,900	65,950
Travel	37,065	60,581	84,652	37,606	36,449	256,354
Communications	5,908	7,834	33,518	19,318	5,001	71,580
Other Expenses	39,950	37,716	98,376	63,610	16,377	256,029
Indirect Costs	46,207	85,677	61,145	60,508	135,833	389,369
Total	**654,369**	**938,665**	**937,732**	**578,163**	**511,599**	**3,620,527**

*through 1/31/2015

FACULTY EXPERTISE

Table 4 summarizes the multi-disciplinary nature of the Center's research questions. We anticipate engaging faculty from multiple colleges and departments to help complement our knowledge and expertise.

Table 5. Disciplines Involved in Center's Research

Research Questions	Disciplines Involved						
	Sociology	Anthropology	Psychology	Leadership	Communication	Nursing	Art
How does culture influence health and safety?	X	X	X	X	X	X	
How do we define, measure, and modify cultural influences?	X	X	X				
What are effective processes to guide cultural strategies at the national, state and local levels?	X		X	X	X	X	
How do we effectively build the capacity of practitioners to improve health and safety using cultural strategies?				X	X	X	X

SIMILAR PROGRAMS

A review of university centers and institutes in the northwest region dedicated to "health and safety" identified several programs:

- The Northwest Center for Occupational Health & Safety, University of Washington, (http://depts.washington.edu/nwcohs/).

- Western Center for Agricultural Health and Safety, University of California, Davis (http://agcenter.ucdavis.edu/).
- High Plains Intermountain Center for Agricultural Health & Safety, Colorado State University (http://csu-cvmbs.colostate.edu/academics/erhs/agricultural-health-and-safety/Pages/default.aspx).
- Center for Excellence for Environmental Health and Safety, Boise State University (http://hs.boisestate.edu/ceehs/).
- Center for Global Health (Occupational Health and Safety Thematic Group), Oregon State University, http://health.oregonstate.edu/global-health/thematic-groups.

However, these centers focus primarily on occupational safety and hazards in the physical environment. Thus, these programs are not similar to our center because the exclude the social environment that is the focus of our activities and exclude our health and safety domains of traffic safety, substance abuse, and domestic violence.

We also reviewed universities in the northwest region that had centers specific to our topics of traffic safety, substance abuse and domestic violence.

- Traffic Safety: The University of Washington has a regional University Transportation Center that conducts research on traffic safety (http://depts.washington.edu/pactrans/research/), but the focus on this center is primarily on transportation infrastructure rather road user behavior and it excludes consideration of culture as a behavioral risk factor.
- Substance Abuse: Washington State University has an Alcohol and Drug Abuse Research Program (http://www.public.wsu.edu/~adap/). However, this program appears to facilitate research by managing state tax funding and providing resources to faculty who primarily focus on individual as well as environment factors including policy.
- Domestic Violence: The University of Colorado Denver hosts the Center on Domestic Violence (http://www.ucdenver.edu/academics/colleges/SPA/researchandoutreach/CenteronDomesticViolence/Pages/default.aspx). Their mission is to end domestic violence by fostering institutional and social change through leadership development, education, research, and community collaboration. Unlike the CHSC, they are focused on a single issue and not about the general role of culture in impacting health and safety.

There are no programs at the University of Montana comparable to the CHSC.

RELATIONSHIP TO UNIVERSITY

The Center's proposed purpose, objectives, and activities align with MSU's core vision, strategic plan, and goals.

By virtue of the Center's core purpose as improving health and safety in our communities, the purpose of the center is directly aligned with the core vision of MSU to "improve the human prospect".[8] Recognizing that issues surrounding quality of life in our modern society are complex and dynamic, the center utilizes a multi-disciplinary approach supported by faculty from multiple departments and colleges including Political Science, Psychology, Sociology, and Industrial Engineering.

The Center's objectives directly align with MSU's strategic priorities of discovery, learning and engagement. The Center supports **discovery** by engaging in externally funded research programs to increase our "national and international" prominence. For example, the center has been awarded more than $6.7 million from 65 external grants since 2010. The results from these research grants have been widely disseminated through national and international conferences and journals including invited keynote presentations. As a result of our international exposure, the center was recently invited to join a European consortium that proposed and won a prestigious Marie Currie grant to host an international exchange of experts in traffic safety and culture.[9]

The Center objectives support the university strategic goals for **engagement** by "working together with community partners to exchange and apply knowledge and resources to improve the human prospect". Indeed, the primary method for applying the knowledge obtained from the Center's discovery activities is through community engagement. The Center engages with community partners by providing training (often at a location in the community and involving a wide variety of local stakeholders). As shown in Tables 3 and 4, the Center has provided over 40 training and conference events reaching more than 2,000 people in 22 states. Many of these training events lasted for multiple days.

After training, the Center often works with communities by providing on-going, one-on-one technical support for a year at a time. This allows for a more in-depth relationship resulting in a greater degree of trust. With an enhanced level of trust, the Center is able to teach and coach the local change agent resulting in greater knowledge transfer and effectiveness at the local level. The Center has spent the past four years developing the basic infrastructure and processes to support this style of engagement. We are now in the process of developing a more

[8] http://www.montana.edu/strategicplan/vision.html
[9] http://ec.europa.eu/research/mariecurieactions/about-msca/actions/rise/index_en.htm

structured evaluation of these services so that we can better understand how to effectively support communities.

The Center is also expanding its activities to support the university strategic goals for **learning** by providing education services for both community members and students enrolled at MSU. Dr. Swinford has developed a course entitled the Sociology of Culture. Material covered in the course informs our research, and students enrolled have the opportunity to engage in research through the Center to enhance the scope of their learning.

The Center's structure and hiring and management practices have supported the mission of the President's Commission on the **Status of University Women** to "eliminate institutional barriers to the success of women". As a result, 75% of the Center's professional staff are women. This success is encouraged by the creation of our own culture within the center that is "an environment of accountability, integrity, and optimism." For example, all staff and faculty meet twice a year to co-create the mission and strategy and to provide a forum where everyone can actively express themselves and participate.

CONCLUSION

The Center for Health and Safety Culture has established a solid record over the past four years. We have built a core multi-disciplinary staff, engaged in over $3.5 million in activities, and worked in over 20 states and 82 communities. Our purpose aligns with the mission of the University and fills a void in the region. Our objectives align with MSU's strategic plan – namely, discovery, learning and engagement. Our activities are meeting the needs of our sponsors as demonstrated by their continued investment in our services. We have developed partnerships and structures to support our on-going efforts.

We believe that the Center for Health and Safety Culture is a valuable addition to the MSU system and hereby request formal center designation.

May 21-22, 2015

ITEM 167-2022-R0515

Request for Authorization to Reinstate the Directed Interdisciplinary Degree; Montana State University

THAT

The Honors College at Montana State University (MSU) hereby requests the Directed Interdisciplinary Studies Degree be reinstated, in order to meet student demand for such a degree offering. This degree was eliminated by the Montana Board of Regents in the fall of 2009 due to low enrollment. Given the marked increase in the number of students in the Honors College at MSU in recent years from 802 students in the fall of 2009 to 1252 students in the fall of 2014 (36% increase), combined with the demonstrated student interest in such a degree offering; we are confident that this degree option will be successful in terms of (1) number of students enrolled, (2) reducing time to degree completion for students with diverse academic interests, (3) rigor of academic coursework, (4) encouraging undergraduate research and (5) admittance to graduate and/or professional schools.

EXPLANATION

The Directed Interdisciplinary Studies Degree (DIS) is for undergraduates interested in pursuing an area of scholarly/creative inquiry which falls outside the established departmental structure and existing degree programs at Montana State University. We hereby request the reinstatement of a B.A./B.S. degree program in Directed Interdisciplinary Studies by the Board of Regents of the Montana University System. The DIS degree will capture the integration of a minimum of three academic disciplines, as identified by the student and approved by the student's Faculty Advisory Committee (FAC). The FAC members will represent three academic disciplines and will work collaboratively with the student and Honors College Academic Advisor, to design and approve both an array of appropriate coursework and an independent research project to address the intersection of the student's interests. The student, with approval by the FAC, will determine whether the degree will be designated as a B.S. or a B.A., depending on the specific combination of academic disciplines for their degree.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form
Attachment #1- Appendix:

- DIS course plan
- List of MSU faculty engaged in undergraduate research/creative project mentoring 2012-present
- Letters of support
- Program Outcomes/Assessment Document

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **167-2022-R0515** Meeting Date: **May 21-22, 2015**

Institution: **Montana State University** CIP Code: **30.9999**

Program Title: **Directed Interdisciplinary Studies Degree**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

___ **A. Notifications:**

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

___ **1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

___ **1b. Withdrawing a program from moratorium**

___ **2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)

___ **3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**

___ **4. BAS/AA/AS Area of Study**

___ **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

___ **1. Re-titling an existing major, minor, option or certificate**

___ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

___ **3. Revising a program** (Curriculum Proposal Form)

___ **4. Distance or online delivery of an existing degree or certificate program**

___ **5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

___ **Temporary Certificate or AAS Degree Program**

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

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ACADEMIC PROPOSAL REQUEST FORM

___ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ **1. Adding an option within an existing major or degree** (Curriculum Proposal Form)

___ **2. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

X **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

___ **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

X **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

___ **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:
The Honors College at Montana State University (MSU) hereby requests the reinstatement of the Directed Interdisciplinary Studies Degree in order to meet student demand for such a degree offering. This degree was eliminated by the Montana Board of Regents in the fall of 2009 due to low enrollment. Given the marked increase in the number of students in the Honors College at MSU in recent years from 802 students in the fall of 2009 to 1252 students in the fall of 2014 (36% increase), combined with the demonstrated student interest in such a degree offering; we are confident that this degree option will be successful in terms of (1) number of students enrolled, (2) reducing time to degree completion for students with diverse academic interests, (3) rigor of academic coursework, (4) encouraging undergraduate research and (5) admittance to graduate and/or professional schools.

The Directed Interdisciplinary Studies Degree (DIS) is for undergraduates interested in pursuing an area of scholarly/creative inquiry which falls outside the established departmental structure and existing degree programs at Montana State University. We hereby request the reinstatement of a B.A./B.S. degree program in Directed Interdisciplinary Studies by the Board of Regents of the Montana University System. The DIS degree will capture the integration of a minimum of three academic disciplines, as identified by the student and approved by the student's Faculty Advisory Committee (FAC). The FAC members will represent three academic disciplines and will work collaboratively with the student and Honors College Academic Advisor, to design and approve both an array of appropriate coursework and an independent research project to address the intersection of the student's interests. The student, with approval by the FAC, will determine whether the degree will be designated as a B.S. or a B.A., depending on the specific combination of academic disciplines for their degree.

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CURRICULUM PROPOSAL FORM

1. Overview

The Honors College at Montana State University (MSU) hereby requests the reinstatement of the Directed Interdisciplinary Studies Degree in order to meet student demand for such a degree offering. This degree was eliminated by the Montana Board of Regents in the fall of 2009 due to low enrollment. Given the marked increase in the number of students in the Honors College at MSU in recent years from 802 students in the fall of 2009 to 1252 students in the fall of 2014 (36% increase), combined with the demonstrated student interest in such a degree offering; we are confident that this degree option will be successful in terms of (1) number of students enrolled, (2) reducing time to degree completion for students with diverse academic interests, (3) rigor of academic coursework, (4) encouraging undergraduate research and (5) admittance to graduate and/or professional schools.

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

The Directed Interdisciplinary Studies Degree (DIS) is for undergraduates interested in pursuing an area of scholarly/creative inquiry which falls outside the established departmental structure and existing degree programs at Montana State University. We hereby request the reinstatement of a B.A./B.S. degree program in Directed Interdisciplinary Studies by the Board of Regents of the Montana University System. The DIS degree will capture the integration of a minimum of three academic disciplines, as identified by the student and approved by the student's Faculty Advisory Committee (FAC). The FAC members will represent three academic disciplines and will work collaboratively with the student and Honors College Academic Advisor, to design and approve both an array of appropriate coursework and an independent research project to address the intersection of the student's interests. The student, with approval by the FAC, will determine whether the degree will be designated as a B.S. or a B.A., depending on the specific combination of academic disciplines for their degree.

3. Need

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

To date, 104 current Honors students indicated that they are interested in such a degree option. This degree would be an ideal pathway for students with diverse academic interests, and/or for students pursuing admittance to graduate, medical or law school. Interdisciplinary problem solving skills will be key to finding meaningful and innovative solutions to the grand challenges of the 21st century, as described under "Integration" in our strategic plan: "By integrating learning, discovery and engagement, and by working across disciplines, the MSU community will improve the world."

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

This degree is designed to afford self-motivated and independent learners the opportunity to design their own curricula under close faculty supervision and guidance. Each DIS degree curriculum therefore has the potential to be uniquely suited to each individual student. The DIS degree option would provide highly motivated and high achieving students the opportunity to pursue diverse academic disciplines in a structured and timely manner.

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A key part of the proposal is close faculty supervision by the Faculty Advisory Committee (FAC), which will prepare a semester report on the student's progress toward degree each term for review by the DIS Oversight Board. This degree will advance and further institutionalize our university's commitment to interdisciplinary studies, through an academic path which is attractive to a significant number of high achieving students.

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

To date, 104 current Honors students indicated that they are interested in such a degree option through a survey of the 1,252 students in the Honors College. Among those, 48 students indicated that it is very likely that they would pursue this degree offering if approved.

A Peterson survey of Honors Colleges and Programs in 2005 found that 20 Honors Colleges offered Honors majors nationwide. At that time, Montana State University was among those institutions. (Note: The National Collegiate Honors Council will research the number of institutions offering degrees in Honors Colleges in 2014 in an upcoming national survey prompted by our inquiry.)

4. Institutional and System Fit

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

The demonstrated student demand for the proposed DIS degree, combined with the recent gift of the Norm Asbjornson Innovation Center (NAIC), which has as its focus interdisciplinary collaboration and studies, are the primary motivations for this proposal. This degree will be unique at our institution and in the state of Montana and will enable highly gifted students to create a rigorous interdisciplinary course of study suited to their own academic interests and future careers.

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

No. Students seeking admission to the DIS program will be required to demonstrate to the DIS Oversight Board that their proposed curriculum cannot be accomplished through any other degree program offered at Montana State University. The DIS degree is for highly motivated and independent learners, interested in pursuing a thesis driven interdisciplinary curriculum, with faculty supervision and guidance. This degree will further institutionalize the existing culture of undergraduate mentoring by faculty at MSU. The responsibility of the students for their academic progress will be comparable to that expected of graduate students in terms of independent inquiry, rigor of scholarly work, thesis preparation, panel defense, public presentation, publications and presentations at regional and national conferences.

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

The DIS degree differs from two other interdisciplinary degree offerings on our campus, the SETS degree in History and Philosophy as well as the Liberal Studies degree - both in the College of Letters and Sciences. These degrees serve different student groups with set curricula and limited flexibility in terms of possible combinations of cross-disciplinary studies. For example, the SETS option offers a

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historical perspective on the evolution of science, and the Liberal Studies degree offers three options, Global or Environmental Studies, or the Quaternity. The DIS degree will provide students with an option to in essence design their own curriculum. See appendix A.

In summary:

i. The DIS degree is for undergraduates interested in pursuing an area of scholarly/creative inquiry, which falls outside the established departmental structure and existing degree programs at Montana State University.

ii. The DIS degree curriculum allows for individual choice in the combination of three academic disciplines selected from all the academic colleges at Montana State University.

iii. The DIS degree is for highly motivated independent learners, prepared to embark on unique and rigorous undergraduate research and creative activities. The level of responsibility of the student will be equal to that expected of our graduate students in terms of rigor of research/creative projects, thesis preparation and defense (8 credits) followed by a public presentation of the student's senior research/creative project.

iv. The DIS degree is open to all students at Montana State University. To apply for admission to the DIS degree, students must submit an academic transcript with grades earned (3.5 minimum GPA) and two letters of reference attesting to the motivation of the applicant and their ability to work independently. Successful applicants will be granted admission to the Honors College at Montana State University and must remain in good academic standing in that College. Students must maintain a 3.0 minimum GPA through their junior year in the DIS program.

v. This degree is designed to afford self-motivated and independent learners the opportunity to design their own academic curriculum, under close faculty supervision and guidance. Each DIS degree therefore has the potential to be unique and suited to each individual student.

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

Learning: The DIS degree will make undergraduate education at MSU adaptable to emerging fields and anticipates shifts in disciplinary boundaries in order to address contemporary issues and emerging challenges. The strategic plan calls for MSU to "create innovative, compelling student learning opportunities that will increase retention and graduation rates." MSU cannot offer a degree in every field or discipline, but we can attract and retain driven, high achieving students to MSU who desire a greater degree of control and voice in designing their curriculum. We also believe that the focus on research as a cornerstone of the degree will help MSU meet Metric L.3.2 and increase the percentage of graduates pursuing advanced degrees.

Furthermore, the DIS degree will prepare students for careers or for graduate school, particularly for those students interested in medical or law school. Through this curriculum, students will develop the ability to think critically and independently across disciplinary lines and as such, will contribute

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to the scholarly discourse in meaningful ways by providing real solutions to the world's most pressing problems.

Discovery: While all students have the opportunity to engage in research activity within existing undergraduate degree programs at MSU, the ability to span disciplinary boundaries is not firmly institutionalized. The proposed DIS degree would provide a structure and template for engaging in cross-disciplinary research. Student participation in discovery is cited in the strategic plan – "MSU's standing in the top tier of research institutions is hard won every day by the talented faculty, students, and staff who create knowledge and art, apply new insights to critical issues, and communicate the impacts of their discoveries throughout the world" – and this degree would provide students with yet another means to participate in discovery at MSU. The DIS degree will contribute to the prominence of MSU both nationally and internationally, through the research, creative endeavors, innovation and scholarly achievements of our faculty and students. DIS students will be required to complete an Honors thesis/creative project in their senior year, and to present their work in a public forum.

Engagement: The proposed DIS incorporates community engagement and curricular outreach in an undergraduate degree at a leading land-grant institution. We take our charge to "educate students, create knowledge and art, and serve communities, by integrating learning, discovery, and engagement" seriously. According to Metric E.1.4 "By 2019, all MSU students and faculty will have an engagement experience during their time at MSU." The proposed degree program offers an opportunity to engage with communities near and far to our most driven students and could serve as a model for other programs nationwide to do the same. Students in this curriculum will be prepared to become leaders and engaged citizens, working with community partners to improve the human condition, through a multi-disciplinary lens. In the past, DIS graduates have spearheaded efforts to address sustainability, social justice, and economic and health disparities in Montana and beyond. These students will serve as mentors in the public schools, as tutors to their peers through the Office of Student Success, as well as active participants in the vast array of service learning and other engagement activities.

Integration: The Integration component of the Strategic Plan has as the stated goal: "By integrating learning, discovery and engagement, and by working across disciplines, the MSU community will improve the world." This spirit is at the center of the DIS degree. Bringing together the goals presented above, students in the program will develop a interdisciplinary course of study, engage in original research across disciplinary boundaries, and engage with the broader community through their curricular and research activities. The proposed degree provides a clear pathway for MSU to move toward Objectives I.1 and I.2 and all metrics used to assess each.

By integrating learning, discovery and engagement, and by working across disciplines, the MSU community, and in particular Honors students, have and will continue to impact and improve the world. This is evident by our students working locally and internationally to improve the lives of others. Honors students in all majors have always integrated their course work with the broader society. For example: nursing students are making a pronounced difference in community health efforts, engineering students are addressing issues of water quality, sanitation, and sustainability, and music and education majors are actively engaged as mentors in the public schools.

Access: The Honors College at MSU is committed to widening access to higher education and ensuring equality of opportunity for all. Students may apply to the Honors College at any point

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during their academic career, prior to their senior year. The written application includes an academic statement, a 500-word essay, a letter of recommendation as well as academic transcript(s) and test scores. Upon careful review, the student will gain admittance to Honors College, or will be reconsidered after one semester of college. This is truly the strength of this Honors College: students at a land-grant state university will have access to an education equal to that offered students at elite private universities.

Stewardship: The Honors College at MSU will responsibly manage its human, physical, economic and environmental resources in an open and sustainable manner. We take our charge, that of providing the most valuable resource of our state - our students - with the best education possible, seriously. We have used the funding allocated to us responsibly and effectively, and have been responsible stewards of the historic buildings entrusted to us.

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

The Office of the Registrar found no other degree program similar to the DIS degree in the Montana University System.

5. Program Details

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

Students may formally apply for admission to the DIS program no earlier than the second semester of their freshman year through the first semester of their junior year, and will be admitted on the strength of their written application, academic record, letters of recommendation and personal interview. Applications will be reviewed by the DIS Oversight Board, which will be comprised of representatives of all the academic colleges at Montana State University.

Applicants for admission to the DIS degree options must provide appropriately detailed answers to the questions listed below. Particular attention should be given to Question #3: Statement of Senior Year Research/Creative Project, and Question #4: DIS Course Plan. If necessary, applicants may attach separate sheets providing a documentation which might be useful to the DIS Oversight Board's deliberations.

Applicants must also include an academic transcript with grades earned (3.5 minimum GPA) and two letters of reference attesting to the motivation of the applicant and their ability to work independently. Applicants must have gained admission to the Honors College at Montana State University, and be in good academic standing in that College.

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All applicants will be invited to discuss their proposals with the DIS Oversight Board during a formal interview, and applicants may resubmit amended proposals if they wish.

1. What are your reasons for wishing to undertake the Directed Interdisciplinary Studies Degree program? Comment briefly on your undergraduate education thus far, and give a brief account of why the DIS degree is particularly appropriate to your intellectual/academic goals.

2. Describe your anticipated and/or career goals after graduation from Montana State University.

3. Describe your anticipated Senior Year Research/Creative Project. It is understood that in consultation with your Faculty Advisory Committee (FAC), you may amend this initial proposal prior to the beginning of your final year of study as a DIS major.

4. Provide details of your anticipated DIS Course Plan. (See appendix A)

A minimum of 120 semester credit hours will be required for graduation. No B.A. or B.S. DIS Degree will be awarded with less than 90 semester credit hours of DIS course work, (30 per academic discipline) nor less than 62 semester credit hours of DIS course work at the Upper Division level. At least 15 credits must be at the 400 level. Students must complete HONR 201 and HONR 202 (Texts and Critics: Knowledge and Imagination) or HONR 301 (Text and Critics for transfer students or students who enter the program late in their academic careers). Of particular use to the students in this curriculum will be existing Honors contracts including HONR 292 or HONR 492 Independent Study; HONR 450 Honors Tutorial; HONR 490R Honors Thesis and HONR 494 Honors Seminars.

The Senior Year Research/Creative Project must represent no fewer than 8 semester credit hours. Upon successful completion of their thesis defense, students will be required to present their Senior Year Research/Creative Project in a public forum.

Students will not be eligible for the award of a DIS Degree unless they have also satisfied the Montana State University Core Curriculum requirements.

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

No implementation period will be necessary. Five (5) students will be selected to enroll in the fall of 2015 if approved by the Board of Regents.

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6. Resources

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

We will increase our current Honors Advisor to 1.0 FTE and have identified the funding in our budget to do so.

Over the longer term we envision a small number of FTE to be located in the Honors College, to establish long-term continuity in HONR offerings, and for flexible use, such as for internal sabbaticals. Any future requests will be managed through the prevailing university process for allocation and reallocation of faculty lines. This degree will be overseen by the DIS Oversight Board, comprised of the Dean and members of the Honors College Advisory Council, with representation of each of the academic colleges at Montana State University.

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.

There are no such requests at this time.

7. Assessment

How will the success of the program be measured?

As has been our practice, all Honors courses and seminars will be regularly assessed. We will also track our graduation and retention rates, as well as the success of DIS graduates beyond MSU, in terms of admittance to graduate schools, fellowship and scholarship recipients, and career success. We will continue to administer rigorous course evaluations and assessments, both at the mid- and end of term, as well as exit interviews and surveys upon graduation. The success of the DIS curriculum will be measured by the number of students graduating from MSU within 4 years combined with retention statistics. Although the earlier enrollment in this degree program was admittedly low, some of our best students chose this academically rigorous option, as evidenced by the 3 Goldwater, Rhodes, Boren and 3 Truman Awards received by students in this degree program. See Attachment 6 for a detailed Program Outcomes/Assessment document.

8. Process Leading to Submission

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

This proposal was reviewed and approved by the Honors College Advisory Council and the Dean of the Honors College. This document will be submitted to review by the Curriculum and Planning Committee as well as the Faculty Senate; it will then be presented for review and approval by the Deans' Council before submission to the Offices of the Provost and President, and the Montana University System Board of Regents.

We have also garnered the enthusiastic support of:

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CURRICULUM PROPOSAL FORM

Dianne Donnelly, Director Academic Advising Center, Montana State University

Denise Malloy, Pre-Med/Pre-Law Advisor, Montana State University

We met with the Department Heads in the College of Letters and Science on December 9, 2015

We met with the Academic Programs Working Group on March 24, 2015.

We met with Dean Nicol Rae, Associate Deans Tamela Eitle and David Cherry on March 31, 2015 and have their approval to proceed with the proposal.

9. Attachments:

1. Appendix A: DIS course plan
2. Appendix B: List of MSU faculty engaged in undergraduate research/creative project mentoring 2012-present, including Honors theses, Undergraduate Scholars Projects, INBRE, Hughes Bioscience Research and the Freshman Research Symposium.
3. Letters of support
4. Program Outcomes/Assessment Document

Proposed Directed Interdisciplinary Studies (DIS) Coursework

Student Name: _____ **Student ID:** _____ **Degree Sought:** BS ___ OR BA ___

Discipline 1				Discipline 2				Discipline 3			
Course Rubric	CR	Core	Sem.*	Course Rubric	CR	Core	Sem.*	Course Rubric	CR	Core	Sem.*
LOWER DIVISION (10 Cr. Min. Per Discipline)											
TOTAL LOWER DIVISON DISCIPLINE 1 CREDITS _____				TOTAL LOWER DIVISON DISCIPLINE 2 CREDITS _____				TOTAL LOWER DIVISON DISCIPLINE 3 CREDITS _____			

TOTAL LOWER DIVISON DISCIPLINES COMBINED CREDITS: _____

HONORS REQUIRED TEXTS AND CRITICS 201US AND 202IH or HONR 301US 8

TOTAL LOWER DIVISION CREDITS _____

UPPER DIVISION (18 Cr. Min. Per Discipline)											
TOTAL UPPER DIVISION DISCIPLINE 1 CREDITS _____				TOTAL UPPER DIVISION DISCIPLINE 2 CREDITS _____				TOTAL UPPER DIVISION DISCIPLINE 3 CREDITS _____			

TOTAL UPPER DIVISON DISCIPLINES COMBINED CREDITS: _____

SENIOR YEAR RESEARCH/CREATIVE PROJECT CREDITS (8 Cr. Min.): _____

TOTAL UPPER DIVISION CREDITS _____

Foundation	Satisfied By Course Rubric	Inquiry & Research & Creative Experience	Satisfied By Course Rubric
Seminar (US)	HONR 201US	Arts (IA)	
Diversity (D)		Humanities (IH)	HONR 202IH
Writing (W)		Social Sciences (IS/RS)	
Quantitative (Q)		Natural Science (IN/RN)	
Contemp. Issues in Science (CS)		Research & Creative Exp. (R,RA,RH,RN or RS)	

TOTAL CREDITS ALL DISCIPLINES COMBINED (84 Credits Minimum) : _____

TOTAL CORE CREDITS: _____

*Sem. (i.e. F14, SPR 15, S 15)

TOTAL CREDITS FOR DIS DEGREE (120 Cr. Min.): _____

Proposed Directed Interdisciplinary Studies (DIS) Coursework Approval

Student Name: _____ **Student ID:** _____ **Degree Sought:** BS _____ OR BA _____

Discipline 1	Discipline 2	Discipline 3
_____	_____	_____

SIGNATURES

Faculty Advisor Committee Member	Faculty Advisor Committee Member	Faculty Advisor Committee Member
Printed Name: _____	Printed Name: _____	Printed Name: _____
College/Dept.: _____	College/Dept.: _____	College/Dept.: _____
Dept. Phone: _____	Dept. Phone: _____	Dept. Phone: _____
Signature: _____	Signature: _____	Signature: _____
Date: _____	Date: _____	Date: _____

HONORS ADVISOR (FAC CHAIR): _____ **Date:** _____

USP/INBRE Mentors Fall 2012 – Summer 2014

(*Also Thesis Mentor in Honors)

(+ 2014 Freshman Research Symposium Presenters)

Dean Adams+
Selena Ahmed
Dennis Aig+
Roberta Amendola
Christina Anderson
Mark Anderson
Ryan Anderson
Wm. Randall Babbitt
Phenocia Bauerle
Rollin Beamish
Ann Bertagnolli*+
Pravin Bhiwapurkar
Jason Bolte
Brian Bothner*
Roger Bradley#
Jennifer Britton
Joan Broderick
Rebecca Brooker
Jennifer Brown+
Laura Burkle#
Carmen Byker
Joel Cahoon*
Douglas Cairns
Jioanna Carjuzaa
Ross Carlson*
Connie Chang+
Mary Clonginger*+
Sarah Codd
Rufus Cone
Julia Cory
Dallas Dallman
Nathan Davis
Lisa Davis
Angela Des Jardins
Josh Deweese+
David Dickensheets+
Mensur Dlakic
Doug Downs
Edward Dratz
Glenn Duff
Florence Dunkel*+
Catherine Dunlop
Andrew Epple
Michelle Flenniken+
Christine Foreman
Michael Franklin
Paul Gannon
Tomas Gedeon+
Paul Gentile
Robin Gerlach
Ada Giusti*
Rebecca Gleason
Sandra Halonen
Ian Handley
Robin Hardy
Anthony Hartshorn
Jeremy Hatch
Jenny Hatchadorian
Jordy Hendrikx
Jeffrey Heys+
Pascale Hickman
James Hicks
Phillip Himmer
Thomas Hughes
Michael Ivie
Clemente Izurieta
Garth James
Sarah Janzen
Ralph Johnson
Erick Johnson
James Joyce
Ron June*+
Todd Kaiser*
Charles Kankelborg
Zuzanna Karczewska
Bern Kohler*
Susy Kohout
David Lageson*+
Laura Larsson*
Ellen Lauchnor+
C. Martin Lawrence
Francis Lefcort*+
Hua Li
Theo Lipfert
Andrea Litt
Thomas Livinghouse
Christopher Livingston
Hunter Lloyd
Chaofu Lu
Rich Macur#
Nancy Mahoney
Galina Malovichko
Clayton Marlow*
Lucy Marshall
Sara Mast
Bruce Maxwell
Thomas Mcmahon
Christa Merzdorf*+
Mary Miles*+
John Miller*
David Miller
Gretchen Minton*
Scott Montross
Shannon Moreaux

Brendan Mumey
Wataru Nakagawa*+
Michael Neeley
Meta Newhouse
Joshua Obar#
John Peters
Robert Petrone
Brent Peyton*
Alexis Pike
Trevor Rainey*
Martha Joh Reeder
Michael Reidy*+
Elisa Renouard
Lisa Rew
Fatih Rifki

Brent Rosso
David Sands+
Michele Sare
Hugo Schmidt
James Schmidt
Ed Schmidt*
Michael Sexson*
Joseph Seymour
Robert Sharrock
Joseph Shaw+
Colin Shaw
Adam Sigler
Jeremiah Slovarp
Jessi Smith
Stephen Sofie

Cynthia Spinelli
Otto Stein
Cindy Stillwell
Steven (Ronald) Stowers*
Gary Strobel
Anjali Sundaram
Robert Szilagyi
Luther Talbert
Martin Teintze
John Thompson
Ian Van Coller
David Varricchio
JovankaVoyich-Kane*
Seth Walk

Rob Walker+
Sara Waller*+
Tom Watson
Bradford Watson
Norman Weeden
Stephanie Wettstein
Blake Wiedenheft
Julie Wieseler
James Wilking
Thomas Wood
Carl Yeoman+
Mark Young#
Nicolas Yunes+
Cathy Zabinski*

Hughes Bioscience Research Mentors Summer 2012 – Fall 2014

(*Also Thesis Mentor in Honors)

(+ 2014 Freshman Research Symposium Presenters)

Mary Cloud Ammons
Brian Bothner
Roger Bradley
Laura Burkle
Ross Carlson*
Connie Chang+
Mary Cloninger*+
Valerie Copie+
Trevor Douglas

Mensur Dlakic
Edward Dratz
Matthew Fields+
Michelle Flenniken+
Tomas Gedeon+
Robin Gerlach
Deborah Keil
C. Martin Lawrence
Francis Lefcort*+

Rich Macur
Christa Merzdorf*+
Heini Miettinen
Sheila Nielsen
Joshua Obar
David Sands+
Edward Schmidt*
Steven Stowers*
Robert Szilagyi

Matthew Taylor
Martin Teintze
Jovanka Voyich*
Seth Walk
Blake Wiedenheft+
Mark Young

Honors Theses Mentors

(+ 2014 Freshman Research Symposium Presenters)

Roberta Amendola
Robert Arnold
Robert Bennett
Ann Bertagnolli+
Richard Block
Rebecca Booklyn
Brian Bothner
Eric Boyd
Gary Brester
Doreen Brown
Joel Cahoon
Ross Carlson
Lawrence Carucci
Patricia Catoira+
David Claudio
Mary Cloninger +
Jerome Coffey
Valerie Copie+
Scott Creel
Scott Davis
Thomas Donovan
Trevor Douglas
Florence Dunkel+,
William Dyer
Steven Eiger
Ann Ellsworth
Marc Giullian
Ada Giusti
M. Gold
Mark Greenwood
Paul Grieco
Allison Harmon+
Ann J – illegible
Kristen Intemann
Frankie Jackson
Ron June+
Coleen Kaiser
Todd Kaiser
Bridget Kevane
Bern Kohler
Jan Krieger (CJMS)
David Lageson+
Marvin Lansverk
Anders Larsson
Laura Larsson
Lori Lawson
Tim LeCain
Ilse-Mari Lee+
Frances Lefcort+
Wesley Lynch
Clayton Marlow
Christa Merzdorf+
Mary Miles+
John Miller
Gretchen Minton
Gwendolyn Morgan
Mary Murphy
Wataru Nakagawa+
Sheila Neilson
Meta Newhouse
Brent Peyton
Melissa Ragain
Trevor Rainey
Michael Reidy+
Peter Rubicam
Robert Rydell
Martha Sellers+
Joe Shaw+
Leah Schmalzbauer
Edward Schmidt
Sarah Schmitt-Wilson
John Seifert
Christopher Seitz
Durward Sobek
Ronald Stowers
Gary Strobel
Michael Sexson
Steven Swinford
David Swingle
Amy Thomas
Jovanka Voyich
Sara Waller+
Dave Willey
Franke Wilmer
Linda Young
Cathy Zabinski

OREGON HEALTH & SCIENCE UNIVERSITY
OHSU
School of Medicine
Family Medicine
Mail code: FM
3181 S.W. Sam Jackson Park Rd.
Portland, Oregon 97239-3098
tel 503 494-7591
fax 503 494-4496

November 4, 2014

Dear Dr. Lee,

I am writing to urge you and the Montana Board of Regents to reinstate the Directed Interdisciplinary Studies (DIS) degree. This degree program was one of the highlights of my time at Montana State University (MSU). In my opinion, the DIS is the perfect degree program for bright, young undergraduate students who want to get the most out of their undergraduate education. The DIS enabled me to tailor an educational program of great interest to me and one that was diverse and appropriately challenging. As a DIS student, I was very well prepared for developing applications and successfully competing for top scholarships, including the Goldwater Scholarship and the Rhodes Scholarship. Through the DIS, I was also able to complete all pre-requisites for successful acceptance to Harvard Medical School (and I was also accepted to several of other top medical schools). Participation in the DIS gave me a broad range of experiences and knowledge so that I was competent to engage in several high-level interviews with ease.

The DIS degree program provides wonderful opportunities for students to engage with a multi-disciplinary committee of faculty and get to know these stellar faculty members extremely well. This is a valuable way for students to get important mentorship from faculty in a way that is individualized and empowering. This is also a very rewarding experience for talented faculty.

The individualized DIS curriculum is excellent preparation for conducting research and engaging in active learning throughout life. The DIS encourages students to take initiative, work independently, and gain an appreciation for incorporating a multi-disciplinary approach to solving complex problems. These are some of the wonderful qualities that many Montana students possess; these students will greatly benefit from the DIS. Similarly, postgraduate degrees programs look for these unique qualities and experiences to help them differentiate between the many qualified applicants to their programs. With tens of thousands of top students applying to medical schools each year, I was very fortunate to have the DIS credentials and experiences to help set me apart from the rest. I also had the benefit of working closely with several stellar faculty who had knowledge and familiarity with my work, my dedication to learning, my life goals, and my personal character – this helped immensely with recommendation letters for scholarships and medical schools. I had several interviewers comment on the richness of my MSU education and the great aspects of the DIS program.

Thank you for the opportunity to obtain a DIS degree from MSU in 1993. It was the perfect way to launch my career as a physician scientist. I give the DIS program my strongest recommendation. Students with great dedication and commitment to learning will embrace this program and will benefit from the many ways that it can enhance their careers. Please feel free to contact me if you would like any further information.

Sincerely,

Jennifer DeVoe, MD, DPhil
Associate Professor
Department of Family Medicine, Oregon Health and Science University
e-mail devoej@ohsu.edu
phone 503-494-2826; Fax 503-494-2746

December 3, 2014

Dr. Ilse-Mari Lee, Dean
Honors College
Montana State University
P.O. Box 172140
Bozeman, MT 59717-2140

Dr. Ilse-Mari Lee,

I have recently been made aware that in 2009 the Montana State University Directed Interdisciplinary Study (DIS) degree was eliminated from the curriculum, and the Montana Board of Regents is now considering re-implementing the program. I write this letter in support of the DIS program. The DIS degree provides a much needed opportunity to a select class of students who are preparing for advanced degrees that require a unique and diverse curriculum that may not be offered at Montana State.

I graduated from Montana State in 1998 with Highest Distinction in the Honors Program and a DIS degree focused on environmental history and land use planning. At the time, I planned on attending graduate school and developing a career in natural resource and land use management. Montana State did not offer a major that allowed me to fulfill the combination of social and biological sciences necessary for my academic development in the field. The DIS degree provided the perfect avenue to achieve my undergraduate goals. As a rigorous thesis-driven program, faculty members on my DIS committee commented that my thesis was equal to Master's degree work.

The skills I learned developing a curriculum, preparing and defending a thesis have served me well in my career. After MSU I went on to graduate first in my class at the University of Montana School of Law. During law school I worked in the natural resource division of the Department of Defense law department as an Honor's Intern at the Pentagon. I then clerked for Judge Thomas on the Ninth Circuit Court of Appeals (Judge Thomas will become the Chief Judge of the Ninth Circuit this week). I was then hired into the Department of Justice Natural Resource Division Honors Program, and began work as an Assistant U.S. Attorney in Oregon. I returned to Montana to serve as an Assistant U.S. Attorney, and ultimately became the Economic Crimes Unit Chief for the Montana U.S. Attorney's

Office. I am now Senior Litigation Counsel at The Boeing Company in Seattle, Washington, and handle complex commercial litigation and investigations on subjects ranging from environmental torts to patent disputes across the globe. At Boeing many of my colleagues and associates rank among the top lawyers in the country.

I have been fortunate in my career track, but a lot of it was developed on the foundation of hard work that began at Montana State in the DIS program, and I am always grateful for the opportunities MSU provided. Since graduating, I have come to appreciate that a DIS degree may not be advisable for many students since it is non-standard and may not fit a prototypical "profession" driven program. But that is the intent, because it is designed for a select class of students who plan to obtain advanced degrees in fields such as law, medicine or the sciences, in an area of study where MSU does not provide an established degree. For these students, the DIS provides a fantastic opportunity.

In sum, I hope Montana State will be able to re-implement the DIS program to provide more diverse curriculum opportunities for high-achieving students. My experience served me well at Montana State and beyond – and I know it will do the same for others.

Best Regards,

Ryan Archer

Ryan M. Archer

November 19, 2014

Re: DIS degree

To whom it may concern,

Please accept this letter of commitment in support of Ilse-Mari Lee's proposal to reinitiate the DIS degree at Montana State University.

As the Founding Director of the Design Sandbox for Engaged Learning (DSEL) at MSU and as faculty of the School of Art at Montana State University, I am interested in developing spaces designed to facilitate crossdisciplinary teaching and learning. Our first DSEL space opens in January 2015 and will support several courses which merge the sciences and arts in terms of content, co-teaching and student mix. My role is to facilitate crossdisciplinary courses being developed and ensure access to the right tools and materials for those courses. I am also charged with programming speakers and side workshops that complement the DSEL slate of courses each semester. For example, students in DSEL courses this Spring will have the opportunity to network with and take critique from industry professionals from Google, IDEO and even The White House.

I am 100% committed to scheduling courses that are part of this revitalized DIS degree in this DSEL space — guaranteeing a specialized environment that will facilitate interdisciplinary collaborations among MSU students with interests across the spectrum.

Sincerely,

Meta Newhouse

Meta Newhouse
Founding Director, DSEL
Associate Professor in Graphic Design
Montana State University School of Art
213 Haynes Hall
Bozeman, MT 59715

DSEL tool for thought + MONTANA STATE UNIVERSITY Mountains & Minds

November 19, 2014

To Whom It May Concern:

As members of an Ad Hoc Interdisciplinary Faculty Committee on Curricular and Co-curricular Change, we have been meeting since June 2014 to discuss options for interdisciplinary opportunities for both students and faculty at MSU. Our committee was born from discussions among the Deans of the College of Engineering, the College of Arts and Architecture, and the Jake Jabs College of Business and Entrepreneurship. These discussions among faculty and administrators have taken place in an environment that is ripe for interdisciplinary work, with the new MSU Strategic Plan as well as the planning for the Norm Asbjornson Innovation Center.

Many interdisciplinary options are developing on the MSU campus, from single courses and minors for students to cross-disciplinary faculty research. It is time to reinstate the Directed Interdisciplinary Studies Degree, which will provide an avenue for students to tailor a degree to a particular interest or research question. This degree will meet a student need not currently met by the SETS degree in History and Philosophy and the Liberal Studies degree.

As members of this ad hoc committee, we fully support the reinstatement of the Directed Interdisciplinary Studies Degree.

Sincerely,

Ad Hoc Interdisciplinary Faculty Committee on Curricular and Co-curricular Change:

Kregg Aytes, Dean, Jake Jabs College of Business and Entrepreneurship
Nancy Cornwell, Dean, College of Arts and Architecture
Brett Gunnink, Dean, College of Engineering
Dean Adams, College of Arts and Architecture
Laura Black, Jake Jabs College of Business and Entrepreneurship
Jake Cook, Jake Jabs College of Business and Entrepreneurship
Susan Dana, Jake Jabs College of Business and Entrepreneurship
Chris Livingston, College of Arts and Architecture
Rob Maher, College of Engineering
Meta Newhouse, College of Arts and Architecture
James Oakley, Jake Jabs College of Business and Entrepreneurship
Carolyn Plumb, College of Engineering
Brent Rosso, Jake Jabs College of Business and Entrepreneurship
Mandy Rutherford, College of Engineering
Durward Sobek, College of Engineering
Bradford Watson, College of Arts and Architecture

MONTANA STATE UNIVERSITY
HONORS COLLEGE
DIRECTED INTERDISCIPLINARY STUDIES (DIS) DEGREE
PROGRAM ASSESSMENT

The Directed Interdisciplinary Degree within the Honors College at Montana State University provides opportunities for students to study, conduct research, and exchange ideas in a challenging and supportive interdisciplinary academic environment. In addition to taking small enrollment classes with outstanding faculty members, DIS majors may enroll in honors seminars and courses and engage in independent study and research opportunities.

LEARNING OUTCOMES

DIS graduates will:

1. Engage in scholarly research.
2. Engage in interdisciplinary coursework and demonstrate the ability to recognize and apply multi- and inter-disciplinary approaches to research questions.
3. Demonstrate leadership skills and sustained community engagement as well as a commitment to public service.

1. **Scholarly research**.
   This outcome will be demonstrated by the fulfillment of <u>two</u> or more of the following components:

   - An undergraduate research project competitively funded by the Undergraduate Scholars Program, Montana INBRE, the Honors College, Howard Hughes Medical Institute, or other Undergraduate Research Program
   - Successful acceptance/completion of NSF sponsored Research Experience for Undergraduates (REU) or research internship
   - A research paper/poster presented at the national, regional or state level, MSU Undergraduate Research Celebration, or at an approved professional conference
   - A research paper written for an Honors College Seminar approved by the faculty member and endorsed by the Dean
   - An Honors Thesis or Thesis/Capstone project
   - Admission to graduate, law, medical or other professional schools; or a specialized employment offer based on the student's undergraduate research record

2. **Interdisciplinary coursework and the demonstrated ability to recognize and apply multi- and inter- disciplinary approaches to research questions.**
This outcome will be demonstrated by the fulfillment of three or more of the following components:

- A multi- or inter- disciplinary paper submitted for an Honors Seminar and approved by the instructor and the Dean of the Honors College
- A multi- or inter- disciplinary undergraduate research project approved the DIS Faculty Advisory Committee and the Dean of the Honors College
- Completion of the DIS curriculum
- Successful defense of DIS senior thesis/creative project

3. **Demonstrated leadership skills and sustained engagement as well as a commitment to public service.**
This outcome will be demonstrated by the fulfillment of two or more of the following components:

- Election to office in MSU student organization/s
- Completion of the MSU Leadership Certificate
- Evidence of successful advocacy on campus and beyond
- Election to office in community organization/s at the local, regional or national level
- Receipt of university, state, national or international awards or honors.

COURSES OFFERED BY HONORS COLLEGE

DIS
Curriculum/Outcome Matrix

Course	Credits		OUTCOMES	
		Research	Interdisiplinary Coursework	Leadership/ Public Service
HONR 201(US)Texts and Critics: Knowledge	4	I	I	
HONR 202 (IH)Texts and Critics: Imagination	4	I	I	
HONR 210 Mentoring Gifted Students	2			D
HONR 301 (US) Texts and Critics II	4	I	D	
HONR 204(D) Great Expeditions	3	I	D	
HONR 492-01 Honors Seminars	4	M	M	M
HONR 450 Honors Tutorial	4	M	M	
HONR 292 Honors Individual Projects	Variable	D	D	D
HONR 492 Honors Individual Projects	Variable	M	M	M
HONR 490 Honors Thesis	Variable	M	M	
HONR 123 Hike/Ski and Read	1			D
HONR 131 Freshman Research Symposium	1	I	I	

I: Introductory Level D: Developing Level M: Mastery Level

Evidence of Student Performance:

1. Scholarly Research

This will be assessed annually through a rigorous and random review of Honors Thesis and Independent Study Projects by a subset of the Honors College Advisory Council.

2. Interdisciplinary Coursework

This will be assessed through the successful completion of one or more upper level Honors seminars, or an interdisciplinary Honors Thesis project. A subset of the Honors College Advisory Council will randomly select at least two papers from each Honors seminar for evaluation.

3. Leadership/ Public Service

This will be assessed through the exit interview/survey of Honors graduates as well as by the number of prestigious scholarships and fellowships awarded to MSU students in a given year.

In each of these outcomes, 80% of students will be rated acceptable or exceptional on every category of the scoring rubric.

DIS Outcomes Scoring Rubric

OUTCOME CATEGORY	UNACCEPTABLE	MARGINAL	ACCEPTABLE	EXCEPTIONAL
SCHOLARLY RESEARCH	No evidence of substantive/approved undergraduate research or creative activities.	Submission and approval of Honors Thesis or Major Capstone, or Independent Study Project.	Submission and approval of Honors Thesis or Major Capstone, or Independent Study Project; Presentation at USP conference.	Submission and approval of more than two components: Honors Thesis, Major Capstone, or Independent Study Project. Presentation/s at regional/national conferences; research submitted and approved for publication.
INTERDISCIPLINARY COURSEWORK	No evidence of interdisciplinary coursework	Completed Texts and Critics courses.	Completed Texts and Critics courses and one Honors seminar.	Completed Texts and Critics courses and more than one Honors seminar and/or Honors Thesis.
LEADERSHIP AND COMMUNITY ENGAGEMENT	No evidence of Leadership or Community Engagement	Successful completion of "Mentoring Gifted Students" or participation in "Science Saturdays" and other educational/community outreach efforts.	Successful completion of "Mentoring Gifted Students" or participation in Science Saturdays and other outreach efforts; active participation in student organizations	Successful completion of "Mentoring Gifted Students" or participation in "Science Saturdays" and other outreach efforts; active participation in leadership role/s in student organizations; national or international recognition/scholarships.

5. Three-Year Assessment Schedule:

		YEAR				
Outcome	2015-2016	2016-2017	2017-18	2018-2019	2019-2020	2020-2021
1	x			x		
2		x			x	
3			x			x

Each element of the assessment plan will be reviewed and updated as necessary in year three of each three-year assessment cycle.

May 21-22, 2015

ITEM 167-2023-R0515

Request for Authorization to Establish the Center for the Communication of Science (CCS); Montana State University

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THAT

This is a request to establish the Center for the Communication of Science (CCS), housed within The College of Arts and Architecture at Montana State University. The purpose of CCS is to develop and integrate collaboration between the science, technology, engineering and mathematics (STEM) fields and visual media/creative disciplines, serving as a catalyst for the dissemination and expression of science.

EXPLANATION

The Center for the Communication of Science (CCS) is dedicated to innovative communication and creative expression of science, technology, engineering and mathematics (STEM). By providing an environment for dialogue and collaboration between artists, filmmakers, musicians, writers, designers, scientists, mathematicians and engineers, CCS will produce dynamic, original work that communicates science to the public.

The specific goals of this center are as follows:

1) Research and Development:

a) To create original films, photography, music, interactive design (e.g. web, games, mobile apps), science writing, visual art and design, directly related to research in science, technology, engineering and math.

b) Develop research on the effective communication of science within the MUS system and nationally.

2) Dissemination: To disseminate productions developed by CCS to the public through the web, public media, screenings, exhibitions, performances and installations pertinent to STEM research.

3) Workshops: To develop a range of instructional programs for science faculty and graduate students focused on working with visual media and media makers.

ATTACHMENTS

Academic Proposal Request Form
Research Center and Institute Proposal Form
Attachment #1- Letters of Support

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

In Item Number: **167-2023-R0515** Meeting Date: **May 21-22, 2015**

Institution: **Montana State University** CIP Code:

Program Title: **Establishing Center for Health and Safety Culture**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

___ **A. Notifications:**

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

___ **1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

___ **1b. Withdrawing a program from moratorium**

___ **2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)

___ **3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**

___ **4. BAS/AA/AS Area of Study**

___ **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

___ **1. Re-titling an existing major, minor, option or certificate**

___ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

___ **3. Revising a program** (Curriculum Proposal Form)

___ **4. Distance or online delivery of an existing degree or certificate program**

___ **5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

___ **Temporary Certificate or AAS Degree Program**

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

___ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ **1. Adding an option within an existing major or degree** (Curriculum Proposal Form)

___ **2. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

X **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

___ **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

___ **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

X **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:

A request is made to establish the Center for Health and Safety Culture.

The purpose of the Center for Health and Safety Culture is to understand and transform the cultural factors that threaten quality of life in terms of traffic safety, substance abuse, and domestic violence. This aligns with the university vision to "inspire people to engage with the university to improve the human prospect." The mission of the Center for Health and Safety Culture (CHSC) is to be an interdisciplinary center serving communities and organizations through research, training and guidance (e.g., support services) to cultivate healthy and safe cultures. The Center's core objectives can be summarized in its primary research questions:

- How does culture influence health and safety?
- How do we define, measure, and modify cultural influences?
- What are effective processes to guide cultural strategies at the national, state and local levels?
- How do we effectively build the capacity of practitioners to improve health and safety using cultural strategies?

More details about the proposed Center are included in its Research Center Proposal Form.

Montana Board of Regents

RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

1. State the proposed Institute/Center's name and purpose.

Name: Center for the Communication of Science (CCS)

The purpose of the Center for the Communication of Science is to develop and integrate collaboration between the science, technology, engineering and mathematics (STEM) fields and visual media/creative/writing disciplines, serving as a catalyst for the dissemination and expression of science.

2. A comprehensive statement of the Institute/Center's mission and its relationship to the University mission.

A. State the Institute/Center's mission.

The Center for the Communication of Science (CCS) is dedicated to innovative communication and creative expression of science, technology, engineering and mathematics (STEM). By providing an environment for dialogue and collaboration between artists, filmmakers, writers, musicians, designers, scientists, mathematicians and engineers, CCS will produce dynamic, original work that communicates science to the public.

B. Identify the Institute/Center's goals and objectives.

The specific goals of this center are as follows:

1) Research and Development:

a) To create original films, photography, music, interactive design (e.g. web, games, mobile apps), science writing, visual art and design, directly related to research in science, technology, engineering and math (STEM).

b) Develop research on the effective communication of science within the MUS system and nationally.

2) Dissemination: To disseminate productions developed by CCS to the public through the web, public media, screenings, exhibitions, performances and installations pertinent to STEM research.

3) Workshops: To develop a range of instructional programs for science faculty and graduate students focused on working with visual media and media makers.

C. What specific need is being responded to in developing the proposed Institute/Center?

There are three specific needs that this Center will respond to as part of its efforts. First, within the MUS system, there are a number of outstanding STEM research programs. Funding for such high-level research programs is becoming increasingly difficult to obtain. There is a strategic institutional commitment as well as legislative interest in increasing research within the MUS system, in part, because of the documented economic impact on the state. The CCS standing as a Center at MSU will serve as a demonstrated commitment to the public dissemination of scientific knowledge – a persuasive component to high-level funding for research - as many NSF and other science granting

organizations now require that the research teams demonstrate the broader impact and outreach components of their work.

Second, public scientific literacy levels have been estimated to be at only 20 percent comprehension. The focus on STEM education in elementary and secondary education reflects the understanding that such core skills are important for college preparation and/or professional success. The dissemination of scientific research will be focused on a lay audience. The CCS has in place a web based distribution system in its award winning Life on TERRA platform. It also is significant that Montana PBS will be an affiliated partner with the CCS so that we may repurpose the work of the Center through Montana PBS's Learning Media Platform and provide age - appropriate science modules aligned with the common core standards to teachers across Montana and available across the country. It is hard to support what one doesn't understand. Without public support of science, governmental funding support diminishes.

Third, not only is there a clear need for improved communication of scientific research but also, CCS has the capacity to develop innovative media programming, artistic representations of scientific research, through our resources, faculty and graduate students (for example graduate students in the School of Architecture, the School of Art and the MFA Science and Natural History Filmmaking Program). The Center positions itself within the College of Arts and Architecture, which represents the arts at MSU and consistently receives international recognition and acclaim for its research. To pair the innovations in filmmaking, art, music and architecture with the innovative STEM research done across campus will set up the Center to become a leading think-tank for the most relevant and contemporary approaches to scientific communication. Such outreach will serve to benefit the scientists in acquiring increasingly competitive grants and highlighting the prominence of their work to the public. This outreach will simultaneously benefit CAA faculty and students through additional research avenues for creative projects. The Center for the Communication of Science therefore addresses the need for an interdisciplinary approach to science communication.

D. Describe how the Institute/Center benefits the department, college, or institution.

The development of this type of center spanning departments will benefit the university not only through its highly interdisciplinary nature, but also through its amplified access to grants, contracts and private donations. CCS endeavors to be a portal for scientific engagement and discovery at Montana State University.

E. Describe the Institute/Center's relationship to the University mission.

As the state's land grant institution, MSU's mission "educates students, creates knowledge and art and serves communities by integrating learning, discovery and engagement."

The proposed Center for the Communication of Science is firmly aligned with this mission.

Educates students: CCS will educate students through the development and dissemination of scientific communication content and through workshops designed for faculty and students. Not only will students be on the receiving end of the content produced by CCS, but they will also be involved in developing the content.

Montana Board of Regents

RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

Creates knowledge and art: CCS will serve as a bridge for the creation of knowledge and art, as well as developing original, innovative work that enhances understanding and appreciation of science and art.

Serves communities by integrating learning, discovery and engagement: The proposed goals of CCS inherently serve communities by integrating learning, discovery and engagement across disciplines. CCS will strive to disseminate all its products to local, regional and national communities.

3. Briefly describe the Institute/Center's anticipated activities.

CCS will develop films (including documentary, narrative and experimental), photography, interactive design, architectural design, science writing, visual art and music directly related to scientific research. The Center will also engage in promoting science through high-quality video abstracts and video publications for online science journals. Workshops will complement the Center's objectives by providing training to STEM faculty and students in effective science communication. Although much of this integrative research activity is already occurring within the College of Arts and Architecture, this center will be a catalyst to stimulate and streamline the interdisciplinary efforts. CCS will collaborate with Montana PBS on developing modules for PBS Learning Media to accompany films. Life on TERRA, the award-winning online distribution platform created by the Science and Natural History graduate program will be incorporated in CCS, thereby providing an additional outlet for the distribution of films and interactive media produced by the center.

A. Identify faculty expertise available for participation in the Institute/Center's activities.

Below are the visual and creative faculty members and affiliated groups who have thus far confirmed that they are interested in participating in the Center's activities. They are professional artists and media makers and are available to bring the communication component to bear.

- Dennis Aig – Professor, Director of the School of Film & Photography
- Christina Anderson — Associate Professor of Photography
- Linda Antes – Assistant Professor of Music
- Jason Bolte – Assistant Professor of Music
- Julia Cory – Assistant Teaching Professor of Music
- Kathy Kasic – Assistant Teaching Professor of Film / Science and Natural History Filmmaking
- Theo Lipfert – Associate Professor of Film / Program Head of Science and Natural History Filmmaking
- Sara Mast – Associate Professor of Drawing, Painting and Foundations
- Meta Newhouse – Associate Professor of Graphic Design, Founding Director Designed Sandbox for Engaged Learning (DSEL)
- Alexis Pike – Assistant Professor of Photography
- Melissa Ragain – Assistant Professor of Art History
- Lucia Ricciardelli — Assistant Professor, Film & Media Studies
- Gianna Savoie — Assistant Teaching Professor Science and Natural History Filmmaking
- Tobin Stewart – Assistant Professor of Music
- Cindy Stillwell – Professor of Film / Science and Natural History Filmmaking
- Tom Watson – Associate Professor of Theatre

Montana Board of Regents

RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

- Jim Zimpel — Assistant Professor of Sculpture
- Montana Public Broadcasting System – Learning Media Platform (educational content distributions system for K-12 curriculum)
- Montana Shakespeare in the Parks (for public speaking support)

This is an inclusive, but not exhaustive list. Additional faculty in writing, humanities and additional fields would also have opportunities to engage in STEM communication efforts as desired and needed. STEM faculty can be found below.

B. Which departments on campus will be involved and how will the Institute/Center contribute to the academic programs of the institution?

We have highlighted at least 23 departments, programs or research groups at Montana State University who have expressed a desire to work with the proposed Center for the Communication of Science. This was determined by personal communication with deans, department heads and program directors. The following individuals have expressed their support and interest for collaboration with the proposed Center (this list is not exhaustive but includes those initially approached):

- Office of Research and Economic Development: Renee Reijo Pera, Vice President of Research & Professor in the Department of Cell Biology & Neuroscience
- Center for Biofilm Engineering: Phil Stewart, Director
- Chemical and Biological Engineering Department: Jeff Heys, Department Head & Associate Professor
- College of Letters and Sciences: Nic Rae, Dean
- College of Agriculture: Charles Boyer, Dean and Director
- Department of Animal and Range Sciences: Patrick Hatfield, Professor
- Department of Cell Biology and Neuroscience / Center for Mental Health Research and Rehabilitation: Frances Lefcort, interim Director
- Department of Earth Sciences: Julia Haggerty, Assistant Professor
- Department of Ecology: Al Zale, Affiliate Professor, Director of the Montana Cooperative Fishery Research Unit
- Department of Ecology: Christopher Guy, Affiliate Associate Professor
- Department of Ecology: Molly Webb, Affiliate Faculty Member and Physiologist at the Bozeman Fish Technology Center
- Department of Mathematics: Beth Burroughs, Associate Professor
- Department of Microbiology and Immunology: Blake Wiedenheft, Assistant Professor
- Department of Plant Science and Plant Pathology: John Sherwood, Professor and Department Head
- Department of Plant Science and Plant Pathology: Michelle Flenniken, Assistant Professor
- Department of Political Science: Elizabeth Shanahan, Associate Professor
- Electrical and Computer Engineering Department: Rob Maher, Department Head, Professor and Affiliate Professor of Music
- Extended University: Suzi Taylor, Assistant Director of Outreach and Communications
- Extension: Jeff Bader, Director
- Institute on Ecosystems (IOE): Cathy Whitlock

Montana Board of Regents

RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

- Land Resources and Environmental Sciences: John Priscu, Professor
- Land Resources and Environmental Sciences: Tracy Sterling, Professor and Department Head
- Montana Space Grant Consortium: Angela DesJardins, Director

Academic programs in the arts and sciences thrive when they are mutually informing. Teaching STEM students to navigate science communication and expression early in their career will give them the competitive advantage they need in the future. Graduate students in STEM will benefit from CCS through increased access to high-quality outreach early in their careers, as well as the training workshops designed by CCS. Students across the College of Arts and Architecture will benefit from the establishment of the Center. Through our funding model, we plan to provide financial support for GRAs and undergraduates whose studies are relevant to the research projects at hand.

4. Identify the organizational structure of the Institute/Center within the institution.

The Center will provide a structured environment for collaborative research among the fields of science, engineering, technology, film, art, music and design at Montana State University. CCS will be housed in the College of Arts and Architecture with a small operations budget and office space provided by the College. It will have an appointed Center Director, currently structured as a faculty work distribution from teaching and research at .33FTE (the replacement costs for any subsequent course coverage covered by the College of Arts and Architecture). Additional staffing: Graduate research assistants and/or staff will be added as grant resources support.

A. Identify all agencies, organizations and/or institutions that will be involved.

Collaborating organizations and institutions may include, but are not limited to: Center for Mental Health Research and Rehabilitation, Center for Biofilm Engineering, Montana Cooperative Fishery Research Unit, Bozeman Fish Technology Center, Extended University, Extension, Institute on Ecosystems (IOE), and Montana Space Grant Consortium

5. Identify first year and continuing finances necessary to support the Center/Institute, including the sources of funding.

We plan to phase this program in by the 2016 academic year. The program will be housed in the College of Arts and Architecture (CAA) at MSU. Initial steps will be to coordinate meetings and forums with STEM and CAA departments, apply for grant funding, seek private donations and establish a web presence. The Center possesses a Founding Director (Kathy Kasic), who CAA is internally covering her 30-35% annual buyout, a successful web distribution portal known as Life on TERRA, funding for one graduate assistant and tuition waiver, office space for the Center, basic operations funding and in the initial phase, in-kind equipment resources from the School of Film and Photography. Kathy Kasic is applying for an NSF grant as a Co-PI with Dr. John Priscu and others, through the Office of Polar Programs. Pending support this grant will be the first grant to run through the Center and will provide funding for three film productions, web development, an experimental film installation, one-month faculty summer salary, one GRA and one undergraduate student to serve in the Education and Outreach wing of the grant. Kasic is also working with the Department of Animal and Range Sciences on a USDA-NIFA proposal, which would provide funding for one undergraduate student scholar in Photography to

Montana Board of Regents

RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

shoot and exhibit photographs of sustainable organic farming. Once the Center is established we will continue to search for funding for operations and additional projects. Below are the start-up costs until grant funding takes over.

Faculty Director Buyout - $9,000
Office space – In Kind
Media production equipment – In Kind
Grad student – Tuition waiver (provided through graduate school); Stipend $8,000
Basic office Operations - $5,000

Ultimately, the Center will be funded primarily on soft money and will be reviewed in years three and five for financial viability.

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

Additional faculty and resources will be recruited as needed on a case-by-case basis, according to individual grant-based need. The goal is to provide support via grants or private donations for two staff members: a Project Manager and a Project Researcher.

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

It is likely that we will need to purchase our own equipment to reduce equipment strain on the departments. This will be developed through a combination of grants and private funding.

6. Describe other similar Centers/Institutes or research capacities in the state and surrounding region.

A. Describe the relationship between the proposed Center/Institute and any similar Centers/Institutes, programs, or research capacities within the Montana University System.

There are no existing programs within the MUS system that focus on science communication on a research level. There is a program in Science and Natural History Filmmaking, however it is a curriculum-based, Masters of Fine Arts program within the School of Film and Photography. Within the curriculum, students may make films about science, but it does not actively promote the academic research and the subsequent funding of science communication. The development of CCS will therefore not duplicate any existing programs.

B. In cases of substantial duplication, explain the differences between these and the need for the proposed Center/Institute at an additional institution. Describe any efforts that were made to collaborate with these Centers/Institutes, programs or research capacities. If no efforts were made explain why.

n/a

Montana Board of Regents

RESEARCH CENTER AND INSTITUTE PROPOSAL FORM

7. Assessment: How will the success of the program be measured?

Success is measured by three key metrics:

1) Tracking outreach of program – how are the productions, designs and works of art of the CCS are being used and viewed?
2) Tracking feedback on the impact of the productions, designs and works of art on the larger populations (reviews, awards, teacher feedback) and tracking the impact through surveys of the workshops on the attendees.
3) Financial sustainability. The Center will be self-sustaining financially by providing compensation for Director, staff and researcher/visual/creative partners. This funding will, beyond base operations, be secured through external grants.

8. State the internal campus review and approval process, which has occurred prior to submission to the Commissioner's Office. Indicate, where appropriate, involvement by faculty, students, community members, professional constituencies, etc.

The initial process of developing this Center began with discussing the proposal with deans, department heads and faculty throughout the university. These discussions lead to letters of support for the Center, which we have attached with this proposal. We presented the proposal to the Faculty Senate in April 2015. The Faculty Senate unanimously voted in favor of the Center.

MONTANA STATE UNIVERSITY
College of
LETTERS & SCIENCE

March 17, 2015

To Whom It May Concern:

I am writing to express my support for the proposed *Center for the Communication of Science* (CCS) in the College of Arts & Architecture at Montana State University.

The mission of the proposed center is the communication and visual expression of the sciences at MSU. In fulfilling this mission CCS will facilitate cross disciplinary research between artists, filmmakers and science and engineering faculty and students at MSU in order to communicate and disseminate scientific research and learning to the wider community in Montana and beyond.

CCS will raise awareness of exciting discoveries by science faculty and students in my college. Enhanced public understanding of the work of scientists and communication of developments in science is also more important than ever for informed public debate on important issues facing our state and region. For these reasons I am enthusiastic in my support for the establishment of CCS.

Sincerely,

Nicol C. Rae
Dean

Office of the Dean
2-205 Wilson Hall
P.O. Box 172360
Bozeman, MT 59717-2360
www.montana.edu/
lettersandscience

Tel 406-994-4288
Fax 406-994-7580
Email lands@montana.edu

Mountains & Minds

MONTANA STATE UNIVERSITY
College of AGRICULTURE & MONTANA AGRICULTURAL EXPERIMENT STATION

TO: Montana Board of Regents

FROM: Charles Boyer
VP, Dean and Director

DATE: March 10, 2015

RE: Support for Proposed MSU Center for Communication of Science

Dear Montana Board of Regents:

I am pleased to offer full support for the proposed Center for Communication of Science at Montana State University.

MSU is quickly becoming a leading land-grant university with a nationally-growing research profile in the STEM fields. As the state's largest university, MSU has both the need and the responsibility to adequately and effectively share research goals, challenges and accomplishments with our public stakeholders.

This is particularly true within the College of Agriculture and Montana Agricultural Experiment Station, who regularly garner more than $15 million annually in research expenditures. Many federal grants now require a public outreach obligation that goes beyond traditional communication methods. This year, the Association of Public Land-grant Universities effectively challenged associated institutions to bolster their communication initiatives and programs. In short, we have more science than we have the capacity to communicate.

Thus, we have already utilized film students and other services in the MSU School of Film and Photography in an effort to meet our critical need of disseminating research highlights and progress. Our most recent project involves a five-minute video showcasing an integrated farming and livestock research project which will be used for myriad outreach events.

There is great collaborative nature, student learning opportunity and possible institutional repute in this proposal. On behalf of the College of Agriculture and Montana Agricultural Experiment Station, we fully support the creation of a Center for Communication of Science at Montana State University.

Agricultural Economics and Economics

Agricultural Education

Animal and Range Sciences

Microbiology and Immunology

Land Resources and Environmental Sciences

Plant Sciences and Plant Pathology

Research Centers

WIMU Regional Program in Veterinary Medicine

Office of the Vice President, Dean and Director

202 Linfield Hall
P.O. Box 172860
Bozeman, MT 59717-2860

Tel (406) 994-3681
Fax (406) 994-6579
http://ag.montana.edu

MONTANA STATE UNIVERSITY EXTENSION

March 15, 2015

Montana Board of Regents
2500 E Broadway St
PO Box 203201
Helena MT 59620-3201

Dear Members of the Board of Regents:

I am writing in support of the creation of the Center for the Communication of Science at MSU for the collaborative potential it holds to inform the people of Montana of the fine work being done at the institutions of the MUS. The Center for the Communication of Science will develop and facilitate cross-disciplinary research between scientists, engineers, artists and filmmakers, with the goal of effectively and creatively communicating science to the public and serving as a catalyst for the dissemination of science. It would be a valuable asset and ally to MSU Extension and its mission of providing unbiased, research based information to improve peoples' lives.

I have committed Extension's participation in the Center for the Communication of Science by helping to identify story lines, people and resources needed for success.

I thank you for your consideration of this worthy project and please feel free to contact me for more information.

Sincerely,

Jeff Bader
Executive Director of MSU Extension

Office of the Director of Extension
218 Culbertson Hall
P.O. Box 172230
Bozeman, MT 59717-2230
www.msuextension.org

Tel (406) 994-1750
Fax (406) 994-1756

MONTANA STATE UNIVERSITY
College of ENGINEERING & ENGINEERING EXPERIMENT STATION

March 5, 2015

To Whom It May Concern:

On behalf of the MSU Department of Electrical and Computer Engineering, I am delighted to support and endorse the proposed ***Center for the Communication of Science (CCS)***.

The new Center will capitalize on two notable strengths of our university: professional filmmaking and discovery and invention in science and engineering. Due to improvements in audio-visual technology and the increasing importance of the internet and social media, the creation of significant and compelling digital media is increasingly coming from individuals outside of the traditional domain of professional film and music production, graphic design, and journalism. The Center will provide the cross-disciplinary framework for effective collaboration between artists, filmmakers, engineers and scientists, enabling creative, compelling, and effective communication of science to the public.

We are particularly supportive of the Center's potential to develop instructional programs for science and engineering faculty, staff, and students to work with visual and audio media to achieve our goals for broader impact of the University across Montana and around the world.

Thank you for your consideration, and for joining us in our enthusiastic support of the Center for the Communication of Science.

Sincerely,

Robert C. Maher
Professor and Department Head

Electrical & Computer Engineering
610 Cobleigh Hall
P.O. Box 173780
Bozeman, MT 59717-3780
www.coe.montana.edu/ee/

Tel (406) 994-2505
Fax (406) 994-5958
Email ecedept@ece.montana.edu

Mountains & Minds

MONTANA STATE UNIVERSITY
College of ENGINEERING

March 17, 2013

Kathy Kasic
Assistant Teaching Professor & Producer
School of Film & Photography
Visual Communications Building
Montana State University
Bozeman, MT 59717

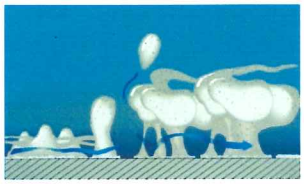
Dear Kathy,

I write to express my enthusiastic support for the creation of the Center for the Communication of Science at Montana State University (MSU). Communication has been an extremely important part of the success of the Center for Biofilm Engineering (CBE) and I believe our story is a perfect case study of the value of the new center you are proposing. This year we are celebrating the 25th anniversary of the founding of CBE as a National Science Foundation Engineering Research Center. We are the oldest, largest, and best known center for biofilm research, education, and technology anywhere in the world. I am convinced that investments in communicating our science through professional graphic illustrations, journal covers, short films made in collaboration with students in MSU's Science and Natural History Filmmaking program, and innovative art/science collaborations, have been instrumental in elevating the international visibility of CBE and MSU. See a few illustrative examples below.

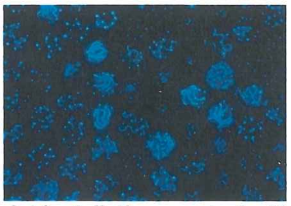
The prospect of an organized Center for the Communication of Science is thrilling. I know CBE students and faculty will be very interested in partnering with you on proposals, workshops, films, artist-in-residence programs, and other activities.

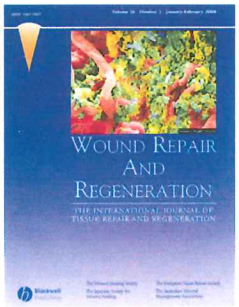
Sincerely yours,

Philip S. Stewart
Director, Center for Biofilm Engineering
Professor of Chemical and Biological Engineering


Published in *Science*, 1996.


Painting by MSU art student Annette Foster.


Art installation created with bioluminescent bacteria at Manhattan College, NY.



Journal cover image.

Center for Biofilm Engineering
366 EPS Building
P.O. Box 173980
Bozeman, MT 59717-3980
http://www.erc.montana.edu

Tel (406) 994-4770
Fax (406) 994-6098
Email user@erc.montana.edu

MONTANA STATE UNIVERSITY
College of AGRICULTURE & MONTANA AGRICULTURAL EXPERIMENT STATION

Department of Animal and Range Sciences

March 8, 2015

TO: Board of Regents

FROM: Patrick Hatfield

RE: Support for Enter for the Communication of Science

I whole heartily support the development of the Center for Communication of Science at Montana State University. It is critical that a Land Grant Institution like Montana State University effectively communicate the value of our research and related teaching and extension endeavors to the public by more than the traditional means of scientific publications and extension outreach activities. Although these means of communicating the results of our research are affective and appropriate for target audiences, they do little to engage the general public in the depth and breadth of the work being done at their land grant institution.

Recently our research group of agro-ecologist, weed ecologist, animal scientist, agricultural economist, soil scientist, and a community development specialist contracted with students in the school of Film and Photography to produce a 5 minute informational video that highlights the goals and results of our research on incorporating livestock into farming systems. The video is a part of my letter of support and I think you will see how effective this type of media is in reaching a very broad based audience.

If I can be of further assistance, please do not hesitate to contact me.

Pat Hatfield

Patrick G. Hatfield
Professor
113 Animal Bioscience Building
Montana State University
P.O. Box 172900
Bozeman, MT 59717-2900

Tel (406) 994-7952
Fax (406) 994-5589
hatfield@montana.edu

Montana Space Grant Consortium

416 Cobleigh Hall
Montana State University
P.O. Box 173835
Bozeman, MT 59717-3835

Dear Kathy,

March 19th, 2015

Montana Space Grant Consortium enthusiastically supports the proposal for the creation of the Center for the Communication of Science. We see this as an asset at MSU and the state of Montana.

Our program is part of a national network of 52 consortia that focuses on strengthening aerospace research and education and we know first-hand the importance of effectively and creatively communicating science to various audiences. The goals of the center mirror many of the objectives we have established within our consortium and would positively impact the work we are doing to reach students and researchers not only at our home institution but across the state.

There is a growing need in our state to engage both K-12 and university students in experimental learning of the sciences and other STEM-related (Science, Technology, Engineering, and Mathematics) areas. The center proposes to develop these learning tools and disseminate information by effectively communicating with a wide audience.
Montana Space Grant is excited about the deep impact this opportunity can have on Montana students and looks forward to potential collaboration with the center to identify specific areas of need in STEM education.

Sincerely,

Angela Des Jardins, PhD
Director, Montana Space Grant Consortium and Montana NASA EPSCoR
Assistant Research Professor of Physics
Angela.DesJardins@montana.edu

Voice: (406) 994-4223 Fax: (406) 994-4452 msgc@montana.edu www.spacegrant.montana.edu

MONTANA STATE UNIVERSITY
College of LETTERS & SCIENCE

17 March 2015

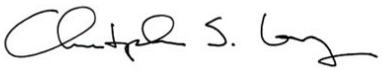
Kathy Kasic
MFA Program in Science and
Natural History Filmaking
School of Film & Photography
Montana State University
P.O. Box 173350
Bozeman, MT 59717-3350

Dear Ms. Kasic:

Department of Ecology

This letter is in support of the creation of a Center for the Communication of Science. Communicating science, especially to the public and policy makers, is becoming increasingly important as funding for science is being reduced at federal and state levels. I believe part of the negative perception of science (therefore reduced funding) is a function of policy makers not understand what scientists contribute to society. This is largely a function of scientists doing a poor job of communicating their knowledge to the public and policy makers. Scientists are highly skilled at communicating among their colleagues given the "publish or perish model" in academia, but communicating their work to people outside their discipline is often difficult. Thus, having a program at Montana State University that focuses on communicating science will help scientists get their important message out and greatly increase the visibility of the University's science programs, which I believe will result in more funding opportunities. In addition, it will be a great training ground for science communicators. I look forward to working with the Center for Communication of Science and will encourage my graduate students to work with the program.

Sincerely,



Dr. Christopher S. Guy
Professor
Assistant Unit Leader-Montana Cooperative Fishery Research Unit

310 Lewis Hall
P.O. Box 173460
Bozeman, MT 59717-3460
www.montana.edu/ecology

Tel (406) 994-4548
Fax (406) 994-3190
Email ecology@montana.edu

MONTANA STATE UNIVERSITY
College of
LETTERS & SCIENCE

March 10, 2015

Kathy Kasic
Assistant Teaching Professor and Producer
School of Film & Photography
Visual Communications Building
Montana State University
Bozeman, MT 59717

Department of Mathematical Sciences

- Mathematics
- Math Education
- Statistics

Dear Kathy,

I am happy to provide this letter of support for your proposal to create the Center for the Communication of Science. I would find it an important addition to Montana State University due to the collaborative potential it holds. My research and outreach in mathematics education includes a large component of communicating mathematical ideas to a public audience, and I would find the Center to be very useful in assisting me in this area. There are also grant-funded projects involving communication of mathematics that I will pursue in the coming years, and having the Center as a partner in those projects would strengthen my ability to secure funding for those projects.

Thank you for your vision in proposing this Center.

Sincerely,

Elizabeth Burroughs
Associate Professor of Mathematics Education
Department of Mathematical Sciences

2-214 Wilson Hall
P.O. Box 172400
Bozeman, MT, 59717-2400
www.math.montana.edu

Tel (406) 994-3601
Fax (406) 994-1789
math@math.montana.edu

Mountains & Minds

MONTANA
STATE UNIVERSITY

March 13, 2015

TO: Kathryn Kasic, School of Film and Photography

FR: John Sherwood, Head, Plant Sciences and Plant Pathology

RE: Center for the Communication of Science (CCS)

the center will aim to facilitate collaboration among scientists, filmmakers and artists. In practice it would foster scientific outreach opportunities in the form of documentary films, creative or journalistic writing, and artistic explorations of scientific representation.

This letter is confirm the support by the Department of Plant Sciences and Plant Pathology for the establishment of a Center for the Communication of Science at MSU. The Film School, with tits MFA in Science & Natural History, making has form many years provided our faculty the opportunity and ability to make films depicting their research. This has been an extremely effective way of communication our work to the general public, something that not all scientist do very well.

Especially useful for our faculty members are the plans of the CCS to: produce science documentary films directly related to the research of scientists, provide financial support and resources to faculty and graduate students whose produce those films (currently either a faculty grant provides that support, or a student produces the film as a class project), disseminate productions developed by CCS to the public, and develop a range of instructional programs for science faculty and graduate students focused on working with visual media and media makers to develop successful broader impact programs. The ability of researchers to more effect communicate their findings to the public will be of critical importance in promoting the science literacy of the general public and to ensure the long term future success of our research programs.

Please feel free to contact me if you have any questions.

Crop Science

Entomology

Horticulture

Plant Biology

Plant Genetics

Plant Pathology

Dr. John Sherwood
Department of Plant Sciences
and Plant Pathology
College of Agriculture
119 Plant BioScience Building
PO Box 173150
Montana State University
Bozeman, MT 59717-3150

Telephone: 406-994-5153
Fax: 406-994-7600
sherwood@montana.edu

MONTANA STATE UNIVERSITY
College of AGRICULTURE
MONTANA AGRICULTURAL EXPERIMENT STATION
EXTENSION

March 9, 2015

Dear Kathy:

I am writing to provide the Department of Land Resources and Environmental Science's (LRES) support for your Board of Regents proposal for the Center for the Communication of Science. There is indeed an intense need for science communication to the public in Montana and the nation. The solidification of your program through sustainable funding would be essential for MUS to move toward this goal and would help faculty incorporate approaches and principles into sharing their science. Thank you for your efforts.

Sincerely,

Tracy M. Sterling
Professor and Department Head

Land Resources and Environmental Sciences

334 Leon Johnson Hall
P.O. Box 173120
Bozeman, MT 59717-3120

Tel (406) 994-7060
Fax (406) 994-3933
landresources.montana.edu

MONTANA STATE UNIVERSITY

5 March 2015

To: Nancy C. Cornwall
Dean of the College of Arts & Architecture

From: Cathy Whitlock
MSU Director, Montana Institute on Ecosystems

Re: Support for the Center for the Communication of Science

I am writing in support of the creation of the new Center for the Communication of Science at Montana State University. CCS will be an important component of MSU's infrastructure to support science communication and outreach. Specifically, CCS goals of facilitating knowledge dissemination through the creative arts, workshops, performances, and exhibitions, as well as through an Scientific-artist in Residence program will help scholars in the Montana Institute on Ecosystem achieve broader public engagement and visibility for their research. Such outreach is an important part of all of our grant-funded activity.

Good luck with your submission.

Montana Institute on Ecosystems
106 AJM Johnson Hall
P.O. Box 173490
Bozeman, MT 59717-3490
http://environment.montana.edu

Tel 406-994-2374
Fax 406-994-5122

May 21-22, 2015

ITEM 167-1001-R0515

Request for Authorization to Offer a M.Ed. and Ph.D. in International Educational Leadership – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana to offer an International Educational Leadership M.Ed. and Ph.D.

EXPLANATION

The growth of study abroad and international education programs in the past ten years has driven an increase in the demand for professionals with advanced training in international education leadership, theory, and advocacy all over the world. This degree will provide the future leadership of governmental, educational, and nonprofit organizations with necessary tools for developing, implementing and managing internationalization efforts related with cross-cultural exchange and training, global education, international education development. The proposed M. Ed. and Ph.D. in International Educational Leadership will focus on education both as an instrument of international development and as a means of promoting cross-cultural understanding.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **167-1001-R0515** Meeting Date: **May 21-22, 2015**

Institution: **University of Montana-Missoula** CIP Code: **13.0401**

Program Title: **International Educational Leadership M.Ed. and Ph.D.**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

___ **A. Notifications:**

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

___ **1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

___ **1b. Withdrawing a program from moratorium**

___ **2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)

___ **3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**

___ **4. BAS/AA/AS Area of Study**

___ **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

___ **1. Re-titling an existing major, minor, option or certificate**

___ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

___ **3. Revising a program** (Curriculum Proposal Form)

___ **4. Distance or online delivery of an existing degree or certificate program**

___ **5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

___ **Temporary Certificate or AAS Degree Program**

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

___ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ **1. Adding an option within an existing major or degree** (Curriculum Proposal Form)

___ **2. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

X **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

___ **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

X **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

___ **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:

The growth of study abroad and international education programs in the past ten years has driven an increase in the demand for professionals with advanced training in international education leadership, theory, and advocacy all over the world. This degree will provide the future leadership of governmental, educational, and nonprofit organizations with necessary tools for developing, implementing and managing internationalization efforts related with cross-cultural exchange and training, global education, international education development. The proposed M. Ed. and Ph.D. in International Educational Leadership will focus on education both as an instrument of international development and as a means of promoting cross-cultural understanding.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

The growth of study abroad and international education programs in the past ten years has driven an increase in the demand for professionals with advanced training in international education leadership, theory, and advocacy all over the world. A master's degree is becoming the required academic level for mid-level and even some entry level positions in the field.

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

This degree will provide the future leadership of governmental, educational, and nonprofit organizations with necessary tools for developing, implementing and managing internationalization efforts related with cross-cultural exchange and training, global education, international education development. The M. Ed. and Ph.D. in International Education focuses on education both as an instrument of international development and as a means of promoting cross-cultural understanding.

3. Need

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

External need – The need for leadership in international programs is rapidly expanding as universities reach out to other countries to diversify opportunities for students.

Internal need – This program is a perfect fit to address the need for additional enrollment by expanding degree opportunities in an area of national and international need.

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

This program provides students with skills and knowledge applicable in the design, implementation, management, and evaluation of international education programs in schools, colleges, foundations, multinational corporations, and public and private educational and cultural agencies.

Examples of job placements for international educators:

- Colleges, Universities, and 2 year institutions: Work in an international student office, education abroad office, or foreign language and TESL (Teaching English as a Second Language) department. There are many specializations within each office /department such as advisers, teachers, specialists, and counselors.

- ESL Programs: Teach English as a second language within or outside the United States.

- Education Abroad Program Providers: Coordinate and oversee various programs around the world. Different program providers offer different types of opportunities including studying, volunteering, working, or teaching abroad.

- Law Firms: Practice law specializing in immigration or other related issues.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

•International Education Associations: Work to aid international educators by providing networking opportunities, publications, and advocacy support to help promote international education.

•Accreditation Agencies: Perform credential evaluations for students planning to study in the United States.

•Local Community International Centers: Provide international student/community outreach programs including: implementing international programs, finding homestay opportunities for international students, and/or developing and coordinating community service projects

•U. S. Government: Work in any of a variety of international careers with the Department of State, Department of Homeland Security, Federal Bureau of Investigation, Congress, or Foreign Service.

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

Fifteen students are anticipated in the M.Ed. program for the first academic year. There is an anticipated growth of ten students in the second year. In the Ph.D. program, eight to ten students per semester are anticipated, with six students expected in the first year.

4. Institutional and System Fit

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

The programs will expand on the current educational leadership program through a partnership with International Programs. The expertise in leadership from the Educational Leadership Department will be merged with the expertise in international issues from International Programs.

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

The M.Ed. and Ed.D. in Educational Leadership will overlap with the new programs but will not require a change.

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

There are no related programs within the Montana University System.

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

The programs will address each of the strategic initiatives identified in UM2020. As the program develops, partnerships will be built with organizations that support international leadership initiatives. Graduate student and faculty research will focus on international leadership adding to knowledge base of that discipline. The versatility of the faculty in the delivery of courses will add to the dynamic learning environment available at the University of Montana. Finally, these programs are truly education for a global century where students from all over the world can learn leadership in a global context.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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.

There are no programs within the Montana University System that are similar to the programs in this proposal.

5. Program Details

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

		International Education Leadership Master's		Credits
CORE	EDLD486(OL)	Intro Stats	Core	3
	EDLD 520	Educational Research	Core	3
	EDLD 550	Foundation of Educational Leadership	Core	3
	New Core	Cross-cultural Competence	Core	3
	New	Globalization in Education	Core	3
	New	Leadership across cultures	Core	3
OPTION 1		Choose 6		18
	New	Best Practices in International Programs Leadership		
	EDLD 542	College Student		
	EDLD 552	Supervision and Evaluation		
	New	Sociology of International Education		
	EDLD 540	Finance of International Programs		
	EDLD 546	Federal/State Higher Education Policy		
	New	International Program Development		
	EDLD 668	College and University Administration		
	New	International Student Perspective (seminar or field experience)		
		OR		
OPTION 2		Internship/ or experience		12
		Choose 2		6
	New	Best Practices in International Programs Leadership		
	EDLD 552	Supervision and Evaluation		
	New	Sociology of International Education		
	EDLD 546	Federal/State Higher Education Policy		

Montana Board of Regents

CURRICULUM PROPOSAL FORM

New	International Program Development
EDLD 668	College and University Administration
New	International Student Perspective (seminar or field experience)

Ph.D. International Educational Leadership

Primary (30 credits)		Supporting (20 Credits)		Foundation (9 credit)			Research (15 credits)
EDLD 550	Foundation of Educational Leadership	EDLD 542	College Student	EDLD 662	History of Higher Education	EDLD486(OL)	Intro stats
EDLD 694	Higher Education Law	EDLD 544	College Curriculum	New	Sociology of International Education	EDLD 520	Educational Research
EDLD 540	Higher Education Finance	EDLD 660	Adult Continuing Education	EDLD 502	Philosophy (Educational Foundations)	EDLD 618	Educational Statistics
EDLD 546	Federal/State Higher Education Policy	EDLD 664	Community College			EDLD 620	Qualitative Research
EDLD 668	College and University Administration	EDLD 667	American College Professor			EDLD625	Quantitative Research
New	Leadership across cultures	EDLD 653	School Personnel				
New	Cultural Proficiency	EDLD 583	Strategic Planning for Technology				
New	Linguistic Diversity						Comprehensive Exams (1 Credit)
New	Politics of international education					EDLD594	Comps
EDLD 552	Supervision and Evaluation						
New	Comparative International Education						Dissertation (Min 12 Credits)
						EDLD699	Dissertation
			91 Credits required				

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

Students would begin enrolling for fall 2015.

6. Resources

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

Yes, additional adjunct faculty currently in the Office of International Programs and the English Language Institute would teach some of the coursework.

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.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Additional adjunct salary will be required to cover the adjunct teaching requirements. The budget below details the additional costs:

Adjunct salaries: $12,000 per academic year

Benefits: $12,000 * 18% = $2160

Course materials: $1000

Library resources (base budget addition) $10,000

7. Assessment

How will the success of the program be measured?

Completion rates will be used as an indicator of success. In addition, follow-up employment surveys will be used with graduates.

8. Process Leading to Submission

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

These programs were developed collaboratively between the Office of International Programs and the Department of Educational Leadership.

May 21-22, 2015

ITEM 167-1003-R0515

Request for Authorization to Offer Options in Communication Studies and Professional Communication in the A.A. degree – Missoula College University of Montana

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THAT

The Board of Regents of Higher Education authorizes Missoula College-UM to offer options in Communication Studies and Professional Communication in the AA degree.

EXPLANATION

Many two-year colleges across the nation provide communication studies options within the Associate of Arts degree. These options primarily respond to the need to assist students in their matriculation into a Bachelor Degree in Communication Studies. However, they also provide students with the ability to focus their AA degree in an area that is of increasing demand to employers. Packaging courses for students interested in pursuing communication studies creates an incentive for students to complete their AA degree. It also assists with advising and assessing students' transition from their two-year degree into a four-year degree, both important processes for increasing retention.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **167-1003-R0515** Meeting Date: **May 21-22, 2015**

Institution: **University of Montana** CIP Code: **09.0101**

Program Title: **Professional Communication and Communication Studies Options in A.A. degree**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

___ **A. Notifications:**

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

___ **1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

___ **1b. Withdrawing a program from moratorium**

___ **2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)

___ **3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**

___ **4. BAS/AA/AS Area of Study**

___ **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

___ **1. Re-titling an existing major, minor, option or certificate**

___ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

___ **3. Revising a program** (Curriculum Proposal Form)

___ **4. Distance or online delivery of an existing degree or certificate program**

___ **5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

___ **Temporary Certificate or AAS Degree Program**

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

___ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ **1. Adding an option within an existing major or degree** (Curriculum Proposal Form)

___ **2. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

X **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

___ **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

X **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

___ **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:

These options will provide tracks within the AA Degree for students to focus their studies on either Communication Studies or Professional Communication. Both communication options include core undergraduate courses required for a major in Communication Studies, thus serving as the first two years of that degree program. However, the universal adaptability of courses in Communication Studies also allows students to focus their studies in the Associate of Arts degree on an area that complements a number of four-year degree programs or career paths they may pursue in the future.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

This proposal is to add two options to the Associate of Arts (AA) degree: Communication Studies and Professional Communication.

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

These options will provide tracks within the AA Degree for students to focus their studies on either Communication Studies or Professional Communication. Both communication options include core undergraduate courses required for a major in Communication Studies, thus serving as the first two years of that degree program. However, the universal adaptability of courses in Communication Studies also allows students to focus their studies in the Associate of Arts degree on an area that complements a number of four-year degree programs or career paths they may pursue in the future.

3. Need

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

Many two-year colleges across the nation provide communication studies options within the AA degree. These options primarily respond to the need to assist students in their matriculation into a Bachelor Degree in Communication Studies. However, they also provide students with the ability to focus their AA degree in an area that is of increasing demand to employers.

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

These options will provide students with opportunities to create numerous pathways within the AA degree. The primary pathway, as noted above, is to a Bachelor of Arts degree in Communication Studies. However, these options also will provide students with the credential of a completed 21st century academic track that complements any degree program.

Packaging courses for students interested in pursuing communication studies assists with advising and assessing students' transition from their two-year degree into a four-year degree, both important processes for increasing retention.

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

At a time when there are financial constraints to education, it becomes increasingly important to provide clearly defined options for students that provide pathways to four-year degrees and to careers. An October 22, 2104 article in the Huffington Post notes that as an "academic discipline, Communication Studies is posting strong growth in relation to undergraduate majors, undergraduate degrees awarded, student popularity, and number of institutions offering the degree according to a newly released American Academy of Arts and Sciences Humanities Indicator assessment." The article continues to explain that the discipline is well-positioned as the digital economy, social networking and the move toward media creation rises to prominence.

4. Institutional and System Fit

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

Montana Board of Regents
CURRICULUM PROPOSAL FORM

The curriculum for the proposed options includes a majority of the core courses required of a student pursuing a major in Communication Studies, which helps students to continue on to a Bachelor's program in Communication Studies.

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

The approval of these proposed options will not require any changes to existing programs at the institution.

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

The curriculum for the proposed options includes a majority of the core courses required of a student pursuing a major in Communication Studies. However, the developmental and writing and math courses offered on our campus provide students options for ensuring their readiness for core requirements such as College Writing, Probability and Linear Mathematics, and Statistics. In addition, the curriculum includes an introductory visual rhetoric course as a literary and artistic studies course. We believe this course not only provides a valuable general education course for AA students, but also serves as a preparatory class for the 200-level Introduction to Rhetorical Studies.

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

The proposed options advance the "UM 2020: Building a University for the Global Century" strategic goals in the following ways:

Partnering for Student Success
A key goal for creating these options is to help prepare students for a baccalaureate degree in communication studies. These options would assist students in their transition to a four-year campus as they integrate early college curriculum into future communication studies. This assists with the advising and assessment of these students.

Education for the Global Century
Research notes that communication skills are at the top of the list of qualities sought by prospective employers. This curriculum is responsive to this workforce need. The Professional Communication option not only prepares students for matriculation to a baccalaureate degree in Communication studies, but provides students with important workforce development credentials.

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.

There is no substantial duplication of a program as the courses included in these options are general education courses that are geared toward transfer to a four-year degree program. The courses included in these options have common course numbers, which support the mission of an AA degree to create pathways to four-year degree programs. In addition, these options were developed in collaboration with the University of Montana's Communication Studies Department to also ensure a clear pathway from the AA degree in either of these options to the four-year Communication Studies degree.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

5. Program Details

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

AA with an option in Communication Studies

*The goal of this option is to provide students with an opportunity to receive an AA degree with a focus in communication studies. In addition, this option helps prepare students for matriculation into a major program in communication studies.

First Year

The following are required courses for an AA with an option in communication studies:

COMX 115S, Intro to Interpersonal Communication	3 credits
COMX 111A , Intro to Public Speaking	3 credits
WRIT 101, College Writing I	3 credits
M 115, Probability and Linear Math	3 credits
Communication Elective	3 credits

It is suggested that students fill the remainder of their degree plan with courses that fulfill the general education requirements and 60 credits required for the Associate of Arts Degree.

Second Year

The following are required courses for an AA with an option in communication studies:

COMX 140L, Introduction to Visual Rhetoric	3 credits
COMX 220S, Intro to Organizational Communication or	3 credits
COMX 240H, Introduction to Rhetorical Theory	3 credits
Communication Elective	3 credits
Statistics Course (PSYX 222, STAT 216, SOC 202)	3 credits

It is suggested that students fill the remainder of their degree plan with courses that fulfill the general education requirements and 60 credits required for the Associate of Arts Degree.

AA with an option in Professional Communication

*The goal of this option is to provide students with an opportunity to receive an AA degree with a focus on professional communication. In addition, this option helps prepare students for matriculation into a major program in communication studies.

First Year

The following are required courses for an AA with an option in professional communication:

COMX 115S, Intro to Interpersonal Communication	3 credits
COMX 111A, Intro to Public Speaking	3 credits

Montana Board of Regents
CURRICULUM PROPOSAL FORM

WRIT 101, College Writing I	3 credits
M 115, Probability and Linear Math	3 credits
WRIT 121, Introduction to Technical Writing	3 credits

It is suggested that students fill the remainder of their schedule with general education courses that will help them meet the requirements for receiving an Associate of Arts degree.

Second Year

The following are required courses for an AA with an option in professional communication:

COMX 140L, Introduction to Visual Rhetoric	3 credits
COMX 220S, Intro to Organizational Communication	3 credits
WRIT 221, Intermediate Technical Writing	3 credits
Communication Elective	3 credits
Statistics Course (PSYX 222, STAT 216, SOC 202)	3 credits

It is suggested that students fill the remainder of their schedule with general education courses that will help them meet the requirements for receiving an Associate of Arts degree.

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

AA students are currently advised according to their planned four-year degree program. Currently, we have approximately 10-15 students a year working toward a four-year degree in Communication Studies. These options would formalize these options, giving us the opportunity to more effectively advise these students and provide them with clearer direction in these areas of communication studies. There is a possibility that formalization of these options and/or increased interest in Communication Studies could increase enrollment toward the AA degree.

6. Resources

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

We do not anticipate that this program would increase the number of students taking core communication courses, and so additional faculty are not required. There are currently students taking many of the same courses outlined in these options as their first step in pursuing a four-year degree in Communication Studies. These options simply formalize a pathway in Communication Studies. As noted above, it is our hope that formally packaging courses through options will help us improve efforts in advising, assessment, and retention.

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.

There are no additional resources required to implement these options. As noted above, AA students already take core communication courses; it is our goal to simply formalize this process through these communication options. A tenure-track professor leads the Communication Studies curriculum and faculty provides administration and oversight for these options.

7. Assessment

How will the success of the program be measured?

Montana Board of Regents
CURRICULUM PROPOSAL FORM

The success of the implementation of these options will be monitored by assessing completion of the Associate of Arts degree. We will also assess students' progression from their Associate Degree with an option in communication into the Bachelor Degree in Communication Studies. In addition, we will continue to investigate similar programs at other two-year institutions and maintain communication through the National Communication Association as we review the curriculum and goals of these options.

8. Process Leading to Submission

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

Interest in developing options began years ago with the investigation of options on other two-year campus throughout the state and country. Investigation continued through dialogue with communication professors from two-year campuses that offer options in communication. Communication options from other two-year campuses became templates for the development of our proposed options. Conversation continued with the former Chair of Communication Studies at the University of Montana, Betsy Bach. It continues with the current Chair, Steve Schwarze, as one of the goals of these options is to assist with transition to a baccalaureate degree in this area.

Students have also been a part of the development of these options. Students focusing their studies on communication have inquired about the possibility of seeing an option identified on their final transcript. In addition, students have expressed interest in combining communication studies with workforce development in their current professions. Finally, there are often questions during advising sessions about the pathway from the Missoula College communication curriculum to the Department of Communication Studies.

May 21-22, 2015

ITEM 167-1601-R0515

Request for Authorization to Offer a Bachelor of Science in Early Childhood Education: Pre-Kindergarten through Grade 3, The University of Montana-Western

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THAT

The Board of Regents of Higher Education authorizes The University of Montana Western to offer a Bachelor of Science Major in Early Childhood Education: Pre-Kindergarten through Grade 3 (ECE:P3).

EXPLANATION

This degree would prepare future and current professionals to meet new Montana Professional Educator Preparation Program standards to receive the ECE: P-3 license. Within three years all pre-K teachers working in public schools will need this license. Additionally, this degree is required as part of the new pre-K grant received by the state. The degree will also meet the staffing needs of Head Start, child care, preschools, and K-3rd grade elementary grade classrooms.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **167-1601-R0515** Meeting Date: **May 21-22, 2015**

Institution: **University of Montana Western** CIP Code: **13.1210**

Program Title: **BS in Early Childhood Education: Pre-Kindergarten through Grade 3 (ECE:P3)**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

___ **A. Notifications:**

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

___ **1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

___ **1b. Withdrawing a program from moratorium**

___ **2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)

___ **3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**

___ **4. BAS/AA/AS Area of Study**

___ **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

___ **1. Re-titling an existing major, minor, option or certificate**

___ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

___ **3. Revising a program** (Curriculum Proposal Form)

___ **4. Distance or online delivery of an existing degree or certificate program**

___ **5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

___ **Temporary Certificate or AAS Degree Program**

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

___ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ **1. Adding an option within an existing major or degree** (Curriculum Proposal Form)

___ **2. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

X **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

___ **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

X **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

___ **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:

This proposal constitutes a request for approval of a new University of Montana Western Bachelor of Science Major in Early Childhood Education: Pre-Kindergarten through Grade 3. The program will be delivered by the Education Department. This degree will prepare future and current professionals to meet new Montana PEPP (Professional Educator Preparation Program) standards to receive the ECE: P-3 license. Within three years all pre-K teachers working in public schools will need this license. Additionally, this degree is required as part of the new pre-K grant received by the state. The degree will also meet the staffing needs of Head Start, child care, preschools, and K-3rd grade elementary grade classrooms.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

The early years are critical for children's current and future success. For example, during these years the brain develops more rapidly than at any other time, with 700 synapses being developed every second. Attention at both the national and state level has highlighted the growing awareness of the need for well-prepared teachers and quality programs for young children. The proposed ECE: P-3 degree will prepare educators with very specific coursework and experiences to meet the needs of this age group. The degree is designed to meet the early childhood teacher preparation standards established by the National Association for the Education of Young Children (NAEYC) in alignment with the Montana early childhood education Professional Educator Preparation Program (PEPP) standards and the national accreditation standards through the Council for Accreditation of Educator Preparation (CAEP).

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

This proposal constitutes a request for approval of a new University of Montana Western Bachelor of Science Early Childhood Education: P-3 degree. The program will be housed in the Education Department. This degree will prepare future and current professionals to meet new Montana PEPP standards to receive the ECE: P-3 license. Within three years all Pre-K teachers working in public schools will need this license. Additionally, this degree is required as part of the new pre-K grant received by the state. The degree will also meet the needs of those seeking employment in Head Start, child care, preschools, and K-3rd grade elementary classrooms.

3. Need

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

New state licensure: The Montana Board of Public Education has recently approved a Pre-K-3rd grade license. As the largest early childhood program in the State and as a leader in early childhood education, it is logical that Montana Western offer the degree.

State funding: The Montana Office of Public Instruction just received a $10,000,000 grant (renewable for four years) for Pre-K. This grant provides nearly half a million dollars a year for scholarships and for course development. Additionally, students who are working within early childhood can apply for $1,000 non-competitive scholarship each semester to apply toward their degree from the Early Childhood Project.

Employment: Within three years, all public schools who offer Pre-K programs will be required to have a teacher with the new ECE: P-3 license. The new $10,000,000 Pre-K grant also requires that early childhood teachers receive a Pre-K degree. Sixty four teachers who will receive this funding have already been identified as needing this degree. This degree would also be appropriate for teachers in early elementary grades, preschool programs such as Head Start, and child care.

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

This degree will assist in meeting the growing demand in Montana and the nation for a highly qualified workforce. Research indicates the importance of quality educational settings for young children, their families, and society. Children who are in high-quality early childhood settings have better short and long term outcomes. For example, children who attend high quality early childhood programs have less need for special education and are less likely to be teen parents, to drop out of school, to be on welfare, or to be incarcerated. They are more likely to attend college and to have full-time employment as adults.

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

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Currently Pre-K is considered a fast growing industry with a 17% growth rate. According to the Bureau of Labor Statistics, in Pre-K alone, there are 197 positions available each year in Montana. Nationally, 41 states have some form of early childhood education licensure covering the Pre-K to early elementary grades (birth to age 8 and Pre-K-grade 1, 2, 3, or 4). Nationally, it is predicted that there will be 47,000 new jobs in Pre-K alone in the next ten years.

4. Institutional and System Fit

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

The University of Montana Western currently offers Bachelor of Science degrees in Elementary Education and in Early Childhood Education. The BS in Elementary Education is designed for students seeking a K-8 licensure. The BS in Early Childhood Education is a non-licensure degree designed for students working with children from birth to age eight in a variety of settings such as Head Start, childcare, and preschool.

Montana Western currently has field sites throughout Montana and online offerings that provide accessible courses for students throughout Montana. The courses provided at these sites will form the foundation for the ECE: P-3 degree.

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

Some coursework in certificate in ECE, AAS in ECE, and BS in ECE are being revised to better align with the ECE: P-3 degree

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

The ECE: P-3 degree utilizes courses from both the BS in Elementary Education and Early Childhood Education. The degree will prepare students to work in both preschool and early elementary settings. This degree is specifically designed for students seeking licensure.

The degree is also designed to meet the early childhood teacher preparation standards established by the National Association for the Education of Young Children (NAEYC) and in alignment with the Montana early childhood education standards and the national accreditation standards through the Council for Accreditation of Educator Preparation (CAEP).

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

Montana Western has been a leader in early childhood education in Montana, offering early childhood degrees consistently for the last 28 years. In addition to serving on campus students, Montana Western, in conjunction with partner colleges and universities, provides early childhood coursework at seven onsite field sites, and through online coursework. This allows place-bound students to obtain degrees without having to relocate. Montana Western also has a unique mission of offering certificate, associate, and bachelor's degrees. This degree is designed as a stackable credential that will allow students who complete an AAS in ECE to continue on to receive a BS degree, without a loss of credits.

This program is also aligned with Montana Western's mission of offering experiential education. Each early childhood course is designed to include practicums where students implement what they are learning with young children.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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.

At this time, Montana Western is the only state institution that is proposing a stand-alone ECE:P-3 degree. Montana Western has discussed this proposal at the Early Childhood Education Higher Education consortium meeting which is attended by representatives from all other campuses offering early childhood coursework. The consortium was supportive of the proposal. The consortium has been meeting at least twice a year for the past 20 years. As a consortium we have a long history of working collaboratively including creating and co-teaching courses. We will continue to work closely together to share coursework whenever it is feasible.

Montana Western currently has articulation agreements with Flathead Community College, Dawson Community College, Great Falls College, and Helena College. These articulation agreements have been in place for many years, being adjusted as degrees have changed.

5. Program Details

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

This curriculum is designed to meet the early childhood teacher preparation standards established by the National Association for the Education of Young Children (NAEYC) and in alignment with the Montana early childhood education standards and the national accreditation standards through the Council for Accreditation of Educator Preparation (CAEP).

General education includes EDEC 247-248	32	Child & Adolescent Development included
EDEC 210-211	3	Meeting the Needs of the Family and lab
EDEC 220-221	3	Creating an Environment for Learning and lab
EDEC 230	4	Positive Guidance and Management and lab
EDEC 265-266	3	Leadership and Professionalism and lab
EDEC 381-382	3	Early Childhood Curriculum and Methods and lab
EDEC 385-386	3	Integrated Curriculum in Early Childhood and lab
EDEC 340	3	Practicing Inclusion
EDEC 405	3	Assessment in EC

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CURRICULUM PROPOSAL FORM

EDEC 430	3	Social/Emotional Development
HEE 340 or EDEC 291	3	Health Methods Course
EDU 201	4	Intro to Education
EDU 222	4	Ed Psych and Child Development
EDU 233	4	Lit, Language and Texts
EDU 234	4	Reading-Writing Connections
EDU 311 or EDEC 291	4	Diversity Course
EDU 334	4	Children & Young Adult Lit
EDU 352	4	Field Experience
EDEC XXX	2	Integrating Tech in ECE classrooms
EDU 382	4	Assessment, Curriculum & Instruction
EDED XXX	4	Mathematics for Early Childhood (K-3)
EDU 397A or EDEC 345	4	Arts Methods
EDEC XXX	4	Science & Social Studies for Early Childhood (K-3)
EDEC 353	1	Fostering Movement
EDU 438	4	Literacy, Assess, Diag & Instruction
Student Teaching	12	Student Teaching
TOTAL	**126**	

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

The goal is to begin the new ECE: P-3 degree next year. Because of the availability of nearly $500,000 in scholarships, the Pre-K state grant, and the new OPI regulations we are anticipating that there could be an additional 60 students next year. Most of these students will be currently working practitioners who will most likely attend school part-time. It is likely that many of these students will be in our field sites.

6. Resources

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

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Most of the courses proposed are currently taught in either the early childhood or the elementary education program. With reconfiguration of duties for existing faculty, all courses can be covered for next year. We anticipate that a new faculty line will be needed within two years because of the increased number of new students that this degree will generate.

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.
Grant funding is available to assist with course revision and development to meet the needs of the ECE: P-3 degree.

7. Assessment
How will the success of the program be measured?

The program is designed to align with state and national accreditation requirements which include the identification of key assessments that will track student progress during the program as well as providing a measure for their impact on children's learning upon completion of the program. This data will be examined on a regular basis and program changes will be made based upon the data.

The quality of instruction will be measured though course evaluations each semester as well as through student surveys completed upon graduation and employer surveys that will be conducted to track the success of program graduates.

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

The program was developed during the fall semester to meet the new ECE: P-3 licensure standards. A statewide meeting was held to gain input on the degree. Representatives from Head Start, child care, early childhood professional organizations, organizations for exceptionalities, early childhood accreditation, and faculty teaching elementary and early childhood were in attendance. The degree was also shared and reviewed by early childhood faculty from other campuses. The program was reviewed and approved by the Montana Western Education Department, the Faculty Chairs, and the Faculty Senate.

May 21-22, 2015

ITEM 167-1602-R0515

Request for Authorization to Offer a Minor in Government – The University of Montana-Western

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THAT

The Board of Regents of Higher Education authorizes The University of Montana Western to offer a Minor in Government.

EXPLANATION

The Government Minor would replace the current Global Politics Minor that has been placed in moratorium. This would allow The University of Montana-Western to continue to produce teachers in the Social Science Broadfield, which is especially important for teacher placement in smaller schools in Montana.

ATTACHMENTS

Academic Request Proposal Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **167-1602-R0515** Meeting Date: **May 21-22, 2015**

Institution: **University of Montana Western** CIP Code: **45.1001**

Program Title: **Government Minor**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

___ **A. Notifications:**

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

___ **1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

___ **1b. Withdrawing a program from moratorium**

___ **2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)

___ **3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**

___ **4. BAS/AA/AS Area of Study**

___ **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

___ **1. Re-titling an existing major, minor, option or certificate**

___ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

___ **3. Revising a program** (Curriculum Proposal Form)

___ **4. Distance or online delivery of an existing degree or certificate program**

___ **5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

___ **Temporary Certificate or AAS Degree Program**

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

___ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

___ **1. Adding an option within an existing major or degree** (Curriculum Proposal Form)

___ **2. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

X **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

___ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

X **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

___ **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

___ **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

___ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:

This proposal is to offer a new minor in Government to replace a Global Politics minor that has been placed in moratorium. This new minor will allow UM-Western to continue to produce teachers in the Social Science Broadfield area.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

This proposal constitutes a request for approval of a new minor in Government.

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

The University of Montana Western seeks to offer a new minor in Government to replace the minor in Global Politics that has been placed in moratorium. This change will allow Montana Western to continue to offer a teacher education program in the Social Science Broadfield area with the reduction of its political science faculty members by one faculty member this year.

3. Need

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

This minor will be needed to continue to prepare Broadfield qualified teachers as the Global Politics major and minor are scheduled to go into moratorium effective fall 2015.

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

Graduates of this program who also complete the World History minor would possess the content area courses to become Broadfield teachers of social science in Montana. This would continue to meet the demand for broadly trained teachers in history and the social sciences of smaller Montana schools.

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

It is estimated that demand will approximate the recent demand of students for the Social Science Broadfield licensure. This has ranged from 10 to 21 enrolled students over the past 10 years.

4. Institutional and System Fit

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

It is very closely connected to the teacher education program at Montana Western since most students taking this minor will become teachers in Montana.

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

This program will not require any changes to any other existing programs at Montana Western.

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

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

Since 1893, Montana Western has been developing teachers for Montana. This minor will continue to allow us to prepare teachers broadly trained in history and the social sciences

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CURRICULUM PROPOSAL FORM

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.

Most colleges and universities with teacher preparation programs in Montana and elsewhere have similar programs

5. Program Details

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

This curriculum, when combined with the existing Modern History Minor, will provide the content and coursework necessary for completing a Social Science Broadfield.

Course Number	Credits	Course Title
ISSS 222	4	Qualitative Research Methods for Social Science
PSCI 210, 220, or 250	4	*Students would take one of the following three classes*
PSCI 210		Introduction to American Government
PSCI 220		Introduction to Comparative Government
PSCI 250		Introduction to Political Theory
	4	*Students would take one of the following two classes*
ANTY 220		Culture and Society
SOCI 101		Introduction to Sociology
EDEC 430	4	*Students would take one of the following two classes*
ECNS 202		Principles of Microeconomics
ECNS 203		Principles of Microecomics & Macroeconomics
EDU 222	8	*Students would take two of the following six classes*
ECNS 431		International Trade

Montana Board of Regents
CURRICULUM PROPOSAL FORM

ENVS 381		Natural Resource Law
HSTA 380		Problems in American Constitutional History
PSCI 421		Comparative Legal Systems
PSCI 434		International Law
PSCI 471		American Constitutional Law
EDU 382	4	Assessment, Curriculum & Instruction
TOTAL CREDITS	**24**	

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

Enrollment in the Interdisciplinary Social Sciences and Education program has ranged from 10 to 21 students over the past 10 years. Most of that enrollment will shift to the new minor as students currently enrolled in the Global Politics program finish their degrees while no new students will be allowed to enroll.

6. Resources

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

There will be no additional faculty resources required for this new 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 other additional resources will be needed to offer this program.

7. Assessment

How will the success of the program be measured?

The success of the program will be measured by the number of graduates and by the placement of those graduates into the workforce.

8. Process Leading to Submission

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

The program was reviewed and recommended for approval by the Montana Western History, Philosophy and Social Science Department, the Department Chairs from every department on campus, Faculty Senate, the Provost, the Chancellor, and the President.

May 21-22, 2015

ITEM 167-1904-R0515

Request for Authorization to Establish a Computer Software Professional Certificate of Applied Science – Helena College University of Montana

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THAT

Helena College University of Montana requests authorization to create a new Certificate of Applied Science, Computer Skills Professional.

EXPLANATION

Helena College has been selected by the U.S. Department of Education to participate in the Experimental Site Initiative. This initiate allows an institution to provisionally adopt experimental teaching methodologies in delivering program academia. Helena College would like to seize this opportunity by electing to participate in trialing a competency-based degree. This educational approach will allow students to leverage the skills and knowledge they have acquired through prior learning and could conceivably complete this certificate in less than one year. Students will be assessed and awarded a CAS based on the successful completion of 10 competencies.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form
Attachment #1 – ESI Acceptance Letter
Attachment #2 – New Program/Degree Submission Form
Attachment #3 – Computer Software Professional CAS Academic Plan

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **167-1904-R0515** Meeting Date: **May 21-22, 2015**

Institution: **Helena College** CIP Code: **11.1006**

Program Title: **Computer Software Professional Certificate of Applied Science**

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit the Academic, Research and Student Affairs Handbook.

_____ **A. Notifications:**

Notifications are announcements conveyed to the Board of Regents at the next regular meeting.

_____ **1a. Placing a program into moratorium** (Document steps taken to notify students, faculty, and other constituents and include this information on checklist at time of termination if not reinstated)

_____ **1b. Withdrawing a program from moratorium**

_____ **2. Intent to terminate an existing major, minor, option or certificate – Step 1** (Phase I Program Termination Checklist)

_____ **3. Campus Certificates, CAS/AAS-Adding, re-titling, terminating or revising a campus certificate of 29 credits or less**

_____ **4. BAS/AA/AS Area of Study**

_____ **B. Level I:**

Level I proposals are those that may be approved by the Commissioner of Higher Education. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the Board.

_____ **1. Re-titling an existing major, minor, option or certificate**

_____ **2. Adding a new minor or certificate where there is a major or an option in a major** (Curriculum Proposal Form)

_____ **3. Revising a program** (Curriculum Proposal Form)

_____ **4. Distance or online delivery of an existing degree or certificate program**

_____ **5. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist)

_____ **Temporary Certificate or AAS Degree Program**

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the proposal to go through the normal Level II Proposal approval process.

_____ **C. Level I with Level II Documentation:**

This type of proposal may go to the Board as a Level I item if all Chief Academic Officers are in agreement. If consensus among the Chief Academic Officers is not reached, however, the item will go to the Board as a Level II request.

_____ **1. Adding an option within an existing major or degree** (Curriculum Proposal Form)

_____ **2. Consolidating existing programs and/or degrees** (Curriculum Proposal Form)

X **D. Level II:**

Level II proposals require approval of the Board of Regents. These requests will go to the Board in a two-meeting format, the first being as informational and the second as action.

_____ **1. Re-titling a degree (ex. From B.A. to B.F.A)**

X **2. Adding a new minor or certificate where there is no major or option in a major** (Curriculum Proposal Form)

_____ **3. Establishing a new degree or adding a major or option to an existing degree** (Curriculum Proposal Form)

_____ **4. Forming, eliminating or consolidating a college, division, school, department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form, except when eliminating or consolidating)

_____ **5. Re-titling a college, division, school, department, institute, bureau, center, station, laboratory or similar unit**

Specify Request:

Helena College University of Montana requests authorization to create of a new Certificate of Applied Science, Computer Skills Professional.

Helena College has been selected by the U.S. Department of Education to participate in the Experimental Site Initiative. This initiate allows an institution to provisionally adopt experimental teaching methodologies in delivering program academia. Helena College would like to seize this opportunity by electing to participate in trialing a competency-based degree. This educational approach will allow students to leverage the skills and knowledge they have acquired through prior learning and could conceivably complete this certificate in less than one year. Students will be assessed and awarded a CAS based on the successful completion of 10 competencies.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

Helena College has been selected by the U.S. Department of Education to participate in its Experimental Sites Initiative. This initiate allows an institution to provisionally adopt experimental teaching methodologies to deliver academic programs. Helena College is requesting a competency-based degree program. This educational approach allows students to leverage the skills and knowledge they have acquired through prior learning and could conceivably allow them to earn a Certificate of Applied Science (C.A.S.) in less than one year by successful demonstration of 10 competencies.

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

The Computer Software Professional program is designed to prepare students for professional technical support positions in today's business and government environment. This program supports and develops competencies in operating and application software, computer hardware, customer service, and business communication concepts while focusing on technological changes in the workplace and information systems. Students who complete this program will earn a Certificate of Applied Science.

3. Need

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

Helena College's offering of this new C.A.S. program has two principle components:

1. The U.S. Department of Education has designated Helena College as an Experimental Learning Site (ELS) for competency based education. Having the support of the USDOE, Helena College would like to capitalize on this opportunity by accommodating an increasing volume of inquiries from students wanting to receive college credit for prior learning through military service, and work-life experiences. The ability to conduct a trial competency-based program offering students the opportunity to convert prior knowledge into demonstrated competencies could accelerate their progress toward a degree.
2. An internal program review conducted by the Office Technology program faculty concluded that only a small number of students actually complete the Computer Skills Specialist C.A.S. program. The lead faculty advisor for C.A.S. students observed that students who elect this program of study are constantly juggling work-life responsibilities, while typically enrolled in five courses per semester. Unfortunately, these students frequently drop out after becoming overwhelmed by academic demands which compete for their time with work and family responsibilities. A competency-based curriculum will allow students to concentrate on one course (competency) at time and work at their own pace. The expected outcome is that students will be more engaged, obtain a deeper level of learning, mastery of the course content and, ultimately, successfully complete their course of study.

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

This program has been specifically designed as a positive response to student attrition and as an avenue for students who have pertinent work experience which can simplify and accelerate their progress toward a degree. The self-paced course design method allows students to apply their prior knowledge at the beginning of a competency based course and this should aid students in the successfully mastery of remaining course competencies in a shorter period of time.

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

The U.S. Bureau of Labor Statistics has projected an occupational growth rate of 13% for customer service representatives, administrative assistants and database administrators through 2022. In Montana, the state's Department of Labor projections for Office and Administrative Support personnel include an estimated 2,400 annual job openings between 2013 and 2023. For office personnel in medical settings, specifically those dealing with medical records, there are another 58 annual job openings projected; for medical secretaries specifically there are an estimated 95 annual job openings with median MT salary of $30,782. Across all of these categories, about two-thirds of the openings are created due to job growth, with about one-third of the openings being due to retirement or job departures.

Our prior experience with persons seeking certificates to improve office technical skills is that many of these students are female, over aged 25, and have one or more children. We expect that the high degree of flexibility offered by this format will make it substantially more attractive than our current, seat-time based traditional program which requires commitment to a traditional full or part time schedule on a 16-week semester calendar.

Overall we anticipate initial enrollment of perhaps 20 students, with the program growing slowly to around 70-80 students being served annually. Because students who are place-bound or living in rural areas of the state can complete the program fully online and at their own pace, we expect demand to be higher than it would be for a classroom-based program.

4. Institutional and System Fit

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

The proposed Computer Software Professional C.A.S. program mirrors our existing Computer Skills Specialist C.A.S. program. Both are fully online and have the same courses within the curriculum. The single and significant difference between the two programs is the proposed C.A.S. will implement a competency based learning methodology versus the traditional seat-time based scheduling and the traditional course assessment practices found in the Computer Skills Specialist degree.

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

No. Helena College already offers a partially online program in this discipline area and has the necessary IT resources and qualified faculty to support the adoption of an additional fully online program.

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

As previously noted, the proposed C.A.S. will allow students to focus on one course (competency) at a time and can self-regulate their progress through a single competency as they pursue the satisfaction of degree requirements. This program will have non-traditional enrollment practices which allow students a continuous learning track rather than mandatory "stop-out" periods as experienced in a traditional academic calendar year. All the courses within the proposed C.A.S. are competency-based rather than seat-time based.

One unique and potentially breakthrough benefit of this program is that students can readily use prior learning from work and life experiences to achieve college credit as the courses are designed to measure

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student success based on the performance of a prescribed competency rather than the traditional learning-testing cycles of a typical academic program and classroom. The format of this program will allow motivated students an opportunity to shorten their time to degree completion based on their preexisting experiences and job related qualifications. Specifically, those who wish to may accelerate their learning and complete the C.A.S. within as few as 20 weeks, while those whose life or work needs necessitate a longer program can take up to 90 weeks, if desired, to complete their program.

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

This proposed C.A.S. serves to advance the following strategic goals of Helena College:

1. Partner for Student Success:

- Improve student persistence towards attainment of educational goals and completion rates for student seeking certificates and degrees by strengthening academic planning by providing students with clear, discrete pathways and encouraging early identification of intended program of study through initial and ongoing advising.
- Prepare students for success in the workplace and in further degree attainment by developing formal articulation agreements and increase partnerships with baccalaureate institutions to improve students' transfer opportunities and subsequent educational attainment.

2. Attain Excellence:

- Being selected as Experimental Learning Site for the US Department of Education, allows faculty, as well as, Helena College to safely explore innovative teaching practices that could help students expedite their time to degree completion rate.

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.

There are no similar programs within the Montana University system.

5. Program Details

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

See attachments #4 – New Program/Degree ASCR Form and #5 – Computer Software Professional CAS Academic Plan

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

Helena College proposes to initiate the C.A.S. beginning Fall 2015. Although it is difficult to precisely forecast the number of students who will enroll in this new program, based on previous experience it is expected that 10-15 students will enter this C.A.S. at its inception. With proper marketing and the ability to reach learners

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CURRICULUM PROPOSAL FORM

outside the Helena community who would be interested in the online program delivery, the degree's growth rate should increase dramatically within the first year. Helena College will make a special effort to work with our dual credit partnering high schools in inviting their students to enter the program.

6. Resources

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

No additional faculty resources will be needed; current full and part-time faculty will teach these courses.

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 will be required to ensure the success of this proposed Certificate of Applied Science.

7. Assessment

How will the success of the program be measured?

The success of this program will be measured by the following metrics:

1. total number of competency enrollments per academic year
2. total number of competency completions per academic year
3. total number administrative withdrawal per academic year
4. the C.A.S.'s attrition and graduation rates per academic year
5. the Academic Advisor will conduct follow-up survey regarding job placements of graduates

8. Process Leading to Submission

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

Upon receiving the acceptance letter from the U.S. Department of Education (see Attachment #3 – ESI Acceptance Letter) to participate in the Experimental Sites Initiative, Dr. Runge, Associate Academic Dean, called a meeting with the Director of Financial Aid, the Director of Admissions and Records, the Division Chair of General Education and the lead faculty member of the Office Technology program. This meeting served as a brainstorming session focusing on the how to make adjustments to current policies and procedures within academics and student affairs department to support the learning landscape of a competency based program. Meeting members also deliberated on how a student would 1) progress through the degree plan and time allotments to complete a competency and the overall C.A.S. degree, 2) receive financial aid disbursements and 3) be advised throughout the duration of completing the C.A.S. degree. At the conclusion of this meeting, it was decided to move forward in writing a formal proposal to the Board of Regents to allow Helena College to offer its first competency based program, resulting in this proposal.

Several meetings have passed in which the offices of academic affairs, financial aid, and the registrar have developed and defined the necessary procedures to effectively offer this program in the experimental phase:

1. Formal registration periods have been designated including last to add and withdraw
2. Financial Aid disbursements dates have been assigned and are based on when a student enrolls in a competency and when the competency is completed in regards to SAP calculations

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CURRICULUM PROPOSAL FORM

3. Grading scale and the percentage which defines a successful passing rate of competency; (70%)
4. Course development to facilitate a competency-based online learning environment
5. When a student should be placed on academic probation
6. When to execute an administrative withdrawal
7. Number of times a student is allowed to repeat competency

To: Experimental Sites Initiative Institutional Contact Date: January 8, 2015

From: U.S. Department of Education Experimental Sites Initiative

We have completed our review of the institutions that responded to our July 31, 2014 *Federal Register* notice announcing new experiments we will be conducting under the Secretary's experimental sites authority. As stated in the *Federal Register* notice, the Secretary selects a limited number of institutions to participate in each experiment; taking into account institutional type and control, geographic location, enrollment size, Title IV participation level, and institutional compliance with Title IV requirements.

We are pleased to inform you that your institution has been selected to participate in one or more of the upcoming academic program experiments under the Experimental Sites Initiative (ESI). We ask that, no later than March 1, 2015, you indicate whether your institution accepts this invitation to participate in the experiments. You do this by printing a copy of this two-page memo and placing an 'X' next to the experiment(s) in which your institution wishes to participate. You may choose to participate in an experiment even if your original letter of interest did not include that experiment. If you no longer wish to participate in any of the experiments, simply place an 'X' next to the "None" line.

Experiments:

_____ Prior Learning Assessment __X__ Competency-Based Education

_____ Limited Direct Assessment _____ None. We do not wish to participate.

After completing this section provide the information and signatures requested on page 2. The completed form (both pages) should be sent as a PDF attachment to an email addressed to Experimentalsites@ed.gov, with "ESI Acceptance" in the subject line.

Once we have received your acceptance, the Department's School Participation Team assigned to your institution will send you a Program Participation Agreement (PPA) Amendment. The PPA Amendment will be sent to the institution's CEO (e.g., President). An institution is not officially participating in an experiment until all parties have signed the PPA Amendment.

On the next page, please provide the information and signatures for the financial aid administrator and an academic official of the institution.

Institution's Name and OPEID:

Name _____ OPEID _____

Financial Aid Administrator:

Name _____ Title _____

Email _____ Signature _____

Academic Official:

Name _____ Title _____

Email _____ Signature_____

Additional Information: We will be presenting webinars in early February 2015 to assist institutions in deciding whether to accept this invitation and to answer questions you may have. During the webinars we will review each of the three experiments above, discuss the specific statutory and/or regulatory waivers that will be provided and any alternative requirements, and begin the discussion of reporting and evaluation requirements. There will be time reserved for questions and answers. Please look for an email from our Experimental Sites Initiative Team (Experimentalsites@ed.gov) with details as to date, time, and registration procedures for the webinars.

Special Note: In late January 2015 we will post on our website a listing of the institutions that have been invited to participate in each of the experiments. We will include the name, city, and state of the institution and the institution's contact name and email address. This listing will provide institutions with an opportunity to share ideas. If you do not want us to include your institution on the listing, send an email to our Experimental Sites Initiative Team at Experimentalsites@ed.gov no later than January 23, 2015. Similarly, if your contact person is someone different than the person to whom we sent the email that included this form, please let us know at the same email address.

We look forward to your affirmative response to participate in one or more of the experiments no later than March 1, 2015. In the meantime, if you have any questions please email them to Experimentalsites@ed.gov.

HELENA COLLEGE
University of Montana

New Program/Degree Submission Form

A. Name of New Degree/Program: Computer Software Professional

B. Type of New Degree/Program: Certificate of Applied Science

C. Submission Information

1. Department: Office of Technology
2. Total Program/Degree Credits: 30
3. Implementation Date of Proposed Program/Degree: Fall 2015

D. Description of Proposed Program/Degree: The Computer Software Professional program is designed to prepare students for professional technical support positions in today's business and government environment. This program supports and develops competencies in operating and application software, computer hardware, customer service, and business communication concepts while focusing on technological changes in the workplace and information systems. Students who complete this program will earn a Certificate of Applied Science.

E. Curriculum Delivery: This program has been specifically designed as a positive responsive to student attrition and as an avenue for students who have pertinent work-life experience which can simplify and accelerate their progress toward a degree. All courses will be:

1. Fully Online
2. Self-Paced
3. Students will be enrolled in one competency at a time. Upon successful completion (passing rate of 70%) the student will be allowed to enroll in the next competency
4. Students will master 10 competency and the competencies must be completed in the prescribed order as outlined on the academic plan, see attachment.

F. Rationale for Proposed Program/Degree: An internal program review conducted by the Office Technology program faculty concluded that only a small number of students actually complete the Computer Skills Specialist C.A.S. program. The lead faculty advisor for C.A.S. students observed that students who elect this program of study are constantly juggling work-life responsibilities, while typically enrolled in five courses per semester. These students unfortunately frequently drop out after becoming overwhelmed by academic demands which compete for their time with work and family responsibilities. A competency-based curriculum

will allow students to concentrate on one course (competency) at time *and* work at their own pace. The expected outcome is that students will be more engaged, obtain a deeper level of learning, mastery of the course content and, ultimately, successfully complete their course of study. Secondly, Helena College has been selected as an ELS (Experimental Learning Site) for competency based education. The ability to conduct a trial competency-based program offering students the opportunity to convert prior knowledge into demonstrated competencies could accelerate their progress toward a degree.

G. Attachments: CAS Academic Plan

Computer Software Professional – 30 credits for CAS Academic Plan		
Name:	Date of Entry:	Date of Completion:
Academic Plan Advisor:		
Transferred From:		
Must successfully complete a competency at a 70% passing rate before advancing to the next competency, C- or higher		

Competency Order	Course #	Course Title	CR	Pre - Requisites	SEM	Grade	Comments
1	TASK 113	Keyboarding and Doc Processing	3				
2	WRIT 121T	Intro to Technical Writing	3				
3	M 108T	Business Math	3				
4	CAPP 154	MS Word	3				
5	CAPP 156	Excel	3				
6	CAPP 153	MS PowerPoint	3				
7	CAPP 158	MS Access	3				
8	CAPP 155	MS Publisher	3				
9	TASK 150	Customer Service Strategies	3				
10	TASK 210	Office Success Strategies	3				
	Developmental Coursework:						

Revised 02/2015