LEVEL II MEMORANDUM

DATE: February 10, 2016

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 February 17, 2016. Issues not resolved at that meeting should be submitted in writing to OCHE by noon on Friday, February 19. 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 change Montana State University College of Nursing Kalispell Site into Kalispell Campus, a Stand-alone Campus
  Item #170-2010-R0316 | Academic Proposal Request Form
- Request for authorization for Gallatin College to offer a Certificate of Applied Science in Computer Network Technology
  Item #170-2012-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form
- Request for authorization to re-title Montana State University's Computer Science Department as the School of Computing
  Item #170-2013-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form | Attachment #1
- Request for authorization for Gallatin College to offer an Associate of Applied Science in Culinary Arts
  Item #170-2016-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form
- Request for authorization to offer a Hospitality Management BS Degree Program
  Item #170-2017-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form | Attachment #1

The University of Montana Missoula:

- Request for authorization to offer a B.A. in African-American Studies
  Item #170-1028-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form
- Request for authorization to re-title the Biology B.A. to a Biology B.S. for Five Options
  Item #170-1029-R0316 | Academic Proposal Request Form | Attachment #1
- Request for authorization to offer a B.A. in Early Childhood Education: P-3
  Item #170-1030-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form
- Request for authorization to consolidate the Departments of Radio-TV and Print/Photo into the School of Journalism
  Item #170-1032-R0316 | Academic Proposal Request Form
- Request for authorization to offer a Certificate in Teaching and Learning
  Item #170-1033-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form
- Request for authorization to re-title the Department of Curriculum & Instruction to the Department of Teaching & Learning

Item #170-1034-R0316 | Academic Proposal Request Form

- Request for authorization to offer a M.S. in Business Analytics
  Item #170-1035-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form | Attachment #1 | Attachment #2 | Attachment #3
- Request for authorization to offer a M.A. in Education
  Item #170-1037-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form
- Request for authorization to re-title the Ed.S. Degree in School Psychology to a S.S.P. Degree
  Item #170-1038-R0316 | Academic Proposal Request Form
- Request for authorization to offer a Ph.D. in Teaching & Learning
  Item #170-1039-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form
- Request for authorization to offer a Pd.D. in Speech Language Pathology
  Item #170-1040-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form
- Request for authorization to offer an A.A.S. in Hospitality Management
  Item #170-1041-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form | Attachment #1

Montana Tech of the University of Montana:

- Request for authorization to offer a B.S. in Civil Engineering
  Item #170-1501-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form
- Request for authorization to offer a B.S. in Mechanical Engineering
  Item #170-1502-R0316 | Academic Proposal Request Form | Curriculum Proposal Request Form

March 3-4, 2016

ITEM 170-2010-R0316

Request Authorization to Change Montana State University College of Nursing Kalispell Site into Kalispell Campus, a Stand-alone Campus

THAT

The Montana State University College of Nursing requests that the Kalispell site of the Missoula/Kalispell campus become a stand-alone campus independent of the Missoula campus.

EXPLANATION

The Missoula campus of the College of Nursing (CON) has technically been referred to as the Missoula/Kalispell campus since the Kalispell site opened in 2002. When the Kalispell site was first opened only 8 students/year were admitted so it was felt that was too few students to make it a campus. In 2009, that distant site expanded and began admitting 16 students/year. The funding for that expansion, including faculty salaries, was provided by private donors with the donation scheduled to last through FY15. Since there was no funding mechanism identified at that time as to how to support that site after the private funds ran out, it was decided not to make the distant Kalispell site a campus in case the expanded site was not financially sustainable. In the spring of 2015, the financial support of the Kalispell site was moved to base dollars.

The Kalispell site continues to admit 16 academically strong students/year. Approximately 85% of students who have graduated from that site have remained in the Flathead Valley to work -which equates to about 100 nurses.

If Kalispell were to become a campus, Dr. Sandy Kuntz who currently serves as the "site coordinator" would become the campus director. This would allow her access to some Banner screens that would facilitate better student advisement and additional support in the hiring process. She would also be invited to Department Heads meetings at MSU that provide professional development and networking opportunities.

No additional funds are needed to support this request. Dr. Kuntz's role description includes 50% FTE as an administrator. College administration has begun to explore expanding the Kalispell campus to include a cohort of students enrolled in the College's accelerated second degree program. If that were to happen, Dr. Kuntz's FTE may be expanded to 75% administration. Expanding the Kalispell site (or campus per this request) to include an accelerated cohort would increase the complexities of Dr. Kuntz's responsibilities and provides additional justification for that setting to become a campus independent of Missoula.

ATTACHMENTS

Academic Proposal Request Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-2010-R0316** Meeting Date: **March 3-4, 2016**

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

Program Title: **College of Nursing: Kalispell Site of the Missoula/Kalispell campus**

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 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- 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. 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)

___ **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)

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

Specify Request:

The MSU College of Nursing requests that the distant Kalispell site of the Missoula/Kalispell campus become a stand-alone campus independent of the Missoula campus.

March 3-4, 2016

ITEM 170-2012-R0316

Request Authorization to allow Gallatin College to offer a Certificate of Applied Science in Computer Network Technology

THAT

Gallatin College is requesting a Level II approval for a new Certificate of Applied Science in Computer Network Technology.

EXPLANATION

This Certificate of Applied Science in Network Technology is the first in a series of Professional Certificates and Certificates of Applied Science (CAS) that will be structured academically around industry certifications in the broad field of information technology. Gallatin College will build these Professional Certifications and CAS degrees so they can be combined into a future Associate of Applied Science in Information Technology (AAS) in Information Technology. This CAS will prepare students for computer hardware and software and applications; local area (LAN) and wide area (WAN) networking; principles of information systems security; disk space and traffic load monitoring; data backup; resource allocation; and setup and takedown procedures. This program will also introduce the design, implementation, and management of linked systems of computers, and peripherals, to maximize efficiency and productivity, and prepare individuals to function as network generalist. The final goal of this program is to prepare students to sit for the CompTIA A+ certification test and the CompTIA Network + certification, the Cisco Certified Entry Networking Technician, and/or the Microsoft Technology Associate.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-2012-R0316** Meeting Date: **March 3-4, 2016**

Institution: **Gallatin College Montana State University** CIP Code: **11.10**

Program Title: **Certificate of Applied Science in Computer Network Technology**

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 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- 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. 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:

Gallatin College is proposing a Level II Certificate of Applied Science in Computer Network Technology. This is a 31 credit one year program that will prepare students for a career as a computer network specialist.

Montana Board of Regents

CURRICULUM PROPOSALS

1. Overview

Since 2011 Information Technology programing has been on the development list for Gallatin College. The field of Information Technology is vast. Anything having to do with the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, in the context of a business or other enterprise is considered information technology. So all aspects such as security, data management, networking, hardware, software, storage, web and mobile, audio visual, are all included in a discussion about information technology. Gallatin College has decided to start the Information Technology programing with a foundational Network Technology Certificate of Applied Science (CAS).

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

This Certificate of Applied Science in Network Technology is the first in a series of Professional Certificates and Certificates of Applied Science (CAS) that will be structured academically around industry certifications in the broad field of information technology. Gallatin College will build these Professional Certifications and CAS degrees so they can be combined into a future Associate of Applied Science in Information Technology (AAS) in Information Technology. This CAS will prepare students for computer hardware, software and applications; local area (LAN) and wide area (WAN) networking; principles of information systems security; disk space and traffic load monitoring; data backup; resource allocation; and setup and takedown procedures. This program will also introduce the design, implementation, and management of linked systems of computers, and peripherals, to maximize efficiency and productivity, and prepare individuals to function as network generalist. The final goal of this program is to prepare students to sit for the CompTIA A+ certification test, the CompTIA Network + certification, the Cisco Certified Entry Networking Technician, and/or the Microsoft Technology Associate.

3. Need

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

This program will prepare students for four standard occupational classified positions; they are Network Support Specialist, Network and Computer Systems Administrator, Computer Network Architect, and Computer User Support Specialist. The tables below show the demand and wage for these job classifications in Montana and Southwest Montana:

Occupational Demand 2014-2024				
	% MT Growth	MT Annual Openings	% SW MT growth	Annual Openings SW MT
Network Support Specialist	10.8%	10	8.9%	7
Network /Computer System Administrators	12.8%	20	18.2%	9
Computer Network Architects	18.3%	7	2.1%	3
Computer User Support Specialist	21.1%	77	17.0%	21

	MT Wage 2014	SW MT Wage 2014
Network Support Specialist	$46,200	$46,240
Network /Computer System Administrators	$58,030	$60,130

Computer Network Architects	$60,130	$57,270
Computer User Support Specialist	$38,700	$43,210

The above table only reflects Montana Department of Labor data; some employers do not use the local job service agencies to advertise open positions. Looking at this data alone there is evidence that our graduates will be able to secure employment in the local service delivery area at livable wages for at least a decade.

Additional labor market data was found that support growth in this area of information technology. At the state level the Montana Department of Labor and Industry reported in their May 2015 Montana Employment Projections Report that Computer User Support Specialist with some type of post-secondary degree has a total annual opening demand of 77 and an average annual wage of $40,802. [i] In a report completed in July of 2015 by The Advisory Board Company, titled "Market Demand for Computer and Information Technology Associate's Degree Programs, Assessing Employer Demand in Gallatin and Park Counties and Across the State of Montana" the data showed local employer demand in Gallatin and Park Counties for Associate's level Computer and Information Technology professionals increased by 48% between July – December 2013 and January –June 2015. In real numbers this was a base level of 29 job listings with an increase up to 43.[ii]

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

Students will receive a basic foundational program and a CAS in computer networking. They will be introduced to systems design, installation, maintenance and troubleshooting that will allow them opportunities in the local and national workforce. This will be offered in the most efficient way possible and students will make connections with local industry employers. They will be exposed to highly recognized industry credentials that will start them on a career path in Information Technology.

Outside constituents include business owners and industry professionals that will benefit from a trained workforce with connections to future professional development. Once approved Gallatin College will organize an Advisory Board that will be comprised of local industry leaders, who will give feedback on program content and student workplace success as a result of existing content.

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

In 2011 Gallatin College completed an Analysis of Workforce Needs for Gallatin Valley. This report stated that employment of computer systems administrators was expected to increase by 23 percent from 2008 to 2018. From this 2011 study to present the demand for any IT support type of employees has remained high. Additional data on workforce demand can be viewed in "Need" question found above in this document.

As with all new programs Gallatin College will be responsible for going into high schools, and introducing the community to this additional offering. Recruiting techniques vary depending on the audience you are targeting. Demand for this program will come from the traditional high school student to the non-traditional adult wanting to train for a new career.

4. Institutional and System Fit

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

There is no connection between the proposed program and any existing programs at Gallatin College or MSU. MSU does have a Computer Science program in the College of Engineering but this offering trains students for

very different careers. In this CAS Computer Networking program M 111 and M 121 could both be free electives towards the CS B.S. This first Math course that is required for the CS Bachelor's is M171. COMX 102/WRIT 104 could also be electives and WRIT 101 is the required in the CS Bachelor's. Gallatin College has presented this proposal to MSU Computer Science faculty, they are in support of the program.

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

No.

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

The College of Engineering Computer Science Department offers a Bachelor's degree, a Master's degree, and a Ph.D. degree in Computer Science. The CAS being proposed here focuses on providing technical assistance to users, building and supporting LAN and WAN networks, and setting up hardware and software to support those networks. It does not teach programing and coding in order to engineer new applications. This proposal has been designed so that a properly advised student could take certain math and writing courses that can transfer to a Bachelor in Computer Science if appropriate.

D. How does the proposed program serve to advance the strategic goals of the institution?
Gallatin College operates under the MSU Strategic Plan and the Comprehensive Two-Year Mission Plan for Gallatin College. Below are the MSU Strategic Plan metrics to which this program will advance institutional goals.

In the MSU Strategic Plan 2012:

- **Metric L.2.3:** "By 2019, the number of associate degrees conferred will increase from 38 to 70 per year. Workforce certificates conferred will increase from 35 to 65 per year." By offering additional workforce certificate opportunities and utilizing community partners that will support those certificates with employment and student referrals, this program should increase the number of certificates conferred.

- **Metric L.3.1: "**By 2019, the percent of graduates employed full time in their field or in positions of their choosing will increase from an average of 62 percent to 70 percent. By offering another option for students that are focused on targeted employment opportunities students should be able to better fulfill their employment goals and help MSU meet its goals.

- **Metric A.1.5**: "By 2019, the number of students enrolled in Gallatin College degree and certificate programs will double to 400." By offering another certificate option to our community we should attract another variety of students, perhaps that we haven't been able to recruit before. If Gallatin College is going to double the amount of students attending more certificates must be added so students can maintain workforce diversity for the local economy.

- **Metric A.2.4: "**By 2019, the number of nontraditional students enrolled in MSU undergraduate and Gallatin College programs will increase to 3,200 (a 20 percent increase)." Gallatin College hopes that by offering this AAS in Photonics and Laser Technology, more non-traditional students will have the opportunity to attend

Montana Board of Regents
CURRICULUM PROPOSALS

college. The college has experienced an increase in nontraditional students with the addition of applied degree programs.

Gallatin College also operates under a Two-Year Comprehensive Mission Expansion Plan, approved by Board of Regents March 2013. By adding the CAS in Network Technology, the following numbered initiatives will be increased.

- #1. Enrollment and program growth;
- #3. Increase percentage of regional high school graduates that access Gallatin College through increasing dual enrollment;
- #5. Develop industry partnerships and meet local workforce demand;
- #6. Expand short-term workforce training;
- #8. Prepare students to be career ready.

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.

Every other 2 year college in the state, except Dawson, offers some type of Information Technology programing. Helena College, Missoula College, and Highlands offer an Associate of Applied Science in Network Support and Computer Networking. City College and Great Falls College offer a Certificate of Applied Science in Computer Networking. Gallatin College acknowledges there is duplication across the state. If the need was being met locally there would not be multiple employers requesting this program and continued unfilled openings as pointed out in above labor market data. This is also a support industry that grows alongside other non-computing business growth. Gallatin County is the fastest growing county in the state which means growth in personal home computing, small business computing, and medium business computing is going to continue to grow and have networking needs it is the mission of Gallatin College to plan for and prepare a workforce to meet local demand.

Montana Board of Regents
CURRICULUM PROPOSALS

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.

Fall		
M 111 or M 121 (depending on educational pathway)	**College Algebra or Technical Math for Computer Technology**	**3**
WRIT 101W or COMX 102/WRIT 104 (depending on educational pathway)	**College Writing or Interpersonal Skills and Workplace Communications.**	**3**
ITS 140	**CCNA 1-Intro to internetworking and cabling**	**3**
ITS 142	**CCNA 2- Intro to IP Routing**	**4**
ITS 164	**Networking Fundamentals**	**3**
ITS 150	**CCNA Exploration**	**3**
ITS 170	**Windows Server**	**3**
ITS 218	**Network Security**	**3**
ITS 224	**Introduction to Linux**	**3**
ITS 163	**Operating Systems: Windows/Apple iOS Smartphones**	**3**
Total Credits		**31**

M 111 Technical Mathematics

- Utilize and apply mathematical operations, measurement (English and Metric Systems), introductory geometric principles and applied algebra into technical applications in academic and workplace situations;
- Read, interpret, and produce solutions to applications at the introductory technical mathematics level;
- Apply ratio and proportion concepts to introductory technical mathematical situations;
- Apply appropriate technology in a mathematical situation;

Montana Board of Regents
CURRICULUM PROPOSALS

- Determine the validity of results and data;
- Solve any component of a right triangle with any two components given.

M 121 College Algebra

- Use factoring to solve, find zeros or x-intercepts of polynomial, rational polynomial, and algebraic equations or functions.
- Solve linear, quadratic, and rational exponential and logarithmic equations and be able to use each of these to model and solve applied problems.
- Solve absolute value equations and inequalities and express solutions of inequalities in interval notation.
- Identify relations vs. functions; use function notation; identify domain, range, intervals of increasing/decreasing/constant values; algebraically and graphically identify even and odd functions.
- Find zeros, asymptotes, and domain of rational functions.
- Evaluate and sketch graphs of piecewise functions and find their domain and range.
- Use algebra to combine functions and form composite functions, evaluate both combined and composite functions and their graphs, and determine their domains.
- Identify one-to-one functions, find and verify inverse functions, and sketch their graph.
- Graph linear, polynomial, radical, rational, exponential, logarithmic and circular equations

WRIT 101 College Writing I

- Use writing as a means to engage in critical inquiry by exploring ideas, challenging assumptions, and reflecting on and applying the writing process;
- Read texts thoughtfully, analytically, and critically in preparation for writing tasks;
- Develop multiple, flexible strategies for writing, particularly inventing, organizing, drafting, revising, and copyediting;
- Demonstrate an understanding of research as a process of gathering, evaluating, analyzing, and synthesizing appropriate primary and secondary sources;
- Integrate their own ideas with those of others;
- Formulate an assertion about a given issue and support that assertion with evidence appropriate to the issue, position taken, and given audience;
- Demonstrate proficiency in the use of the conventions of language and forms of discourse, including grammar, syntax, punctuation, spelling, and mechanics;
- Use conventions of format and structure appropriate to the rhetorical situation and audience;
- Develop and organize logical thoughts as a means of building evidence that results in a persuasive argument;
- Understand how to self-edit and appreciate its importance in crafting a professional document.

COMX 102 Interpersonal Communication in the Workplace

Upon completion of this course, a student will be able to:

- Understand the key elements of the communication process;
- Identify the elements of nonverbal and verbal communication and explain their significance in the communication process;
- Describe appropriate business ethics and professional courtesy;
- Identify practical skills geared toward improving communication in the workplace;
- Practice skills in listening reflectively, attentively, and more empathetically.

Montana Board of Regents
CURRICULUM PROPOSALS

WRIT 104 Workplace Communications
- Determine audience, purpose, and topic for workplace writing tasks;
- Develop skills in prewriting, organizing, drafting, editing and revising documents;
- Produce and edit short technical documents such as instructions, memos, and incident reports;
- Demonstrate basic competency in the use of grammar, syntax, punctuation, spelling, and mechanics;
- Design and evaluate documents in order to clearly and effectively communicate the message to the intended audience;
- Demonstrate the ability to work individually and in small groups to produce written documents.

ITS 140 CCNA 1: Discovery Introduction to Networking and Cabling : 3 Credits
- Compare and select appropriate internetworking devices to segment networks using the OSI model;
- Design IP addressing schemes using standard subnetting techniques;
- Choose a logical and physical LAN topology to solve networking problems;
- Evaluate networking media, connectors, wiring closets, structured cabling, and patch panels to meet networking requirements;
- Create, construct, and test a network using PC hardware and software, patch cables, installation of structured cabling, and digital test equipment;
- Prepare network documentation;
- Cooperate in engineering teams.

ITS 142 CCNA 2: Discovery: Intro to IP Routing
Students will design, build, and maintain small to medium size networks. Basic configuration routers into small networks.
- Understand the structure of the Internet and how communication occurs between hosts;
- Install, configure, and troubleshoot Cisco IOS devices;
- Plan a basic wired infrastructure to support network traffic;
- Configure a server to share resources and provide common web services;
- Implement basic WAN connectivity using Telco services;
- Demonstrate proper disaster-recovery procedures and perform server backups.

ITS 150 CCNA 1: Exploration
- Use network protocol models to explain the layers of communications in data networks;
- Design, calculate, and apply subnet masks and addresses;
- Build a simple Ethernet network using routers and switches;
- Employ basic cabling and network designs to connect devices;
- Use Cisco CLI commands to perform basic router and switch configuration and verification.

ITS 164 Networking Fundamentals
Course Description: This course is an introduction to networking fundamentals with both lecture and hands-on activities. Topics include the OSI model and industry standards, network topologies, IP addressing (including subnet masks), and basic network design. Concepts are reinforced with lab activities using equipment in live and simulated environments.

Outcomes:
- Define and distinquish network terminology;

Montana Board of Regents
CURRICULUM PROPOSALS

- Identify functions of the OSI and TCP/IP reference models and related protocols;
- Define, name, and identify networking media and understand how it is integrated into local area networks (LAN) and wide area networks (WAN) ;
- Define and describe network hardware including layer 1, 2, and 3 devices;
- Define and describe physical and logical network topologies;
- Define, describe, and apply IP addressing;
- Define subnetting and understand how subnets are calculated and applied;
- Explain the relationship between ports, protocols, and firewall configurations;
- Define and describe network operating systems;
- Define and perform connectivity testing using ping and tracert
- Perform LAN setup and connectivity testing;
- Perform small WAN setup and testing using static and dynamic routing protocols.

ITS 163 MS Windows Operating Systems: Windows and Apple iOS Smart Phones

- evaluate hardware readiness and capability
- install and configure Windows 8 and migrate user configurations from previous versions of Windows to Windows 8
- install and configure disk drives, and other devices
- install and configure windows store applications
- control access to local hardware and applications
- configure Internet Explorer, HyperV Clients, IP settings, and Network Settings
- configure and maintain network security, remote management, remote connection, shared resources, file and folder access, local security settings, authentication and authorization, mobility options, and updates
- manage local data storage and monitor system performance
- configure backup procedures and file recovery options

ITS 170 MS Windows Server 2012

- Become familiar with Microsoft Server 2012 features, capabilities, and installation methods
- Plan server deployments using MAPS, WDS, and Windows AIK
- Plan infrastructure services like DHCP and DNS
- Be able to plan, create, and maintain Active Directory services
- Plan, create, and maintain terminal services and basic virtualization via HyperV
- Be able to deploy file, print and FAX services
- Plan server data storage, file permissions, file sharing, etc.
- Understand and apply maintenance procedure for high availability, as done with clustering
- Plan, develop and maintain server security and network access
- Secure infrastructure services for remove access and the use of certificates

ITS 218 Network Security

- Describe the security threats facing modern network infrastructures;
- Secure network device access;
- Implement AAA on network devices;
- Mitigate threats to networks using ACLs;
- Implement secure network management and reporting;
- Mitigate common Layer 2 attacks;
- Implement the Cisco IOS firewall feature set;

Montana Board of Regents
CURRICULUM PROPOSALS

- Implement the Cisco IOS IPS feature set
- Implement site-to-site IPSec VPNs;
- Administer effective security policies.

ITS 224 Introduction to Linux

- Explain the history of Linux and Open Source software;
- Define and explain the Linux installation process;
- Install and configure the Linux operating system;
- Understand and configure the Linux boot process and system initialization;
- Students will utilize text editors to examine, monitor, and configure the operating system;
- Demonstrate proficiency with Linux utilities, commands, applications, file system navigation, file
- Develop shell scripts to automate system tasks, backups, and configurations;
- Students will utilize Linux utilities to perform system backup and restore
- Students will install and manage software.

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

Gallatin College would like to have this program approved and through the Board of Regents by their March 2016 meeting. Once approved Gallatin College will start approval process for the courses and recruit to hire the Program Director. In May, June and July recruiting and marketing for students and adjuncts will begin. June, July and August will be used to purchase equipment, set up space and solidify curriculum for fall.

For the first fall semester our program goal will be 10 students with an eventual goal of 20 students. Graduation goal of 5 students in May of 2017, 10 students May of 2018, and 15 May of 2019.

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.

Every workforce program at Gallatin College is overseen by a Program Director that has contractual teaching responsibilities of 9-12 credits a semester. Given this model Gallatin College will hire adjuncts to cover 4-7 credits depending on the semester. The primary plan to pay for this start-up program is to utilize the county mill levy funding Gallatin College receives.

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.

Gallatin College will need to acquire equipment for a lab with appropriate equipment and supplies. Resources for this equipment will come from Perkins funding and county mill levy funding.

7. Assessment

How will the success of the program be measured?

Program success can be defined by several metrics in two-year education. Are students having a positive learning experience and gaining the skills required to sustain them in industry specific employment. Gallatin College continually assesses these measures and outcomes at the program and course levels.

Montana Board of Regents
CURRICULUM PROPOSALS

In addition, we will incur annual assessments based on student, employer, and alumni satisfaction feedback, input provided by Montana Photonics Alliance employers, including feedback provided during Industry Advisory Committee meetings. Student enrollment, graduation rates, and employment trends will be collected, reviewed and analyzed. Appropriate modifications to the program will occur based on the above feedback and data analysis.

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.

Gallatin College Program Development Manager met with four industry professionals, on several occasions during the writing of this proposal. These professionals all operate their own business in IT support, their academic background ranges from Bachelor to Doctorate degrees in Computer Science. Their work experience includes supporting residential to medium sized employers as an outsourced IT support service. Gallatin College also met with MSU's IT department for feedback on what type of skill set they were looking for when they recruited, and their network specialist have also reviewed the course content.

Gallatin College sent this proposal to MSU's Computer Science Department for their input and John Paxton, Ph.D., participated in one industry meeting the summer of 2014. This proposal will be reviewed by MSU's Curriculum and Programs Committee, MSU's Academic Programs Working Group, MSU Faculty Senate, MSU Dean's Council, MUS CAO's, and finally the MUS Board of Regents.

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[i] Montana Department of Labor and Industry. (2015). Montana Employment Projections 2016-2024.

[ii] The Advisory Board Company. (2015). "Market Demand for computer and information Technology Associate's Degree Programs, Assessing Employer Demand in Gallatin and Park Counties and Across the State of Montana. Pg. 7

March 3-4, 2016

ITEM 170-2013-R0316

Request Authorization to Re-title Montana State University's Computer Science Department as the School of Computing

THAT

Montana State University's Computer Science Department be re-titled as the School of Computing.

EXPLANATION

The term School of Computing conveys the pervasive nature of computing in today's world much better than the term Computer Science Department does. The new title will provide numerous advantages:

- Because the new name better conveys the reality of computing in today's world, it should attract more students to study computing-related topics, providing much needed additional talent to Montana's high tech industry
- In the future, a School of Computing is well positioned to offer new academic opportunities to students such as a B.A. in Computer Science, a Data Science certificate and/or innovative multidisciplinary courses. This will better prepare students for the variety of computing careers and opportunities that await them.
- In the future, a School of Computing is well positioned to serve as a connector for researchers with computational needs and researchers with computational expertise. Because research projects increasingly require computational expertise, the MSU and MUS research enterprise can be better served. Important new interdisciplinary, computationally intensive, research hubs on topics such as data science could be located in the School of Computing.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form
Attachment #1 - Letters of Support

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-2013-R0316** Meeting Date: **March 3-4, 2016**

Institution: **Montana State University** CIP Code: **11.07**

Program Title: **School of Computing**

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 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- 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. 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)

___ **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)

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

Specify Request:

Request for authorization to re-title Montana State University's Computer Science Department as the School of Computing.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

Montana State University's Computer Science Department requests authorization to be re-titled as the **School of Computing**.

Note: At Associate Provost Ron Larsen's recommendation, the questions on the Curriculum Proposal Form have been slightly modified to provide supporting information for this request.

2. Provide a one paragraph description. Be specific about what degree, major, minor or options are provided.

The School of Computing will continue to offer the same degrees and options that the Computer Science Department does, namely

- A Ph.D. in Computer Science
- An M.S. in Computer Science
- A B.S. in Computer Science (professional option and interdisciplinary option)
- A non-teaching minor in Computer Science

The School of Computing will continue to serve the same student populations that the Computer Science Department does. According to the Spring 2015 Registrar's Report (Report G, Part A), the Computer Science Department serves 371 CS students (303 undergraduates, 18 post-bacs, 24 master's students and 26 doctoral students). In addition, the CS Department also serves non-majors and other constituents.

3. Need

A. To what specific need is the institution responding by re-titling the Computer Science Department?

We live in a collaborative, interdisciplinary world where computing is pervasive. The term **School of Computing** captures this reality more effectively than the term Computer Science Department. The term School of Computing provides immediate benefits, as well as a shell for future growth and opportunities. Some of the immediate and potential future benefits include

- A more inclusive name will attract more MSU students to study computing. In today's world, a student who gains a richer understanding of computing will benefit both professionally and personally.
- Montana's computing industry, where demand for students with computing skills far exceeds supply, will be better served by having a larger and more diverse computing talent pool. In turn, this will contribute to growth in Montana's economy. A letter of support is attached from the Montana High Tech Business Alliance.
- A more inclusive name will enable our organization to better connect researchers inside and outside of MSU who have either computational needs or computational skills. This will benefit the MUS research enterprise. As one recent example that illustrates the multidisciplinary research potential, two computer science faculty are co-PIs on Barry Jacobsen's recently funded MREDI project entitled *Increasing Profitability by Improving Efficiency of Montana's Farm and Ranch Lands*.
- A School of Computing could house exciting new degrees and educational opportunities. For example, a B.A. in Computer Science fits well into a School of Computing.
- A School of Computing will shine a light on computing minors, attracting more students from other

Montana Board of Regents
CURRICULUM PROPOSAL FORM

majors to acquire computational skills.
- A School of Computing could house exciting new multidisciplinary research hubs in strategic areas such as data science.
- A School of Computing could offer joint appointments to multidisciplinary researchers whose expertise includes computing. Because many faculty have multidisciplinary research interests, this could help MSU attract high caliber faculty members.

Other top universities have recognized the strategic importance of a name that better captures the broad aspects of computing. Here are a few examples:

- The University of Utah has a School of Computing, http://www.cs.utah.edu/
- Arizona State University has a School of Computing, Informatics & Decision Systems Engineering, http://cidse.engineering.asu.edu/
- Carnegie Mellon has a School of Computer Science, https://www.scs.cmu.edu/
- Georgia Tech has a School of Computer Science located in a College of Computing, http://www.scs.gatech.edu/. A letter of support is attached from Lance Fortnow, who is chair of Georgia Tech's School of Computer Science.
- Drexel University has a College of Computing & Informatics, http://drexel.edu/cci/

B. How will students and any other affected constituencies be served by the re-titling?

Because this is a name change, affected constituencies will continue to be served as before.

C. What is the anticipated demand for degrees offered by a School of Computing? How was this determined?

Since the Computer Science Department already exists, the current demand is known. During Spring Semester 2015, 371 majors and graduate students were served (see response to Question 2 above for more detailed information), as well as non-CS students. Since 2009, nationwide enrollments in Computer Science have grown at a rate of 10%-15% per year, due to the plentiful opportunities for students with computing knowledge. At Montana State University, enrollments have risen from a low of 179 in Fall Semester 2008 to 371 in Spring Semester 2015. These enrollments are projected to continue rising in the foreseeable future and can be accelerated by an organizational name change that better captures both the depth and breadth of computing.

4. Institutional and System Fit

A. What is the connection between the re-titled program and existing programs at the institution?

The School of Computing would replace the Computer Science Department and assumes all of its former functionality.

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

No changes will be required.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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

Because the School of Computing is a name change for the Computer Science Department, our organization is already differentiated by providing degrees (Computer Science B.S., M.S. and Ph.D.) and opportunities (a CS minor, computing coursework, etc.) that other programs do not.

The re-titling signals that beyond the traditional role of a Department in academics and educating students, a School of Computing embraces and expands the role of the University in addressing the needs of our partners in both industry and the public sector. A School of Computing will serve a broader public as they increasingly seek computing-related research and scientific assistance. Developing new partnerships will serve the state of Montana well and will better prepare our students for future employment and other endeavors.

D. How does the re-titled program serve to advance the strategic goals of the institution?

The re-titled program will contribute to several of Montana State University's strategic goals.

- *Learning: MSU prepares students to graduate equipped for careers and further education*. In Montana and nationwide, computer science degrees at all levels are among the most in-demand degrees. In 2015 according to http://www.forbes.com/sites/susanadams/2014/11/12/top-degrees-for-getting-hired-in-2015/, Computer Science is the third most demanded undergraduate degree, the second most demanded M.S. degree and the seventh most demanded Ph.D. degree. Longer-term, a School of Computing will explore creating additional degrees (such as a B.A.) and options.

- *Discovery: MSU will 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*. Research increasingly requires computing or data science expertise to be successful. The broader interdisciplinary reach of a School of Computing will help it serve as a connector between researchers with computational needs and researchers with computational expertise. This interdisciplinary reach can help attract high caliber researchers to MSU.

- *Engagement: Members of the Montana State University community will be leaders, scholars and engaged citizens of their local, national and global communities, working together with community partners to exchange and apply knowledge and resources to improve the human prospect*. The broader interdisciplinary reach of a School of Computing will provide more opportunities for engagement with a broader range of constituents.

- *Integration: By integrating learning, discovery and engagement, and by working across disciplines, the MSU community will improve the world*. A School of Computing will be a highly interdisciplinary organization, leading to more opportunities that integrate learning, discovery and engagement.

- *Access: Montana State University is committed to widening access to higher education and ensuring equality of opportunity for all*. The number of students seeking computer science degrees at MSU more than doubled from Fall Semester 2008 to Spring Semester 2015. According to the most recent 2014 Taulbee Survey, http://cra.org/wp-content/uploads/2015/06/2014-Taulbee-Survey.pdf, nationwide enrollments in computer science have risen for seven consecutive years and last year rose by 20%. A School of Computing will better serve the rapidly increasing number of students interested in computing. In addition, the interdisciplinary nature of a School of Computing will likely attract more underrepresented populations such as women, who last year earned 14.1% of CS degrees nationwide.

Georgia Tech School of Computer Science
College of Computing

August 18, 2015

To whom it may concern:

I strongly support the proposal by MSU Computer Science chair John Paxton and his team to establish a School of Computing at Montana State.

I chair the School of Computer Science at the Georgia Institute of Technology, part of the University System of Georgia. The School of Computer Science sits within a College of Computing, separate from Engineering. The college has three schools, Computer Science, Interactive Computing, and Computational Science and Engineering. We have 35 tenure-track faculty in the School of Computer Science and about 90 overall in the college for approximately 1800 undergraduate majors.

Computer science has grown to be much more than a single discipline. Not only does the field develop the skills to produce computers that are faster, smarter, reliable, secure and smartly connected, computer science also explores how people and society connect with computers as well as the main tools to deal with the enormous growth of data from cloud computing and scientific experimentation and simulations. Virtually every job requires computer skills and having a few computer courses can make an engineer or an English major far more valuable to potential employees. 25 years ago Georgia Tech recognized the value of computing as a discipline worthy of its own college and has become a world leader in the field as a result and drawing industry from start-ups to Fortune 500 companies coming to the Atlanta region.

I had the privilege to visit the Montana State CS department in May and already see recent growth in the city and a synergy between a growing tech industry in Bozeman and the university. I had extensive conversations with John Paxton and several CS faculty and came away impressed with their leadership and vision. The demand in computer science from both industry and students has greatly increased in the past few years and all indications are that they will continue to increase in years to come. Bozeman and the state of Montana cannot continue to increase their high tech presence without a corresponding increase in the talent pool produced from Montana State.

Transitioning the department of computer science at Montana State to a school of computing is the first step in recognizing the value of computer science and computing across the campus, in Bozeman and the whole of Montana.

Sincerely,

Lance Fortnow Professor
and Chair

266 Ferst Drive • Atlanta, GA 30332-0765 USA • Phone 404.894.6711 • Fax 404.385.6506 • www.scs.gatech.edu
A Unit of the University System of Georgia • An Equal Education and Employment Opportunity Institution

Montana High Tech Business Alliance
1121 E Broadway St, Suite 108
Missoula, MT 59802
406.552.9157
director@mthightech.org
www.MTHighTech.org

AUGUST 14, 2015

To Whom It May Concern:

The Montana High Tech Business Alliance (MHTBA) is delighted to support the proposal put forth by Montana State University's Computer Science Department to change its name to the School of Computing.

The MHTBA was formed in 2014 and includes more than 200 member companies. The economic growth of our members is hampered by a shortfall of graduates with computing knowledge. A February 2015 study by The University of Montana's Bureau of Business and Economic Research shows that MHTBA members have the capacity to add 400 net new jobs in 2015. Yet, the entire MUS system produced less than 100 computer science graduates in academic year 2014-2015.

An immediate benefit of the name change is that

- Computing is ubiquitous in today's world. The term School of Computing captures both the breadth and depth of computing. In contrast, the term Computer Science Department only captures the technical depth aspect. By changing the name to one that better conveys computing's accessibility, more students will be attracted to learn about computing. This in turn will lead to more students earning in-demand computing degrees, minors and certificates.

After the name change takes place, there are other important long-term benefits that can be realized:

- A School of Computing provides a venue for broader, more multidisciplinary endeavors such as a Data Science Center. In contrast, a Computer Science Department does not. These exciting new opportunities will attract more students to computing. In addition, these opportunities will help recruit quality faculty and broaden the number of potential collaborative researchers.

- A School of Computing provides a venue for broader, more interdisciplinary academic opportunities. For example, a B.A. in Computer Science could be offered by a School of Computing. As another example, a Facebook data mining course could be developed through the School of Computing and jointly taught by a sociologist and a computer scientist. These new academic opportunities will stimulate more students to undertake computing-related degrees, minors and certificates.

In conclusion, a School of Computing will create a virtuous cycle that results in economic growth for the state of Montana. More computing talent will attract more high tech companies to locate in Montana. More high tech companies will provide a broader set of opportunities for employees, attracting even greater numbers of students to computing fields.

Thank you for your consideration of this important proposal.

Sincerely,

Christina Henderson

EXECUTIVE DIRECTOR

March 3-4, 2016

ITEM 170-2016-R0316

Request Authorization for Gallatin College to Offer an Associate of Applied Science in Culinary Arts

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THAT

Gallatin College is proposing an Associate of Applied Science in Culinary Arts for approval.

EXPLANATION

Gallatin College is proposing a two-year Associate of Applied Science (AAS) degree in Culinary Arts that is well-aligned with Montana's food culture and strong tourism industry. This degree will lead to a variety of culinary and food service positions in our local food services industry.

ATTACHMENT

Academic Proposal Request Form
Curriculum Proposal

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-2016-R0316** Meeting Date: **March 3-4, 2016**

Institution: **Gallatin College** CIP Code: **12.0500**

Program Title: **Associate of Applied Science in Culinary Arts**

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 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- 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. 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:

Gallatin College is proposing a two-year Associate of Applied Science (AAS) degree in Culinary Arts that is well-aligned with Montana's food culture and strong tourism industry. This degree will lead to a variety of culinary and food service positions in our local food services industry.

Montana Board of Regents

CURRICULUM PROPOSALS

1. Overview

Gallatin College is proposing a two-year Associate of Applied Science (**AAS)** degree in Culinary Arts that is well-aligned with Montana's food culture and strong tourism industry. This degree will lead to a variety of culinary and food service positions in our local food services industry. This degree has several introductory level courses in common with MSU's College of Education, Health, and Human Development's proposed Hospitality Management Bachelor's. Students completing an Associate's Degree in Culinary Arts might choose to continue their education in order to complete the Bachelor's in Hospitality Management. Additionally, the Associate's Degree course work is designed to offer a future Certificate of Applied Science in Food Service.

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

The AAS in Culinary Arts includes traditional culinary arts coursework alongside unique offerings that include concepts such as; farm to table, local agriculture, sustainability and value added techniques, all with a local Montana emphasis. The AAS in Culinary Arts is a 60 credit offering, with 21 of those credits in general education. This AAS includes a summer session opportunity with Towne's Harvest field work and/or an internship. There are 20 courses offered in this AAS, 16 are currently offered in the MUS system, 3 will be unique new offerings and 8 will be shared courses with the Bachelor's Degree in Hospitality Management.

3. Need

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

The mission of Gallatin College is to meet the need of local industry. In July of 2014 the University of Montana's Institute for Tourism and Recreation Research released a report stating that Gallatin County led the state in tourism spending, which was a 19% increase. Park County ranked 6th in the state in tourism spending, which made the Yellowstone Country the number one tourism region in the state. Of this tourism spending restaurant and bar expenditures make up 20% of the total.

Above data represents non-resident tourism; it should be noted that the Bureau of Business and Economic Research reported in its 2014 Economic Outlook report that Gallatin County is projected to be the fastest growing urban area in the state. This growth along with an improving economy means a higher demand on our local restaurants and food service institutions (hospitals, schools, nursing homes, correctional facilities) from the local community. All these food service groups rely on professional chefs and staff to meet workforce demand.

In regards to actual occupational demand, the Montana Department of Labor and Industry projects average job gains per year from 2012 to 2022. In the accommodation and food services sector there will be 950 openings per year.

Occupational Title	2022 Emp. Projection	Annual Openings (growth/replacement)	Median Wage
Chefs and Head Cooks	403	12	$38,014

Montana Board of Regents
CURRICULUM PROPOSALS

First–Line Supervisors Food Prep/Servers	3,675	151	$29,353
Food Service Managers	443	9	$46,614
Cooks	5,702	194	$20,608
Bakers	940	29	$23,714
Cooks, Institutional and Cafeteria	2,195	59	$24,141
Food Prep and Serving Related	46	3	$23,514

In the 2011 Gallatin and Park Counties Workforce Needs Assessment, local businesses identified six high priority workforce programs in the Hospitality Industry. Four of the six workforce programs were specific to culinary arts and food service needs. A number of hospitality related focus groups have confirmed this need over the past three years.

In addition to the above data, Gallatin College collected data from the Bozeman Job Service from January 2014-June 2014. Job listings and job openings in Gallatin College were reviewed for cooks, food preparations workers, food service managers, slaughterers and meat packers, protein trimmers, chefs, head cooks, and first line food prep supervisors. During the time period from January 1, 2014-June 30 2014 there were 115 Job Orders and 116 Job Openings for the listed positions in Gallatin County. The nearest culinary arts programs are in the western part of the state, at Missoula College (3 hour drive) and Flathead Valley Community College (5 hour drive).

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

First and foremost there are no opportunities for students in culinary arts in this part of the state. Missoula and Flathead are the nearest offerings for culinary arts. Students will benefit from this program in that it delivers specifically what they need in order to become successful culinary professionals, a combination of management skills along with content knowledge in food and culinary skills. The program includes hands-on training, experiential learning, and internships. And, most importantly there are both existing jobs and entrepreneurial opportunities across Gallatin and Park Counties for graduates.

Restaurant industry stakeholders in Montana will benefit from having a pool of qualified candidates when hiring food and beverage managers, chefs, and bakers for positions that are currently difficult to fill. Additionally, they will have the opportunity to work with, train, and hire culinary students to fill positions that would normally be filled by individuals who are seeking employment, but have no professional commitment to culinary arts.

Flathead Valley Community College and Missoula College at the University of Montana offer Associate of Applied Science Degrees in Culinary Arts and Food Service Management respectively.

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

Montana Board of Regents
CURRICULUM PROPOSALS

To start with anecdotal examples, Gallatin College recruiters report every time they return from high schools tours that students continue to request culinary programing. In addition to high school students requesting this programing, high school administrators at Bozeman and Belgrade High both offer Pro-start programs in culinary arts. Pro-start is an introductory curriculum to the culinary arts industry. This connection becomes a direct pipeline from two local high schools of incoming students, it also allows for the possibility of future dual enrollment activities.

Demand for the program was assessed in three different ways: 1) using an analysis by Education Advisory Board, 2) conducting a focus group and interviews with industry stakeholders, and 3) informal communications and follow-up with SFBS alumni.

According to an assessment conducted by *Education Advisory Board* (in collaboration with Burning Glass and Labor/Insight™) the overall demand for positions with hotel, restaurant, and tourism management skills has risen steadily since 2010. Between 2010 and 2013, the number of job postings grew 14.3% overall, and 44% in the region. This trend is predicted to continue. Employers are predominantly seeking graduates with traditional business and finance skills (accounting, financial reporting, and sales), and skills specific to hospitality (restaurant management, food safety, and event planning).

Gallatin College collected data from the Bozeman Job Service from January 2014-June 2014 specifically on job listings for cooks, food preparations workers, food service managers, slaughterers and meat packers, and protein trimmers, chefs and head cooks, and first line food prep supervisors during this time period and there were 115 Job Orders and 116 Job Openings.

This listing suggests that an Associate's Degree in Culinary Arts should include business management content and skill development. Potential employers include hotels, hospitals, and foodservice contractors, in addition to restaurants. Top job titles for graduates with culinary arts degrees include cook, store manager, and restaurant shift supervisor.

In a focus group, hosted by the Bozeman Chamber of Commerce, and interviews, general managers of hotels and foodservice directors suggested that they have difficulty filling management positions, and that they would prefer to fill front line positions with students enrolled in hospitality or culinary programs who were interested in hospitality and culinary careers. According to local culinary industry stakeholders, the most important skills required of graduates are related to foundation culinary skills, customer service and human resource management. All the culinary focus group participants insisted in the importance of an internship in culinary and expressed interest in developing an internship program, stressing the value of a degree that includes experience working in the industry. Participants were very supportive of developing a culinary program at Gallatin College MSU and eager to be involved in an industry stakeholder advisory council. According to stakeholders, one of the most important perceived benefits of a culinary degree program is the potential to professionalize the culinary industry in Montana.

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 PROPOSALS

This two year Associate of Applied Science in Culinary Arts is being proposed alongside the four year Bachelor's in Hospitality Management. Several of the courses in the Hospitality Management degree

CULA 102	Intro to Culinary Arts	3	Knife skills, stock, eggs, cooking techniques, etc.	Offered in MUS System/Shared course
CULA 105	Food Safety Sanitation	3	ServSafe Certification for Managers and Food Allergies; HACCP, TIPS.	Offered in MUS System/Shared course
NUTR 221CS	Human Nutrition	3	Food product knowledge and how food affects health and well-being.	Also taken by HOSPITALTIY, SFBS, and F&N Majors etc.
SFBS 298	Towne's Harvest Practicum	3	Field-based Practicum course at Towne's Harvest; small plot hands-on gardening planning and maintenance and harvesting. Some marketing experience. (Herbs, greens and other vegetables).	Also taken by HOSPITALITY Majors, and could overlap with or be a special section of SFBS 296 (Towne's Harvest Practicum), which is taken by SFBS Majors.
NUTR 226	Food Fundamentals	3	Food Science, nutrition, food systems, food knowledge.	Also taken by HOSPITALITY, SFBS, F&N Majors
NUTR 251	Food and Culture	3	Cultural, regional, and international Aspects of Cuisine	Would be added to F&N Curriculum
SFBS 2xx	Farm to Table Sourcing	3	Sourcing locally, managing producer relationships, seasonal menu planning, feature recipe development.	Also taken by HOSPITALITY Majors
CULA 250	Hospitality Supervision/Customer Service	3	Customer Service. Settings, service, guest service, front and back relations.	Offered in MUS System, shared course.

program will share courses with the Culinary students. Please see table below for the 24 credits of shared courses.

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

Approval will not require any changes to existing programs on the two year side with the exception of the business math course. Faculty will work on specializing components of this course so there are culinary arts problems and concepts. Gallatin College is currently reviewing this course and adding content that is specific to other applied degree programs, including interior design, business management, and now culinary arts.

Montana Board of Regents
CURRICULUM PROPOSALS

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

No other culinary programs exist at Montana State University. Additionally, this is the first time a Gallatin College program is being proposed in conjunction with a Bachelor's program. Coordinating a Bachelor's degree program in Hospitality Management with a Culinary Arts program offered by the Gallatin College will improve opportunities for students who might have discontinued their education with a two-year degree by creating a clear pathway to a Baccalaureate. In addition to this streamlining, Gallatin College is already having conversations with Belgrade and Bozeman High Schools about dual enrollment opportunities for this new educational programing.

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

Gallatin College operates under the MSU Strategic plan and the Comprehensive Two-Year Mission Plan for Gallatin College. Below are the MSU strategic plan metrics that this program will contribute towards.

In the MSU Strategic Plan 2012 **Metric L.2.3:** states that "By 2019, the number of associate degrees conferred will increase from 38 to 70 per year. Workforce certificates conferred will increase from 35 to 65 per year." By offering additional workforce certificate opportunities and utilizing community partners that will support those certificates with student referrals, this program should increase the number of certificates conferred.

Metric L.3.1: "By 2019, the percent of graduates employed full time in their field or in positions of their choosing will increase from an average of 62 percent to 70 percent. By offering another option for students that are focused on targeted employment opportunities students should be able to better fulfill their employment goals.

Metric A.1.5: "By 2019, the number of students enrolled in Gallatin College degree and certificate programs will double to 400." By offering another certificate option to our community we should attract another variety of students, perhaps that we haven't been able to recruit before. If Gallatin College is going to double the amount of students attending more certificates must be added so students can maintain workforce diversity for the local economy.

Metric A.2.4: "By 2019, the number of nontraditional students enrolled in MSU undergraduate and Gallatin College programs will increase to 3,200 (a 20 percent increase)." Gallatin College hopes that by offering this Culinary Arts AAS more non-traditional students will have the opportunity to attend college. The college has experienced an increase in nontraditional students with the addition of applied degree programs.

Gallatin College also operates under a Two-Year Comprehensive Mission Expansion Plan, approved by Board of Regents March 2013. By adding the Culinary Arts AAS the following numbered initiatives will be addressed and responses to these can be found in above metric answers.

#1. Enrollment and program growth;

#3. Increase percentage of regional high school graduates that access Gallatin College through increasing dual enrollment;

Montana Board of Regents
CURRICULUM PROPOSALS

#5. Develop industry partnerships and meet local workforce demand;

#6. Expand short-term workforce training;

#7. Improve Industry certification rate;

#8. Prepare students to be career ready.

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.

Currently in the MUS system there are two other culinary arts programs, one at Flathead Valley Community College and one at Missoula College. There are no culinary program opportunities east of Missoula. As stated earlier Gallatin County has the highest expenditures in non-resident travel, and Park County is 6th, with 19% of those expenditures being spent in restaurants in our two county area. This doesn't take into consideration the needs in institutions like hospitals or schools. The proposed Culinary Arts AAS Degree has a unique emphasis on Sustainability, and will address local demand for professional cookery training. The proposed Gallatin College Program is being designed in collaboration with MSU College of Education, Health and Human Development Hospitality Management Degree to encourage 2-year degree students to continue their education and earn a Baccalaureate degree.

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 Culinary Arts program has a Farm to Table Cuisine focus and offers management of restaurant enterprises with an emphasis on farm to table sourcing and healthful cuisine. Graduates will find employment as foodservice and restaurant managers or as entrepreneurs launching their own restaurant or foodservice enterprise. The curriculum utilizes existing coursework in Sustainable Food and Bioenergy Systems (SFBS), Food and Nutrition, and adds courses specifically related to culinary arts and farm to table sourcing. An internship course in foodservice systems management, quantity food preparation, and kitchen garden management is incorporated.

Montana Board of Regents

CURRICULUM PROPOSALS

COURSE NUMBER*	COURSE TITLE	CREDITS	TOPICS/ EMPHASIS	CURRICULAR CONNECTIONS
1st YEAR				
CULA 102	Intro to Culinary Arts	3	Knife skills, stock, eggs, cooking techniques, etc.	Offered in MUS System/Shared course
CULA 105	Food Safety Sanitation	3	ServSafe and TIPS Certification for Managers and Food Allergies; HACCP certification.	Offered in MUS System/Shared course
M108 or ACTG 101	Business Math or Accounting	3	Accuracy in solving mathematical problems.	Offered at Gallatin College
CULA 104	Professional Chef I	3		Offered in MUS
COMX 115 WRIT 101	Interpersonal Communication or College Writing	3		Offered at Gallatin College
CULA 104	Professional Chef II	3		Offered in MUS
NUTR 221CS	Human Nutrition	3	Food product knowledge and how food affects health and well-being.	Also taken by HOSPITALTIY, SFBS, and F&N Majors etc.
CULA 161	Meats, Vegetables, Nuts and Legumes	3	Livestock and poultry processing; terminology and identification of cuts; carving, boning & trimming; roast rolling and tying; cutting methods. Nuts and legumes.	Offered in MUS

Montana Board of Regents

CURRICULUM PROPOSALS

CULA 157	Pantry Garde-manger	3	Cold foods	Offered at Gallatin College
	TOTAL CREDITS	**27**	**(9 Gen. Ed)**	
SUMMER				
SFBS 298	Townes Harvest (	3	Field-based Practicum course at Towne's Harvest;	Shared, Also taken by HOSPITALITY Majors,
CULA 298	INTERNSHIP	3-6	Hands-on experience working in a restaurant kitchen or foodservice.	Offered in MUS
	TOTAL CREDITS	**6**	**(3 Gen. Ed.)**	
2nd YEAR				
NUTR 226	Food Fundamentals	3	Food Science, Nutrition, Food Systems, Food knowledge.	Shared, Also taken by HOSPITALITY, SFBS, F&N Majors
CULA 2XX	Montana Meats & Charcuterie	3	Emphasis on local and range fed meats, curing methods. (pr:shahr/kew/tree)	
CULA 165	Baking and Pastry	3	Whole grains, artisan breads. Desserts and confections.	Offered in MUS System
NUTR 251	Food and Culture	3	Cultural, regional, and international aspects of cuisine	Would be added to F&N Curriculum
CULA 2XX	Dairy Foods & Culturing	3	Fermentation and Preserving	
CULA 270	Purchasing and Cost Controls	3	Purchase and cost control, menu	Offered in MUS System
CULA 248	Bar and Beverage Management	3	Wine and brewing beer; whiskey;	Offered in MUS System
SFBS 2xx	Farm to Table Sourcing	3	Sourcing locally, managing producer relationships,	Also taken by HOSPITALITY Majors

Montana Board of Regents
CURRICULUM PROPOSALS

CULA 250	Hospitality Supervision/Customer Service	3	Customer service, settings, service, guest service, front and back relations.	Offered in MUS System, shared course.
	TOTAL 2nd YEAR CREDITS	**27**	(9 Gen. Ed.)	
	TOTAL PORGRAM CREDITS	**60**	**(21 Gen. Ed.)**	

Below are learning outcomes found on the MUS website for the proposed program courses, if approved faculty will develop learning outcomes for each new course that is to be offered.

CULA 105 Food Service Sanitation

- Demonstrate application of food service sanitation HACCP (Hazard Analysis Critical Control Points);
- Prevent and respond to food borne illness;
- Identify bacterial growth and factors to inhibit that growth in a food production environment, (food spoilage);
- Demonstrate pest control.

CULA 103 Professional Chef I

- Have a working understanding of food service sanitation, including the HACCP system and be able to apply those practices to food preparation and service;
- Identify and operate commercial food production equipment, adhere to standard operating procedures, and demonstrate ability to utilize tools and work space in kitchen with safety and organization;
- Understand and utilize culinary terminology and basic cooking and baking methods for food production;
- Exhibit kitchen organizational skills (*mise en place*) and pre-preparation time management;
- Prepare stocks; soups; sauces; vegetable cookery; starch cookery (including legumes, potatoes, grains, and pasta); quick breads; yeast breads; rolling dough; beginning dessert sauces, syrups and creams; cookies.

M 108 Business Mathematics

- Demonstrate that he/she has developed an analytical mind;
- Demonstrate that he/she has the ability to apply basic concepts to a variety of business situations;
- Achieve accuracy in solving mathematical problems as they relate to business;
- Achieve a satisfactory level of competence in bank reconciliations, payroll, discounts, interest, Insurance, taxes, depreciation, inventory, and the time value of money.

NUTR 221 Basic Human Nutrition

- Describe the role of major and macro key nutrients in promoting optimal health in humans;
- Recognize foods categorized as rich sources of essential nutrients and phytonutrients;
- Describe how food scarcity, availability and price affect the nutritional value of the diet;

- List and discuss the psychological, cultural, and social factors that may influence the behavior selection of food;
- Interpret and use the information in various nutrition "tools" such as D.R.I.s, Food Guide, food composition tables, computer dietary analysis etc... recognize the limitations of these tools;
- Determine through personal dietary evaluation whether nutrient needs are being met;
- Assess the potential problems resulting from dietary (nutrient) imbalance, surpluses, and/or deficiencies;
- Recognize the treatment of food such as food additives, irradiation, food safety may influence its nutritional content;
- Develop an awareness of how nutritional needs are influenced by normal physiologic states of the life span;
- Analyze nutrition information and advertising and prepare a written analysis of soundness and validity based on scientific research using a variety of appropriate scientific resources;
- Develop an awareness of the current trends and contemporary nutritional problems such as eating disorders, sports nutrition, obesity, hunger, etc..., as they influence human nutrition, and acquire a foundation for further study;
- Identify the regulations regarding dietary supplements and understand the need for evidence based research regarding their usage

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

The first step in the process is sending the proposal through the MSU approval process and then to the Board of Regents. Gallatin College staff will work with MSU staff and MSU facilities on developing and implementing a plan to move into an existing food service space on campus that is being vacated. The creation of the culinary teaching lab within this existing space is required to move forward with the program implementation. The year one enrollment goals for this AAS will be 20 students, establishing a program total of 40 by year two and graduating 15 per year.

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.

In order to start the Culinary Arts program, one new tenure track faculty will be hired as the Culinary Program Director. The program director will be an Executive Chef that has industry experience, and some teaching experience. The full-time Culinary Program Director would be enlisted to teach a half-time teaching load and administer the program. Administration includes supervising the hands-on development of specific skills utilizing on-campus classroom laboratories with adjuncts. Adjunct instructors will be used to complete the teaching responsibilities of the 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.

Montana Board of Regents
CURRICULUM PROPOSALS

The program operations will be funded through a combination of student tuition and the Gallatin County Mill Levy funding the college receives on an annual bases. To operate a successful Culinary Arts AAS program, a culinary teaching lab, a restaurant dining lab and an adjoining classroom are required. A restaurant laboratory classroom would be open to campus and public, and managed by students completing coursework. This of course is going to be common space with the MSU Hospitality Management program creating shared facility for efficiencies.

7. Assessment

How will the success of the program be measured?

Several aspects of the program will be monitored and assessed to ensure that program and learning goals are being met. Learning outcomes will be established for each course and the overall program. Key means (assignments and activities) and measures will be selected for monitoring student achievement. Student Satisfaction with the program will be assessed by seeking informal feedback during advising sessions and by an exit survey completed with each student just prior to graduation. Student retention, program completion, years to program completion, internship placement and job placement will be key indicators of program success and will be monitored, in addition to gathering feedback from internship hosts and employers.

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 AAS proposal was developed in conjunction with Dr. Alison Harmon (Health and Human Development Faculty). Dr. Harmon is also proposing a Bachelor's degree program in Hospitality Management, which share some of the culinary arts courses. Additionally, Dr. Harmon was a leader in the development of the interdisciplinary Sustainable Food & Bioenergy Systems (SFBS) Degree Program for MSU. In its fifth year, this program enrolls approximately 90 students and has 40 alumni. Original enrollment goals have been exceeded by 100%. In preparation for the development of this AAS culinary Arts proposal Gallatin College met with industry stake-holders, please see letters of support that accompany this proposal. Additionally, a needs assessment was conducted by *Education Advisory Board* to determine employer demand for graduates with Hotel, Restaurant, and Tourism Management Bachelor's Degrees and Culinary Arts Associate's Degrees. A focus group was conducted in collaboration with the Bozeman Area Chamber of Commerce involving hospitality managers in the Gallatin Valley. Individual interviews were conducted with foodservice directors, restaurant managers, and Executive Chefs. Dr. Harmon also held meetings with faculty; program leaders and curriculum committees in the College of EHHD, College of Business, and College of Agriculture have shaped each of the degree options, and are on-going. Gallatin College Dean has visited with Flathead Valley Community College and Missoula College leadership about this new AAS offering.

March 3-4, 2016

ITEM 170-2017-R0316

Request Authorization to Offer a Hospitality Management BS Degree Program

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THAT

Montana State University College of Education, Health, and Human Development is proposing a Bachelor of Science Degree in Hospitality Management.

EXPLANATION

The College of EHHD, Department of Health and Human Development is proposing a four-year Bachelor's of Science degree in Hospitality Management with three Options in: 1) Restaurant Management: Farm to Table, 2) Lodging and Facility Management, and 3) Food Enterprise. This degree program seeks to address demand from students, stakeholders, and the hospitality industry, and will prepare graduates for entrepreneurial, management and leadership positions.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal
Attachment #1 – Support Letters

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-2017-R0316** Meeting Date: **March 3-4, 2016**

Institution: **Montana State University** CIP Code: **12.0500**

Program Title: **BS in Hospitality Management**

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 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- 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. 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:

Establish a new undergraduate interdisciplinary degree program in Hospitality Management with three Options in 1) Restaurant Management: Farm to Table, 2) Lodging and Facility Management, and 3) Food Enterprise.

Montana Board of Regents

CURRICULUM PROPOSALS

1. Overview

This proposal is for a new interdisciplinary Bachelor's Degree Program in Hospitality Management that capitalizes on MSU's strengths in Food, Agriculture, and Business, is well-aligned with Montana's economy, and addresses current demand from hospitality and food industry stakeholders, future employers, and students. The hospitality industry represents a broad category of fields within the service industry including: foodservice, lodging, event planning, entertainment, tourism, and recreation.

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

The Hospitality Degree program is an interdisciplinary 4-year bachelor's degree program. The program can also accommodate the completion of study in 3 years if students wished to attend classes in the summer. It incorporates existing coursework from Food & Nutrition, Business, and Agriculture. New courses will be designed to bridge business management skills with content in hospitality management such that graduates are prepared to become valued employees and successful entrepreneurs in the hospitality industry. Three degree options are proposed: Restaurant Management: Farm to Table; Lodging and Facility Management and Food Enterprise. Each of these options is distinct in the state and region and has the potential to stimulate the industry and professionalize the future workforce for Montana's hospitality industry. In the context of the Montana University System, the intended niche of the Hospitality Management Degree program is restaurant and lodging management with an emphasis on farm to table connections and agritourism.

3. Need

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

Currently, there are no BS degree programs in Hospitality offered at 4-year degree institutions in Montana, yet tourism is one of Montana's leading industries, and according to interviews with stakeholders, hospitality management jobs are difficult for employers to fill. According to the Montana Office of Tourism, eleven million visitors came to Montana in 2014, contributing $3.9B to the state's economy. Tourism and recreation businesses directly and indirectly support 55,270 Montana jobs. According to a recent report by the University of Montana's Institute for Tourism and Recreation Research, Gallatin County leads the state in tourist spending ($662M in 2014), with tourism contributing to 6,500 local jobs (*Bozeman Daily Chronicle, 8.19.14*). There is a need for professionally trained managers in the hospitality industry across the state. As the land grant institution of Montana, MSU is uniquely positioned to provide education and training for managers in the hospitality industry.

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

Hospitality industry stakeholders in Montana will benefit from having a pool of qualified candidates when hiring food and beverage or hotel managers, positions that are currently difficult to fill.

Additionally, they will have the opportunity to work with, train, and hire hospitality students to fill positions that would normally be filled by individuals who are seeking employment, but have no interest in hospitality management as a profession.

Food and agriculture industry stakeholders in Montana also stand to benefit from the proposed degree program in that many constituents have been seeking academic expertise in the area of value-added agriculture or small-scale food processing, especially utilizing specialty crops. According to the MT Department of Agriculture, Agriculture is Montana's largest industry, generating $4.2B for agricultural products and services in 2012. However, most of our agricultural products are exported raw, a missed economic opportunity for the state's economy and for agricultural producers. Relative to 1950, a much smaller percentage of what we consume in the state is produced here. As a state, Montana has the potential to become much more food self-reliant with the right training for food and agricultural professionals, and value-added food industries have the potential to contribute to local economic development and job creation. Currently, the number of jobs in food product manufacturing is growing, making it the third largest manufacturing sector (*Grow Montana; growmontana.ncat.org*). College graduates need the appropriate skills in order to fill these new positions, Montana's industry needs technical assistance from the Land Grant University. Additionally, institutional foodservices would benefit from enterprises geared to create food products for quantity service.

Opportunities for entrepreneurship abound for students with the appropriate education and training for success. Students will benefit from this program designed specifically to develop hospitality managers. The curriculum provides a combination of business skills along with content knowledge in food and agriculture as well as hotel or lodging management. The program includes hands-on training, experiential learning, and internships. Most importantly there are both existing jobs and entrepreneurial opportunities for graduates.

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

Demand for the program was assessed in three different ways: 1) using an independently conducted analysis by Education Advisory Board (https://www.eab.com/), a consulting firm that provides data to institutions to assist with decision making in higher education, and one that routinely conducts needs assessments for new academic programs, 2) conducting focus groups and interviews with local industry stakeholders, with assistance from the Bozeman Area Chamber of Commerce, 3) a review of current enrollment in related programs offered at MSU Bozeman, MSU Billings and UM along with informal communications and follow-up with Sustainable Food and Bioenergy Systems degree program (SFBS) alumni, and 4) strong support from the regional hospitality community including the Montana Restaurant Association, the Montana Tavern Association, and regional hotel and restaurant owners, all of whom have pledged paid internships and job opportunities for graduates of the program.

According to an assessment conducted by *Education Advisory Board* (in collaboration with Burning Glass and Labor/Insight™) the overall demand for positions with hotel, restaurant, and tourism management skills has risen steadily since 2010. Between 2010 and 2013, the number of job postings grew 14.3% overall, and 44% in the region.

Montana Board of Regents
CURRICULUM PROPOSALS

This trend is predicted to continue. Employers are predominantly seeking graduates with traditional business and finance skills (accounting, financial reporting, and sales), and skills specific to hospitality (restaurant management, food safety, and event planning). Between May 2013 and April 2014, 97 positions were posted in Billings MT alone, but more than 4,000 jobs were posted in the region (including Seattle, Portland, Salt Lake, Boise, and Spokane).

The most predominant employers were foodservice establishments and food distribution companies, travel agencies, fitness centers and gyms, and hotel chains. The most predominant job titles for graduates were restaurant manager, retail manager, store manager, general manager, and assistant manager. The most common relevant occupations for positions included foodservice supervision and management, sales management, marketing management, accountants, lodging management, event planning, and human resource management. For these positions, no competitor BS degree programs currently exist in the state of Montana, although there are programs in Washington, Utah, Idaho, and North Dakota, and South Dakota.

In focus groups and interviews, general managers of hotels, foodservice directors, and restaurant managers suggested that they have difficulty filling management positions, and that they would prefer to fill front line positions with students enrolled in hospitality programs who were interested in hospitality careers. According to local hospitality industry stakeholders, the most important skills required of graduates are related to customer service and human resource management. Many focus group participants and interviewees expressed interest in developing an internship program to accompany an MSU degree program, stressing the value of a degree that includes experience working in the industry. Participants were very supportive of developing a degree program at MSU and eager to be involved in an industry stakeholder advisory council. According to stakeholders, one of the most important perceived benefits of a hospitality degree program at MSU is the potential to professionalize the future workforce for the hospitality industry in Montana. That is, workers and managers in the hospitality industry would have more professional skills and hospitality expertise, particularly in customer service and human resource management. With the increase in the boutique and luxury hotel industry in Bozeman, there is a need for increasing the skills and professionalism that sophisticated tourists expect, and for which there is no ready supply. We see an opportunity to develop tomorrow's leaders in these areas.

Student demand is evident through advising of current and past students in the SFBS, 10% of whom would have enrolled in the Restaurant Management: Farm to Table option had it been offered, and another 5% in the Food Enterprise option (There are currently 90 SFBS students, and the degree program is 6 years old). SFBS graduates have suggested that additional business content and skill development in the curriculum would have helped them be more immediately successful. Judging from the success of SFBS in attracting both resident and non-resident students, it is reasonable to assume that an interdisciplinary Hospitality Management Degree program that emphasizes sustainability would also be attractive and ultimately successful. The number of food and nutrition majors has also grown 13.5% in the last five years to 126 students.

The hospitality degree program would be an alternative for students interested in food who do not wish to pursue a career in dietetics or nutrition science.

Providing current students with a more appropriate academic path will have a positive impact on student retention and graduation rates. However, we believe the Hospitality degree program will be

even more successful at attracting new students, and out-of-state students. MSU already has an excellent reputation for training students in Food & Nutrition, Dietetics, and Sustainable Food Systems (see links below). We can capitalize on this momentum to market a related degree program in Hospitality Management. Montana will be an attractive place to study restaurant management: farm to table, lodging management and food enterprise.

Publicity for MSU's food-related programs:

http://www.alliedhealthworld.com/blog/10-dietetics-and-nutrition-programs-to-check-out.html

http://www.montana.edu/news/11716/msu-program-named-one-of-the-10-best-college-environmental-programs-in-the-u-s

http://www.montana.edu/news/12660/msu-s-towne-s-harvest-garden-receives-national-recognition

4. Institutional and System Fit

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

There are several existing programs that will be interdependent with a new degree program in Hospitality Management, most notably the Sustainable Food & Bioenergy Systems degree program, the Montana Dietetic Internship, and Towne's Harvest Garden.

Sustainable Food & Bioenergy Systems (SFBS) is a 4-year Bachelor's degree program that integrates coursework in agroecology, crop production, animal science, and food and nutrition. This interdisciplinary curriculum is a collaboration among four MSU departments (HHD, PSPP, LRES, and ANRS) in two different colleges (EHHD and Agriculture). Students began enrolling in SFBS in Spring 2009. Currently the program has approximately 90 majors and 60 alums. SFBS has attracted many new students to the study of food and agriculture while emphasizing interdisciplinary and systems thinking. Graduates are prepared to begin addressing society's multi-factorial food and energy issues and seek careers in small scale food production and marketing, community development, food and energy policy, non-profit organization management, foodservice and other kinds of food enterprise. Relevant SFBS courses will be incorporated into the **Hospitality Management Degree**. Students who are seeking careers in culinary arts, restaurant or foodservice management, catering, or food related business would be better served by a degree in Hospitality Management that integrates more business and management coursework and provides additional hands-on experience with developing and managing a foodservice or other food enterprise.

The **Montana Dietetic Internship (MDI)** provides students who have earned undergraduate degrees in dietetics with the required supervised practice experience for becoming registered dietitians. MDI, which began enrolling interns in 2011, is currently a 10-month long non-degree graduate program, and preference for admission is given to MSU graduates in food and nutrition (dietetics option). However, MDI's unique concentration in *Sustainable Food Systems* makes it one of only two in the nation with

that designation and as a result, serves to attract between five and ten out-of-state applicants for each available slot. Of the 64 interns who have completed the program to date, 85% have passed their dietetic registration exam within one year, and 80% are employed in the field of dietetics (about half of those in the state of Montana and 70% in the region). Enrollment in this program has grown by 43% since it began. The field of dietetics encompasses medical nutrition therapy, community nutrition education, and foodservice management. MDI interns complete rotations in each of these areas with preceptors in contracted facilities across the state of Montana including hospitals, schools, clinics, public health departments, state agencies, and at MSU.

A **Hospitality Management Degree** would serve to enhance MDI and other graduate level programming in dietetics, in that more of the required hands-on foodservice management training could be provided at MSU.

Towne's Harvest Garden (THG) is MSU's 3-acre organic campus farm, located at the BART farm, 1 mile west of campus. It serves as an experiential outdoor classroom, living research laboratory for studying local food systems, and a space for community engagement and service learning. THG was initiated by students and faculty in 2006, and is currently in its ninth year of production and food distribution. THG primarily distributes food through a community supported agriculture program (CSA) where members pay for a share of produce in advance of the season, and then visit the farm each week to pick-up their share of the harvest. Additionally, THG operates a weekly campus farm stand in the summer and early fall, operates a Community Food Truck (CFT) which transports discounted produce to rural communities surrounding Bozeman, and offers discounted weekly shares of produce to students who visit the farm on Friday afternoons in the late summer and early fall. Finally, THG provides food for the MSU Foodservices' Montana Made program when requested.

THG is thoroughly integrated into the SFBS curriculum. SFBS students spend a summer or fall semester at THG experientially learning about small scale food production and distribution from planting seeds to transplanting, weeding, irrigating, pest management, composting, harvesting, field washing and bundling, and marketing. This course is called the *Towne's Harvest Practicum*. Another SFBS course that utilizes THG as a classroom is *Culinary Marketing Farm to Table*. Culinary Marketing students also experience garden maintenance, and then harvest produce specifically for food preparation in the Herrick Hall Foods Lab. Collectively they complete a quantity food project that is known as the annual Towne's Harvest President's Lunch, which is served on the farm using rented tables and chairs, and tableware transported from the Foods Lab. Montana Dietetic Interns also experience THG in the first two weeks of their internship when they complete a rotation in sustainable food systems. They experience harvesting, field washing, and marketing, and experiment with recipe development and food preservation in the Herrick Hall Foods Lab. THG is a vital component of each of these academic programs and courses. **Hospitality Management** students would also complete part of their training at THG, in the Towne's Harvest practicum, focusing on high value crops for farm to table culinary enterprises.

A Hospitality Management Degree Program would also incorporate coursework currently offered in the College of Business, coursework in the Food & Nutrition, Health & Human Performance, Health Enhancement, and Family and Consumer Science curricula in the Health and Human Development Department; coursework offered by the Division of Agricultural Education, and coursework offered by the School of Architecture.

Montana Board of Regents
CURRICULUM PROPOSALS

Culinary Arts at Gallatin College

A Culinary Arts 2-year degree (being proposed concurrently) would have several introductory level courses in common with the Hospitality Management Degree option in Restaurant Management: Farm to Table. AAS Degree students would enroll in MSU courses to satisfy these requirements. Additionally, Gallatin College Culinary Arts coursework provides additional electives for students in the Restaurant Management Farm to Table and Food Enterprise options. Students completing an Associate's Degree in Culinary Arts have completed 42 credits toward a BS degree in the Restaurant Management option, and might choose to continue their education for another two- three years to complete the BS in Hospitality Management.

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

Approval of the proposed program will not require any major changes to any existing programs. Resources are available from the Provost's office if additional sections of courses need to be offered due to high demand. The proposed program will attract new students to MSU and provide new education and training opportunities for dietetic interns, and students in Food and Nutrition, SFBS, and Agricultural Education. There are several existing courses in which small changes will be made to avoid duplication, or where some clarification of content may be useful in light of the new courses proposed. These are listed below.

NUTR 226: Food Fundamentals and *NUTR 227: Food Fundamentals Lab* comprise an existing two-course series that is part of several existing degree programs including Food & Nutrition, Family and Consumer Science, and the SFBS Sustainable Food Systems option. NUTR 226 is a 3 credit lecture course open to non-majors, but NUTR 227 is restricted due to limited lab section capacity. The series focuses on the fundamentals of food science with emphasis on each of the food groups from agricultural production through food processing and finally preparation for consumption. Culinary considerations are part of the content. The lab portion consists of a series of food experiments that allow students to gain hands-on food preparation experience in a home-style kitchen (rather than a commercial kitchen), and also the opportunity to explore food science concepts in a laboratory setting. The proposed *CULA 101: Intro to Culinary Arts*, would be more focused on the introduction and development of practical skills and professional cooking in a commercial kitchen setting, appropriate for future chefs, restaurant managers, and food processing entrepreneurs. To emphasize the distinction, NUTR 226 might be renamed "Food Science Fundamentals" and NUTR 227 likewise "Food Science Fundamentals Lab".

NUTR 322: Foodservice Systems Management is a 3 credit lecture course covering content related to foodservice systems and management theory and currently includes the National Restaurant Association's ServSafe Training and Certification. This is also a course for Food & Nutrition majors and SFBS Majors in the Sustainable Food Systems option. One of the major projects in this class is the conceptual design of a restaurant operation or foodservice. This is an appropriate course for Hospitality Majors, though the ServSafe training and certification would be offered in an earlier new course called HOSP 1XX: *Food Safety & Sanitation*. This component would be retained in NUTR 322 as

optional for those students not taking HOSP 1XX: *Food Safety & Sanitation* as part of their curriculum (currently the content is delivered on-line). For clarity, it would be logical to update the rubric of this course and *NUTR 395: Practicum: Quantity Foods Production & Management* to HOSP rather than NUTR.

NUTR 351: Nutrition and Society is a 3 credit lecture course focused on the principles of community nutrition, food policy, nutrition education, and public health. *Nutrition and Society* is a required course for Food & Nutrition Majors and SFBS Majors in all options and will be part of the two Hospitality Management options dealing with food. Currently *NUTR 351* contains a small amount of content (1 lecture and 1 project) related to food and culture.

A separate proposed *NUTR 251 Food & Culture* has long been needed/desired for the Food & Nutrition curriculum, and would be needed by the food options of the Hospitality Management Degree and the 2-year Associate's Degree in Culinary Arts offered by Gallatin College as well. Therefore the food and culture component of NUTR 351 would be eliminated, reducing crowding of content in that course, so that the food and culture content can be covered much more comprehensively and appropriately in a new course.

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

While there will be some interdependence among Hospitality Management and existing programs, the proposed degree is distinct because it is designed to provide business and management training in the specific areas of foodservice and lodging. The program combines existing courses in a unique way and adds new courses where necessary to complete the degree and various options. This is an interdisciplinary degree program that will be one-of-a-kind in the state of Montana and beyond.

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

The proposed program is well-aligned with MSU's strategic plan by contributing to learning, discovery, and engagement, improving access to education, demonstrating financial and environmental stewardship of university resources, and providing ample opportunities for the integration of scholarship activities.

Hospitality Management graduates will be prepared for existing career opportunities. The needs assessment demonstrated that job opportunities in this field are growing.

The curriculum includes the hands-on experience that is attractive to employers, and the human infrastructure of the program is planned such that students will receive job placement support. Collaborating with Montana employers to provide internship experiences will in turn create an employment network for graduates.

This interdisciplinary program will bring together diverse group of faculty who can collaborate on research, grant-funded projects, and other forms of scholarship.

Built into the Hospitality Management curriculum are multiple opportunities for community engagement, service learning, and outreach in Montana's rural communities and beyond.

Like SFBS, THG, and MDI, Hospitality Management will provide a means for facile integration of learning, discovery, and engagement. Development of the cross-disciplinary curriculum itself is learning opportunity that is worthy of research, publication, and dissemination. The planned community engagement that is central to the curriculum is an essential part of the learning experience and will encourage inquiry that leads to new discoveries in farm to table cuisine, agritourism and food enterprise.

Sustainability is at the core of the proposed degree program in Hospitality Management. The curriculum incorporates teaching on sustainability— from resource conservation, to social justice and strengthening local economies through entrepreneurship in agriculture. In addition, the proposed program provides the university with entrepreneurial opportunities, thus contributing to stewardship of financial resources on campus.

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.

Currently, a Bachelor's Degree in Hospitality Management is not offered in the Montana University System. Flathead Valley Community College and Missoula College at the University of Montana offer Associate of Applied Science Degrees in Culinary Arts and Food Service Management respectively, and Missoula College has recently proposed a 2-year degree in Hospitality and expressed desire to also develop a BA in Hospitality Management. The Culinary Arts AAS Degree from Gallatin College has a unique emphasis on Sustainability, and will address local demand for professional cookery training. The proposed Gallatin College Program is being designed in collaboration with the Hospitality Degree to encourage 2-year degree students to continue their education to earn a BS Degree.

The University of Montana offers a BS in Parks, Tourism and Recreation Management and a minor in Recreation Management (in the College of Forestry and Conservation). This degree program emphasizes Natural Resources, Ecology, Wilderness Protection and Outdoor Recreation; and course requirements include two business courses (*Financial Accounting* and *Managerial Accounting*), as well as courses titled *Nature Based Tourism*, *Tourism & Sustainability*, and *Outdoor Recreation Management*. According to faculty at U of M, this program has been in existence for more than two decades (though its name has evolved). Enrollment has been steady at 100-120 students. MSU Billings offers a Bachelor's Degree in Outdoor Adventure Leadership (in the Department of Health and Human Performance) which emphasizes exercise science, outdoor activities and skills, and leadership development; and course requirements include *Adventure Leadership*, *Outdoor Recreation in the United States*, and *Organization and Administration in Health Enhancement*. Enrollment in the MSU Billings program has been fairly steady since 2011 with an average of 40 majors.

The proposed Hospitality Management Degree Program is more interdisciplinary than either of the degree programs described above, including approximately 18 credits of business management coursework in all options as well as core courses in hospitality management. The intended niche of the Hospitality Management Degree program is restaurant and lodging management with an emphasis on farm to table and agritourism. Hospitality Management students would have the opportunity to complete part of their studies at MSU Billings (or U of M) if outdoor adventure leadership were of interest. Alison Harmon has been in communication with faculty at both U of M and MSU Billings to discuss the distinct niche of each program.

The University of Montana also has an Institute of Tourism and Recreation that has served the state for more than 25 years and offers a certificate in entertainment management. Montana State University does not intend to develop expertise in the areas of rural tourism, parks and recreation or entertainment management.

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 Hospitality Management degree program has three options in Restaurant Management: Farm to Table, Lodging and Facility Management and Food Enterprise. This degree program is offered as a 4-year experience. Students wishing to complete the degree in there years will also have that option. This would entail attending three summer sessions. This may be a good option for some, as Summer sessions are the ideal time to study and practice concepts related to farm to table and value-added foods. All options have practicum courses for skill development, and field-based courses that integrate problem-based learning and service learning through community engagement. Additionally all options include internships (at least 3 credits) to ensure that graduates have sufficient practical work experience to be competitive for job placement.

The **Restaurant Management: Farm to Table** option is focused on management of restaurant enterprises with an emphasis on farm to table sourcing and healthful cuisine. Graduates will find employment as foodservice and restaurant managers or as entrepreneurs launching their own restaurant or foodservice enterprises. This option is also tied to the provision of foodservices in healthcare facilities (hospitals, assisted living, and retirement homes) and other institutions such as schools, workplaces, or prisons. The curriculum utilizes existing coursework in SFBS, Food and Nutrition, and Business, and adds courses specifically related to culinary arts and farm to table sourcing. Practicum courses are in foodservice systems management, quantity food preparation, and kitchen garden management, and the option includes a senior level restaurant management internship. This is the option that would most likely attract Gallatin College students who earn their Associate's Degree in Culinary Arts to continue their education and earn their Bachelor's Degree.

Montana Board of Regents
CURRICULUM PROPOSALS

The **Lodging and Facility Management** option is focused on the management of hotel and lodging facilities with an emphasis on agriculture or Montana's cultural heritage. Graduates will find employment as managers of rural inns, B&Bs, and dude ranches/guest ranches; or as managers in independently operated hotels or national hotel chains. They may also choose an entrepreneurial path, launching their own lodging, agritourism, or cultural heritage enterprise. The curriculum utilizes existing coursework in Business, overlapping some with the Restaurant Management: Farm to Table option, and adds coursework specific to lodging operations, agritourism, and event planning. It includes junior level and senior level internships in lodging operations and lodging management.

The **Food Enterprise** option is focused on food science and small scale processing, with an emphasis on adding value to Montana's specialty crops and marketing (or direct marketing) for local and regional distribution. This option connects farm production with the food product needs of the hospitality industry, particularly with large scale foodservices serving institutions. Existing value-added food enterprises are often associated with agritourism, and typically integrate a farm to table philosophy, thus, this option ties together the themes of the degree program. Graduates will find employment with existing food processing and distribution companies, or as entrepreneurs launching food enterprises. The curriculum utilizes existing coursework in SFBS, Food & Nutrition, and Business. New courses overlap with the Restaurant Management: Farm to Table option, and additionally include courses in food processing, and experimental foods. The option includes practicum coursework in food product development and a senior level internship with a food enterprise firm.

Course requirements common to all options:
HOSP 1XX: Introduction to Hospitality Management
CULA 250: Hospitality Supervision/Customer Service
ECHM 205CS: Energy & Sustainability
STAT 216Q: Intro to Statistics
ACTG 201: Financial Accounting
ECNS 202: Prin Macroeconomics OR ECNS 204: Prin Microeconomics
BMGT 205: Professional Business Communication
BMGT 335: Management and Organization
BMKT 325: Principles of Marketing
BMKT 343: Integrated Marketing Communications
FCS 371: Research Methods in HHD
BGEN 361: Principles of Business Law
SFBS 429: Small Business & Entrepreneurship in Food & Health
SFBS 451R: Sustainable Food Systems
HOSP 498: Hospitality Management Internship
HOSP 499: Hospitality Management Capstone
WRIT 101W: College Writing
M121Q: College Algebra
NUTR 221CS: Human Nutrition
ECNS 101IS: Economic Way of Thinking

Montana Board of Regents
CURRICULUM PROPOSALS

Additional recommended CORE coursework for all options:
AGED 140US: Leadership Development for Agriculture -OR- BGEN 194US Seminar (Business)
ARCH 121IA: Intro to Design
CHMY 121: Intro Gen Chemistry (IN) -AND/OR- BIOM 103IN: Unseen Universe: Microbes
HUMANITIES (H); DIVERSITY (D)

OPTION SPECIFIC COURSEWORK:
RESTAURANT MANAGEMENT: FARM TO TABLE OPTION (RMFT)
4 YEAR PLAN

RUBRIC/NUMBER	COURSE TITLE	CREDITS
	1st YEAR (Fall/Spring)	
HOSP 1XX	Intro to Hospitality Management	3
CULA 102	Intro Culinary Arts	3
CULA 105	Food Safety & Sanitation	3
WRIT 101W	College Writing 1	3
BIOM 103IN	Unseen Universe: Microbes	3
M 121Q	College Algebra	3
IH or RH	Humanities CORE	3
US	University Seminar CORE	3
IA or RA	Arts CORE	3
NUTR 221CS	Human Nutrition	3
CREDITS		**30**
	2nd YEAR (Fall/ Spring)	
ECNS 101IS	Economic Way of Thinking	3
ACTG 201	Financial Accounting OR BGEN 210 Acct & Finance Basics	3
BMGT 205	Prof Business Communication	3
SFBS 2XX	Farm to Table Sourcing	3
NUTR 226	Food Fundamentals	3
NUTR 251; (D CORE)	Food & Culture	3
ECNS 202	Prin Macroecon OR ECNS 204 Prin Microecon	3
CULA 250	Hospitality Supervision/ Customer Service	3
SFBS 298	Towne's Harvest Internship OR THG Pracitucm	3
	CULINARY ELECTIVES and other Electives	3
CREDITS		**30**
	3rd YEAR (Fall/Spring)	
STAT 216Q	Intro to Statistics	3
ECHM 205CS	Energy & Sustainability	3
BMGT 335	Management and Organization	3
FCS 371	Research Methods in HHD	3
BGEN 361	Principles of Business Law	3
BMKT 325	Principles of Marketing	3
NUTR 351	Nutrition & Society	3
CULA XXX	CULINARY ELECTIVES and other Electives	9
CREDITS		**30**

Montana Board of Regents
CURRICULUM PROPOSALS

	4th Year (Fall/Spring)	
BMKT 343	Integrated Marketing Communications	3
NUTR 322	Foodservice Systems Management	3
NUTR 395	Practicum: Quantity Foods Production & Management	3
SFBS 451R	Sustainable Food Systems	3
HOSP 4XX	The Hospitality Industry in Montana	3
SFBS 429	Small Business & Entrepreneurship in Food & Health	3
HOSP 498	Hospitality Management Internship	3
HOSP 499	Hospitality Capstone	3
CULA XXX	CULINARY ELECTIVES and other Electives	6
	CREDITS	**30**
TOTAL CREDITS		**120**

FOOD ENTERPRISE OPTION (FDEN)
4 YEAR PLAN

RUBRIC/NUMBER	COURSE TITLE	CREDITS
	1st YEAR (Fall/Spring)	
HOSP 1XX	Intro to Hospitality Management	3
CULA 102	Intro Culinary Arts	3
CULA 105	Food Safety & Sanitation	3
WRIT 101W	College Writing 1	3
BIOM 103IN	Unseen Universe: Microbes	3
M 121Q	College Algebra	3
IH or RH	Humanities CORE	3
US	University Seminar CORE	3
IA or RA	Arts CORE	3
NUTR 221CS	Human Nutrition	3
CREDITS		**30**
	2nd YEAR (Fall/ Spring)	
CHMY 121 IN	Intro Gen Chemistry	4
ECNS 101IS	Economic Way of Thinking	3
ACTG 201	Financial Accounting OR BGEN 210 Acct & Finance Basics	3
BMGT 205	Prof Business Communication	3
SFBS 2XX	Farm to Table Sourcing	3
NUTR 226/227	Food Fundamentals/Lab	5
ECNS 202	Prin Macroecon –OR- ECNS 204 Princ Microecon	3
CULA 250	Hospitality Supervision/ Customer Service	3
SFBS 298	Towne's Harvest Internship	3
	CULINARY ELECTIVES and other Electives	3
CREDITS		**30**
	3rd YEAR (Fall/Spring)	
STAT 216Q	Intro to Statistics	3
ECHM 205CS	Energy & Sustainability	3
NUTR 251 (D CORE)	Food & Culture	3

Montana Board of Regents

CURRICULUM PROPOSALS

BMKT 325	Principles of Marketing	3
FDSC 3XX	Introduction to Food Processing	3
BMGT 335	Management and Organization	3
FCS 371	Research Methods in HHD	3
NUTR 351	Nutrition & Society	3
	CULINARY ELECTIVES and other Electives	6
CREDITS		**30**
	4th Year (Fall/Spring)	
BMKT 343	Integrated Marketing Communications	3
BGEN 361	Principles of Business Law	3
SFBS 451R	Sustainable Food Systems	3
SFBS 429	Small Business & Entrepreneurship in Food & Health	3
FDSC 4XX	Experimental Foods	3
HOSP 4XX	The Hospitality Industry in Montana	3
FDSC 495	Practicum: Food Product Development	3
HOSP 498	Hospitality Management Internship	3
HOSP 499	Hospitality Management Capstone	3
CULA XXX	CULINARY ELECTIVES and other Electives	3
	CREDITS	**30**
TOTAL CREDITS		**120**

LODGING and FACILITIES MANAGEMENT OPTION (LFM)

4 YEAR PLAN

RUBRIC/NUMBER	**COURSE TITLE**	**CREDITS**
	1st YEAR (Fall/Spring)	
HOSP 1XX	Intro to Hospitality Management	3
HOSP 2XX	Intro to Lodging Operations & Facility Management	3
CULA 105	Food Safety & Sanitation	3
WRIT 101W	College Writing 1	3
BIOM 103IN	Unseen Universe: Microbes	3
M 121Q	Math	3
IH or RH	Humanities CORE	3
US	University Seminar CORE	3
IA or RA	Arts CORE	3
NUTR 221CS	Human Nutrition	3
CREDITS		**30**
	2nd YEAR (Fall/ Spring)	
ECNS 101IS	Economic Way of Thinking	3
BMGT 205	Prof Business Communication	3
ARCH 231CS	Issues in Sustainability	3
STAT 216Q	Intro to Statistics	3
ECNS 202	Prin of Macroecon OR ECNS 204 Prin Microecon	3
ACTG 201	Financial Accounting OR BGEN 210 Acct & Finance Basics	3
ECHM 205CS	Energy & Sustainability	3
CULA 250	Hospitality Supervision/ Customer Service	3
	Electives	6

Montana Board of Regents
CURRICULUM PROPOSALS

CREDITS		**30**
	3rd YEAR (Fall/Spring)	
NUTR 251; (D CORE)	Food & Culture	3
HOSP 3XX	Hospitability in Agriculture	3
HOSP 3XX	Event Planning	3
AGED 353 (AGBU 353)	Cooperative Business Principles and Practices	3
BMGT 335	Management and Organization	3
HOSP 398	Hospitality Lodging Operations Internship	3
HOSP 3XX	Lodge & Facility Conceptual Design	3
	Electives	9
CREDITS		**30**
	4th YEAR (Fall/Spring)	
BGEN 361	Principles of Business Law	3
BMKT 343	Integrated Marketing Communications	3
HOSP 4XX	The Hospitality Industry in Montana	3
SFBS 451R	Sustainable Food Systems	3
SFBS 429	Small Business & Entrepreneurship in Food & Health	3
AGED 482	Non-Formal Teaching Methods in Agriculture	3
HOSP 498	Hospitality Management Internship	3
HOSP 499	Hospitality Management Capstone	3
	Electives	6
CREDITS		**30**
TOTAL CREDITS		**120**

SUPPORTING COURSEWORK FOR HOSPITALTIY MANAGEMENT OPTIONS:

Hospitality Management Electives in Business:
ACTG 202: Principles of Managerial Accounting
BMGT 240 Business Research Methods
BMGT 322: Operations Management
BMGT 329: Human Resource Management
BMGT 410: Sustainable Business Practices
BMGT 420: Leadership and Motivation
BMGT 433: Management of Quality and Productivity
BMGT 461: Small Business Management
BMIS 211: Intro Bus Decision Support
BMKT 337: Consumer Behavior
BMGT 406: Negotiation/Dispute Resolution
BMKT 420: Introduction to Digital Marketing

Hospitality Management Electives in Health & Human Development:
BIOH 201: Hum Anatomy & Physiology I
BIOH 211: Hum Anatomy & Physiology II
COA 405: Advanced Concepts in Coaching
FCS 101IS: Indiv and Fam Dev: Lifespan

FCS 138: Srvy of Fam Fin and Cons Issue
FCS 239: Contemporary Consumer Issues
FCS 261: Adult Development and Aging
FCS 271: Meas Well-being: Amer Families
FCS 337: Personal and Family Finance I
FCS 338: Personal and Family Finance II
NUTR 321: Nutrition in the Life Cycle
CHTH 317: Health Behavior Theories
KIN 410: Adv Strength Training and Conditioning

Hospitality Management Electives in other areas:
AGED 309: Philosophy and Programs in Extension
AGED 353: Cooperative Business Principles and Practices
AGED 312: Communicating Agriculture
AGED 482: Non-formal Tchng Meth Ag
AGSC 465R: Health, Ag, and Poverty
ARCH 231CS: Issues in Sustainability
HORT 105: Miracle Growing
HORT 131: Landscape Design/Hist/Theory
HORT 337: Veg Production
HOTR 343: Commercial Plant Production
HORT 345: Organic Market Gardening
HSTA 409: Food in America
NASX 415: Native Am Food Systems
NRSM 421: Holistic Thought & Mngmt
PSCI 436: Politics of Food & Hunger
SFBS 346: SFBS Field Course
EDU 491: Nature, Leadership, & Outdoor Leadership Education

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

The proposed launch of the Hospitality Management Degree is Fall 2017. Full implementation of the program will depend on the hiring of faculty with specific expertise and the availability of a commercial teaching kitchen and food processing equipment for food-related options (see below). **Phase 1** of the degree program will include the two food-related options. A search for a TT faculty member is currently underway in Food & Nutrition, and this line will be dedicated to meeting the need for expertise in foodservice/restaurant management. When filled, the Restaurant Management Farm to Table option could be launched, followed by the Food Enterprise which will require a search for a new TT faculty member with expertise in food science/product development. New course syllabi and proposals to support the first two options would be developed for review during the 2016-17 academic year.

Phase 2 of the degree program include, implementing the Lodging and Facility Management option. Phase 2 will be launched in the Fall of 2018, depending the successful enrollment of the first two options, and following a search for the second TT faculty member with expertise in hotel and facilities management. New course proposals to support these two options would be developed for review during the 2017-18 academic year. The two TT faculty lines referenced above are described further in "#6 Resources" below.

Student demand for two of the options is already present on campus (subsets of SFBS). Interested students may be able to begin the program in the first option launched and switch when a new option is launched. Initial enrollment goals for the degree program would be approximately 100 students within 5 years, graduating 10-30 per year.

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.

To launch the Hospitality Management Degree Program, two new tenure track faculty lines and one NTT faculty line will be required (these TT lines were cited above in the Implementation Plan). The NTT faculty member would collaborate with a Gallatin College Program Director in coordinating the management and use of the commercial teaching kitchen and adjacent eating space. In general, tenure track faculty would be responsible for teaching the academic portions of the curriculum while an experienced professional (NTT Faculty) would be enlisted to supervise the hands-on development of specific skills utilizing the commercial teaching kitchen, and internships.

Much of the curriculum external to the new offerings are courses that students would likely subscribe irrespective of the program of study (e.g. STAT 216 Q, PSYX 100, MATH 121). Nevertheless, a potential need to expand numerous courses beyond their current capacity exists. Additional support may be needed, depending on enrollment, to support the teaching of business courses required by all options, and other required courses including NUTR 351 (significant service learning component), SFBS 451R (CORE Research course), AGED 140US (CORE class recommended), FCS 371 (required in all options), and SFBS 429 (required in all options). Additional support will also be needed in other subject areas where the addition of Hospitality Management students would require adding a new course section (ECHM 205CS; STAT 216Q, ECNS 202, WRIT 101W, M 121Q, ARCH 121IA, ECNS 101IS, CHMY 121).

Provost Potvin has committed to providing two new TT faculty lines and one new NTT faculty line to support this program as well as continuing to address growth in key areas by supporting extra sections of courses (see packet of Support Letters).

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 infrastructure to support this major includes a teaching kitchen in Herrick Hall, Towne's Harvest Garden at the BART farm and the Food and Health Disparities Integrative Lab Program.

Montana Board of Regents
CURRICULUM PROPOSALS

The Herrick Hall Foods Lab, with seven food preparation stations, is set up to mimic a household kitchen, with some commercial equipment such as stainless steel prep tables, a commercial range, and foodservice quality appliances. Townes' Harvest is a 3-acre plot on the Horticulture Farm (part of the BART farm), with four hoop houses for season extension, a fruit orchard, and pole barn, in addition to growing space in the Plant Growth Center for starting seeds. There is space at Towne's Harvest for an intensively managed high value garden that could serve as the living laboratory classroom for a course in Kitchen Garden Management (part of two Hospitality Management options). The Food and Health Disparities Integrative Lab, (led by Dr. Selena Ahmed and Dr. Carmen Byker in the HHD Department) can be used to examine phytonutrient content of foods and to test the sensory properties of food with either trained and consumer panels. Students conducting product development as part of their coursework in Food Enterprise will be able to collaborate with MSU researchers to test their products.

To operate a successful Hospitality Management degree program, additional infrastructure will be needed. For launching the Restaurant Management: Farm to Table option a Commercial Teaching Kitchen/ Culinary Arts Laboratory and restaurant style eating space is needed. The Commercial Kitchen would be similar to a restaurant prep kitchen and include areas for hot and cold food preparation, meats & charcuterie, and baking (this space should accommodate approximately 25 students). The Food Enterprise option will require a portion of this laboratory for small scale food processing equipment which will be used to develop food product prototypes and conduct associated research. Additional needed spaces include 2-3 faculty offices; 2 adjacent classroom spaces equipped with technology that can accommodate a minimum of 25 students each, a conference room that can also be used for fine dining, and a small room that can be used as a sensory lab for testing food products with trained and consumer panels. The restaurant style eating space should accommodate approximately 100 guests for hospitality dinners and culinary arts showcases. This space is envisioned as a flexible space that can be adapted as needed for various class projects, and is open to campus and the public whenever a curricular event is scheduled. This space can be used for *interdisciplinary* showcases (art, engineering, music, English, architecture etc.), or public education that might be integrated in some way with a food/culinary presentation.

A re-purposed dining hall at MSU would be an excellent fit for the needs of these programs. Harrison Dining Hall, which will be vacated by University Foodservice as they create renovated and new dining hall spaces for MSU students, is a functional commercial kitchen with an attached dining space. For the academic needs of the Hospitality Management curriculum, this existing and functional space is ideal.

The infrastructure that will support the proposed academic program will also be a source of revenue for the university. In addition to supporting teaching in other existing programs including Food & Nutrition, and Sustainable Food & Bioenergy Systems, the commercial kitchen and food processing lab could be used for outreach and training such as that conducted by Team Nutrition with School Food Service Managers and cooks, and continuing education for Family and Consumer Sciences school teachers. Additional outreach and classes for public education using this space would be a source of revenue. The space could also rented by external organizations conducting classes and training, or to food entrepreneurs.

7. Assessment

How will the success of the program be measured?

Montana Board of Regents
CURRICULUM PROPOSALS

Several aspects of the program will be monitored and assessed to ensure that program and learning goals are being met. **Learning Goals** will be established for each option following a survey of learning outcomes for each course in the curriculum. Key means (assignments and activities) and measures will be selected for monitoring student achievement. **Student Satisfaction** with the program will be assessed by seeking informal feedback during advising sessions and by an exit survey completed with each student just prior to graduation. **Student retention, program completion, years to program completion, internship placement and job placement** will be key indicators of program success and will be monitored, in addition to gathering feedback from internship hosts and employers. **Overall Program Impact** will be assessed using a five year follow-up survey of graduates regarding employment, entrepreneurship, and career satisfaction.

For the Hospitality Management Degree Program, external accreditation will be sought from the *Accreditation Commission for Programs in Hospitality Administration* (includes 9 Standards).

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.

Dr. Alison Harmon (Health and Human Development Faculty; currently Interim Dean for the College of Education, Health, and Human Development) volunteered to develop this proposal as the content of the proposed curriculum overlaps well with her academic training and teaching experience (food and nutrition, culinary fundamentals, farm to table cuisine, small business and entrepreneurship, and sustainable food systems). Additionally, Dr. Harmon was a leader in the development of the interdisciplinary Sustainable Food & Bioenergy Systems (SFBS) Degree Program for MSU. In its sixth year, this program enrolls approximately 90 students and has 50 alumni. Original enrollment goals have been exceeded by nearly 100%. In 2012, this program was named one of the 10 best environmental programs in the United States by the Mother Nature Network.

Proposal development was guided by input from MSU experts, MSU students and alums, and industry stake-holders. Additionally, a needs assessment was conducted by *Education Advisory Board* to determine employer demand for graduates with Hotel, Restaurant, and Tourism Management Bachelor's Degrees and Culinary Arts Associate's Degrees. A focus group was conducted in collaboration with the Bozeman Area Chamber of Commerce involving hospitality managers in the Gallatin Valley. Individual interviews were conducted with foodservice directors, restaurant managers, and culinary experts. Meetings with faculty and program leaders, and curriculum committees in the College of EHHD, the JJ College of Business & Entrepreneurship, and College of Agriculture's Division of Agricultural Education have shaped each of the degree options, and are on-going. Feedback has been incorporated or retained for future consideration.

Montana Board of Regents

CURRICULUM PROPOSALS

LISTING OF ALL PROPOSED NEW COURSES BY OPTION

PROPOSED LEVEL	COURSE TITLE	CREDITS	RMFT	FDEN	LMRT	SFAD
HOSP 1XX	Intro to Hospitality Management	3	X	X	X	X
CULA 102	Intro to Culinary Arts	3	X	X		
CULA 105	Food Safety & Sanitation	3	X	X	X	
SFBS 2XX	Farm to Table Sourcing	3	X	X		
CULA 250	Hospitality Supervision/ Customer Service	3	X	X	X	X
HOSP 2XX	Intro Lodging Operations & Facility Management	3			X	X
NUTR 251	Food & Culture	3	X	X		
FDSC 3XX	Introduction to Food Processing	3		X		
HOSP 3XX	Event Planning	3			X	
HOSP 3XX	Sports & Fitness Management	3			X	X
HOSP 3XX	Hospitality in Agriculture	3		X	X	
HOSP 398	Hospitality Lodging Operations Internship	3			X	
FDSC 4XX	Experimental Foods	3		X		
FDSC 495	Practicum: Food Product Development	3		X		
HOSP 4XX	The Hospitality Industry in Montana	3	X	X	X	
HOSP 4XX	Lodge & Facility Conceptual Design	3			X	X
HOSP 498	Hospitality Management Internship	3	X	X	X	X
HOSP 499	Hospitality Management Capstone	3	X	X	X	X
TOTAL	**18**		**9**	**13**	**12**	**7**

Proposed Teaching Loads for Hospitality Faculty:

Position Type	Faculty Specialty	Courses
TT Faculty #1 (search is underway)	Hospitality/Foodservice Management	• Intro to Hospitality Management (HOSP 1XX) • Hospitality Supervision/ Customer Service (CULA 250) • Food Service Systems Management (NUTR 322) • Event Planning (HOSP 3XX) • Hospitality Management Capstone (HOSP 499)
TT Faculty #2	Lodging Management	• Intro Lodging Operations and Facility Management (HOSP 2XX)

Montana Board of Regents

CURRICULUM PROPOSALS

		• Hospitality in Agriculture (HOSP 3XX) • The Hospitality Industry in Montana (HOSP 4XX) • Lodge and Facility Conceptual Design (HOSP 4XX)
NTT Faculty	Hospitality Management and Culinary Arts	• Intro to Culinary Arts (CULA 102) • Food Safety & Sanitation (CULA 105) • Food Science Fundamentals Lab (NUTR 227) • Farm to Table Sourcing (SFBS 2XX) • Practicum: Quantity Foods Production (NUTR 395) • Hospitality Lodging Operations Internship (HOSP 398) • Hospitality Management Internship (HOSP 498)
TT Faculty #3	Food Science	• Food Science Fundamentals (NUTR 226) • Intro to Food Processing (FDSC 3XX) • Experimental Foods (FDSC 4XX) • Practicum: Food Product Development (FDSC 495)
Existing Food/Nutrition Faculty	Food & Nutrition	• Food & Culture (NUTR 251)

HOSPITALTIY MANAGEMENT COURSE DESCRIPTIONS

RUBRIC NUMBER	COURSE TITLE	CR	EMPHASIS
HOSP 1XX	Intro to Hospitality Management	3 LEC	Introduction to the Hospitality Industry; Management Principles
CULA 102	Intro to Culinary Arts	3 LAB	Basic culinary principles; Knife Skills, Stock, Eggs, cooking techniques, etc.
CULA 105	Food Safety & Sanitation	3 LEC	ServSafe Certification for Managers and Food Allergies; HACCP; Food safety management in a foodservice operation
SFBS 2XX	Farm to Table Sourcing	2 LEC 1 LAB	Procurement; Sourcing locally, managing producer relationships, seasonal menu planning, recipe development, networking, developing community/administrative buy-in for local buying in institutional foodservice, institutional policies.
SFBS 296/ SFBS 298	Towne's Harvest Practicum	3 LAB	High value small scale gardening and greenhouse production for hyper-local restaurant/foodservice sourcing; Emphasizes hands-on field experience with small-scale market gardening, distribution through community-supported agriculture, and market sales at local farmers'

Montana Board of Regents

CURRICULUM PROPOSALS

			markets. Students will complete one independent project, service-learning at local farms and complete weekly writing assignments.
CULA 250	Hospitality Supervision/ Customer Service	3 LEC	Supervisory management topics; principles and best practices in internal and external customer service.
HOSP 2XX	Intro Lodging Operations & Facility Management	3 LEC	Introduction to the fundamentals of hospitality facilities management. Includes content related to budgeting and projections.
NUTR 226	Food Fundamentals	3 LEC	Principles of food composition, preparation, selection, food safety and storage with special reference to physical and chemical changes which occur during normal food handling. Includes an introduction to meal planning, sensory evaluation, and cultural food perspectives.
NUTR 227	Food Fundamentals Lab	2 LAB	Practical experiences which illustrate the principles of ingredient functionality, methods of preparation, preservation, food safety and sensory evaluation.
NUTR 251	Food & Culture	2 LEC 1 LAB	Cultural, Regional, and International Aspects of Cuisine
FDSC 3XX	Introduction to Food Processing	1 LEC 2 LAB	Fundamentals of Food Processing; Food Processing Treatments; introduction to the application of food chemistry.
HOSP 3XX	Event Planning	3 LEC	Fundamentals of planning and executing conventions and events; budget management; cost projections
HOSP 3XX	Hospitality in Agriculture	1 LEC 2 LAB	Intensive field course exploring opportunities to improve agricultural profitability through agritourism
NUTR 322	Foodservice Systems Management	3 LEC	Principles of quantity food procurement, production, and presentation. Emphasizes food safety and sanitation principles and organizational management for food and nutrition professionals.
NUTR 351	Nutrition & Society	3 LEC	Social and cultural, economic, policy, and environmental factors in the community influencing nutritional status, and public health, techniques to assess community nutritional needs, and methodology for designing, implementing, and evaluating community nutrition programs, practices, and policies. Major service-learning project completed for a public or private agency.
HOSP 395	Lodging Management Practicum	3 LAB	Students gain practical management experience in the campus hotel laboratory
NUTR 395	Practicum: Quantity Foods Production & Management	1 LEC 2 LAB	Hands-on food lab experience in culinary purchasing, production, analysis, and presentation activities. Applied food safety and sanitation principles. Application of organizational management theories in culinary businesses.

Montana Board of Regents

CURRICULUM PROPOSALS

HOSP 398	Hospitality Lodging Operations Internship	3 IND	Introductory hands-on experience with local lodging operation
FDSC 4XX	Experimental Foods	1 LEC 2LAB	Introduction to design of new foods; advanced food science principles; recipe modification and experimentation; advanced food chemistry
FDSC 495	Practicum: Food Product Development	3 LAB	Students or student teams research, plan, develop, and take a food product prototype to market; cost analysis; applied food processing; food preservation techniques.
HOSP 4XX	The Hospitality Industry in Montana	1 LEC 2 LAB	Field-based Course; class or student teams design and propose a new outlet for a Montana locale.
HOSP 4XX	Lodge & Facility Conceptual Design	3 LEC	Student teams create a concept for a lodging operation or other hospitality facility.
HOSP 498	Hospitality Management Internship	3 IND	Practical, hands-on management experience with a Hospitality Management Entity in Montana; tailored to match the career aspirations of the student.
HOSP 499	Hospitality Capstone	3 LEC	Preparation for Internship; job searching; professional development; resumes; mock interviews; social media; leadership

Support letters for the Hospitality Management BS Degree Program and the Culinary Arts AAS Degree Program:

Table of Contents:

The Pennsylvania State University		tourism is a unique approach. Notes new careers related to event planning. Strong and balanced degree program with unique features.	
Patricia McGlynn, PhD Extension Agent Flathead County Extension	12.4.15	General support for proposed programs. Special interest in food enterprise. Lodging, and agritourism. The lack of employees for this industry is a challenge.	22
Susan Dana, Chair, Academic Programs Committee Jake Jabs College of Business & Entrepreneurship	12.4.15	Proposed Hospitality Management Curriculum has been reviewed the APC; these are the appropriate courses, HM students are welcome in these courses.	23
Les Craig, Director Audrey Wooding, Dep Director Blackstone LaunchPad	12.4.15	The Blackstone LaunchPad provides entrepreneurial resources. In the past 2 years they have provided assistance to 26 new ventures in the category of food & beverage or entertainment/hospitality. Academic opportunities that provide training are needed in this area.	24
ASMSU	11.19.15	Resolution from student senators supporting the proposed hospitality management and culinary arts degree programs at MSU	25
Jon Tester, Senator	10.22.15	Encouraged by the prospect of a new 4-year hospitality degree to help strengthen our tourism industry	27
Serena Rundberg, Owner Nova Cafe	10.6.15	Nova, a local restaurant has 50 employees. Bozeman has a hiring crisis in its growing foodservice industry that would be supported by proposed programs.	28
Barb Rooney, Sr VP of Lodging, Boyne Resorts (oversees Big Sky)	10.13.15	Big Sky has 1500 team members, looking for more qualified workforce to fill positions. 4-year degree holders will be prepared for management and leadership positions.	29
Lisa Feltis-German Latitud Sur Import & Distribution	10.13.15	Graduate of CIA America, notes the demand for graduates from culinary and hospitality management programs. Recommends seeking support from corporate partners.	30
Brad Griffin, MTRA Kurt Schull, The Bay Jim Bos, Bistecca at the Granary Mike Hope, MTA/ Rockin' R Bar	9.21.15	Expresses support for degree programs from the MT Restaurant Association and the MT Tavern Association.	31
Tiffany Lach, Owner Sola Cafe	9.16.15	Sola employs more than 50 employees. It is challenging to recruit management level talent for the foodservice industry. Internship opportunities for students, employment for qualified graduates.	32
Alison Harmon, MSU Bozeman Lynne Fitzgerald, MSU Billings Kathe Gabel, MSU Billings	3.3.15	Memo of Understanding regarding proposed niches of the Hospitality Management BS at MSU Bozeman and the Outdoor Adventure Leadership BS at MSU Billings.	33
LaRell Baldwin, General Manager Crowne Plaza Billings	1.29.15	One of the largest full service convention hotel in MT. Opportunities for internships. Interest in serving on the Industry Advisory Board.	34
Daryl Schliem, President/CEO Bozeman Area Chamber of Commerce	1.29.15	Strong local support for these programs that will support the tourism industry	35
Benno Garwood, General Manager Comfort Suites Bozeman	12.12.14	Support for hospitality training and more qualified applicants for the hotel management positions. Opportunities for internships. Interest in serving on the Industry Advisory Board	36
Dirk S. Adams Lazy SR Ranch	12.18.14	Montana's need for butchers, training that could be provided by coursework associated with the Culinary Arts AAS degree.	38

Mike Garcia, Director (former) Voice of MT Tourism	12.1.14	United voice for MT tourism stakeholders. Program would unite Montana's two most important industries, support the growing hospitality industry and entrepreneurship.	40
Meg O'Leary, Director Montana Department of Commerce	11.21.14	Program will prepare students for careers in Montana. Interest in serving on the Industry Advisory Board.	42
Nancy Moore, National Center for Appropriate Technology	11.13.14	Program will support Montana's developing food system. Interest in farm to table sourcing, agritourism, and food science. Training and internships opportunities for students.	43
Alan Merrill, President Montana Farmers Union	11.5.14	Program will benefit Montana's rural landscape and local economies. Interest in Value-Added agriculture. Opportunities for internships.	44
Christina Waller, Owner Root Cellar Foods	11.3.14	Program (Food Enterprise option) will support the mission of this business, a local food manufacturer. Can help provide field trips, tours, and internships for students, as well as apprenticeships for graduates. Opportunities for collaborative research projects. Interest in serving on the Industry Advisory Board.	45
Rob Watson, Superintendent Bozeman Public Schools	10.30.14	Support for streamlining culinary curriculum and Pro-Start from high school to BS degree program. More than 100 students are are enrolled in the culinary arts program at Bozeman High School.	46
Jan Tusick, Director Mission Mountain Food Enterprise Center	10.29.14	Supports addition of Food Science expertise in Montana and at MSU. Need to support food manufacturers in Montana. Interest in serving on the Industry Advisory Board.	47
Ron De Yong, Director MT Department of Agriculture	10.16.14	General support for program. Particular interest in the Food Enterprise Option, and economic development through food manufacturing. Appreciates the emphasis on rural tourism and agritourism. Interest in serving on the Industry Advisory Board.	49
Dax Schieffer, Human Resources Director (former) Big Sky Resort	10.14.14	Employment opportunities for graduates. Gallatin County leads state in tourism spending. Program will support industry.	51
Steve Erickson, Director ASMSU RSF Matt Caires, Dean of Students	10.13.14	General support for degree program. Internship opportunities for Sports & Fitness Administration Option students.	52
Candy Lubansky, Superintendent Belgrade Public Schools	10.7.14	General support for degree programs. Notes the popularity of high school culinary program and Pro-Start--students who are learning foodservice management skills could continue on to AAS or BS degree program.	53
Michael Dean, Executive Sous Chef Xanterra Parks and Resorts	10.6.14	Fills 200 culinary positions each summer in Yellowstone NP. Would like to collaborate on student training. Tourism is growing rapidly, as is the need for professionals in institutional hospitality like hospitality and schools.	54

To: Randy Babbit, Faculty Senate President
Michael Babcock, Faculty Senate Vice President
From: Martha A. Potvin, Executive Vice President of Academic Affairs and Provost
Re: Letter of support for the proposed MSU B.S. in Hospitality Management
Cc: Alison Harmon, Interim Dean, College of Education, Health and Human Development
Date: January 18, 2016

Dear Randy and Michael,

I support the proposed AAS in Culinary Arts and BS in Hospitality Management. These programs complement each other in providing a pathway from entry-level workforce development through baccalaureate degree attainment in a recognized discipline. Indeed, the former creates a strong pathway to the latter for interested students, preparing them for professional careers as well as to become well-educated and engaged citizens. The BS degree serves a new target population of students, those that aspire to careers in the management of organizations within in the growing service sector of our national economy. The BS degree will appeal to students who wish to ensure the provision of exceptional services and quality experiences to others, especially as it relates to the hospitality and tourism sectors.

The proposed BS program is well aligned with our founding mission as a land grant institution (Section 4 of the Morrill Act):

> *"…at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."*

While there are clearly practical reasons for supporting the BS such as serving Montana students and the needs of the State, it is an opportunity to develop a program that is a point of pride at our great university. It also offers a chance to expand the scholarly profile of the Department of Health and Human Development in terms of stature and quality.

The proposal has strong support from the faculty in the College of Education, Health and Human Development (EHHD) and from Deans Council. As an interdisciplinary degree, it draws from, and builds upon other successful programs in the Jake Jabs College of Business and Entrepreneurship, and the College of Agriculture. Students also support the proposal as evidenced by a nearly-unanimous, positive vote from ASMSU.

MSU will need to develop strong academic programs of quality to remain nationally competitive. This degree meets the curricular standards and guidelines for a BS degree and helps to expand MSU's academic portfolio thereby contributing to long-term institutional sustainability. Because the program is interdisciplinary, its options are synergistic with many other academic pursuits such as information services, computer systems, health and human performance, nutrition, entrepreneurship, and local and regional food production and safety.

Resources for both staffing and infrastructure are available to assure the success of the program. Space has been identified. A new budget model will be sensitive to increased student demand in courses both within and outside of EHHD. We also expect to raise funds from external sources. Indeed, our President has already secured an endowed scholarship for students in the program.

The program has the support of the hospitality industry across the state. Montana businesses will no longer need to pay recruiting firms to reach out-of-state for bachelor's qualified students in hospitality management. They will be able to advertise for individuals with the credentials they prefer knowing that quality graduates are produced within Montana.

P.O. Box 1272
Helena, MT 59624

MONTANA LODGING AND HOSPITALITY ASSOCIATION

www.mtlha.com

Ph (406) 449-8408
Fx (406) 442-8018

January 12, 2016

Provost Martha Potvin
Office of the Executive Vice President for Academic Affairs and Provost
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of the Montana Lodging and Hospitality Association (MLHA) and tourism industry leaders in support of the proposed Culinary Arts AAS degree program at Gallatin College and the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management.

We believe there is a compelling need for this program and are willing to assist the university in securing private funding for its initial launch.

The proposed program seeks to unite two of Montana's most important industries: Tourism and Agriculture, which would really serve to move Montana's economy forward for the benefit of citizens, communities and our visitors.

Tourism is one of Montana's leading industries with over 11 million visitors in 2014 and supporting over 38,000 jobs. Total non-resident spending is expected to surpass $4 billion in 2015. Gallatin County has seen nearly 20% growth in non-resident spending from 2013 to 2014.

The hospitality industry needs future leaders and many employers are now left to hire managers from programs from outside of Montana. The students who attend MSU have a passion for the area and the outdoor recreational opportunities in Montana, it would be mutually beneficial for students, the industry and the university with the development of tourism based curriculum.

Thank you for your attention to this letter of support and please call on me or Stuart Doggett, our Executive Director at, stuart@montana.com anytime.

Sincerely,
Steve Wahrlich, CHA
Owner, Best Western Plus ClockTower Inn, Billings
& Chair, Montana Lodging & Hospitality Association
E-mail: sw@bwclocktowerinn.com

College of
EDUCATION, HEALTH & HUMAN DEVELOPMENT

TO: President Waded Cruzado and Provost Martha Potvin

FROM: The faculty of the College of Education, Health and Human Development

RE: Hospitality Management BS Degree Program & Culinary Arts AAS Degree Program

DATE: January 18, 2016

The College of Education, Health and Human Development supports the proposed BS degree program in Hospitality Management and the unique opportunity to partner with the Gallatin College on an AAS degree program in Culinary Arts.

- Offering a BS degree program in Hospitality Management addresses **student demand** and desire for relevant and innovative academic opportunities. Likewise, this proposal is consistent with EHHD's mission to prepare students for professions that make a difference in our communities.
- The proposed degree program **supports and enhances our existing degree programs** in food and nutrition, dietetics, health and human performance, sustainable food and bioenergy systems, family and consumer sciences, and community health. Existing programs will be complemented by hospitality- and business-related content to enhance the employability of our graduates.
- In EHHD, our teaching, research, and engagement are well-aligned with MSU's **Land-Grant Mission,** as evidenced by the connections we have with community partners, and our commitment to addressing the needs of stakeholders and constituents. Responding to the workforce needs of the state is appropriate, as is providing a well-rounded education that prepares students for specific professions. The Hospitality Management degree program will extend our service to Montana and enrich well-being across the state by contributing to community health, rural economic development, and entrepreneurial opportunities, engaging students from a variety of backgrounds.
- EHHD has been and will continue to be an excellent partner in **interdisciplinary** curricular development, and research collaborations across colleges. Hospitality Management will further contribute to the positive outcomes of interdisciplinary degree programs and faculty in the program will contribute to MSU's research mission.
- Offering a BS degree program in Hospitality Management represents an opportunity for EHHD to engage partners in a rapidly growing industry in supporting MSU and our students with scholarships, internships, and apprenticeships. As this program has the overwhelming support of businesses in Bozeman and throughout Montana, it opportunity for significant **fundraising** and also give our faculty access to new grant opportunities.

Office of the Dean
Alison Harmon
250 Reid Hall
PO Box 172940
Bozeman, MT 59717-2940

Tel (406) 994-4133
Fax (406) 994-1854

- We believe that the rapid development of hospitality-related tourism in Montana requires the kind of **thoughtful leadership and disciplined stewardship** that EHHD has the capacity to develop in our graduates. Our graduates will be equipped to meet the needs of visitors while sustaining and honoring the character and cultural heritage of rural communities and the natural environment loved by year-round residents.

Lynn Kelting-Gibson
Dawn Tarabochia
Anna Diffenderfer
Joe Hicks
John Seifert
David Henderson
Ann Ellsworth
Fenqjen Lou
Nancy Colton
Kimberly Hartman
Coleen Kaiser
Robert Carson
Nicole Wenago
Sherri Pearson
Mark Schure
Michael Fox
Milica McDowell
Nick Lux
Ann Ewbank
Art Bangert
Holly Hunts
Sweeney Windchief

Collen McMilin
Christine Stanton
Kathryn Will-Dubyak
Tricia Seifert
Joyce Herbeck
Sarah Schmitt-Wilson
Lynn Paul
Bill Ruff
Mary Miles
Janet Gamble
Carmen Byker Shanks
Selena Ahmed
Sandy Osborne
Beth Rink
Debby Haynes
Jayne Downey
Denise Malloy
Suzanne Christopher
Alison Harmon
Elizabeth Bird

MONTANA
STATE UNIVERSITY

January 15, 2016

Provost Martha Potvin
Office of the Executive Vice President for Academic Affairs and Provost
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of University Food Services (UFS) and Auxiliary Services at MSU, to express support for the proposed Bachelor's Degree Program in Hospitality Management and AAS Degree Program in Culinary Arts.

Over the past several years, UFS has begun a migration to a higher quality, larger scale food service operation. We are the largest food service operation in the state of Montana. Starting with the renovation of Miller Dining Commons and now planning for a new dining hall, we will be serving over 1.6 million meals this academic year. Our catering endeavors culminated last fall when we served a five star, four course dinner to 1,000 attendants at the MSU Foundation Capital Campaign Kickoff Gala Event.

With these types of progression comes numerous opportunities for students enrolled in the aforementioned programs to get hands on, real world, fast paced experience associated with food service and events planning and execution. Auxiliary Services and University Food Services could provide avenues for the following:

- Student jobs that can be developed around their academic commitments
- Internship assignments where students can apply and hone their skills in real life situations.
- And upon graduation, jobs for qualified graduates of both programs.

Perhaps most important, as we plan for a new dining hall, targeting completion in the summer of 2018, the question of what will be done with the spaces vacated by Harrison and Hannon Dining Halls arise. We believe the Harrison space would lend itself to the programmatic needs of these proposed degree programs thereby saving the university funds by converting existing similar space versus building new academic space.

Respectfully Submitted,

Thomas Stump
Director, MSU Auxiliary Services

Auxiliary Services
Hedges Complex
P.O. Box 172080
Bozeman, MT 59717-2080

Tel (406) 994-2661
Fax (406) 994-1918

MONTANA
STATE UNIVERSITY

14 January 2016

Memo To: Alison Harmon

From: Tracy Dougher, Division Head for Agricultural Education

Re: Hospitality Management Bachelor's Degree Program

Horticulture & Agricultural Education

Agricultural Education supports the Hospitality Management Bachelor's Degree Program. Our curriculum concerns were addressed in the planning and include our courses that are already aimed at teaching others to lead, support and educate regarding the agricultural and natural resource missions. We are prepared for additional students in AGED 140 Leadership in Agriculture, AGED 312 Communicating Agriculture, AGED 482 Non-formal Teaching Methods in Agriculture, AGED 309 Philosophy and Programs in Extension, and potentially a new course we are developing on Volunteer Management.

Dr. Tracy A.O. Dougher
Division Head for
Agricultural Education &
Professor of Horticulture
230C Linfield Hall
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January 12, 2016

Provost Potvin and Faculty Senate
Office of the Provost and Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman, MT 59717-2560

Provost Potvin and MSU Faculty Senate:

The Montana Academy of Nutrition and Dietetics (MT AND) strongly supports a Hospitality Management Program at Montana State University (MSU). The proposed Hospitality Management degree program currently under consideration by the Faculty Senate merits close examination and appreciation for the potential value this new curriculum has in preparing dietetic students for careers in various practice locations within the arena of dietetics, nutrition and healthcare. The following comments highlight the positive impact this new degree program will have in the practice of dietetics in Montana and throughout the mountain west.

Positive collaboration potential with outcomes to support achievement of competency standards in dietetic accredited programs:

The Montana Dietetic Internship Program (MDI) is a non-degree graduate program that provides the supervised practice experiences which are among the final required steps for obtaining professional credentialing as a Registered Dietitian Nutritionist (RDN). The professional RDN is qualified for working in three practice areas; clinical nutrition, community nutrition and food service management. The national accrediting organization recently examined food service management competencies and identified areas that educational programs need to address in order to meet enhanced standards in future student preparation. Those areas noted that are of significance to the MSU Hospitality Management proposal include: leadership/management skills, basic food preparation and culinary skills, and sustainable practices in food and nutrition services (sustainable, recycling and waste - aeroculture and globalization) [1]. The **Restaurant Management: Farm to Table option** as proposed in the new **MSU Hospitality Management degree** will focus on the management of restaurant businesses utilizing farm to table menus that promote healthy diets.

A farm to table approach to improving well-being in a population is not just the newest business trend, but a sound tactic to improved health for individuals and communities. According to the USDA's Economic Research Service (ERS) in 2013 food consumed away from home in restaurants totaled nearly $706 billion (excluding alcoholic beverages) or 49.6 percent of total food expenditures ($1.42 trillion)[2]. The foodservice industry is nearly equal in size to food retailing and these patterns of nutrition

consumption away from home have become the norm for the American eating experience. Research demonstrates that frequently eating meals away from home is associated with higher rates of obesity, higher body fatness and the less consumption of fruits and vegetables.[3,4,5] Preparing dietetic food service professionals equipped to manage operations with a focus on bringing fresh, locally produced foods into the commercial dining experience in an effective and cost efficient manner, all the while promoting healthy meals, has the potential to address the negative health consequence of eating half of our meals away from home.

Positive collaboration potential with outcomes to generate employment opportunities for recently graduated MSU dietetic professionals:

The proposed collaboration between the MSU Food & Nutrition undergraduate program, MDI, and the new Hospitality Management program is prudent and will foster the development of quality preparation opportunities for dietetic professionals. At MSU, the expertise and infrastructure that a new degree program in Hospitality will bring can enhance the preparation of food and nutrition professionals for practice in various arenas and enrich the implementation of sustainable food systems thinking that offers progressive and cutting edge approaches to dynamic individual and community health challenges. The opportunity for new employment environments that emerging dietetic professional will be prepared and qualified for is multiplied by the proposed collaboration and development of a MSU hospitality program. It would allow dietetic students and interns to access a commercial kitchen for foodservice management practicum experiences, and several new courses in food and culture, experimental foods, food safety and sanitation, event planning, in addition to several additional hospitality courses. The added faculty lines noted in the proposed program would support the development of a Master's Degree program in Dietetics that can accompany the MT AND supported MDI program at MSU. In 2024 individuals seeking to sit for the Registered Dietitian Nutritionist (RDN) credentialing examination must be masters prepared along with verification of completing an accredited supervised practice program (i.e., MDI). The proposed MSU Hospitality degree is definitely a plus in meeting these upcoming career tract requirements that will include advanced training in leadership, management, and organizational skills as well as knowledge and skills related to foods, culinary skills, and foodservice systems.

The **Restaurant Management: Farm to Table option** compliments the preparation of Registered Dietitian Nutritionists for work in food service and healthcare facilities (hospitals, assisted living, and retirement homes) and other institutions such as schools, workplaces, or state institutional settings. The RDN employment outlook is projected to grow 21 percent from 2012 to 2022[6]; the 2013 mean annual wage for RDNs was $56,300 nationally and the mean annual wage for an RDN in Montana was $49,270 annually.[7] Consumer trends related to food consumption show no indicators of change to the American eating away from home experience. A strong area of employment for RDNs is food service management, and the intersection of individual and community health as it relates to a well-functioning, vibrant and renewal food system is a unique approach to create a healthier population. The courses in the Hospitality Management degree specifically related to culinary arts and farm to table sourcing meet dietetic nutritionist performance competencies, and will strengthen the preparation of dietetic professionals for work in emerging and innovative approaches to better health. An employer survey conducted in 2012-13 by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) [1] mentions the need for dietetic professionals to have expertise in strategic planning, developing budgets and business plans, leading initiatives to improve the use of sustainable practices, evaluating marketing

plans, food preparation and culinary skills, and general management and business principles. Again the resources that will be developed through the proposed MSU Hospitality degree program will improve the capacity of MSU and MDI to provide this industry sought after training and expertise for future dietetic professionals.

Montana is a state well positioned to have a profound impact in the arenas of rural economic development, environmental stewardship, and human well-being. MSU has the opportunity to fulfill its highest Land Grant Mission charge in preparing individuals that meet the demand for college educated workers in these industries through a Hospitality Management degree program. MSU- MDI graduates lead the workforce and excel in many employment sectors, as most certainly will be the case with future graduates given the building blocks that enhanced programming and resources provided by a new **MSU Hospitality Management** degree program. Please support the development of this needed program for Montana and the region.

Respectfully submitted,

Montana Academy of Nutrition and Dietetics, Board of Directors
Lynn Paul, Ed.D. RD, LN, President,
Coleen Kaiser, MS, RDN, LN, President Elect
Alicia Burtchett, RDN, LN
Chris Emerson, MS, RDN, LN
Janet Gamble, MS, RDN, LN
Deborah Jones, RDN, LN
Jackie Ludwig, RDN, LN
Camille McGoven, RDN, LN
Colleen Miller, MS, RDN, LN
Tami Waite, RDN, CSR, LN
Kandis Wessel, RDN, LN

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5. Binkley, J.K., Eales, J., & Jekanowski, M. (2000). The relation between dietary change and rising US obesity. *International Journal of Obesity,* 24, 1032-39.

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BUILDING A BETTER COMMUNITY

THE COMMUNITY Café

thehrdc.org

e: hello@

January 7, 2016

The Community Café is a Program of HRDC.

p: 406.587.4225

e: café@thehrdc.org

a: 302 N 7th Avenue
Bozeman, MT 59715

Provost Martha Potvin
Office of the Executive Vice President for Academic Affairs and Provost
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Dear Provost Potvin:

We are writing on behalf the Human Resource Development Council District IX and the Culinary Workforce Program Stakeholders Group to express support for the proposed Bachelor's Degree Program in Hospitality Management and AAS Degree program in Culinary Arts. Our stakeholders group includes representation from the numerous local businesses and organizations including: Bozeman Job Service, Bozeman High School ProStart, Buck's T-4, Community Food Co-op, Free Range Kitchen, Montana Ale Works, Montana State University Dining Services, Open Range, Nova Café, and Xanterra Parks and Resorts.

The purpose of the HRDC Culinary Workforce Development Program is to provide culinary and customer service training using the Community Café's commercial kitchen to connect un/underemployed individuals to gainful employment. We currently offer a basic culinary arts and employment skills curriculum at the Community Café. While many of our stakeholders provide more advanced opportunities for paid work, internships, apprenticeships and employment for our graduates, our clients would benefit from additional training and degree programs in these areas.

The need for qualified culinary professionals is only expected to grow in the local area and the southwest Montana region. In order to meet this industry need, students will require more post-secondary options for advancing their skill level along their career path. This proposed program is a critical and necessary component of that pathway.

Thank you for your time and thoughtful consideration,

Attachment: Stakeholder Signatures

p: 406.587.4486
e: hello@thehrdc.org

a: 32 South Tracy
Bozeman, Montana 59715

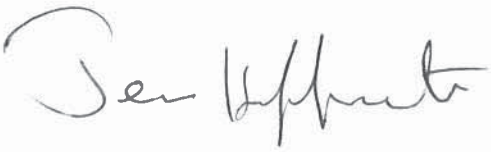
HRDC
BUILDING A BETTER COMMUNITY

Patrick Weaver
Foodservice Director
Community Food Co-op

Martin Lewis

Line Cook
Grand Tree Best Western

Chef/owner
FREE RANGE Kitchen

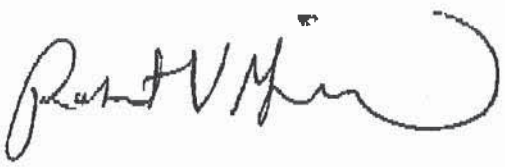


Culinary Instructor, The Community Cafe
Social Enterprise Consultant

SERENA RUNDBERG
Proprietress - Nova & Feed cafe

SEAN LEHMANN - EXECUTIVE CHEF
NOVA & FEED CAFE

McKenzie Ball
Workforce Development Coordinator
Human Resource Development Council



Robert Gifford
Workforce Development VISTA
Community Cafe

Michael Dean, CEC, CCA
Executive Sous Chef
Xanterra, Yellowstone

NORTHERN ARIZONA UNIVERSITY
The W. A. Franke College of Business

School of Hotel and Restaurant Management

Northern Arizona University
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January 7, 2016

Alison Harmon, PhD RD LN
Interim Dean and Professor
College of Education, Health & Human Development
250 Reid Hall
Montana State University
Bozeman, MT 59717-3360

Dear Dr. Alison Harmon:

This letter serves as documentation of our conversation about the Montana State University (MSU) proposal for a Hospitality Management degree. As I shared, I believe MSU is uniquely situated to provide a much-needed academic program in this field. I believe you have done an excellent job of differentiating this program from other programs in your state, as well as providing a bridge for MSU's Gallatin College students.

I have reviewed your Hospitality Management Degree proposal for MSU. I serve as the Executive Director of the School of Hotel & Restaurant Management at Northern Arizona University's W.A. Franke College of Business. As an Associate Professor, I also teach coursework in Hospitality Management.

Specifically, the Restaurant Management: Farm to Table option is clearly addressing current trends in foodservice, by connecting local agricultural production with foodservice establishments. It appears that MSU already has related expertise in this area, which should build synergies with both the Sustainable Food & Bioenergy Systems degree program, and Towne's Harvest Garden. It will be critical that the new faculty hired to support this program not only have quality knowledge of the concept of farm-to-table, but also expertise and experience implementing such programs. Given MSU's status as a high research activity institution, it will be paramount that new faculty (at all levels) are aware of the research productivity and scholarly activity expectations. Since this is a relatively new field of inquiry, there will likely be opportunities to apply for external grants, and conduct empirical research that should be welcomed in peer-reviewed hospitality & tourism journals.

Regarding the Lodge Management & Rural Tourism option, I highly recommend MSU consider using the term "lodging" rather than "lodge". Lodging is the widely accepted term in both industry and academe, and it connotes the breadth and depth of this segment of the hospitality industry. This term would imply that the degree program will prepare future students in all

aspects of lodging, which will make them more marketable in securing entry-level management positions across the country, not just in Montana. It will be essential that the leader and faculty of this program develop relationships with lodging organizations (ranches, B&Bs, as well as worldwide corporations) to recruit your students. I think Big Sky Resorts, Triple Creek Ranch and Rye Creek Lodge in Darby MT, and the Yellowstone Club near Bozeman would make excellent partners. We work with both Triple Creek Ranch and the Yellowstone Club here as well. Since many of MSU's students may desire to remain in the region, and/or may be attracted to unique, independently-own lodging companies and small, quaint properties, you will definitely want to identify these enterprises as well. It would be good to get these industry professionals engaged in guest lectures in courses. Perhaps you can even encourage them to offer student internships during the summer. The single most important competency industry looks for is "knowledge of the industry". Helping your students build their skills, knowledge, and abilities through internship will most certainly enhance their ability to secure quality entry-level management positions upon graduation.

During our discussion, you shared that Bozeman is unique in that it offers tourism activity year-round. This means you can partner with the local hospitality community in providing employment opportunities for the students. Since Flagstaff does not offer vast employment opportunities, we offer all of our summer courses online. This encourages students to get internship experience, while potentially taking courses during the summer terms to stay on track or graduate early. Summer internships are typically 3 month experiences, which will help students apply their academic knowledge to real-world problems.

I agree that the Lodging Management option is the most logical one to incorporate "rural tourism". You might consider using terms like 'heritage tourism" or "cultural tourism" in your marketing materials. These are the current terms used in industry, and are likely to be attractive to potential students. These terms will also open the door to working with Montana's tribal communities, and Native American students. Given Northern Arizona University's partnerships with the Hopi Tribe and Navajo Nation, there will likely be many projects we can partner on to enhance the economic impact of hospitality and tourism on Native land.

Regarding the Sports and Fitness Administration option, I highly recommend you consider including "leisure management" in this title. This terminology will allow you to incorporate spa management, and other related fitness and health tourism businesses. For example, there is a need for well-trained managers who can develop and facilitate resort and hotel youth programs, as well as people who can work in the wellness segment of the hospitality industry. I think including kinesiology coursework in this option is wise, and will again make the graduates from this program more marketable.

The Food Enterprise option is an incredibly unique curricular track that will be attractive to future entrepreneurs who have creative ideas about the food products they would like to develop. A local example here in Flagstaff is Jonathan Netzke who created the Tepa Burger. He may be interested in visiting with you and your students to help inspire the development of new niche products in Montana.

Finally, as I shared, my son is currently at the Trapper Creek Job Corps Center in Darby, MT, which is administered by the US Forest Service. He shared with me that culinary arts and natural resources (similar to recreation & leisure) two of the trades developed on-site. This means that there are potential graduates, who may want to enhance their knowledge, as well as their marketability, who would be great fits for MSU's Gallatin College, or even this newly developed Hospitality Management degree program

I'm grateful that you reached out to me, and it was an honor to review and discuss your curriculum proposal. I look forward to future partnerships with MSU for students and possible research collaborations between NAU and MSU.

Good luck!

Wanda M. Costen

Wanda M. Costen, Ph.D.
Executive Director & Associate Professor
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MONTANA STATE UNIVERSITY
College of
EDUCATION, HEALTH & HUMAN DEVELOPMENT

Department of Health & Human Development

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www.opi.mt.gov/MTeamNutrition

In cooperation with the Montana Office of Public Instruction

Tel 406-994-5641
Fax 406-994-7300
Email kbark@mt.gov

Mountains & Minds

January 4, 2016

Provost Potvin and Faculty Senate
Office of the Provost and Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman, MT 59717-2560

Provost Potvin and MSU Faculty Senate:

The Montana Team Nutrition Program is pleased to provide strong support for the Hospitality Management Program at Montana State University (MSU). This degree program has the potential to provide skilled professionals for school nutrition programs in Montana and surrounding mountain states. It can also provide a network of contracted trainers for school nutrition program staff to utilize to meet their professional development needs in preparing foods from scratch and sourcing local foods, in addition to educating children about food and motivating them to try new foods.

Montana Team Nutrition is the nutrition education and food service training arm for the Office of Public Instruction's School Nutrition Program. Our mission is to support the development of healthy school nutrition (grades PreK-12) environments to motivate students to make smart food choices and develop life-long healthy eating habits. We conduct professional development workshops, provide technical assistance and facilitate funding opportunities for foodservice professionals, educators, administrators, and community leaders on topics such as nutrient-rich menu planning, whole foods cooking and culinary techniques, smart snacks and beverages, nutrition education, farm to school, and school wellness policy best practices.

Schools play a critical role in supporting children and families in accessing healthy food, motivating children to enjoy a variety of foods, and learning about Montana agriculture. Farm to school provides children with the opportunity to learn about and taste regionally grown or sourced Montana foods while supporting local economies. We are excited to see tremendous interest from school leaders, parents, and community partners in initiating or strengthening farm to school across Montana. Recent studies show it is an effective way to educate and excite children to taste vegetables and explore new foods.

We see the need for business minded, skilled culinarians in school nutrition programs to help prepare tasty and nutritious foods that appeal to students' palate. Also, as of this school year, the USDA now requires specific professional standards for school nutrition staff. The Hospitality Degree Program will allow students applying for school nutrition positions to be job ready. Thus we are pleased to support the MSU Hospitality Management Degree Program as it could train future food service directors or staff for Montana schools. While we understand the degree program's focus is on restaurant management, graduates

with this and the farm to table knowledge could seek employment in school nutrition programs. School nutrition programs run on a very tight budget and the manager needs skills to run a fiscally sound operation while at the same time meeting the USDA program's rules and student preferences. Through collaboration with the MSU Hospitality Program and support from Montana Team Nutrition, OPI, and Montana School Nutrition Association, we could increase the training opportunities for school nutrition programs and early childhood/childcare center staff in food preparation and culinary skills. Training could occur in the MSU's commercial kitchen or onsite training that could be facilitated through collaboration between programs.

Another area that MSU's Hospitality pre-service students or graduates can play a role is with nutrition and food education. The Montana Team Nutrition Program has recently established a *Montana Chefs to School Network* which includes a cadre of chefs/trainers to assist schools with nutrition education, food demonstrations, or food service professional development workshops. Additionally, high school family and consumer science classes (formerly home economics) are teaching culinary arts or operating a Pro-Start Program (National Restaurant Association Foundation's education initiative). This growing and very popular program is one that will need trained chefs to mentor students in learning culinary skills and participating in local, state, and national competitions.

I am excited for future potential collaborations with this degree program to meet the training needs or to provide skilled staff for school nutrition programs. We would welcome the opportunity to help facilitate collaboration between MSU and other associations like the Montana School Nutrition Association in helping to connect students and graduates to schools around the state.

Thank you for your thoughtful consideration. The time is right to initiate this degree program as it will help to serve the needs of our communities and carry out our land grant university's mission.

Sincerely,

Katie Bark

Katie Bark, RDN, SFS
Project Director, Montana Team Nutrition Program

MONTANA
MANUFACTURING
EXTENSION CENTER
An affiliate of the NIST Manufacturing Extension Partnership
AN MSU COLLEGE OF ENGINEERING CENTER

December 21, 2015

Provost Martha Potvin
Office of the Executive Vice President for Academic Affairs and Provost
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of MSU's Montana Manufacturing Extension Center. I would like to express support for the proposed Bachelor's Degree Program in Hospitality Management. I am particularly supportive of the Food Enterprise option. We see this program providing support for the Montana food manufacturing industry, and are excited about the prospect of developing expertise at MSU in food product development.

The Montana Manufacturing Extension Center is a statewide manufacturing outreach and assistance center staffed by full-time professionals who have manufacturing, engineering and business expertise. We have a proven record of positive impact for our client firms and the economy.

Recently we have assisted in the development of food manufacturing sector strategy groups in Great Falls and in Bozeman. There are about 10 food manufacturers in each group and they meet regularly to address common issues. Food manufacturing is one of the fastest growing manufacturing sectors in the state and one of their common issues is finding qualified labor. I believe that there is a great opportunity to place Food Enterprise student interns into these companies.

Our recently hired food safety specialist, Claude Smith may also be a mentor for a Food Enterprise student intern interested in HACCP planning and safe food handling in manufacturing.

The degree program will be an excellent complement to the existing workforce development programs in the state.

MMEC would be interested in being part of our curriculum advisory council as well.

Respectfully,

Paddy Fleming

Paddy Fleming
Center Director

LIVINGSTON
FOOD RESOURCE CENTER
FOOD PANTRY • COMMUNITY KITCHEN

December 5, 2015

Provost Martha Potvin
Office of the Executive Vice President for Academic Affairs and Provost
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of the Livingston Food Resource Center, to express my support for the proposed Bachelor's Degree Program in Hospitality Management and AAS Degree program in Culinary Arts.

The mission of the Livingston Food Resource Center is to eliminate hunger in Livingston and Park County through the acquisition and distribution of healthful food to individuals and families in need; play a leadership role in the development of a strong, sustainable local food system; define and address the root causes of hunger in Livingston and Park County; support food related economic development efforts; and, provide training to prepare people for meaningful careers in the food service industry.

Since moving into our new Center, which includes a large, state-of-the-art, commercial kitchen, we have launched a ten-week culinary training program to prepare people for jobs as restaurant and institution cooks. We just completed the second 10-week session and like the first session conducted this past spring, all of our students have been quickly recruited by area restaurants. And, several of the students have expressed a desire to pursue additional training and degree programs in this area and in Hospitality Management.

In addition to providing an educational experience, the Center has a number of internship opportunities for students to gain hands-on experience in large-batch cooking, food processing, baking, and meal preparation. In a state where tourism and hospitality make up the state's second largest industry there is always a high demand for qualified people with these skills to fill professional positions that have career-path potential – the starting salaries might not be the highest, but the need is great and the opportunities are immediate and long term.

This is an important opportunity and when a Hospitality Management and Culinary Arts program is established I will consider providing funds for scholarships, as I have for related programs.

Thank you.

Sincerely,

Michael McCormick
Executive Director

The Livingston Food Pantry of Park County | 202 S. 2nd Street | Livingston, MT 59047
(406) 222-5335 | livingstonfoodpantry@yahoo.com

PENNSTATE

School of Hospitality Management
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Fax: 814-863-4257

Alison Harmon PhD RD LN
Interim Dean & Professor
College of Education, Health & Human Development
Bozeman MT 59717

December 4, 2015

Dr. Harmon:

Thank you for the opportunity to review your proposed curriculum for a BS Degree in Hospitality Management. I am currently as Associate Professor in Hospitality Management at Penn State in addition to Directing our Center for Food Innovation. One of my specialties is product development, and I also have an interest in Farm to School initiatives. Our School of Hospitality Management has a long history—about 75 years, is well-respected in the nation, and currently enrolls more than 800 students. Our School is housed in the College of Health & Human Development.

Generally, a Hospitality Management degree program should prepare students to be leaders who have professional communication skills, and provide opportunities for real-world experiences. Our program also strives to produce graduates with analytical, critical, organizational and strategic thinking skills, as well as significant content knowledge in Hospitality.

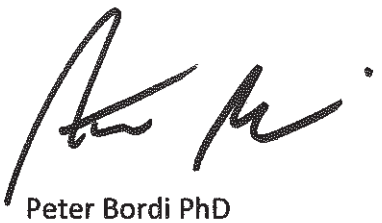
I have reviewed the 4 options of your curriculum plan: Restaurant Management: Farm to Table, Food Enterprise, Sports and Fitness Administration, and Lodge Management & Rural Tourism. Each of these seems to address different aspect of Hospitality Management, providing students with choices that can lead to different career tracks. Penn State's School offers a BS in Hospitality Management and also a Minor in Entrepreneurship and Innovation focusing on entrepreneurship, leadership, and creating new ventures. I can see that each of your plans provides general education and some electives in addition to required courses for the major and for each of the options. You have a good blend of courses that are focused on specific business and management skills in addition to a variety of courses that will give students the content knowledge and skills they need to be successful in hospitality careers. Like our Dietetic Management Option, your curriculum requires a number of food & nutrition focused courses and other sciences like microbiology, and chemistry (in your the Food Enterprise option). I am

impressed with the number and variety of electives you can provide that are supportive of the degree program.

Overall, it appears that you are addressing current and continuing trends in Hospitality Management (ie "farm to table") in addition to offering a curriculum that is unique to the needs of your state. Linking hospitality with agritourism or "rural tourism" is a unique approach for preparing hospitality managers for your region. One trend that is evident in our region is the growth in careers related to event planning and management. You have a course in event planning in the Lodge Management and Rural Tourism option, that you might consider making an elective or required course in the other options too.

After reviewing your curriculum plans I conclude that you have developed a strong and balanced degree program with several unique features. Thank you for the opportunity to read your materials, and best wishes as you move forward in its development. Please let me know if there are other ways that I can be helpful.

Sincerely



Peter Bordi PhD
Associate Professor of Hospitality Management
Director, Center for Food Innovation
124 Mateer Building
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814-863-3579
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MONTANA STATE UNIVERSITY EXTENSION

Flathead County Extension Office

December 4, 2015

Provost Martha Potvin
Office of the Executive Vice President for Academic Affairs and Provost
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing to express support for the proposed Bachelor's Degree Program in Hospitality Management and the AAS Degree program in Culinary Arts. I have been working with a number of groups in western Montana that would benefit from such a program.

Between 2010 and 2013, craft beer production in Montana increased by 49 percent and employment more than doubled from 231 to 486 jobs. In 2012, Montana had 38 brewing establishments and as of September 2015, there are 60 breweries in operation. The Montana Brewers Association expressed that the largest obstacle to business expansion is a lack of skilled employees. Flathead Valley Community College has initiated a Fermentation Science Program to train brewers that began in September 2015. What is still needed is hospitality training for tasting room personnel.

I am very involved with the Kalispell Conventional and Visitors Bureau working with farmers on establishing agritourism venues in the Flathead. I've also been working with lodging owners and their staff. Once more, a challenge is the lack of employees with hospitality training to work in the lodging industry. Tourism is a $3 billion industry in Montana. It seems logical that the land grant university would supply skilled labor for this highly valuable economic driver for the state.

Restaurant owners prefer employees with safe food handling certification. Students graduating from the Hospitality program would have this credential in hand. Wait staff with ServSafe training would ensure the safety of our residents and the millions of people that visit Montana.

For all the above reasons and more I support the Hospitality Program.

Sincerely,

Patricia McGlynn, PhD

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E-mail extension@flathead.mt.gov

MONTANA STATE UNIVERSITY | JAKE JABS College of BUSINESS & ENTREPRENEURSHIP

TO: Dr. Alison Harmon, Interim Dean, College of Education, Health & Human Development

FROM: Susan Dana, Chair, Academic Programs Committee
Jake Jabs College of Business & Entrepreneurship

SUBJECT: Review of Revised Hospitality Management Curricula

DATE: December 4, 2015

The Academic Programs Committee of the Jake Jabs College of Business & Entrepreneurship has reviewed the revised curricula for the proposed degree programs in hospitality management. The committee agrees that the courses listed include appropriate business courses, and all necessary prerequisites for the courses are included in the proposed programs. We welcome hospitality students into the College's courses.

The committee also notes that, should enrollment in the hospitality program result in significantly increased demand for these courses, additional resources would be required to support additional sections.

December 4, 2015

Provost Martha Potvin
Office of the Executive Vice President for Academic Affairs and Provost
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of the Blackstone LaunchPad at MSU, to express my support for the proposed Bachelor's Degree Program in Hospitality Management and AAS Degree program in Culinary Arts. This is a unique proposal that combines food, tourism, entrepreneurship, and will provide economic development opportunities for our students to remain in this beautiful and resourceful state we are fortunate to call home - Montana.

The Montana State University Blackstone LaunchPad (MSU BLP) is a co-curricular program providing entrepreneurial resources for students and alumni interested in and committed to providing opportunities for them to craft a future of their choosing. The MSU BLP staff offers one-on-one ideations sessions, entrepreneur coaching, and venture creation support.

During the past two years of this program MSU BLP staff has had 300+ venture coaching sessions with MSU students and alumni resulting in more than 175 ventures. Of these, 26 have self-identified their industry as either Food & Beverage or Entertainment & Hospitality. At a minimum, one of seven ventures is starting around industries directly related to the proposed Hospitality Management degree. An academic opportunity for these students to receive professional training and learn best practices in their chosen venture would increase the probability of success in moving these ventures forward and provide other students the training needed to consider an entrepreneurial career.

Thank you for the opportunity to provide support to this proposed academic program.

Sincerely,

Les Craig

Director MSU Blackstone LaunchPad

Audrey Wooding

Deputy Director MSU Blackstone LaunchPad

Blackstone LaunchPad

MONTANA STATE UNIVERSITY

2015-R-13

Affirmation of Support for the Proposed Hospitality Management and Culinary Arts Degree Program at Montana State University

Sponsors: Hope Lynn
Lacey Chapman
Wyatt Murdoch
Lauryn Windham

Yes 17 No 1 Abs 0
Date: Nov. 19th, 2015

Vote Necessary: Majority

Intent: To express the support of the Associated Students of Montana State University (ASMSU) for the proposed Hospitality Management and Culinary Arts Degree Program at Montana State University (MSU).

Whereas, tourism contributes an estimated $3.8 billion annually to the Montana economy and supports 48,260 Montana jobs according to the 2014 Institute for Tourism and Recreation Research; and,

Whereas, the Hospitality Management and Culinary Arts Degree Program will train students for existing jobs, future careers, and entrepreneurial opportunities; and,

Whereas, the proposed curriculum links tourism and agriculture, supporting two of the leading industries in Montana, contributing to economic development; and,

Whereas, the Hospitality Management Degree Program would be a nationally unique, interdisciplinary program at MSU that would attract in-state and out-of-state students; and,

Whereas, the hospitality sector in Montana has voiced a need for professionally trained managers and employees.

Therefore, let it be resolved that: ASMSU supports the proposed Hospitality Management and Culinary Arts Degree Program at MSU, and believes it will further the land-grant mission by providing professionally trained hospitality and culinary leaders to the Montana economy.

Let it be further resolved that: MSU should continue to address the faculty and staff needs of the growing student body.

Let it be further resolved that: a copy of this resolution be sent to Dr. Waded Cruzado, MSU President; Dr. Martha Potvin, Executive Vice President for Academic Affairs and Provost; Dr. Kregg Aytes, Dean of the Jake Jabs College of Business and Entrepreneurship; Dr. Alison Harmon, Interim Dean of the College of Education Health & Human Development; Dr. Charles Boyer, Vice President of Agriculture; Robert Hietala, Dean of the Gallatin College; Dr. Deborah Haynes, Department Head for Health & Human Development; Stephanie Gray, Gallatin College Program Manager; Dr. Randy Babbit, Faculty Senate Chair; Dr. Michael Babcock, Faculty Senate Chair-Elect; Levi Birky, ASMSU President; Erin Murdock, MSU Exponent; Gail Schontzler, Bozeman Daily Chronicle,

Let it be further resolved that a copy of this resolution be sent to public comment: Dr. Gregory Gilpin, MSU Faculty in Ag Economics and Economics; Brian Berry, Recruiting Manager and Director of Human Resources at Big Sky Resort; Mike Hope, Owner of R bar; Daryl Schliem, CEO of the Chamber of Commerce; Christina Hoover, MSU student; Steve Erickson, MSU Director of Recreation Sports and Fitness; Roth Jordan, Owner of Montana Ale Works; Sean Faris, General Manager of Montana Ale Works; Tom Stump, MSU Director of Auxiliary Services; Todd Jutila, MSU Food Service Manager; Mike Dean, Executive Sous Chef with Xanterra Parks and Resorts in Yellowstone Park.

UNITED STATES SENATE
WASHINGTON, D.C. 20510

JON TESTER
MONTANA

October 22, 2015

Martha Potvin
PO Box 172560
Montana State University
Bozeman, MT 59717-2560

Dear Martha,

Thank you for taking time out of your busy schedule to meet with me in Bozeman. I appreciate your commitment to Montana State University and your role in ensuring it remains one of our top universities.

I am encouraged by the prospect of a new four-year hospitality degree to help strengthen our tourism industry. Increasing graduate school enrollment is another good idea that will help keep Montana's best and brightest in Montana..

Please continue to let me know how I can help.

Sincerely,

312 East Main Street

Bozeman, MT 59715

406.587.3973

www.thenovacafe.com

Provost Potvin
Vice President for Academic Affairs and Provost
Montana State University
PO Box 172560
Bozeman, MT 59717-2560

Vice President and Provost Potvin:

I write this letter in support of the Bachelor's Degree Program in Hospitality Management and Culinary Arts AAS degrees. I have been a restaurant owner in Bozeman, MT for 10 years and have struggled at various times to find skilled kitchen staff and people really interested in the restaurant world.

We currently employ close to 50 employees both front and back of house, including management. We have more than doubled our staff over these past 10 years and only expect to get busier, therefore, hiring more employees.

We are experiencing here in Bozeman what I would call a hiring crisis for those of us in the food service industry. We have gone to relatively desperate measures to hire decent staff and folks interested in the work that we do.

I think that offering Culinary type degrees will help draw the folks needed to help Bozeman with its growing demand of hospitality personnel. This is a growing field and in our cafes, a growing career path and our institutions should support this growth.

With Bozeman becoming an ever more desirable place to live, work and recreate, the state needs to recognize the resources necessary to sustain the amount of new visitors and residence in the Bozeman area. Our tourism numbers are huge and vital to our businesses here in Bozeman. Gallatin County is the fastest growing county in the state.

We strongly support these Programs and sincerely hope that you will consider same.

All my best,

Serena Rundberg
Owner

BIG SKY RESORT
P.O. Box 160001
Big Sky, Montana
59716

(406) 995-5000
Fax (406) 995-5001

National Reservations
(800) 548-4486

Group/Convention Sales
(800) 548-4487
Fax (406) 995-5003

www.bigskyresort.com

October 13, 2015

Provost Potvin
Office of the Provost and President for Academic Affairs
Montana State University
P.O. Box 172560
Bozeman, MT 59717-2560

Provost Potvin,

My name is Barb Rooney and I am the Senior Vice President of Lodging for Boyne Resorts which oversees lodging and spa at Big Sky Resort, located 45 miles south of Bozeman. Big Sky Resort strongly supports the offering of an Associate of Applied Science in Culinary Arts at Gallatin College and the Bachelors of Hospitality Management and Montana State University along with development in spa and health club management. Big Sky has over 1,500 team members in the hospitality industry at its peak time every winter. Having a culinary arts program and a 4 year hospitality degree will help our business by providing a better skilled employee who can develop into meaningful careers. The opportunity to collaborate with Gallatin College and Montana State University to teach the correct skills and develop career pathways into culinary arts, hospitality management or spa and health club management will be valuable for local business and students. We have the jobs for your graduates.

The University of Montana's Institute for Tourism and Recreation Research released a report stating that Gallatin County led the state in tourism spending, which was a 19% increase. Park County ranked 6th in the state in tourism spending, which made the Yellowstone Country the number one tourism region in the state. The tourism economy saw double digit growth in our area and is expected to achieve similar growth in the future.

While the hospitality industry does offer entry level roles, those who are prepared with a 4 year degree have the critical thinking and organizational skills to move forward in career positions. There is a gap in the workforce for that segment currently in Montana and our company must turn to other states who have prepared students for management and leadership positions in hospitality. This is a trend we wish to see shift so that we can hire and promote more Montana graduates.

I look forward to continued collaboration with Montana State University as we both strive to offer new avenues for career readiness, particularly in the area of culinary arts and hospitality.

Sincerely,

B Rooney

Barb Rooney
Big Sky Resort

Provost Potvin
Vice President for Academic Affairs and Provost
Montana State University
Bozeman, Mt.

Dear Provost Potvin,

I'm writing you today in support of the proposed degree programs in Hospitality Management, and Culinary Arts, at MSU Bozeman.

I am a proud graduate of The Culinary Institute of America (Hyde Park, NY), and have enjoyed a long career in the fields of culinary arts/hospitality/wine – many doors & opportunities would not have been available to me without the degree received from such an accredited school and program. It has long been my sense that Southwest Montana, and Gallatin County in particular, is in need of programs/degree opportunities for current & future students seeking the same.

The reality is – a unique and extraordinary opportunity to develop world class programs in the fields of Hospitality Management, and the Culinary Arts at MSU Bozeman is attainable. Our location is central to many of the most attended tourist attractions in Montana, as well as potential in drawing students from Idaho, The Dakota's and beyond. An argument may be made re similar programs available in-state (Montana); they are good programs, however we have the opportunity to raise the level of quality & depth of instruction needed to prepare our students – our future Chef's, Hospitality Managers, and Sommeliers, able to compete in the national & international workforce.

I have worked in many food/hospitality related businesses – always, the resume hitting my desk showing dedication, discipline, and quality of program(s) from degree attained rises to the top. These attributes are part of the soul and structure of the applicant – once hired, these employees benefit not only the establishment but the community at large. An opportunity to develop those seeking classic and academic structure to the vocation is an amazing thing, one not to be taken lightly or without consideration. I strongly encourage you, and your peers, to embrace the potential of developing these program.

Needless to say, this does not come without cost – infrastructure, quality of curriculum and instructors, placement services, etc.. In order to move toward fruition, I would encourage augmentation of costs through funding available via State and national educational resources. Corporate sponsorship in either funds for infrastructure/programs or scholarship(s) – All-Clad Cookware, Cuisinart, Sysco Food Systems, The Wine Spectator, etc., - all have a demonstrated track record in support of hospitality & culinary arts programs. Additionally, most programs of this nature require externship; our community leaders in the culinary & hospitality fields will be willing partners, be it Yellowstone Nat'l Park, Big Sky resorts, local restaurants and affiliated businesses. We welcome, indeed need, these students and this resource.

Kind regards,
Lisa Feltis-German CS, CSW
Latitud Sur Import & Distribution

September 21, 2015

President Waded Cruzado
211 Montana Hall
Montana State University
Bozeman, MT 59717-2420

Dear President Cruzado,

On behalf of the hospitality industry in Montana, we want to thank you for your leadership in creating a Hospitality and Management program at MSU-Bozeman. The Montana Restaurant Association and Montana Tavern Association stand ready to assist in any way! At our recent meeting, we were asked to provide some data about the two industries. I am pleased to present that data and I think you will agree that they represent a huge economic driver in Montana.

The direct employment for eating and drinking establishments is 37,200 people. An additional 16,000 people are employed indirectly in industries that support the food and drinking establishments.

There are 2,641 eating and drinking establishments in Montana registering almost $1.6 billion in sales. The indirect benefit to Montana's economy is another $1.07 billion in ancillary business including agriculture, construction, finance, insurance, real estate, food service companies, beer and wine distributors and many other vendors and suppliers.

On a national level, students that graduate from your program would be entering an industry with over 1 million locations with $709 billion in sales and employing over 14 million people.

On behalf of our members, we are very excited about your plan and we know that graduates would find very rewarding careers in an industry that is crying out for talented young people to join it.

Please let us know if we can be of further assistance!

Sincerely,

Brad Griffin	Mike Hope	Kurt Schull	Jim Bos
MTRA	MTA/Rocking R Bar	The Bay	Bistecca at the Granary

Sola
café | market

September 16, 2015

Provost Potvin
Vice President for Academic Affairs and Provost
Montana State University
PO Box 172560
Bozeman, MT 59717-2560

Vice President and Provost Potvin:

As the owner of three restaurants as well as a production bakery in Bozeman, we employ more than fifty full and part time employees. As our business has grown, it has become more and more of a challenge to recruit management-level talent from this region. We seek leaders and talented chefs who are not only educated to run departments or entire operations but who have also made a clear choice to pursue a career in the hospitality and culinary realms.

Gallatin County is the fastest growing county in the state and boasts the highest tourism revenue. As our region continues to grow, the hospitality and service sectors are bound to flourish in this thriving economy. We believe it is in the interest of the State of Montana to provide educational resources to those who choose careers in hospitality and culinary arts.

By providing avenues of specialized education, Montana State University will contribute to the strength of both the business sector and the individuals who wish to pursue a career path in one of these domains. The earning potential of educated hospitality professionals is easily double or triple that of entry-level, minimum wage workers.

Degrees and programs that specialize in these industries would best prepare the graduates with relevant experience and information. Of course, a hospitality and/or culinary program could eventually offer courses to students in existing, well-established University programs such as Sustainable Food Systems, Finance, Management, and Manufacturing. Once again, better preparing these students to join the work force in career-oriented roles.

The leadership team of Sola Cafe, Sola Jabs Hall, Red Tractor Pizza and Sola's bakery are in full support of a MSU Bachelor's Degree Program in Hospitality Management as well as the Culinary Arts AAS degree. To this end, in addition to hiring program graduates, we would be delighted to support an internship as part of their education.

We look forward to the day we have many MSU graduates pursuing meaningful careers within our organization.

~Tiffany Lach, founder, owner
Sola Cafe | Market Sola Jabs Hall
Red Tractor Pizza Sola's Bakery

Bozeman, Montana
406-922-SOLA
solacafe.com redtractorpizza.com

MONTANA
STATE UNIVERSITY
BILLINGS
Access & Excellence

Department of Health
and Human Performance

MEMORANDUM OF UNDERSTANDING

DATE: March 3, 2015
TO: Provost Potvin; Office of the Provost and Vice President for Academic Affairs; Montana State University
RE: MSU-Bozeman Hospitality Management Degree Proposal

The purpose of this MOU is to clarify the intended niche of the proposed Hospitality Management B.S. degree program in comparison to the existing niche of the Outdoor Adventure Leadership BS degree program at MSU Billings such that we avoid unnecessary duplication of academic programs.

The Outdoor Adventure Leadership BS degree program offered at MSU Billings has been in existence since 2008 and currently enrolls 35 students. The program involves 2 full time faculty with expertise in backcountry travel, snow and ice, winter travel, rock climbing, navigation, LNT, leadership, program planning, research methods, and techniques of teaching and guiding. The program includes coursework and training intended to prepare students to work for specialty outdoor training schools, outdoor environmental education centers, municipal recreation departments, land management agencies, military programs, and commercial guiding operations.

The proposed Hospitality Management B.S. degree program for Montana State University would offer degree options in Restaurant Management: Farm to Table; Lodge Management and Rural Tourism; Value-Added Food Enterprise; and Sports and Recreation Administration. The proposed program would offer coursework and training in the area of hospitality management (foodservice, lodging facilities, gym/fitness and health facilities, and food manufacturing plants), and intends to prepare students to become managers of restaurants or other foodservices; hotels, lodges, or guest ranches; recreation facilities with an emphasis on indoor sports and fitness; and food entrepreneurs.

A table comparing the curricula of both programs revealed an overlap in 3 required courses (*Foundations of Exercise Science, Recreation Management/Outdoor Recreation in the US, and Managing Healthcare Organizations/Organization and Administration in Health Enhancement*). Generally, the training provided by these two programs is likely to result in graduates with markedly different skill sets. MSU Hospitality Management students who are interested in gaining outdoor adventure leadership skills will be encouraged to consider attending MSU Billings for a semester or academic year to take advantage of the diversity of courses offered.

Prepared Jointly by:

Alison Harmon; Associate Professor, Food & Nutrition; Sustainable Food Systems
Health and Human Development, MSU

Lynne Fitzgerald; Assistant Professor, OAL Program Director, Health and Human Performance, MSUB

Kathe Gabel; Professor, Chair, Health and Human Performance, MSUB

1500 University Drive | Billings, Montana 59101-0245 | Office: 406-657-2370| Fax: 406-657-2399

TAKE A MOMENT...

CROWNE PLAZA
HOTELS & RESORTS

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of myself and the Crowne Plaza Billings to express our enthusiastic support for the proposed Culinary Arts AAS degree program at Gallatin College and the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management.

The Crowne Plaza Billings is located in historic downtown Billings and serves as a distinctive landmark for the area. Our property consists of 289 guest rooms, a full service restaurant and bar, a Starbucks franchise, and meeting space to accommodate a wide range of social or business needs. Our extensive combination of hospitality services offers ample opportunities for graduates of hospitality management.

We are excited by the possibility of having an academic program in Montana that will support the hospitality industry. Hotel management positions are difficult to fill without a qualified pool of applicants. We would enjoy working with student interns from this program who are motivated to pursue careers in hotel management or hospitality.

Tourism and hosting visitors is important for Montana and important for our communities and local economies, and this program will contribute to the continued development of opportunities.

Managing one of the largest full service convention hotels in Montana, I feel that I could make a valuable contribution by serving on an industry advisory board for the proposed degree programs in culinary arts and hospitality management. Please consider me for this role and feel free to contact me concerning any advisory needs.

The Crowne Plaza Billings is looking forward to supporting these hospitality-oriented degree programs in every possible way, and sincerely thanks you for contributing the success of the hospitality industry in Montana.

LaRell Baldwin

LaRell Baldwin
General Manager

CROWNE PLAZA BILLINGS
T. 800-588-7666 F. 406-252-7029 W. www.crowneplaza.com/billings
A. 27 North 27th Street, Billings, MT 59101 USA

Bozeman Area Chamber of Commerce Montana

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman MT 59717-2560

January 29, 2015

Provost Potvin:

I am writing to support the development of a Culinary Arts AAS degree program at Gallatin College and a Hospitality Management degree program at MSU. I express support on behalf of myself as President and CEO of the Bozeman Area Chamber of Commerce, the Bozeman Convention and Visitors Bureau, and the Bozeman Tourism Improvement District.

Montana, and particularly the Gallatin Valley has needed these program for some time. Gallatin Valley is the most visited region of Montana—leading the state in tourism spending ($667 Million in 2013), which supports 6,500 local jobs. There is a significant need for academically and professionally trained in the hospitality industry all over Montana, but particularly here in the Bozeman area.

Earlier this year the Bozeman Chamber of Commerce hosted a focus group with local leaders in the hospitality industry. There is strong local support for creating these degree programs at MSU and the Gallatin College. Hoteliers and restaurateurs alike expressed the need for a qualified and motivated work force, as even well-paying management positions can be difficult to fill. Several chamber members also expressed interest in helping developing student internships and training programs.

Creating these programs at MSU would support the growth and development of a hospitality industry that has tremendous potential to contribute to economic growth in this state.

Sincerely,

Daryl W. Schliem
President/CEO Bozeman Area Chamber of Commerce
Executive Director Bozeman Convention & Visitors Bureau
Executive Director Bozeman Tourism Business Improvement District

Bozeman Area Chamber of Commerce
2000 Commerce Way • Bozeman, MT 59715
406-586-5421 • 406-586-8286 (fax)
www.bozemanchamber.com • info@bozemanchamber.com

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman, MT, 59717-2560

12.12.2014

Provost Potvin:

I am writing on behalf of myself and the Comfort Suites Bozeman to express support for the proposed Culinary Arts AAS degree program at Gallatin College and the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management.

The Comfort Suites Bozeman is an all-suite hotel focusing on meeting the needs of individual business travelers. Our hotel caters to the independent business traveler by offering spacious guest suites which include fridge, microwave, complimentary high speed internet, and over-sized work space. Hotel amenities include complimentary hot breakfast, on-site sundries shop, swimming pool, spa, exercise facility, guest laundry and 24 hour business center. We have been open since July of 2013, and greatly appreciate the opportunity to contribute to and participate in the success of the Bozeman community.

We are excited by the possibility of having an academic program in Montana that will support the hospitality industry. Hotel management positions are difficult to fill without a qualified pool of applicants. We would enjoy working with student interns who are motivated to pursue careers in hotel management or hospitality.

Tourism and hosting visitors is important for Montana and important for our communities and local economies. This program will contribute to the continued development of opportunities.

If I can be of use by serving on an Industry Advisory Board for the program, or in any other way, please do not hesitate to contact me.

Thank you for your time.

Sincerely,

Benno Garwood
General Manager | **Comfort Suites Bozeman**
2515 Catamount, Bozeman, MT, 59718 |

2515 Catamount
Bozeman, Montana 59718
P 406.587.0800 ▪ F 406.587.0802

benno.garwood@ComfortSuitesBozeman.com |
p: 406.587.0800 | *f:* 406.587.0802

FROM THE DESK OF

DIRK S. ADAMS

Please cc: Terry Leist
Tom Stump
Bob Hietala

December 18, 2014

President Waded Cruzado
Montana State University
P.O. Box 172420
Bozeman, MT 59717-2420

Dear President Cruzado:

I want to thank you for the opportunity to sell local beef to Montana State University Bozeman. If we meet your specifications, I expect that in 2015 the Lazy SR Ranch could sell MSU about 30,000 pounds of Black Angus beef, all graded choice, aged 21 days, and from cows under two years of age raised naturally just over the Bridger Mountains from you. The cattle are grain finished at a feedlot in Hobson.

I also want to thank you for purchasing our turkeys and ham for various holiday events the last couple of years.

MSU's support of local agriculture means much and I have frequently spoken at events of your commitment.

On another note, as long as I am writing, I wanted to share with you my view that Montana needs butchers. The ability to expertly cut meat is one of the keys to expanding the sale of beef in Montana and expanding our value-added protein products. There is a real shortage of butchers and one cannot get butchers out of Craig's List. As you think about education topics for the two year colleges under your jurisdiction I hope you will keep this need in mind. My estimate is that right now we could use 40 butchers in Montana.

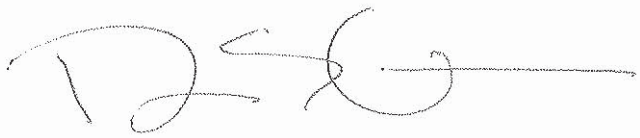
Lastly, I wanted you to know that my wife, Miki Gissell Adams, has spent the last three years getting the only license in Montana to

729 SHIELDS RIVER ROAD WILSALL, MONTANA 59086 406-578-2330 DIRKADAMS@MAC.COM

process poultry for others. She does business under the name Montana Natural Poultry. Her plant, which can do about 50 birds a day, is located in Wilsall and provides local jobs at a good wage. She has accomplished all this without any state or federal assistance, with intelligence and good humor and much diligence. I suspect that she is the only female leader in Montana's meat processing industry.

Thank you again.

Sincerely yours,



Dirk S. Adams
Lazy SR Ranch
Wilsall, Montana

VOICES OF
MONTANA TOURISM
JOBS. COMMUNITY. ECONOMY.

Dec. 1, 2014

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of myself and Voices for Montana Tourism in support of the proposed Culinary Arts AAS degree program at Gallatin College and the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management.

Voices of Montana Tourism serves as a united voice for Montana's tourism stakeholders. We seek to educate, communicate, and shape perceptions of tourism in Montana among elected leaders, policy influencers, and the general public.

The proposed program seeks to unite two of Montana's most important industries: Tourism and Agriculture, which would really serve to move Montana's economy forward for the benefit of citizens, communities and our visitors.

The importance of the tourism industry in Montana is often underappreciated. In 2013, 11 million visitors spent $3.62 billion in our state, directly supporting nearly 34,000 jobs, and generating $236 million in state and local taxes. In fact, tourism lowered taxes in each Montana household by $550, an increase of 9% from 2012. If Montana measured the economic impact of the $440 million spent by our foreign visitors alone last year as a service export, then tourism would be Montana's #2 export, second only to overseas bulk grain exports last year.

An academic program in hospitality would support this growing industry, and better prepare our hospitality workforce for our ever-growing, entrepreneurial industry.

The professional accreditation that accompanies an academic degree from such an esteemed institution as MSU would immeasurably advance the reputation and relevance of Montana's multi-billion dollar tourism industry.

I look forward to the advancement of this program initiative and any opportunity our organization or I might have to assist in its progress.

Sincerely,

Mike Garcia
Director, Voices of MT Tourism
mike@voicesoftourism.com

MEET OUR COMMITTEE MEMBERS

BIG SKY

Mike Scholz (co-chair)
Owner,
Bucks T4 Investments, LLC
PO Box 160279
Big Sky, MT 59716
phone: 406-539-1882
mikeinbigsky@gmail.com

BILLINGS

Steve Wahrlich
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Brad Anderson
Anderson Management Group
Montana Restaurant Association
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brada@andersonmgt.com

Alex Tyson
Executive Director,
Billings CVB and
Billings Tourism Business Improvement District
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BOZEMAN

Robin Hoover
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Yellowstone Country
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Jeff Welch
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Matt Sease
Treasurer,
MT Lodging & Hospitality Assn.
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bozemangm@yahoo.com

BUTTE

Mike Johnson
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mike@showmemt.com

Paula Ruark
President,
MT Lodging & Hospitality Assn.
and
Director of Sales & Marketing,
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paular@townpump.com

GREAT FALLS

Johna Wilcox
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HELENA

Stuart Doggett
Executive Director,
MT Lodging & Hospitality Assn.
PO Box 1272
Helena, MT 59624
phone: 406-449-8408
stuart@montana.com

MILES CITY

John Laney
Executive Director,
Miles City Chamber of Commerce
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Miles City, MT 59301
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milescitychamber@milescitychamber.com

MISSOULA

Racene Friede (co-chair)
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Barb Neilan
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WHITEFISH

Dylan Boyle
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P.O. Box 4232
Whitefish, MT 59937
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STAFF

Mike Garcia
Director,
Voices of Montana Tourism
P.O. Box 1272
Helena, MT 59601
phone: 406-431-7814
mike@voicesoftourism.com

MEG O'LEARY
DIRECTOR

MONTANA
DEPARTMENT OF COMMERCE

DIRECTOR'S OFFICE

STEVE BULLOCK
GOVERNOR

November 21, 2014

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

On behalf of the Montana Department of Commerce, please allow this letter to express my whole-hearted support for the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management and a proposed Culinary Arts AAS degree.

These programs will provide new opportunities for students, training them for careers in a growing and exciting Montana industry. Currently there is no program that provides academic training in hospitality in our state.

The program clearly seeks to link two leading Montana industries: Tourism and Agriculture—resulting in a synergy that will fuel continued economic growth in our state. The emphasis on sustainability will be attractive to Montana students as well as out-of-state and international students. Students need to understand how to provide effective hospitality for the evolving tourist demographic, in addition to understanding the limitations on tourism in a large rural state where transportation can be challenging. Viewing the state's tourism industry as a system with many interacting and integrated parts is essential.

Experiential components of the curriculum will ensure that students are well-prepared for careers in Montana's hospitality industry and these students may be more inclined to remain in-state to pursue their careers after college.

The Montana Department of Commerce strongly supports the development of these curricula, and would like to be represented on an Industry Stakeholder Advisory Board for Hospitality Management. Thank you for your time, and please let me know if I can be of further assistance.

Sincerely,

Meg O'Leary, Director
Department of Commerce

http://commerce.mt.gov
301 S. PARK AVE. | PO BOX 200501 | HELENA, MT 59620-0501 | P: (406) 841-2700 | F: (406) 841-2701 | TDD: (406) 841-2702
commerce@mt.gov

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman MT 59717-2560

11.3.14

Provost Potvin:

I am writing on behalf of the National Center for Appropriate Technology (NCAT), headquartered in Butte MT, to express my support for the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management at MSU. The program has the potential to create much-needed support for the development of Montana's food system by building expertise in farm to table sourcing, agritourism, and general food science in our state.

The *Montana Healthy Food and Communities Initiative* at NCAT fosters robust regionally-based food systems and healthy living in Montana communities. Through educational activities, research and advocacy, and strong public and private partnerships, we seek to create lasting improvements in the way Montanans grow, buy, and think about food. We are interested in supporting this proposal as it aligns with our goal of improving Montanans' access to healthy, local food by connecting food producers and distributors with local food markets, especially institutions and retail establishments.

The National Center for Appropriate Technology currently has projects related to the proposed Hospitality Management degree options and could support the development of this curriculum with training and internship opportunities for students.

It is encouraging that this new degree program could help to build a professional workforce for the food manufacturing industry, and for tourism related to food and agriculture.

Thank you for considering this important proposal.

Kindly,

Nancy Moore

National Center for Appropriate Technology (NCAT)
Montana Healthy Food and Communities Initiative Director
nancym@ncat.org

MONTANA FARMERS UNION

300 RIVER DRIVE NORTH
PO BOX 2447
GREAT FALLS, MT 59403
406-452-6406

November 5, 2014

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of the Montana Farmers to express my support for the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management. In addition to providing new opportunities for students, this program has the potential to greatly benefit Montana's rural landscape and local economies.

Montana Farmers Union is very interested in using value added agriculture to support our regional economy, and has been advocating for university expertise in food science for many years. On November 20-21st we are collaborating with the Mission Mountain Food Enterprise Center to bring together grain producers and processors at a conference focused on growing a regional grain economy.

Montana Farmers Union is a statewide grassroots organization working for family farmers, ranchers and rural communities through education and legislative action. The mission and vision of the proposed degree program in Hospitality Management are well aligned with our organizational goals. Linking tourism with agriculture and rural communities is a great way to educate visitors about agriculture while also supporting growers and local economies.

Montana Farmers Union strongly supports the development of this curriculum, and may be able to support the program with education and training opportunities and potentially internships for students.

Sincerely,

Alan Merrill
President

ROOTCELLARFOODS.NET | BOZEMAN, MONTANA 59771

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman MT 59717-2560

11.3.14

Provost Potvin:

We are writing on behalf of Root Cellar Foods to express our support for the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management. Some of the goals of the program align well with the purpose and mission of our business.

Root Cellar Foods is a local manufacturing small business that processes local vegetables into ready to eat produce for institutions, restaurants and grocery stores. We offer a wide array of produce to our customers and process them in almost any way that fulfills their recipe needs while strengthening demand of local agriculture. We are one of few local processors who seek to connect farms to institutions in this region.

The Value-Added Food Enterprise degree option is of particular interest to Root Cellar Foods. As a business in the Gallatin Valley, we would like to collaborate with MSU to develop meaningful learning experiences for students in this major-- including field trips and tours, internships, and potentially apprenticeships for graduates. Additionally, there may be opportunities for collaborative research projects.

Root Cellar Foods strongly supports the development of this curriculum, and would also be interested in serving on an Industry Stakeholder Advisory Board for Hospitality Management.

Sincerely,

Dean Williamson, Owner

Christina Waller, Owner

Bozeman Public Schools
404 West Main, P.O. Box 520
Bozeman, MT 59771-0520
www.bsd7.org

Robert J. Watson, Ed.D.
Superintendent
Phone: (406) 522-6001
Fax: (406) 522-6065
robert.watson@bsd7.org

Provost Potvin
Office of the Provost and President for Academic Affairs
Montana State University
P.O. Box 172560
Bozeman, MT 59717-2560

Provost Potvin,

Bozeman School District #7 supports the potential offering of an Associate of Applied Science in Culinary Arts at Gallatin College and the Bachelors of Hospitality Management and Montana State University. Our high school has been offering a culinary arts program utilizing the ProStart® curriculum for the past 3 years. ProStart® is a nationally recognized culinary arts curriculum. With support from industry members, educators, the National Restaurant Association Educational Foundation (NRAEF) and state restaurant association partners, ProStart® reaches more than 95,000 high school students across the country. From culinary techniques to management skills, ProStart's industry-driven curriculum provides real-life experience opportunities and builds practical skills for our students.

The opportunity to collaborate with Gallatin College and Montana State University to align curriculum, streamline career pathways and potentially offer dual enrollment opportunities would be beneficial for our students and for our industry partners. As one of the fastest growing electives in our school, the popularity of our culinary program has been noteworthy. We currently have more than 100 students enrolled in our culinary arts program at Bozeman High School this semester.

Offering our students a chance to study what they enjoy by providing local access to post secondary education is a mission we all share. The additional potential of students continuing into the MSU Hospitality Management Bachelor's degree program is exciting. In a recent survey of our high school students we found a high level of interest in careers related to the hospitality industry. Considering the rapid growth of this industry in our community, it was no surprise that our students would be interested in related career opportunities.

We look forward to continued collaboration with Montana State University as we both strive to offer new avenues for college and career readiness for all our students.

Sincerely,

Rob Watson
Superintendent
Bozeman School District

Lake County Community Development Corporation
Mission Mtn. Food Enterprise Center
LCCDC

October 29, 2014

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of Mission Mountain Food Enterprise Center (MMFEC), part of the Lake County Community Development Corporation, to express my support for the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management. The program has the potential to help support and grow the food manufacturing industry in Montana, stimulating economic growth and new job opportunities.

The purpose of the Mission Mountain Food Enterprise Center is to provide resources and technical expertise to developing food and agricultural enterprises through a USDA and FDA regulated shared use food processing facility. Our center is one of the four legislatively designated Montana Food and Agriculture Development Centers. Our clients range from small start-up food businesses to established Food HUB cooperatives owned by agricultural producers.

Currently, Montana does not have real academic or technical expertise in food science. At Mission Mountain Food Enterprise Center we rely on food science resources for Washington State Cooperative Extension and the Oregon Food Innovation Center. For a cost they provide food science technical services such as process control authority and food product development. Educational programs such as HACCP certification and process control authority training for acidified food processors are also provided under contract.

Since the inception of Mission Mountain Food Enterprise Center in 2000 we have been challenged to meet the needs of food manufacturers in Montana who are seeking food science expertise. The out of state resources are costly and many small enterprises cannot afford the contractual rates. The regulatory requirements of the upcoming Food Safety Modernization Act (FSMA) will increase the need for education in food safety planning, HACCP and process control authority. The Montana Food and Agriculture Development Center Program is poised to assist in the delivery of training and resources but will need the support of a food specialist who can provide certified trainings. Food businesses will need a workforce trained and certified in numerous aspects food safety to uphold the FSMA mandate for food safety planning and implementation.

407 Main Street SW Ronan, MT 59864
Phone: 406.676.5901 Fax: 406.676.5902
lakecountycdc.org

Mission Mountain Food Enterprise Center is in a position to support the development of this degree program with training and internship opportunities for students. There are job opportunities for graduates with existing Montana food manufacturing firms. Other potential partners include the MT Manufacturing Extension Center and the Food and Agriculture Development Centers.

It is encouraging how this new degree program could help to build a competent workforce for the food manufacturing industry. I would be happy to provide assistance and participate on an Industry Stakeholder Advisory Board for Hospitality Management if needed.

Thank you for your consideration and your support for this exciting new degree program.

Jan Tusick- Director
Mission Mountain Food Enterprise Center

Steve Bullock
Governor

MONTANA
Department of
AGRICULTURE
302 N Roberts, PO Box 200201
Helena, Montana 59620-0201

Ron de Yong
Director

406.444.3144 • Fax: 406.444.5409 • agr@mt.gov • www.agr.mt.gov

October 16, 2014

Provost Potvin
Office of the Provost and
Vice President for Academic Affairs
Montana State University
PO Box 172560
Bozeman MT 59717-2560

Provost Potvin:

I am writing on behalf of the MT Department of Agriculture to express my support for the proposed interdisciplinary Bachelor's Degree Program in Hospitality Management. In addition to providing new opportunities for students, this program has the potential to greatly benefit Montana's rural landscape and local economies.

I am particularly supportive of the degree option in Value-Added Food Enterprise. This is a program and area of expertise that Montana has needed for more than two decades—a broad coalition of stakeholders has been advocating for such a program. The number of jobs in food manufacturing is growing, so now is an excellent time to begin training that workforce and lending technical expertise to Montana's food manufacturing enterprises. Supporting the food manufacturing sector also supports our agricultural industry and helps to keep food processing dollars in the state. There are many opportunities to add value to the diversity of raw commodities we produce in Montana, such that we could produce and process more of what we consume, and export higher value goods.

I also appreciate the emphasis on rural tourism/agritourism. There are many ways to link tourism activities with agriculture, and no better place to do it than on the farms and ranches of Montana.

Interdisciplinary coursework seems to be what is needed to address current societal problems. This newly proposed degree program seems well-aligned with the current interdisciplinary program in Sustainable Food & Bioenergy Systems. I believe it will be attractive to students interested in linking hospitality with agriculture and sustainability. Experiential components of the curriculum will ensure that students are well-prepared for careers in Montana, and will be more likely to stay in Montana using the networks they will have developed during internships.

The Montana Department of Agriculture strongly supports the development of this curriculum, and would like to be represented on an Industry Stakeholder Advisory Board for Hospitality Management.

Ron de Yong
Director

BIG SKY
MONTANA

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59716

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www.boyne.com

October 14, 2014

Provost Potvin
Office of the Provost and President for Academic Affairs
Montana State University
P.O. Box 172560
Bozeman, MT 59717-2560

Provost Potvin,

My Name is Dax Schieffer and I'm the Human Resources Director for Big Sky Resort, located 45 miles south of Bozeman. I have worked with Gallatin College on the Culinary Arts project and look forward to continued collaboration. Big Sky Resort strongly supports the potential offering of an Associate of Applied Science in Culinary Arts at Gallatin College and the Bachelors of Hospitality Management and Montana State University. Big Sky has over 1,500 team members in the hospitality industry at its peak time every winter. Of that amount, over 400 are in food and beverage with over 150 in culinary. Having a culinary arts program will help our business by providing a better skilled employee, we have the jobs that can become careers. The opportunity to collaborate with Gallatin College and Montana State University to teach the correct skills and develop career pathways into culinary arts or hospitality management will be valuable for local business and students.

The University of Montana's Institute for Tourism and Recreation Research released a report stating that Gallatin County led the state in tourism spending, which was a 19% increase. Park County ranked 6th in the state in tourism spending, which made the Yellowstone Country the number one tourism region in the state. Of this tourism spending restaurant and bar expenditures make up 20% of the total. This doesn't even take into account the culinary and hospitality needs in institutions like hospitals and schools.

Offering our students a chance to study what they enjoy while maintaining the cost by providing local access is a goal we all share. The additional potential of students continuing on into the MSU Hospitality Management Bachelor's degree program is exciting for industry.

I look forward to continued collaboration with Montana State University as we both strive to offer new avenues for career readiness, particularly in the area of culinary arts and hospitality.

Sincerely,

Dax Schieffer
Big Sky Resort

MONTANA
STATE UNIVERSITY

October 13, 2014

RE: Open Letter of Support – MSU's new Hospitality Management Program

To Whom It May Concern:

We are writing today in support of the proposed interdisciplinary Bachelor's Degree program in Hospitality Management that is proposed by Health and Human Development and in association with the College of Business, College of Agriculture, and Gallatin College. We see so many ways that this new degree program will benefit MSU students, along with the economy, business and citizens of the State of Montana.

As a product of the MSU Recreation Degree Option program of the early 1980's, Steve enjoyed an academic curriculum that eventually took him to graduate school and a 30+ year career in Campus Recreation. Thirty years later, we see even a greater need among our students for a Sports and Recreation Administration Degree (SRAD) here at MSU and in Montana. We have a rare opportunity at MSU to utilize our local and state-wide tourism and recreational opportunities to put our own students into these industries. Bozeman is one of the nation's prime locations to utilize internships by putting our students into the hotel, restaurant and recreation industries.

At the MSU Hosaeus Fitness Center, we could routinely hire multiple interns each semester. We have a 168,000 sq. ft. facility and a multitude of programs including sports, personal training, group fitness, facility management, and outdoor recreation. Our new Outdoor Programs Director, Ryan Diehl, also shares a vision to expand his offerings to include many courses in outdoor leadership and trip management. He also runs a large rental retail shop, which is perfect to help students understand the business side of management.

There has never been a better time at MSU to develop this interdisciplinary degree in Hospitality Management. We both fully support Dr. Harmon's proposal and look forward to the future partnerships and learning opportunities that will follow for our students.

Sincerely,

Steve Erickson, Director
ASMSU Recreational Sports and Fitness

Dr. Matthew R. Caires, dean of students

Matthew R. Caires, Ed.D.
Dean of Students
174 Strand Union
P.O. Box 174220
Bozeman, MT 59717-4220
Tel (406) 994-2826
Fax (406) 994- 5931
Email mcaires@montana.edu

BELGRADE SCHOOL DISTRICT

October 7, 2014

Provost Potvin
Office of the Provost and President for Academic Affairs
Montana State University
P.O. Box 172560
Bozeman, MT 59717-2560

Provost Potvin,

Belgrade Public School District supports the potential offering of an Associate of Applied Science in Culinary Arts at Gallatin College and the Bachelors of Hospitality Management and Montana State University. Belgrade High School has been offering a culinary arts program utilizing the *Pro-Start* curriculum for approximately ten (10) years. The opportunity to collaborate with Gallatin College and Montana State University to align curriculum, streamline career pathways and potentially offer dual enrollment opportunities would be beneficial for our students, both schools and our industry partners.

The popularity of the secondary culinary program has been noteworthy. We currently have 12 students enrolled in the *Pro-Start* program. *Pro-Start* is a program in which students learn the essentials of foodservice management needed for successful employment in the Hospitality and Tourism field. This program was developed specifically for high school students. This course would additionally offer our students a chance to study what they enjoy while maintaining the cost by providing local access is a mission we all share. The additional potential of students continuing on into the MSU Hospitality Management Bachelor's degree program is exciting.

We look forward to continued collaboration with Montana State University as we both strive to offer new avenues for college and career readiness for all our students.

Sincerely,

Candy Lubansky

Candy Lubansky
Superintendent

Candy Lubansky, Superintendent
Belgrade Public Schools, 312 N. Weaver, Belgrade, Montana 59714
Phone: (406) 924-2006 Email: clubansky@belgradeschools.com

Provost Potvin
Office of the Provost and President for Academic Affairs
Montana State University
P.O. Box 172560
Bozeman, MT 59717-2560

Provost Potvin,

My name is Michael Dean. I am a Certified Executive Chef and Certified Culinary Administrator through the American Culinary Federation, and am currently employed as the Executive Sous Chef for Xanterra Parks and Resorts in Yellowstone National Park. I have worked with Gallatin College on the Culinary Arts project and assisted in the development of the courses and curriculum. I enthusiastically support the potential offering of an Associate of Applied Science in Culinary Arts at Gallatin College and the Bachelors of Hospitality Management and Montana State University. I have worked with Yellowstone National Park Lodges for more than 25 years, and have been responsible for hiring Restaurant Chefs, Sous Chefs, Cooks and Kitchen Crew for the lodges and restaurants in Yellowstone. I believe that having a local culinary arts program will help our business by providing a better skilled employee. Each summer we hire over 200 culinary positions. The opportunity to collaborate with Gallatin College and Montana State University to teach the correct skills and develop career pathways into culinary arts or hospitality management will be valuable for local business and students.

The University of Montana's Institute for Tourism and Recreation Research released a report stating that Gallatin County led the state in tourism spending, which was a 19% increase. Park County ranked 6th in the state in tourism spending, which made the Yellowstone Country the number one tourism region in the state. Of this tourism spending, restaurant and bar expenditures make up 20% of the total. This doesn't even take into account the culinary and hospitality needs in institutions like hospitals and schools.

Offering our students a chance to study what they enjoy while maintaining the cost by providing local access is a goal we all share. The additional potential of students continuing on into the MSU Hospitality Management Bachelor's degree program is exciting for industry.

I look forward to continued collaboration with Montana State University as we both strive to offer new avenues for career readiness, particularly in the area of culinary arts and hospitality.

Sincerely,

Michael Dean, CEC, CCA
Executive Sous Chef
Xanterra Parks and Resorts,
Yellowstone National Park Lodges
P.O. Box 165
Yellowstone National Park, WY 82190
307-344-5513
mikedean63@hotmail.com

March 3-4, 2016

ITEM 170-1028-R0316

Request for Authorization to Offer a B.A. in African-American Studies – University of Montana-Missoula

---

THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to offer a B.A. in African-American Studies.

EXPLANATION

The African-American Studies program at the University of Montana-Missoula is requesting the creation of a major in African-American Studies. The proposed major is budget neutral as it relies on existing courses at UM, those already taught or cross-listed with African-American Studies, an academic unit supported by extant staff and administration. At present, there is no major in African-American Studies or any related interdisciplinary field in the state of Montana. Our program currently offers a minor and an undergraduate certificate. The proposed major will combine courses, students, and faculty from the Humanities, Social Sciences, Arts, and another interdisciplinary program, Women, Gender, and Sexuality Studies.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1028-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana-Missoula** CIP Code: **05.0201**

Program Title: **African-American Studies B.A.**

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)

___ **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 African-American Studies program at the University of Montana-Missoula is requesting the creation of a major in African-American Studies. The proposed major is budget neutral as it relies on existing courses at UM, those already taught or cross-listed with African-American Studies, an academic unit supported by extant staff and administration. At present, there is no major in African-American Studies or any related interdisciplinary field in the state of Montana. Our program currently offers a minor and an undergraduate certificate. The proposed major will combine courses, students, and faculty from the Humanities, Social Sciences, Arts, and another interdisciplinary program, Women, Gender, and Sexuality Studies.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

Proposal: to create a B.A. degree in African-American Studies at the University of Montana- Missoula.

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

The African-American Studies Program at the University of Montana-Missoula is requesting the creation of a major in African-American Studies. The proposed major is budget neutral as it relies on existing courses at UM, those already taught or cross-listed with African-American Studies, an academic unit supported by extant staff and administration. At present, there is no major in African-American Studies or any related interdisciplinary field in the state of Montana. Our program currently offers a minor and an undergraduate certificate. The proposed AAS major will combine courses, students, and faculty from the Humanities, Social Sciences, Arts, and another interdisciplinary program, Women, Gender, and Sexuality Studies.

3. Need

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

At the present time, students in the state of Montana cannot major in African-American Studies. As the program has grown, UM students have begun to ask why the African-American Studies program does not offer a major in addition to the minor and certificate option. Alums of the program have also publicly indicated their support for the development of a new African-American Studies major. The program thus is responding to the interest of current students with the support of our alums.

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

Our students will gain the ability to major in African-American Studies (AAS), thus preparing them to speak with even greater sophistication and nuance about one of the most pressing problems of the nation as a whole and the state in particular. We also send a strong message to our alums that the University is paying attention to issues of racial diversity, thereby increasing trust with a constituency keenly interested in becoming more involved in supporting the university system. The success of the funding campaign for the Doss Scholarship for African-American Studies students is just one indication of the potential that exists to draw African-American Studies alums into greater involvement in University endeavors.

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

We sent a survey to 100 students enrolled in African-American Studies courses during the 2014-15 school year. Twenty-four of the 35 survey respondents (more than 70%) indicated that if an African-American Studies major had been available while they were students at UM, they would have taken it. Students wrote glowing comments such as:

> I think it is a great opportunity for students. The wealth of scholarly study is growing in this area and is important for understanding history and the world.
>
> I think it would be an awesome opportunity. “Black: Africa to Hip-Hop” was my favorite class so far. It was incredibly informative. I would love to take another class like that.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

It is an important major which many students-both in and out of state- are interested in pursuing, and I feel we should provide it as an option.

I would switch my major to that for sure.

It would be amazing if the school did this. Not many schools offer this major and it would be a great way to attract people to the school.

If U of M has the 3rd oldest AAS program in the nation, it only makes sense that we would offer it as a Major program. It's something we should be proud of; AAS really helps students to understand racial issues and especially inequality in the United States.

Would be really cool!

One student even opined, "It's a great idea! Is there anyway we could make it required for everyone?" While we do not advocate universal requirement, the student's enthusiasm underlines how much interest is present within the student body.

4. Institutional and System Fit

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

African-American Studies is an interdisciplinary program that has a long history of working with numerous units and departments from across the university community. Faculty from anthropology, economics, English literature, geography, history, modern languages, music, political science, sociology, and women, gender, and sexuality studies teach courses that count for African-American Studies courses, serve on subcommittees, and help coordinate AAS-sponsored events.

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

No.

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

There are no other closely related programs at the University of Montana or in the MUS system.

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

Diversity is one of UM's four underlying values. This new major will, as has been the case in AAS since its inception in 1968, serve the university's interest in both "recognizing and embracing" racial differences. It will also, by focusing so carefully on race, welcome and include "members of those groups who have historically been subject to discrimination and are still underrepresented in the campus community" (UM Diversity Strategic Plan, 2009). Our award-winning faculty members are skilled and adept at pursuing challenging topics like race both in the classroom and without. A new major would take our program to new level, build on the kind of excitement and student interest indicated above, and bring more students into our classes.

E. Describe the relationship between the proposed program and any similar programs within the Montana

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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.

No similar major exists in the MUS 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 African-American studies major is an interdisciplinary program requiring thirty-six (36) credits drawn from a combination of disciplines: anthropology, economics, English literature, geography, history, modern languages, music, political science, sociology, and women, gender, and sexuality studies.

Core Courses (18 credits)

- AAS/HSTA 141HX Black: Africa to Hip-Hop and Beyond
- ANTY 122S Race and Minorities
- AAS/HSTA 342H African-American History to 1865
- AAS/HSTA 343H African-American History Since 1865
- SOCI 220S Race, Gender and Class
- SOCI 325 Social Stratification

Electives (15 credits)

15 credits required from the following electives, 6 credits of which must be in an upper division course (i.e. 300 or 400 level). One of the upper-division courses must fulfill the upper-division writing requirement for the major (eligible courses marked with an asterisk below). In addition, of the 15 total elective credits, classes must be taken in at least three different disciplines.

African-American Studies

- AAS 191 Special Topics
- AAS 208H Discovering Africa
- AAS 260 African Americans and Native Americans
- AAS/HSTA 262 Abolitionism: The First Civil Rights Movement
- AAS 291 Special Topics
- AAS 372 African-American Identity
- AAS/HSTA 347 Voodoo, Muslim, Church: Black Religion
- AAS 391 Special Topics
- AAS/HSTA 415 The Black Radical Tradition*
- AAS/HSTA 417 Prayer and Civil Rights*
- AAS 491 Special Topics
- AAS 493 Omnibus

Anthropology

- ANTY 349 Social Change in Non-Western Societies
- ANTY 330X Peoples and Cultures of the World

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Economics
- ECNS 217X Economic Development
- ECNS 312 Labor Economics

English/Film Studies
- FILM 484 – Film Directors (with topic approved by AAS director)
- LIT 304 U.S. Writers of Color*
- LIT 343 African-American Literature*
- LIT 420 Critical Theory
- LIT X91 Special Topics (as approved by AAS director)

Geography
- GPHY 141 XS Geography of World Regions
- GPHY 243X Africa

History
- HSTR 262 Islamic Civilization: The Classical Age
- HSTA 361 The American South: From Slavery to Civil Rights
- HSTA 382H History of American Law
- HSTA 418 Women and Slavery*
- HSTA 419 Southern Women in Black and White*

Modern Languages
- FRCH 339 Survey of African Cinema

Music
- MUSI 130L History of Jazz

Political Science
- PSCI 326 Politics of Africa
- PSCI 348 US Multicultural Politics
- PSCI 443 Politics of Social Movements

Sociology
- SOCI 441 Capstone in Inequality and Social Justice*
- SOCI 443 Sociology of Poverty

Women, Gender, and Sexuality Studies
- WGSS 363 Feminist Theory and Methods*

Capstone (3 credits):

Each student must also perform a 3-credit capstone project as an independent study in which they conduct a research project, service project, or artistic project focused on an issue pertinent to the African-American community. All projects must be approved by the AAS director.

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

Implementation of the proposed major will happen immediately. All listed courses are already taught and funded through their respective departments/programs.

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.

No.

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

No.

7. Assessment

How will the success of the program be measured?

Success of the AAS major will be measured by the current assessment tools used by the AAS Program and by the University of Montana. AAS courses are already evaluated, as is the overall program, when AAS minors sit for an exit interview before graduation.

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 proposed AAS major was a result of discussions between faculty, AAS alums, and students.

March 3-4, 2016

ITEM 170-1029-R0316

Request for Authorization to Re-title the Biology B.A. to a Biology B.S. for Five Options – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to retitle the Biology BA to a BS for five options.

EXPLANATION

Based on student demand and a review of similar Bachelor of Science degrees in Biology at other universities, we request approval to change the Biology BA degree to a BS degree for five of the eight total options: Cellular & Molecular Biology, Ecology & Organismal Biology, Genetics & Evolution, Field Ecology, Human Biological Sciences. The BS degree is appropriate for these options because of the intensive cognate requirements in science (chemistry, physics, math, statistics) and a greater number of required biology courses.

ATTACHMENTS

Academic Proposal Request Form
Attachment 1 – Course list and option map

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1029-R0316** Meeting Date: **November 2015**

Institution: **University of Montana-Missoula** CIP Code: **26.01**

Program Title: **Retitle Biology BA to BS for five options**

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.

X **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)

___ **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:

We seek approval to change the degree from a Bachelor of Arts in Biology to Bachelor of Science in Biology for the following options within the current degree:

- Cellular & Molecular Biology
- Ecology & Organismal Biology
- Genetics & Evolution
- Field Ecology
- Human Biological Sciences

The other three options: Natural History, Teacher Preparation in Biology and Teacher Preparation in General Science will retain the BA designation.

Students planning to go on to graduate school, medical school or other professional post-baccalaureate programs have collectively expressed a desire to rename their degree to a BS based on the perception that the BS conveys a greater sense of preparation for these advanced programs and better reflects the depth of disciplinary and cognate coursework they've mastered.

The DBS Curriculum Committee and faculty agree that the five options indicated above for transition to the BS warrant that change because of 1) the deeper extent of disciplinary preparation 2) the higher number required credit hours of cognate course work (4-8 credits of Math, 8-20 credits of Chemistry, 5-10 credits of physics); and 3) the higher number

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

of biology courses required. Students pursuing degrees in these five options are more highly trained in the (sub)disciplines of biology than students in the other three options.

Degree Option	Cell & Molecular	Ecology & Organ- ismal	Genetics & Evolution	Field Ecology	Human Biologi- cal	Natural History	Teacher - Biology	Teacher - General Science
required		required choice (must choose among several options--all options in spreadsheet)--see checklists for details						
Course								
BIOB								
BIOB 101N Discover Biology								
BIOL 130N Evolution and Society								
BIOB 160N Princples of Living Systems	■	■	■	■	■	■	■	■
BIOB 170N Principles of Biological Diversity	■	■	■	■	■	■	■	■
BIOB 171N Princ. of Biological Diversity Lab	■	■	■	■	■	■	■	■
BIOB 226N Gen Science: Earth & Life								
BIOB 260 Cell and Molecular Biology	■	■	■	■	■	■	■	■
BIOB 272 Genetics and Evolution	■	■	■	■	■	■	■	■
BIOB 301 Developmental Biology	■	■	■	■	■	■	■	■
BIOB 375 General Genetics	■	■	■	■	■	■	■	■
BIOB 410 Immunology	■	■	■	■	■	■	■	■
BIOB 411 Immunology Lab	■	■	■	■	■	■	■	■
BIOB 425 Adv. Cell and Molecular Biology	■	■	■	■	■	■	■	■
BIOB 440 Biological Electron Microscopy	■	■	■	■	■	■	■	■
BIOB 468 Endocrinology	■	■	■	■	■	■	■	■
BIOB 480 Conservation Genetics	■	■	■	■	■	■	■	■
BIOB 483 Molecular Phylogenetics/Evol	■	■	■	■	■	■	■	■
BIOB 486 Genomics	■	■	■	■	■	■	■	■
BIOB 499 Senior Thesis								
BIOE								
BIOE 172N Introductory Ecology								
BIOE 342 Field Ecology (@ FLBS)								
BIOE 370 General Ecology		■	■	■		■	■	■
BIOE 371 General Ecology Lab		■	■	■		■	■	■
BIOE 403 Vertebrate Design and Evolution		■	■	■	■	■	■	■
BIOE 406 Behavior and Evolution		■	■	■	■	■	■	■
BIOE 416 Alpine Ecology (@FLBS)		■	■	■	■	■	■	■
BIOE 428 Freshwater Ecology		■	■	■	■	■	■	■
BIOE 439 Stream Ecology (@FLBS)		■	■	■	■	■	■	■
BIOE 440 Conservation Ecology (@FLBS)		■	■	■	■	■	■	■
BIOE 447 Terrestrial Ecosystem Ecology		■	■	■	■	■	■	■
BIOE 448 Terrestrial Plant Ecology		■	■	■	■	■	■	■
BIOE 449 Plant Biogeography		■	■	■	■	■	■	■
BIOE 451 Landscape Ecology (@FLBS)		■	■	■	■	■	■	■
BIOE 453 Ecology of Small & Large Lakes (@FLBS)		■	■	■	■	■	■	■
BIOE 458 Forest and Grassland (@FLBS)		■	■	■	■	■	■	■
BIOE 482 Evolution and Development		■	■	■	■	■	■	■
BIOH								
BIOH 112 Intro to Human Form/Function I								

BIOH 113 Intro to Human Form/Function II
BIOH 365 Human A&P 1 for Health Professions
BIOH 370 Human A&P II for Health Professions
BIOH 405 Hematology
BIOH 423 TA: Form & Function I
BIOH 424 TA: Form & function II
BIOH 456 Cadaver Dissection I
BIOH 457 Cadaver Dissection II
BIOH 461 Human A & P Tutor I
BIOH 462 Principles of Medical Physiology
BIOH 463 Human A & P Tutor II
BIOH 470 Summer Clinical Lab
BIOH 471 Professional Training I
BIOH 472 Professional Training II
BIOH 480 Teaching A&P I
BIOH 481 Teaching A&P II

BIOL

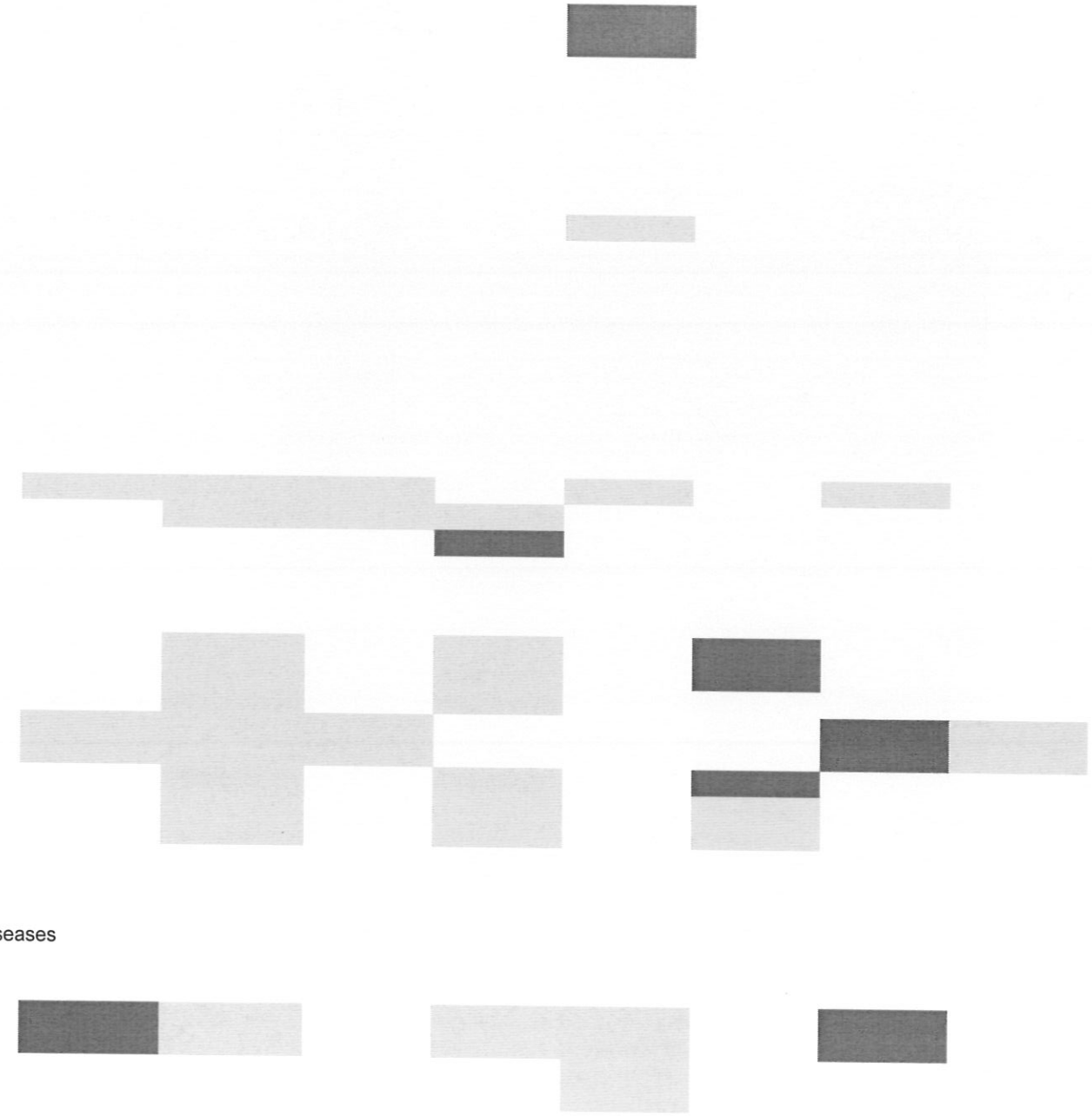
BIOL 315 Peer Advising
BIOL 415 Field Meth. In Fish.
BIOL 435 Comparative Animal Physiology
BIOL 484 Plant Evolution
BIOL 492 Seminars in Ecology & Res. Man. (@FLBS)

BIOO

BIOO 101N Survey of MT Wildlife & Habitats
BIOO 105N Intro to Botany
BIOO 320 General Botany
BIOO 335 Rocky Mountain Flora
BIOO 340 Biology & Manag. Fishes
BIOO 433 Plant Physiology
BIOO 434 Plant Physiology Lab
BIOO 462 Entomology
BIOO 470 Ornithology
BIOO 475 Mammalogy
BIOO 486 Field Techniques in Mammalogy

BIOM

BIOM 135N Hotsprings Microbe: Yellowstone
BIOM 227 Epidemiology of Vector-Borne & Parasitic Diseases
BIOM 250N Microbiology for Health Sciences
BIOM 251 Micro. For Health Sciences Lab
BIOM 360 General Microbiology
BIOM 361 General Microbiology Lab
BIOM 400 Medical Microbiology
BIOM 402 Medical Bacteriology & Mycology
BIOM 403 Medical Bacter. & Mycology Lab



BIOM 407 Clinical Diagnosis
BIOM 408 Clinical Diagnosis Lab
BIOM 410 Microbial Genetics
BIOM 411 Experimental Microbial Gen. Lab
BIOM 415 Microbial Diversity Ecology & Evolution
BIOM 427 General Parasitology
BIOM 428 General Parasitology Lab
BIOM 435 Virology
BIOM 450 Microbial Physiology
BIOM 451 Microbial Physiology Lab
BIOM 490 Advanced Undergraduate Research

BCH

BCH 380 Biochemistry
BCH 480 Advanced Biochemistry I
BCH 482 Advanced Biochemistry II
BCH 486 Biochemistry Research Lab

Cognate Courses

CHMY 121N Intro to General Chemistry
CHMY 123N/124N Intro Organic/Biochem
CHMY 141N College Chemistry I
CHMY 143N College Chemistry II
CHMY 221/222 Organic Chemistry I
CHMY 223/224 Organic Chemistry II
CHMY 311 Analytical Chemistry
CHMY 360 Applied Physical Chemistry
CHMY 373 Physical Chemistry
CHMY 485 Laboratory Safety
M 162 Applied Calculus
M 171 Calculus I
STAT 216 Statistics
STAT 451/457 Statistical Methods I
STAT 452/458 Statistical Methods II
PHSX 205/206 College Physics I
PHSX 207/208 College Physics II
CSCI 451 Computational Biology
PSYX 100S Intro to Psychology
GEO 101N/102N Intro to Physical Geology
GEO 105N Oceanography
GEO 108N Climate Change
EDU 497 Methods: 5-12 Science
ASTR 131N/134N Elementary Astronomy

March 3-4, 2016

ITEM 170-1030-R0316

Request for Authorization to Offer a B.A. in Early Childhood Education: P-3 – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education grants approval for the University of Montana-Missoula to offer a BA in Early Childhood Education: P-3.

EXPLANATION

The Bachelor of Arts in Early Childhood Education: P-3 is specifically developed to prepare highly qualified and effective education professionals for Montana's new Early Childhood Education Preschool – Grade 3 (P-3) licensure area. The 120 credit major in Early Childhood Education effectively blends existing courses in the Elementary Education (K-8) major and the minor in Early Childhood Education to meet required state standards with the addition of four courses.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1030-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana-Missoula** CIP Code: **13.1210 Early Childhood Education and Teaching**

Program Title: **Bachelor of Arts in Early Childhood Education: P-3**

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 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- 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. 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 University of Montana-Missoula seeks approval to offer a Bachelor of Arts in Early Childhood Education: P-3. The BA in Early Childhood Education: P-3 is specifically developed to prepare highly qualified and effective education professionals for Montana's new Early Childhood Education Preschool – Grade 3 (P-3) licensure area. The 120 credit major in Early Childhood Education effectively blends existing courses in the Elementary Education (K-8) major and the minor in Early Childhood Education to meet required state standards with the addition of four courses.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

The B.A. in Early Childhood Education: P-3 will be administered in the Department of Curriculum and Instruction of the Phyllis J. Washington College of Education and Human Sciences. This undergraduate program was developed in response to Montana's leadership, through the Office of Public Instruction, to expand licensure in elementary education to include a new Early Childhood Education Preschool – Grade 3 (P-3) licensure area.

The major in Early Childhood Education: P-3 effectively blends existing courses in the Elementary Education (K-8) major and the minor in Early Childhood Education to meet required state standards with the addition of four new courses. Students declare the Early Childhood Education major as entering freshmen and apply for admission to the Teacher Education Program at the beginning of their sophomore year. Upon entrance to the Teacher Education Program, students will progress through the program as a cohort. Each semester, coursework will be linked to clinical experiences in UM's LAB Preschool and in the primary grades in area schools to engage students in real world experiences that support their connection of coursework to classroom teaching practices.

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 major at the University of Montana-Missoula leading to a Bachelors of Arts in Early Childhood Education: P-3. It will operate in concert with the K-8 elementary program, utilizing existing resources including dedicated teacher education advisors and field experience coordinators, as well as accreditation supports including an assigned Director of Accreditation, and an Assessment and Licensure Manager. The Early Childhood Education: P-3 program effectively organizes existing course offerings in the Early Childhood minor, the Elementary Education program, and four additional courses to meet state and national standards for the initial preparation of early childhood teachers for preschool through grade 3. The program capitalizes on the state of the art early childhood clinical teaching and research facility located in the Phyllis J. Washington Education Center which makes UM an ideal setting for the preparation of highly qualified early childhood professionals.

3. Need

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

Focused attention on the significance of early learning at both state and national levels has led to multiple initiatives for new public pre-kindergarten programs and renewed early intervention efforts in the primary grades designed to prevent later school and life challenges that will demand a highly qualified workforce in early education. Through the establishment of the new Early Childhood Education: P-3 licensure area (in addition to the existing K-8 teaching license), the state of Montana and the Office of Public Instruction have called upon Montana's higher education institutions to respond with degree programs that address this growing workforce need. The B.A. in Early Childhood Education: P-3 degree is designed to support this critical workforce need. To support the preparation of highly qualified early childhood teachers, this degree meets Montana's new early childhood teacher preparation standards as established in the state Early Childhood Education: P-3 Professional Educator Preparation Program Standards (PEPPS). Further, the program is aligned with the national accreditation standards through the Council for Accreditation of Educator Preparation (CAEP).

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

A critically important window of opportunity for development and learning exists in the early years, which includes children in preschool through grade 3. State and national efforts are underway to address inequities in the availability of high-quality early education for our youngest and most vulnerable population. The Early Childhood

Education: P-3 licensure program will support UM teacher education candidates in developing highly marketable knowledge and skills for employment upon graduation as well as supporting Montana and our nation in the development of a highly qualified workforce to meet the growing demand for early childhood teachers. Additionally, the investment in the preparation of highly qualified early childhood professionals is proven to be effective in supporting the optimal development of young children; leading to tangible benefits for Montana's children across the lifespan including fewer referrals to special education and higher rates of high school completion.

Due to the significant demand for highly qualified early childhood professionals in our state and nation, students enrolled in Early Childhood Education: P-3 programs who also work in a qualifying early childhood program for at least 15 hours per week are eligible for financial support administered through the Montana Early Childhood Project. These Early Professional Development Incentive awards provide noncompetitive funding of $1,000 each semester for students enrolled in a minimum of 6 credits per semester in Early Childhood Education: P-3 programs. In addition, Montana's Preschool Development Grant is providing $500,000 annually to provide full scholarships to qualifying students pursuing the Early Childhood Education: P-3 teaching license.

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

With the implementation of the new Montana early childhood education standards, current teachers in public school preschool programs will be required to hold the new P-3 license within 3 years. Moreover, early childhood education is a highly employable field across the nation. Nationally, 41 states offer early childhood education licensure covering the Pre-K to early elementary grades. The Bureau of Labor Statistics projects that the employment of preschool teachers will grow faster than the average for all occupations (17 percent from 2012 to 2022) and the employment of kindergarten and elementary school teachers is projected to grow 12 percent during that same period.

In addition to the preparation of P-3 teachers, the B.A. in Early Childhood Education meets requirements for employment in existing Head Start and Early Head Start programs and meets the Montana Early Childhood Practitioner Registry guidelines for working in community-based early childhood programs.

Finally, UM student interest in the Early Childhood Education: P-3 endorsement is high. Our current pre-education students have long expressed interest in pursuing Early Childhood Education due to their focused interest in working with our youngest school-age population. Now that Early Childhood Education: P-3 is a licensure option in Montana, our students are expecting UM to align our programs with this new licensure area.

4. Institutional and System Fit

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

The Early Childhood Education: P-3 degree is specifically aligned with the elementary education (K-8) program to expand degree and teacher licensure opportunities available to UM students. The Early Childhood Education: P-3 degree shares the elementary education program's commitment to blend clinical experiences with each course to support students in the translation of theory to practice in preschool and K-3 classrooms. Integral to this field component is the early childhood clinical teaching facility located in the Phyllis J. Washington Education Center. Students will complete real-world experiences in this nationally accredited preschool program under the guidance of highly qualified clinical supervisors. The clinical supervisors provide carefully structured support that is needed in the preparation of future teachers who will effectively promote student learning in their early childhood classrooms. Currently, the Department of Curriculum and Instruction also offers a minor and an M.Ed. in Early Childhood Education. Courses already in place for the undergraduate minor in Early Childhood and the Elementary Education degree form the foundation for the new B.A. degree in Early Childhood Education: P-3.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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

The proposal requires the development of four additional courses in early childhood education. Funding through the Preschool Development Grant is available to support the development of coursework needed to implement new P-3 licensure programs.

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

Currently, UM students can complete the four-year elementary education program (K-8) and add a minor in early childhood education to seek an additional P-3 teacher licensure. While this is a viable option for some students, the four-year B.A. in Early Childhood Education: P-3 provides a more focused and cohesive program for students who are committed to teaching in the primary grades. Students completing the Early Childhood Education: P-3 degree will take additional coursework focused on the early years as well as extended clinical opportunities to work specifically with children in preschool through grade 3.

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

The development of the B.A. in Early Childhood Education: P-3 includes a focus on advancing strategic issues in the UM 2020 strategic plan. In particular, program design highlights student engagement by embedding real-world clinical experiences within each course to help students connect what they learn with actual practice in early childhood programs. In addition, the program targets retention of our education majors through this engagement in clinical experiences. Finally, the degree capitalizes on the exemplary programming and services that are part of the University of Montana campus in the early childhood wing of the Phyllis J. Washington Education Center. This state-of-art clinical and research facility includes the nationally accredited Learning and Belonging Preschool, an observation room equipped with high-tech video and sound systems to supports teaching, learning, and research opportunities, and the *Doyle-McWhinney Language, Counseling, and Parent Meeting Room* for facilitating wrap-around family services including speech therapy, counseling, and parenting support.

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.

Prior to July 1, 2015, Montana offered just one option for the licensure of elementary education teachers at the K-8 level. To meet the demand for elementary education teachers, Montana currently has five state accredited K-8 teacher education programs in the Montana University System. As required for state and national accreditation, each of these programs maintains a unique conceptual framework that guides their practice.

With the addition of Montana's new Early Childhood Education: P-3 licensure area, these teacher preparation programs are called upon to adapt to new workforce demands and teacher licensure needs. Essentially, campuses that opt to add an Early Childhood Education: P-3 degree are likely to see the self-selection of existing and future prospective elementary degree candidates to enter the elementary education (K-8) or Early Childhood Education: P-3 program. It is our responsibility to these students and our education constituents across the state that we offer the full range of degree options in PK-8 education.

Focused attention on the significance of early learning at both state and national levels has led to multiple

Montana Board of Regents
CURRICULUM PROPOSAL FORM

initiatives for new public pre-kindergarten programs and renewed early intervention efforts in the primary grades designed to prevent later school and life challenges that will demand a highly qualified workforce in early education. With the implementation of the new Montana early childhood education standards, current teachers in public school preschool programs will be required to hold the new P-3 license within 3 years. Moreover, early childhood education is a highly employable field across the nation. Nationally, 41 states offer early childhood education licensure covering the Pre-K to early elementary grades. The Bureau of Labor Statistics projects that the employment of preschool teachers will grow faster than the average for all occupations (17 percent from 2012 to 2022) and the employment of kindergarten and elementary school teachers is projected to grow 12 percent during that same period. This demand will require the engagement of multiple teacher education programs in the MUS system.

The demand for programs that prepare Early Childhood Education: P-3 professionals was discussed at the 2014-15 Montana Early Childhood Higher Education Consortium meetings, which are attended by representatives from all state campuses offering early childhood coursework. It was the group's consensus that adding the Early Childhood Education: P-3 degree to multiple teacher preparation programs would help address the interests and needs of campus-based students as well as building capacity to meet the steadily increasing workforce demands in early education.

The Montana Early Childhood Higher Education Consortium (MECHEC) has a 20-year history of collaboration and advocacy for the preparation of highly qualified early childhood education professionals including creating and co-teaching courses. Our faculty members have been in discussions with consortium members regarding this proposal and these final documents will be shared and presented at the October MECHEC meeting. We will continue to work closely together to share coursework whenever it is feasible.

One program in the Montana University System initiated a bachelor's degree in Early Childhood Education: P-3 fall semester 2015 - the University of Montana-Western. This degree was developed to meet the needs of students attending UM-Western both on-campus in Dillon and through a distance education model that offers: 1) online delivery of coursework; 2)face-to-face delivery of classes across Montana; and 3) a hybrid model of online with face-to-face, community-based class offerings to place-bound practitioners across Montana. UM Western's programs represent the specific conceptual framework, pedagogy, and strengths of the campus – much like the diverse K-8 licensure programs currently offered at MUS campuses across the state. UM's Early Childhood Education: P-3 degree will provide this important option for students opting to complete their teacher education program on the UM-Missoula campus. UM fully supports Montana Western's distance education programs in Early Childhood Education and will not offer competing distance 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.

The B.A. in Early Childhood Education: P-3 is an undergraduate program that provides teacher education candidates with focused expertise in effective, evidence-based teaching practices for young children in preschool through grade 3. The degree requires 120 credits of coursework that collectively meets the Montana standards for Early Childhood Education. Each course will require clinical components that engage students in real world experiences working with young children and their families. Catalog language regarding admission to the Teacher Education Program and eligibility for student teaching will remain the same with the inclusion of references to the Early Childhood Education: P-3 degree.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

Course Number	General Education / Content / Specialty Courses	GER	Prerequisite	CR
WRIT 101	College Writing I			3
LIT 110L LIT 120L LSH 151L LSH 152L NASX 235X	Intro to Lit Poetry Humanities Bible, Greeks, and Romans Humanities Medieval to Modern Oral and Written Traditions of Native Americans	Lower Div. Writing Course and L	WRIT 101 or placement	3 or 4
M 132	Numbers & Operations for K-8 Teachers		M 095 or placement	3
M 133	Geometry & Measurement for K-8 Teachers	Symbolic System	M 132	3
ANTY 122S	Race and Minorities	S & Y		3
GPHY 121S GPHY 141S	Introduction to Human Geography or World Regional Geography	S		3
HSTA 255	Montana History			3
NASX 105	Native American Studies	H & X		3
PHSX 225N	General Science: Physical and Chemical Science	N	M 132 or equivalent	5
BIOB 226N	General Science: Earth and Life Science (Spring only)	N	M 095 or equivalent	5
HEE 233	Health Issues of Children and Adolescents			3
HEE 302	Methods of Instructional Strategies in Elem. Physical Ed.			3
ARTZ 302A	Elementary School Art	A	Sophomore	2
THTR 239A	Creative Drama/Dance K-8	A		2
MUSE 397	Methods: K-8 Music			2
EDU 331	Literature and Literacy for Children			3
Current First Aid Card w/ CPR (Must complete at least one semester prior to student teaching.)				
	LEVEL 1 Learning and Instruction*			
EDU 395	Clinical Experience: Level 1			1
EDU 222	Educational Psychology and Child Development			3
EDU 338	Academic Interventions			3
EDU 397	Methods: PK-4: Early Numeracy			3
EDU 397	Methods: PK-3: Early Literacy			3
	LEVEL 2 Critical Thinking and Problem Solving*			
EDU 395	Clinical Experience: Level 2			1
EDU 346	Exceptionalities			3
EDU 370	Integrating Technology into Education			3
ENST 472	General Science: Conservation Education			3
EDEC 408	Early Childhood Principles and Practices			3
	LEVEL 3 Pedagogy and Content Knowledge*			
EDEC 495	Practicum: Integrated Curriculum			3
EDEC 410	Family, Community, Culture			3
EDEC 420	Meeting Standards through Play-Based Environments			3
EDEC 405	Assessment in Early Childhood			3
EDEC 230	Positive Child Guidance and Management			3
	LEVEL 4 Pedagogy and Content Knowledge			
EDU 451	Clinical Experience: Level 3			1
EDEC 453	Early Childhood STEM			3
EDEC 430	Social/Emotional Development			3
EDU 407E	Ethics and Policy Issues			3
EDEC 454	PK-3 Language Arts and Reading Methods (needs to be a writing intensive course)			3
	LEVEL 5 Student Teaching*			
EDU 495	Student Teaching K-3			14
EDU 491	Reflective Practice and Applied Research			1

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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

The program is intended to be launched Fall 2016. Marketing and student advising will begin Spring 2016 upon approval by the Montana Board of Regents. It is anticipated that 20 students will enroll the first year with enrollment reaching 30 students per semester by the end of a three-year period (60 students annually).

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 Department of Curriculum and Instruction added and filled a tenure-track line in Early Childhood Education with Professor Julie Bullard beginning in the 2015-16 academic year. One additional faculty line will be needed by AY 2017-18 to implement the B.A. in Early Childhood Education: P-3. This will be facilitated through prioritization of a new faculty line or the reallocation of resources in the College. In conjunction with existing faculty expertise in early childhood (Professors Ann Garfinkle, Matthew Schertz, Trent Atkins and Kate Brayko) and program resources including the affiliated PJWEC early childhood facility and staff, all other teaching and management needs of the program will be met.

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.

NA

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

Program success will be documented initially by student enrollment numbers and growth in enrollment on an annual basis. Additionally, quality of instruction will be measured by 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. Finally, the program is designed to align with state and national accreditation requirements which include the identification of 6-8 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. Data regarding student progress in the early childhood degree will be reported in annual accreditation reviews as well as through the next on-site state and national accreditation visit in 2020.

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 University of Montana's Department of Curriculum and Instruction has existing program options in the field of early childhood education. The B.A. in Early Childhood Education: P-3 builds upon these existing P-3 teacher licensure options including the Early Childhood Education: P-3 minor and the M.Ed. in Early Childhood Education.

This proposal was developed in collaboration with C&I faculty in social studies, science, math, and literacy who have strong existing partnerships with faculty in the College of Performing and Visual Arts and the College of Humanities and Sciences. We have had conversations with faculty in Art, Music, Theatre and Dance, Math, Biology, and Physics who teach courses directly in support of teacher education programs and all have expressed support for this B.A. in

Montana Board of Regents

CURRICULUM PROPOSAL FORM

Early Childhood Education: P-3 degree proposal.

Faculty and administrators in the College have been highly engaged at the state level in the development of Montana's new early childhood teacher licensure area including participation in writing the new standards and working collaboratively with the Office of Public Instruction to support implementation. Conversations about P-3 teacher licensure and bachelor's degree option have been held with Missoula campus partners, state education organizations, University students, and other constituents.

Additionally, faculty members have worked closely with the Montana Early Childhood Higher Education Consortium which includes deans, faculty, and instructors who have affiliations with other agencies and organizations including Head Start and non-profit agencies supporting young children and families. The development of new programs to meet the demand for P-3 licensure was a focus of the MECHEC meeting on January 30, 2015 meeting. At this meeting and in a follow-up letter to OCHE, the MECHEC advocated for the development of Early Childhood Education: P-3 programs at multiple campuses across the state in order to meet state and national workforce demands.

The final program was reviewed and approved unanimously by the Department of Curriculum and Instruction as well as UM's Faculty Senate.

March 3-4, 2016

ITEM 170-1032-R0316

Request for Authorization to Consolidate the Departments of Radio-TV and Print/Photo into the School of Journalism – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to consolidate the Department of Radio-TV and the Department of Print/Photo into the School of Journalism.

EXPLANATION

The School of Journalism proposes to collapse the two current departments (Radio-TV and Print/Photo) into one single entity in the School of Journalism. The division of two departments no longer reflects the realities of our industry or in our School. Increasingly, our students are headed for employers who demand that they master all media. Students can no longer focus on a discrete set of skills and expect to succeed after graduation. Internally, our faculty work closely with each other and many teach courses on both sides of the dividing line. Our organizational structure needs to reflect this reality. The change will not cost anything and will cause no inconvenience to any of our students. It will make our school more efficient and should make it easier to recruit the best students.

ATTACHMENTS

Academic Proposal Request Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1032-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana** CIP Code: **09.0401**

Program Title: **School of Journalism Departments Consolidated into the School of Journalism**

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 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- 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. 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:

The School of Journalism proposes to collapse the two current departments (Radio-TV and Print/Photo) into one single entity in the School of Journalism. The division of two departments no longer reflects the realities of our industry or in our School. Increasingly, our students are headed for employers who demand that they master all media. Students can no longer focus on a discrete set of skills and expect to succeed after graduation. Internally, our faculty work closely with each other and many teach courses on both sides of the dividing line. Our organizational structure needs to reflect this reality. The change will not cost anything and will cause no inconvenience to any of our students. It will make our school more efficient and should make it easier to recruit the best students.

March 3-4, 2016

ITEM 170-1033-R0316

Request for Authorization to Offer a Certificate in Teaching and Learning – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to offer a Certificate in Teaching and Learning.

EXPLANATION

The Department of Curriculum and Instruction would like to create a certificate program for students completing the secondary and K-12 Teacher Education Program leading to eligibility for licensure in secondary (5-12) and K-12 content areas. Students will complete this certificate as they complete their majors in their content fields of study. The proposed Certificate in Teaching and Learning does not require any new courses and does not impact students' current degree programs. Students will still complete the bachelor's degree in the subject area they intend to teach and the current secondary/K-12 professional licensure coursework. The certificate will serve to provide formal recognition of the licensure coursework upon completion.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1033-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana** CIP Code: **13.1206 Teacher Education, Multiple Levels**

Program Title: **Teaching and Learning Certificate**

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 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- 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. 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 Department of Curriculum and Instruction would like to create a certificate program for students completing the secondary and K-12 Teacher Education Program leading to eligibility for licensure in secondary (5-12) and K-12 content areas. Students will complete this certificate as they complete their majors in their content fields of study. The proposed Certificate in Teaching and Learning does not require any new courses and does not impact students' current degree programs. Students will still complete the bachelor's degree in the subject area they intend to teach and the current secondary/K-12 professional licensure coursework. The certificate will serve to provide formal recognition of the licensure coursework upon completion.

The Certificate in Teaching and Learning is a 44-50-credit program (dependent on content area) developed for pre-service undergraduate and post-baccalaureate students engaged in existing coursework in secondary (grades 5-12) or specialty (grades K-12) teacher licensure areas at the University of Montana. UM has offered professional teaching licensure programs that have been nationally accredited since 1954. Students wanting to become teachers currently complete a major in the content area they want to teach and also complete the professional licensure program through the Department of Curriculum and Instruction. The professional licensure program is a 44-50-credit sequence of courses specifically designed to meet state and national standards in the preparation of highly qualified and highly effective teachers. The program of study functions in much the same way as a major or minor, but it does not currently result in a formal recognition by UM. Successful completion of the program will be closely noted on students' transcripts via the Certificate in Teaching and Learning, indicating to potential employers that a candidate has fulfilled all of the University's undergraduate or post-baccalaureate requirements in teacher education.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

The Department of Curriculum and Instruction in the Phyllis J. Washington College of Education and Human Sciences would like to create a Certificate in Teaching and Learning for students completing the secondary and K-12 Teacher Education Program leading to eligibility for licensure in secondary (5-12) and K-12 content areas. Students will complete this certificate as they complete their majors in their content fields of study. The proposed Certificate in Teaching and Learning does not require any new courses and does not impact students' current degree programs. Students will still complete the bachelor's degree in the subject area they intend to teach and the current secondary/K-12 professional licensure coursework. The certificate will serve to provide formal recognition of the licensure coursework upon completion.

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

The Certificate in Teaching and Learning is a 44-50-credit program (dependent on content area) developed for pre-service undergraduate and post-baccalaureate students engaged in existing coursework in secondary (grades 5-12) or specialty (grades K-12) teacher licensure areas. UM has offered professional teaching licensure programs for over 80 years that have been nationally accredited since 1954. Students wanting to become teachers currently complete a major in the content area they want to teach and also complete the professional licensure program through the Department of Curriculum and Instruction. The professional licensure program is a 44-50-credit sequence of courses specifically designed to meet state and national standards in the preparation of highly qualified and highly effective teachers. The program of study functions in much the same way as a major or minor, but it does not currently result in a formal recognition by UM. Successful completion of the program will be closely noted on students' transcripts via the Certificate in Teaching and Learning, indicating to potential employers that a candidate has fulfilled all of the University's undergraduate or post-baccalaureate requirements in teacher education. The Certificate program will be administered in the Department of Curriculum and Instruction in the Phyllis J. Washington College of Education and Human Sciences with certificate paperwork reviewed and signed by the Licensure and Assessment Manager.

3. Need

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

Currently, there is no undergraduate education degree or education major option for pre-service secondary and specialty area teachers at the University of Montana in spite of the 44-50-credit hour program of study for prospective teachers. The Certificate in Teaching and Learning attends to this gap while leaving the existing content area majors and degree programs intact.

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

The Certificate in Teaching and Learning complements the content specific coursework that pre-service teacher candidates take to become highly qualified and highly effective teachers. The Certificate documents and acknowledges the extensive training pre-service teacher candidates undergo to become teachers. The Certificate likewise can help streamline local education agencies' hiring processes as completion of the Certificate will be noted on candidates' transcripts.

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

This program of study currently exists within the Teacher Education Program with an average of 95 undergraduate and post-baccalaureate completers over the last six years. This demand reflects the average number of undergraduate and

Montana Board of Regents
CURRICULUM PROPOSAL FORM

post-baccalaureate teacher candidates in Curriculum and Instruction.

4. Institutional and System Fit

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

The Certificate in Teaching and Learning identifies the existing teacher education program for secondary and K-12 professional teachers as worthy of distinct acknowledgement by the University and the Montana University System. Pre-service teacher candidates in secondary and specialty fields take coursework to fulfill the degree requirements in their content-specific areas. The Certificate recognizes the additional coursework and training that candidates undergo to become highly qualified teachers.

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

No.

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

Not applicable.

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

The Certificate in Teaching and Learning serves the strategic goals of the institution (UM 2020) in two ways: it buttresses the University's commitment to robust curricular programing in real-world settings and it aligns faculty and student efforts in one of the most demanding fields with that of the output of the University. As the Department of Curriculum and Instruction has revamped its Elementary Education degree program and created a graduate degree program in Early Childhood Education, it has become clear that the secondary program and programs training pre-service teachers in major fields of study in the humanities, social sciences, and hard sciences as well as in specialty areas, including music, the arts, and physical education, merit formal recognition of students' professional training. In addition, the Certificate is responsive to current and past student perceptions of the coursework they take in the Department of Curriculum and Instruction. Many, if not most, assume that they will earn a formal award from UM upon their successful completion of their teacher training program if not an additional major. The Certificate will provide such acknowledgment to students who complete the course of study and their potential employers.

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.

While other MUS campuses do have secondary and K-12 teaching licensure programs, certificate programs in secondary education do not exist at these campuses. A Bachelor of Science degree programs in Reading and Secondary Education and Special Education and Secondary Education exist at MSU-Billings. Because the degree programs at Billings are highly specific and limited to Reading and Special Education and the Certificate proposed here is not, MSU-Billings was not consulted.

5. Program Details

A. Provide a detailed description of the proposed curriculum. Where possible, present the information in the form

Montana Board of Regents
CURRICULUM PROPOSAL 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.

Below is the education program of study form that students currently use to ensure that they have planned and eventually met their requirements for becoming a licensed teacher in the state of Montana. Regardless of the secondary content area or specialty K-12 content area, all pre-service teacher candidates must take the coursework below to become a teacher in the state. Prior to beginning coursework in the Teacher Education Program, students must take WRIT101: College Writing 1, HEE233: Health Issues of Children and Adolescents, and a course in Native American Studies, in addition to becoming first aid and CPR certified. After admission to the Teacher Education Program, students take EDU202: Early Field Experience, EDU221: Educational Psychology and Measurement, EDU370: Integrating Technology into Education, EDU345: Exceptionality and Classroom Management, EDU395: Field Experience to be taken with the major and minor methods course(s), EDU481: Content Area Literacy, EDU407E: Ethics and Policy Issues, EDU495: Student Teaching, and EDU494: Professional Portfolio. As noted on the program of study form below, there is variability in number of content area methods courses that students take in specific fields.

Teacher Education Program

Secondary and K-12 Professional Licensure Requirements

Name _____ Student ID:

Current Course Number	Course Title	CR	Completed
These courses must be completed with a C- or better before applying to the Teacher Education Program:			
WRIT 101	College Writing I	3	
Additional licensure requirements:			
HEE 233	Health Issues of Children and Adolescents	3	
Native American Studies Course		3	
Current First Aid and CPR Cards *Must complete at least one semester prior to student teaching. 5-12 majors need adult CPR. K-12 majors need child *and* adult CPR.			
Admission to the Teacher Education Program is required to enroll in the courses listed below.			
These courses are recommended to be taken together (Block I):			
EDU 202	Early Field Experience	1	
EDU 221	Educational Psychology and Measurement	3	
EDU 370	Integrating Technology into Education *Math, Business, and Music majors meet through departmental requirements	3	
EDU 345	Exceptionality and Classroom Management	3	
These courses are recommended to be taken together (Block II):			
EDU 395	Field Experience (co-requisite with Methods Courses)	1	
Major/minor teaching methods courses		3-9	
EDU 481	Content Area Literacy *English and Music majors meet through departmental requirements	3	
EDU 407e	Ethics and Policy Issues	3	

Montana Board of Regents

CURRICULUM PROPOSAL FORM

These courses must be taken together:			
EDU 495	Student Teaching: Secondary	14	
EDU 494	Professional Portfolio	1	

Teacher Education Program
Secondary and K-12 Teaching Majors and Minors
(Grade levels are 5-12 unless noted otherwise.)

Extended Teaching Majors

These content areas do not require an additional teaching major or minor.

Art (K-12)*
Biology
Broadfield Social Studies* (Licensed to teach Government & History and one additional social science: Economics, Geography, Psychology or Sociology)
Business Education
Chemistry
English
French (K-12)
General Science Broadfield* (Biology, Chemistry, Physics, and Earth Science)
German (K-12)
Health and Human Performance (K-12)*
Mathematics
Music (K-12)*
Spanish (K-12)

Teaching Majors

These content areas require an additional teaching major or minor.

Earth Science*****
Economics
Geography
Government (Political Science)
History
Latin (K-12)
Physics
Psychology
Russian
Sociology
Theatre

Teaching Minors or Endorsements

These content areas require a teaching major.

Early Childhood Education (P-3) Note: May only be added to elementary education.
English as a Second Language (K-12)
Library Media (K-12)
Reading (K-12)
Special Education (K-12)

*UM offers only a teaching major in these content areas.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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

As the courses and program of study currently exist, no new implementation plans are proposed. The Licensure and Assessment Manager in the College of Education and Human Sciences currently reviews all teacher candidate materials to determine eligibility for student teaching and licensure. The Licensure and Assessment Manager will review and sign certificate application materials as well.

6. Resources

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

No.

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

No additional faculty resources are required. The Licensure and Assessment Manager in the College of Education and Human Sciences currently reviews all teacher candidate materials to determine eligibility for student teaching and licensure. The Licensure and Assessment Manager will review and sign certificate application materials as well.

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

The success of this program will be measured primarily by the continued enrollment of pre-service teacher candidates. Feedback from teacher candidates and those hiring in school districts will be solicited anecdotally and via surveys disseminated and collected through the Department of Curriculum & Instruction. Data will be analyzed and acted upon in the Department's strategic committees on programs, data, and recruitment. Additionally, the program aligns with state and national accreditation requirements which include the identification of 6-8 key assessments that track student progress during the program as well as providing a measure for their impact on student learning upon completion of the program. Data regarding student progress in the certificate will be reported in annual accreditation reviews as well as through the next on-site state and national accreditation visit in 2020.

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.

Since the Teacher Education Program shifted from a degree in education to degrees in specific content areas, it has been difficult to recognize the program of study that professional licensure students complete. After conversations with

The Teacher Education Services and the Dean's Office in the Phyllis J. Washington College of Education and Human Sciences, with advisement from the Office of the Provost and the Office of the Registrar, as well as a review of the certificate guidelines, it was determined this was the most appropriate way to formally recognize professional licensure students' program of study. Feedback from students that their training is equivalent to another major has been taken serious, as has input from state level education associations was also taken under advisement.

March 3-4, 2016

ITEM 170-1034-R0316

Request for Authorization to Re-title the Department of Curriculum & Instruction to the Department of Teaching & Learning – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to retitle the Department of Curriculum & Instruction to the Department of Teaching & Learning.

EXPLANATION

By changing the Department of Curriculum and Instruction's name to the Department of Teaching and Learning, the work done within and by the department will be made more explicit as will its programmatic offerings to current and prospective students. The Department has unanimously agreed on "Teaching and Learning" as its name for three reasons: 1) to more accurately and clearly reflect what the department does to the university community and prospective students, 2) to attract pre-service and in-service teachers to our offerings, and 3) to attract prospective students who work in education settings other than the school.

ATTACHMENTS

Academic Proposal Request Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1034-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana** CIP Code: **13.1206 Teacher Education**

Program Title: **Department of Teaching & Learning retitled from Curriculum and Instruction**

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 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- 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. 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)

___ **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)

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

Specify Request:

The Department of Curriculum and Instruction requests to change its name to the Department of Teaching and Learning. In working collaboratively with departments within the Phyllis J. Washington College of Education and Human Sciences as well as the University of Montana's Office for Integrated Communications over the 2014-2015 academic year, the Department has unanimously agreed on "Teaching and Learning" as its name for three reasons: 1) to more accurately and clearly reflect what the department does to the university community and prospective students, 2) to attract pre-service and in-service teachers to our offerings, and 3) to attract prospective students who work in education settings other than the school.

First, faculty conducted an array of research both inside and outside school contexts as well as those that prepare professionals for work in schools and in organizations that have education programs. "Teaching and Learning" more accurately describes this work as an ecology of study and training in formal and informal settings. "Curriculum and Instruction" is reflective of formal education settings like the school. Such a shift is reflective of the field at large. Nationally, a number of well-recognized former "Curriculum and Instruction" departments have changed their name to "Teaching and Learning." Some of these include The Ohio State University, Peabody College at Vanderbilt University, the University of Iowa, the University of Nebraska-Lincoln, and the University of Wisconsin-Oshkosh.

Second, in identifying as "Teaching and Learning," the Department anticipates attracting pre-service and in-service teachers to our new and revised programmatic offerings, especially in this time of teacher shortages in Montana and around the country (see NPR story on the Teacher Shortage) The Department has new programs in early childhood education and elementary education, and it is submitting a revision of the Master's of Education program this year to

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

address high needs areas. Given the current national shortages and the ongoing trend of retiring baby boomers, attending to the need to build a robust teaching force in language that is easily identifiable is paramount. Moreover, in a recent report issued by the Institute of Education Sciences at the National Center for Education Statistics, researchers found that of those teachers who left the profession, nearly 40% retired, while over 29% continued to work in a K-12 settings but in other positions than that of "teacher". This signals that teaching and learning can extend beyond the classroom in school and school system settings.

Finally, with the "Teaching and Learning" name, the Department anticipates attracting people who are moving into education from other fields and people who are interesting in working in education in a variety of organizational settings, such as museums, non-profits, and libraries. Researchers argue that strong consideration should be given to individuals working in fields other than education who are nonetheless interested in or have had some training teaching. Additionally, the Department has proposed changes to the structure of the Master's of Education Program to offer students more flexibility in designing their course of study to suit their personal and professional goals in settings that engage in some form of education like museums, libraries, and other non-profit organizations. The Department has likewise proposed a significant revision to the Library Information and Media Technology endorsement program that is available for pre- and in-service teachers.

By changing the Department of Curriculum and Instruction's name to the Department of Teaching and Learning, the work done within and by the department will be made more explicit as will its programmatic offerings to current and prospective students.

March 3-4, 2016

ITEM 170-1035-R0316

Request for Authorization to Offer a M.S. in Business Analytics – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to offer a MS in Business Analytics.

EXPLANATION

Career advancement opportunities at the intersection of data science and business are substantial. Jobs in this space show a growth rate of 67% over the past year. The School of Business Administration (SoBA) at the University of Montana proposes to offer a MS in Business Analytics to create a strong pipeline of students skilled in data-driven business decision-making and advanced marketing analytics and to develop UM's reputation as the premier institution in the region.

The Business Analytics MS builds on a set of core classes in data analytics. In addition to offering much of the content taught in similar programs at other universities, we will focus on the ability of graduates to not only analyze big data, but also develop the strategic insights and the narrative to communicate the insights gained from the analysis.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form
Attachment 1 – Survey & Focus Group Information used to determine need
Attachment 2 – Research on Programs in Business Analytics at Other Institutions
Attachment 3 – Catalog Language

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1035-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana-Missoula** CIP Code: **52.1301**

Program Title: **Business Analytics M.S.**

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 Affairs Handbook.

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___ **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:**

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___ **1. Consolidating existing programs and/or degrees** (Curriculum Proposal 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:

Career advancement opportunities at the intersection of data science and business are substantial. Jobs in this space show a growth rate of 67% over the past year. The School of Business Administration (SoBA) at the University of Montana proposes to offer a MS in Business Analytics to create a strong pipeline of students skilled in data-driven business decision-making and advanced marketing analytics and to develop UM's reputation as the premier institution in the region.

The Business Analytics MS builds on a set of core classes in data analytics. In addition to offering much of the content taught in similar programs at other universities, we will focus on the ability of graduates to not only analyze big data, but also develop the strategic insights and the narrative to communicate the insights gained from the analysis.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

Career advancement opportunities at the intersection of data science and business are substantial. Jobs in this space show a growth rate of 67% over the past year. In order to seize the initiative, the School of Business Administration (SoBA) at the University of Montana proposes to offer an enhanced program of courses to create a strong pipeline of students skilled in data-driven business decision-making and advanced marketing analytics and to develop UM's reputation as the premier institution in the region. In order to place our students in these high-paying positions, the Management Information Systems Department (MIS) and the Management & Marketing Department (M&M) in SoBA plan to offer a new Master of Science (MS) degree in Business Analytics.

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

The Business Analytics MS builds on a set of core classes in data analytics. In addition to offering much of the content taught in similar programs at other universities, we focus on the ability of graduates to not only analyze big data, but also develop the strategic insights and the narrative to communicate the insights gained from the analysis. In addition to the core courses offered by MIS and M&M, electives will be offered, some from within SoBA, but others in departments across campus, including Computer Science, Journalism, Math and Media Arts.

3. Need

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

Numerous studies, including one from the Harvard Business Review, indicate strong general demand for data analysts. McKinsey predicts that by 2018, the demand for data scientists will outpace available employees by approximately 150,000 in the US alone. Bentley University, which offers a master's program in Marketing Analytics, claims a 92% placement rate of its graduates, with demand becoming stronger each year. Indeed, the growth rate in marketing-related analytics hires – marketing analytics, advanced analytics, marketing mix modeling, media mix modeling or digital attribution— is astounding: up 67% over the past year and 136% over the past three years, according to *Forbes*. Over the past year, the number of jobs with "big data" as a requirement increased 63%, so the growth in marketing "big data" jobs beats even the growth of "big data" jobs generally. More generally, "analytical and research skills," coupled with digital savvy—search engine optimization, pay-per-click ads, managing Twitter feeds, and so on—are the top two required skills for marketing candidates in 2015, according to the article "The Six Ingredients that Make the Right Marketing Candidate" in the January 2015 issue of *American Marketing Association*. The Marketing Science Institute identifies "developing marketing analytics for a data-rich environment" as a top-tier priority for its funding initiatives through 2016 (www.msi.org). *Fortune* states that marketing is the field with the most job openings, due to "the proliferation of social media and the relative scarcity of people" qualified to develop strategies for this arena.

Business Analytics, sitting at the intersection of several disciplines—Business, Math and Computer Science— can be a challenge for universities. We believe our program can achieve this integration as indicated by the curriculum discussed below. Likewise, adding in an emphasis in marketing can provide marketing analytics/digital marketing knowledge within the proposed MS degree, for which there is also high demand. Many marketing professionals need skills made necessary by the

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Internet, social media, and mobile platforms. In fact, during recent visits by speakers in our marketing program, one out of three is considering entering a similar program or has enrolled already (at USC or ASU). Job seekers with graduate degrees can expect starting salaries at around $80,000, which is about $30,000 more than the undergraduates in our programs are offered, according to All Analytics.

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

The program would serve both students and employers, here and in the region, by providing training of the labor force with highly sought-after skills in data sciences, including a graduate degree. More detailed information regarding this question is provided in A above.

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

We expect demand for this program from several segments: current UM undergraduate students continuing into a fifth year, students graduating from other universities in the state, students from other states and international students, and business professionals from the Northwestern U.S. Our related undergraduate certificates give an indication of the interest of current undergraduate students. Although the Big Data Certificate was approved only this past January, already seven students graduating spring 2015 received the certificate. The Digital Marketing Certificate is two years old and 22 students have received it or are in the process of receiving it. The associated courses in SoBA have an enrollment between 20 and 40 students. Further, we did a survey of current students in SoBA and received feedback indicating interest by our current undergraduate students to continue their studies for an additional year in this MS program. (Results of the survey are in Appx. 1.). Given the issues regarding Business Analytics discussed above, we also anticipate strong demand from professionals in related fields of business.

We also expect significant demand from abroad. Arizona State University reports 333 applications last year for its new MS degree in Business Analytics, of which 61% were from abroad. Also, South Dakota State University offers a Master of Science in Analytics degree (through their Information Systems and Mathematics departments). They started fall 2014 and have 18 students enrolled, half of them from abroad (as verified by phone).

Our research shows that no such program currently exists at universities in the Northwest region (see Appx. 2), despite the significant demand by organizations here and further afar for these skills. Similar programs are offered in Denver and Boulder, CO, and two universities in the Northwest offer related certificates. The Missoula Economic Partnership (MEP), the Big Data Alliance, the Advisory Board of the M&M department, and interviews with local and regional employers ascertain that there is significant demand for our graduates, including at the local level.

To sum, we expect this program to grow to 30 new students (including undergraduates continuing for an additional year for their MS degree) three to five years after inception. In the first year, we anticipate enrolling 8 students currently enrolled at UM in our undergraduate programs, 5 students from outside UM (2 in state, 3 out of state), and 2 foreign students. We expect this total of 15 students to grow to 21 in year2, and 30 in year 3.

General demand was determined based on the information provided above. Specifics are estimates by faculty based on their relationships with students here at UM and with other

Montana Board of Regents
CURRICULUM PROPOSAL FORM

universities. Given sufficient funding we hope to establish an excellent reputation for this program in the graduate business education marketplace. Accordingly, we then expect a growth rate of 25% for in and 50% for out-of-state students in the following years.

4. Institutional and System Fit

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

UM currently offers two related certificates, the Big Data Certificate (campus-wide initiative) and the Digital Marketing Certificate (a program jointly offered by the M&M and MIS departments in SoBA). Also, many of the courses offered already exist at UM in various departments and colleges, some on the graduate and others on the undergraduate level. We are currently working to ally our program with Data Analytics programs under consideration in Math and Computer Science.

Moreover, the business courses in the new program would expand the elective options for our existing MBA and Master of Accountancy students, as qualified students could take the courses by instructor consent.

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

No changes are currently expected.

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

This program relates to activities in Math and Computer Science to offer Data Analysis degrees. The planning has been ongoing for about two years. The current status and final outcomes of these potential programs are unknown. Overall, the proposed degree is unique on campus, but complements other programs and efforts. It creates opportunities for current undergraduates to specialize and enhance career opportunities by obtaining a graduate level degree.

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

This program is aligned with UM's strategic plan as it adds to growth of the university, extends the number of graduate programs, creates a program of distinction, increases the number of graduate assistantships, attracts foreign students, and draws on existing resources that are not fully employed (e.g., highly capable faculty currently teaching undergraduate students that could also teach in graduate programs). Further, the program aligns with more specific plans within the university to offer graduate degrees in the area of data analytics.

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

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Similar programs within MUS are unknown.

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 core curriculum addresses the following critical issues in business analytics: quantitative analysis, statistical computing, business statistics, big data analysis, forecasting/predictive modeling, business intelligence, data mining and management, communicating insights based on data analysis and associated decision making. The catalog language for the proposed curriculum is presented in Appx. 3. New courses for the degree have also gone through the review and approval process.

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

For the 2016/17 academic year (AY), we estimate 15 students enrolled in the program, largely undergraduate students currently at UM (the delayed approval may lead to smaller numbers than anticipated); AY 2017/18, we estimate 21 students; and AY 2018/19, we estimate 30 students. Further, we expect a 60/40 ratio of in to out-of-state students in subsequent years. Because this is offered as a degree program that can potentially be finished within one year, all required courses will have to be offered every year, including year one.

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 already adjusted the departments' curricula in recent years to include more courses in the area of business analytics and digital marketing for the undergraduate certificates addressed earlier. Specific budget needs and associated funding to begin the program for the proposed MS degree are addressed below. We are requesting, after the program is established and has experienced growth (about 3 to 4 years after start), one additional faculty line each in the MIS and Management & Marketing Departments to be able to continue to offer this graduate degree, assuming we achieve our goal of new students. New faculty lines will also help us maintain AACSB accreditation for this program. Our immediate per-year budget needs, once the MS program is approved by the Board of Regents, are:

Backfill for tenure-track and adjunct salaries	$82,500
2 Graduate Assistants	$28,354
Marketing and Administration	$17,500

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Total: $128,354

In addition, a conservative estimate of $17,944 in benefits need to be added to the personnel costs. (Please find CVs for the instructors of the required classes in Appx. 4.)

These costs will be shared equally by SoBA and UM Central Administration during the first two years of offering the degree. The AAIP identified the MS in Business Analytics as one of the few new programs with great potential to innovatively advance the University mission.

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.

Fortunately, we have a graduate office in place that can take on much of the administration associated with this program. We assume we need the limited funds for administration and marketing as indicated above.

Our marketing plan will emphasize four different target markets. First, current and former UM students, primarily in the Business School (marketing and/or MIS) that would like to continue on for a master's degree. These people will be reached via advising and emails. Other UM students in areas such as computer science and math might be reached, but we want to ensure we are not cannibalizing others master's programs. We might also do an email campaign to past graduates from the University to let them know about this new offering as other programs, such as MPA, are doing.

Second, college seniors across the state of Montana who might be interested in our Masters of Business Analytics. By partnering with other universities, we can work with their advising offices and faculty to send marketing brochures, fliers, and perhaps provide webinars or sample lectures.

Third, out-of-state and foreign students. Marketing efforts for these populations could be targeted via Google AdWords placement when searching for master's degree programs in data science, business analytics, marketing analytics, big data, and related search phrases. In addition, other platforms such as LinkedIn and Twitter could be used in a similar fashion. These efforts would take up the majority of our anticipated marketing budget of $7,500 included in the above.

Finally, business professionals, primarily across the Northern Rockies and West Coast. We will start by emailing our alumni in relevant positions/companies. We could also partner with professional industry groups such as American Marketing Association Chapters in major cities. Marketing for the QuestMT conference held in September on the UM campus reached a broad group and we could also disseminate information in these channels.

Content marketing is a key aspect of marketing strategy today, so offering a blog and other useful content related to our cutting-edge curriculum would be a state-of-the-art marketing strategy that is highly relevant. Developing associated internet landing pages will take up the remainder of the budget.

7. Assessment

How will the success of the program be measured?

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Academically, we have to operate assessment under the guidelines of our accrediting agency, AACSB. From a business perspective, we will evaluate the program's success based on total number of students enrolled, number of out-of-state students enrolled, number of companies engaging with the program, and professional placement of the program's 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.

This proposal was developed largely by faculty in the Management Information Systems and Marketing & Management Departments. We did a survey of all graduating undergraduate students in spring 2015 and a focus group with upper-level, graduating students. We interviewed several potential employers (Elixiter, OMD) and discussed it with our Advisory Board. We further cooperated with Missoula Economic Partnership and the Mathematics and Computer Science Departments in developing the Big Data Certificate as well as a potential Master degree in Data Analytics.

APPENDIX 1

SURVEY STUDY: A survey of 146 students in the Capstone class BMGT 486 was conducted in March 2015.

Key takeaways:

- Only 39% of the students graduating in Spring 2015 "definitely" have a job lined up.
- 39.7% of students are a 5 or greater on 7 point scale assessing "What is your interest in pursuing a master's degree after graduation?"
- 16.5% of the students who responded to the question said that they would like to pursue a master's "immediately after graduation"
- MBA had the highest overall interest for field of study (mean 2.78, mode 3 on 4 point scale). Marketing was second (mean 2.06, mode 2), Business Analytics third (2.01/2), Digital Marketing fourth (1.99/2), Marketing Analytics fifth (1.88/1). ((Note: Accounting was left off of the survey in error, but 9 students did write that option in to the survey, for an average interest score of 3.44, mode of 4.))
- "Career Considerations" was listed as most important factor when considering masters degree (mean 4.42, mode 5 on a 5 point scale), with Financial Considerations second (mean 4.18, mode 4), Enjoyment of Learning third (mean 3.81, mode 4)
- Mean response to likelihood to return to UM for masters was 3.28, mode 3 (which is a neutral response on 5 point scale), however 41.8% (61 students) said they were "likely" or "very likely" to return to UM for a master's degree.

FOCUS GROUP: A focus group was conducted on April 16 in the E-Commerce Class (BMIS 478), which includes students that may be particularly interested in the MS BA degree.

Notes from the session:

- A few students would be scared away from a Business Analytics degree by STATS, but most don't view STATS as a major obstacle. They would like to see a more applied stats class, one that has a real-world connection. They also want assurance that they will be prepared for the master's level stats class.
- The title "Business Analytics" resonated most with students. They view Digital Marketing = Social Media, whereas Data Analytics seems too technical. Business Innovation seems to focus on entrepreneurship, which most students would not be interested in.
- Students liked the idea of a common set of core classes with the ability to specialize in a particular area (e.g., Digital Marketing, Information Management).
- Students liked the idea of getting a bachelor's and master's degree in 5 years rather than 6. They didn't want to have to commit in freshman year, but thought that Junior year would be an acceptable timeframe for making that decision. They would like the option to come back a few years after graduation and complete the master's program with a "fast track".
- Some students were concerned that UM doesn't have strong master's programs in business (no national reputation). A student commented that SoBA was not on the list of top 100 business schools in the western U.S.
- When considering programs, some students would want to know how our program stacks up against others.
- When considering programs, students want to know who will hire them, what the salaries are, and what percentage of students get hired with the degree.

- Existing undergraduate students need to be made aware of the program. Students agreed that our 200-level business courses would be the right place to do it. They like personal appeals from professors telling them why they should consider a master's, and what it can do for them. Some also indicated that they really weren't sure what's involved in the master's programs, period, and that they'd like to know more about it.
- Some students would like the ability to take courses remotely while working. Nonetheless, students believed most online classes are not nearly as effective as traditional courses.

APPENDIX 2

Research on Programs in Business Analytics at Other Institutions (as of 3/1/2015)

State	Institution	
Alaska	University of Alaska Anchorage	n/a
Alaska	University of Alaska Fairbanks	n/a
Alaska	University of Alaska Southeast, Juneau Campus	n/a
Arizona	**Arizona State University / Tempe**	**MS Business Analytics**
Arizona	Northern Arizona University	n/a
Arizona	**University of Arizona**	**Business Intelligence & Analytics (Certificate NDP)**
California	California Maritime Academy	n/a
California	California State University, Bakersfield	n/a
California	California State University, Channel Islands	n/a
California	California State University, Chico	n/a
California	California State University, Dominguez Hills	n/a
California	California State University, East Bay	n/a
California	California State University, Monterey Bay	n/a
California	California State University, Northridge	n/a
California	**California State University, Sacramento**	**MBA Concentration: Business Analytics in Healthcare**
California	California State University, San Bernardino	n/a
California	California State University, San Marcos	n/a
California	California State University, Stanislaus	n/a
California	Humboldt State University	n/a
California	University of California-Merced	n/a
California	**University of Southern California**	**MS Business Analytics**
Colorado	Adams State University	n/a
Colorado	Colorado Mesa University	n/a
Colorado	**Colorado State University**	**Business Intelligence Certificate – Graduate Level**
Colorado	Colorado State University-Pueblo	n/a
Colorado	Metropolitan State University of Denver	n/a
Colorado	University of Colorado at Colorado Springs	n/a
Colorado	**University of Colorado Denver**	**MS Business Analytics (with option to specialize in big data)**
Colorado	**University of Denver**	**MS New Media and Internet Marketing (online and on campus)**
Colorado	University of Northern Colorado	n/a
Colorado	Western State Colorado University	n/a
Colorado	**University of Colorado Boulder**	**MS Business Analytics**
Hawaii	University of Hawaii at Hilo	n/a
Hawaii	University of Hawaii at Manoa	n/a
Hawaii	University of Hawaii Maui College	n/a
Hawaii	University of Hawaii West Oahu	n/a
Idaho	Boise State University	**BS in Business and Economic Analytics (new in fall**

		2015)
Idaho	Idaho State University	n/a
Idaho	Lewis-Clark State College	n/a
Idaho	University of Idaho	n/a
Illinois	**Aurora University**	**Master of Science in Digital Marketing and Analytics**
Illinois	**Illinois Institue of Technology**	**Master of Science in Marketing Analytics and Communication**
Maryland	**University of Maryland**	**Master of Science in Marketing**
Montana	Montana State University, Billings	n/a
Montana	Montana State University, Bozeman	n/a
Montana	Montana State University, Northern	n/a
Montana	Montana Tech of the University of Montana	n/a
Montana	University of Montana, Western	n/a
Nevada	Nevada State College	n/a
Nevada	University of Nevada, Las Vegas	n/a
Nevada	University of Nevada, Reno	n/a
New Mexico	Eastern New Mexico University - Portales	n/a
New Mexico	New Mexico Highlands University	n/a
New Mexico	New Mexico Institute of Mining and Technology	n/a
New Mexico	New Mexico State University	n/a
New Mexico	Northern New Mexico College	n/a
New Mexico	University of New Mexico	n/a
New Mexico	Western New Mexico University	n/a
North Dakota	Dickinson State University	n/a
North Dakota	Mayville State University	n/a
North Dakota	Minot State University	n/a
North Dakota	North Dakota State University	n/a
North Dakota	University of North Dakota	n/a
North Dakota	Valley City State University	n/a
Oregon	Eastern Oregon University	n/a
Oregon	Oregon Institute of Technology	n/a
Oregon	Portland State University	**Digital Marketing Strategies (undergraduate certificate)**
Oregon	Southern Oregon University	n/a
Oregon	Western Oregon University	n/a
Oregon	**Oregon State University**	**MBA with Business Analytics track**
Oregon	**University of Oregon**	**Undergraduate concentration in Operations and Business Analytics (new in fall 2015)**
South Dakota	Black Hills State University	n/a
South Dakota	**Dakota State University**	**Master of Science in Analytics (MSA)**
South Dakota	Northern State University	n/a
South Dakota	South Dakota State University	n/a
South Dakota	University of South Dakota	n/a
Texas	**University of Texas Dallas**	**Master of Science in Marketing (Marketing Analytics**

		Track Option)
Utah	**Dixie State University**	**eMarketing Certificate (undergraduate)**
Utah	Southern Utah University	n/a
Utah	University of Utah	n/a
Utah	Utah State University	n/a
Utah	Utah Valley University	n/a
Utah	Weber State University	n/a
Washington	Central Washington University	n/a
Washington	Eastern Washington University	n/a
Washington	Washington State University	n/a
Washington	**Seattle University**	**Graduate Certificate in Business Analytics**
Washington	Washington State University Tri-Cities	n/a
Washington	Western Washington University	n/a
Washington	University of Washington	Master of Communication in Digital Media
Wyoming	University of Wyoming	n/a
Maryland	**Johns Hopkins University**	**Master of Science in Marketing**
Washington, DC	**American University**	**Master of Science in Marketing**
New York	**Fordham University**	**Master of Science in Marketing Intelligence**
New Hampshire	**Southern New Hampshire**	**MBA in Internet Marketing, 100% online**

APPENDIX 3

CATALOG LANGUAGE: MASTERS IN BUSINESS ANALYTICS

The Master of Science degree in Business Analytics (MS BA) is offered by the Departments of Management & Marketing and Management Information Systems in the School of Business Administration. The program prepares students for work that applies data science and decision making to business, in particular in the areas of marketing and MIS. Students also have the opportunity to gain skills in using quantitative analysis for innovative solutions. The degree consists of 32 credits.

Admission Requirements

Applicants need to have an undergraduate degree and provide transcripts, official GMAT/GRE scores, a strong letter of interest, a resume, three letters of recommendation, and evidence of related work experience (or take BMKT/BMIS 598 Internship, see below). The GMAT/GRE will be waived for those applicants who receive a grade of B or better for all prerequisite courses (see below).

Prerequisite Courses

1. BMIS 326 Introduction to Data Analytics, or equivalent
2. STAT 451 Statistical Methods I (plus STAT 457 Statistics Lab), or equivalent
3. BMKT 560 Marketing & Stats, or equivalent
4. BMKT/BMIS 598 Business Analytics Internship or relevant work experience

Required Courses (17 credits)

- BMIS 601 Business Intelligence (3 cr.) * [t]
- BMIS 625 Text Mining of Unstructured Data (3 cr.) * [t]
- BMIS 650 Quantitative Analysis (2 cr.) [t]
- BMKT 642 Advanced Marketing Research (3 cr.) * [t]
- BMKT 670 Applied Data Analytics (3 cr.) * [a]
- BMKT 680 Big Data and Innovation (3 cr.) * [t] †

* denotes new course [t] tenure track instructor [a] adjunct instructor † course includes professional paper/project

Elective Courses (minimum of 15 credits, as approved by the MS BA Director, no more than 9 credits can be at the 400-level)

- BMIS 465 Real-time Data Analytics
- BMIS 471 Fundamentals of Network & Security Management
- BMIS 472 Advanced Network & Security Management
- BMIS 478 Electronic Commerce
- BMIS 575 Fundamentals of Consulting
- BMIS 674 Management Information Systems
- BMIS 491/591 Special Topics
- BMKT 420 Integrated Online Marketing

- BMKT 491/591 Special Topics
- CSCI 444 Data Visualization
- CSCI 548 Pattern Recognition
- CSCI 564 Applications of Mining Big Data
- CSCI 491/591 Special Topics
- JRNL 414 Investigations
- JRNL 592.06 Independent Study: Video News
- M 461 Practical Big Data Analytics
- M 491/591 Special Topics
- MART 500 Digital Tech in the Arts I
- MART 510 Digital Tech in the Arts II
- MBA 694 MBA Seminar

Course Descriptions: Required Courses

BMIS 601 – Business Intelligence. Prereq., admission to the MS BA program or instructor consent. The course intends to provide graduate students with the foundational knowledge necessary to transform big data into useful business intelligence. The course will provide students with the skills, tools, and techniques required to collect, synthesize, and distribute information to support intelligent decision-making at the managerial level. 3 credit hours. (expected instructor: Prof. Clay Looney).

BMIS 625 – Text Mining of Unstructured Data. Prereq., admission to the MS BA program or instructor consent. An integration of Data Science theory and the actual practice of searching, sorting, relating, and deriving results from textual data. Students will be exposed to machine learning, natural language processing, as well as other computer assisted data mining techniques and then gain hands-on proficiency in the practice of data science using the software from data mining and document analysis vendors. 3 credit hours. (expected instructor: Prof. Joel Henry)

BMIS 650 – Quantitative Analysis. Offered spring. Prereq., admission to the M.B.A., MS BA or M-Acct. programs. Quantitative methods supporting managerial decision-making. Theory and logic underlying such methods as linear programming and simulation. Solution of complex problems and practice of interpersonal skills in team projects. Level: Graduate. 2 Credit hours (instructor: Prof. Jerry Evans)

BMKT 642 - Advanced Marketing Research. Prereq., admission to the MS BA program or instructor consent. The purpose of the course is to learn how to provide information for better business decision making. Students study the different aspects of marketing research as it relates to business problems and develop a mindset that continually relies on information-based decisions. 3 credit hours. (expected instructor: Assoc. Prof. Emily Plant)

BMKT 670 - Applied Data Analytics. Prereq., admission to the MS BA program or instructor consent. This course applies statistical skills and technical expertise to real-world big-data business applications. Students will work with the tools of data science and hone their ability to answer business questions through the analysis of data. 3 credit hours. (expected instructor: Dr. John Chandler)

BMKT 680 - Big Data and Innovation. Prereq., BMIS 601, BMKT 670, admission to the MS BA program or instructor consent. The course provides an integrative, capstone experience for students to reflect on

and apply the data science tools they have learned in the Master of Business Analytics program. In addition, this course will focus on the innovation and creativity aspects of big data, or how big data can unleash new insights and innovations that solve customer and societal problems. The course will train future managers to think strategically and innovatively—about data, about opportunity, about value. It will ensure that students are proficient in strategy, customer value and insights. Students engage in a capstone professional paper/project. 3 credit hours (expected instructor: Prof. Jakki Mohr).

> Description of professional paper/project as part of BMKT 680 (this language will be in the syllabus, not the catalog): As the last class in a program of study, a capstone class project allows students the opportunity to demonstrate the knowledge and skills gained during the program; it is a hands-on, integrative project course that includes integrative application of the analytics methodologies, techniques, and tools learned throughout the program in the context of a specific analytics problem. The capstone project serves to further students' skills in developing business insights from quantitative analysis and support data driven decision-making processes. Ideally, projects will be based on a real business problem faced by organizations in the business community. In this project, students (either individually or in teams of 2-3) will identify an opportunity area to bring the power of data analytics to bear on surfacing new insights and innovations. These insights can be in any discipline of your choosing, ranging from business to health care to natural resource management to the nonprofit arena. It will be your job to find the data source you will use; identify the relevant tools to use in exploring that data; to develop the insights; and to clearly develop the innovation emerging from that data. Alternatively, you may have an idea about an innovation and identify a data source to validate or test the viability of that idea. The final deliverables for the project consist of a timetable that you develop, a final paper addressing the following topics, and a presentation: a) Scoping of the problem: What is the nature of the social/customer/societal need you would like to address? How can this be scoped to a tractable level? b) Consideration of the data sets to inform the analysis of the problem: Qualitative, quantitative, structured/unstructured, etc. c) Hypotheses and testing via data analysis, c) Innovative insights resulting from the data analysis, d) Strategic considerations in implementing the innovation.

Course Descriptions: Prereq. and Elective Courses

BMIS 326 - Introduction to Data Analytics. Prereq., College-level statistics. This course introduces the terminology and application of big data and data analytics. Students will complete cases in a variety of disciplines as they become acquainted with some of the software, tools, and techniques of data analytics. 3 Credit hours (instructor: Prof. Jason Triche)

BMIS 465 – Real-time Data Analytics. Offered intermittently. Prereq., STAT 216, BMIS 365 or equivalents. Focuses on analyzing big data in motion using commercially available software. 3 Credit hours (instructor: Eric Tangedahl)

BMIS 471 - Fund of Network & Security Management. Offered intermittently. Prereq., junior standing. Current topics will focus on the impact of network technologies and infrastructures on facilitating and supporting business and organizations. Students learn about design, installation, and configuration of networks as well as implementing security, networking protocols, and virtualization technologies. Includes a hands-on lab to demonstrate the concepts. 3 Credit hours (instructor: Shawn Clouse)

BMIS 472 - Advanced Network & Security Management. Offered intermittently. Prereq., junior standing and BMIS 471. Focuses on network security and how it aligns with organizational strategy, directory services for access to organizational information, and cybersecurity management. Includes a hands-on lab to demonstrate the concepts. 3 Credit hours (instructor: Shawn Clouse)

BMIS 478 – Electronic Commerce. Offered intermittently. Prereq., junior standing in Business. Focuses on the capabilities of the Internet to support and enable commerce. Provides a managerial perspective on topics including effective web site design, emerging technologies, business models, infrastructure architectures, and security. 3 Credit hours (instructor: Clay Looney)

BMIS 575 – Fundamentals of Consulting. Offered spring. Prereq., graduate standing. The technical, interpersonal, and consulting skills necessary to effectively work with clients. Focuses on management; does not require a technical background. Level: Graduate. 2 Credit hours. (instructor: David Firth)

BMIS 674 – Management Information Systems. Prereq., admission to the M.B.A., MS BA or M-Acct. program. The tactical/operational responsibilities and roles of the CIO. Includes governance issues, supporting the learning organization, managing the technologies, and managing the development of systems. Focuses on management; does not require a technical background. Level: Graduate. 2 Credit hours (instructor: Cameron Lawrence)

BMIS 491/591 – Special Topics. Offered intermittently.

BMIS 598 – Internship. Prior approval must be obtained from the SoBA Graduate Office

BMKT 420 – Integrated Online marketing. Prereq., junior standing in business, BMKT 325. Exploration and application of marketing communications principles to the internet environment. Students develop individual WordPress websites/blogs, learn about online marketing techniques, and complete online marketing and social media projects. Level: Undergraduate, Graduate. 3 Credit hours (instructors: Buck, Plant, Porter, Schulzke)

BMKT 491/591 – Special Topics. Offered intermittently.

BMKT 560 – Online course. Offered autumn. Prereq., admission to the M.B.A. or M-Acct. programs or graduate standing with consent of graduate business program director. Introduction to marketing principles to create long-term competitive advantage for an organization. Topics include environmental analysis, marketing planning, segmentation analysis, target marketing, and planning for product, price, promotion and distribution. Business statistics covered including t-tests, analysis of variance, regression and correlation analysis; statistics applications in context of marketing research and marketing problems. Level: Graduate 3.000 Credit hours (Instructor: Stan)

BMKT 598 – Internship. Prior approval must be obtained from the SoBA Graduate Office.

CSCI 444 – Data Visualization. Offered intermittently. Prereq., M 171; programming experience; and junior, senior, or graduate status; or consent of instr. Visualization fundamentals and applications using special visualization software; formulation of 3-D empirical models; translation of 3-D models into graphical displays; time sequences and pseudo-animation; interactive versus presentation techniques; special techniques for video, CD and other media. 3 Credit hours. Levels: Graduate, Undergraduate

CSCI 548 – Pattern Recognition. Offered intermittently. Introduction to the framework of unsupervised learning techniques such as clustering (agglomerative, fuzzy, graph theory based, etc.), multivariate analysis approaches (PCA, MDS, LDA, etc.), image analysis (edge detection, etc.), as well as feature selection and generation. Techniques in exploratory data analysis when faced with large, multivariate datasets. Opportunities at implementation of some algorithmic approaches as well as use of preexisting tools such as the R-project statistics package. Emphasis will be on the underlying algorithms and their implementation. Credit not allowed for both CSCI 448 and CSCI 548. Level: Graduate. 3 Credit hours

CSCI 564 – Applications of Mining Big Data. Offered intermittently. Introduction to existing data mining software systems and their use, with focus on practical exercises. Topics include data acquisition, data cleansing, feature selection, and data analysis. Credit not allowed for both CSCI 464 and CSCI 564. Level: Graduate. 3 Credit hours

CSCI 491/591 – Special Topics.

JRNL 414 - Investigations. Offered spring. Prereq., JOUR 331 for print students, R-TV 361 for broadcast students. Introduction to methods and ethics of investigative reporting, emphasizing computer-assisted research and analysis of public records and databases. 3 Credit hours

JRNL 592.05 - Independent Study: Video Production. Offered autumn and spring. Instruction in digital video photography, storytelling and non-linear editing. Students desiring to acquire video production skills will be introduced to high-definition video cameras and advanced editing techniques through lectures in JRNL 350, and will perform assignments specific to environmental science and natural resource issues. Prereq., graduate standing or C/I. 3 credit hours

M 461 Practical Bid Data Analytics. Offered autumn. Prereq., STAT 341, and one of M 221 or M 273, or consent of instructor. This is a methods course supporting the Big Data Certificate Program. The course provides the students with the essential tools for the analysis of big data. The content consists of map reduce and canonical information methods for analyzing massively large data sets, windowing methods for the analysis of streaming data, an introduction to predictive analytics, and an introduction to data visualization methods. 3 Credit hours

M 491/591 – Special Topics. Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.

MART 500 – Digital Tech in the Arts I. This course explores the relationship between aesthetics and the emerging capabilities of digital technology. It will cover the historical relationship between science and art up to the end of the 20th century and examine the methodology of critical artistic applications. 4 Credit hours

MART 510 – Digital Tech in the Arts II. This course expands upon the research begun in MAR 500 by exploring the development of emerging 21st century digital technologies and their impact on aesthetics in artistic production. Level: Graduate. 4 Credit hours

MBA 694 – Seminar. Offered every term. Prereq., graduate student in business or consent of business graduate director. Selected topics in business. 1-15 Credit hours

STAT 451 – Statistical Methods I. Offered autumn. Prereq., one year of college mathematics including M 115 or equiv. course in probability or consent of instr. May not be counted toward a major in mathematics. Intended primarily for non-mathematics majors who will be analyzing data. Graphical and numerical summaries of data, elementary sampling, designing experiments, probability as a model for random phenomena and as a tool for making statistical inferences, random variables, basic ideas of inference and hypothesis testing. 3 Credit hours

STAT 457 – Computer Data Analysis I. Offered autumn. Coreq., STAT 451 or consent of instr. An introduction to software for doing statistical analyses. Intended primarily for students in STAT 451. 1 Credit hours

March 3-4, 2016

ITEM 170-1037-R0316

Request for Authorization to Offer a M.A. in Education – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to offer a MA in Education.

EXPLANATION

Faculty members in the Department of Curriculum & Instruction propose a M.A. in Education, a 30-credit hour program with a thesis/capstone paper. The core of the program will have flexible options in each of four key areas: Educational Research, Learning and Assessment, Critical Issues, and Diversity, for 12 credits, a 3-credit thesis, and an additional 15 credits from electives in education. All of these courses are currently offered.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1037-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana-Missoula** CIP Code: **13.0301**

Program Title: **Education MA**

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 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- 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. 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:

Faculty members in the Department of Curriculum & Instruction propose a M.A. in Education, a 30-credit hour program with a thesis/capstone paper. The core of the program will have flexible options in each of four key areas: Educational Research, Learning and Assessment, Critical Issues, and Diversity, for 12 credits, a 3-credit thesis, and an additional 15 credits from electives in education. All of these courses are currently offered.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

Faculty members in the Department of Curriculum & Instruction at the University of Montana propose a new Master of Arts (M.A.) in Education, a 30-credit hour program with a thesis/capstone.

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

The core of the proposed M.A. in Education program will have flexible options in each of 4 key areas: Educational Research, Learning and Assessment, Critical Social Issues, and Diversity, for 12 credits, a 3-credit thesis, and an additional 15 credits from electives in education. All of these courses are currently offered. We anticipate this program being attractive to graduate students who may already hold teacher licensure, or those from other areas interested in professional education degrees to prepare them, for example, for work in nonprofit or non-school settings. This degree will also prepare participants for doctoral work in education.

3. Need

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

Many of our competitors offer 30-credit Masters Degrees with fewer required courses and thesis/professional paper options for completion of their degrees (including Montana State University). We have designed this degree program to address our need for an attractive alternative and more flexible option than our current M.Ed. offerings. In addition to keeping the total credit hours to 30 and the focus on research as the completion requirement, this program can be customized by education students based on background knowledge, interests, and career goals.

In addition, the Council for the Accreditation of Educator Preparation (CAEP), the accrediting agency for the Master's Degree programs in the Department of Curriculum and Instruction at the University of Montana, has established new standards for advanced programs that address candidate's knowledge and skills, clinical practice, recruitment, P-12 student impact, and program assessment. The curriculum scope and sequence of this proposed program will effectively address the new standards focused primarily on the standards addressing candidate's knowledge/skills, clinical practice, and assessment.

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

The addition of an M.A. in Education to our existing M.Ed. will allow more students access to graduate programs at UM-Missoula. We anticipate that students in both programs will benefit from each other's perspectives in the courses that they do take together, understanding that education, teaching, and learning are dynamic phenomena that occur in many contexts. The infusion of students who work in non-school settings will underscore this point.

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

We anticipate that graduate students that currently have licensure, including some of our distance students, will elect this option. Based on conversations individual faculty have had with current and prospective graduate students, we anticipate that students interested in education, through non-profit and museum work, will likewise be interested in this program.

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 M.A. program will run alongside the current M.Ed. program. The M.Ed. program is focused primarily on those who want to teach or currently teach in schools. The M.A. program remedies this by encouraging students to select a concentration area and tailoring a course of study to their professional interests. The M.A. program will also prepare students for research doctorate programs in education (Ph.D.) or practitioner doctorate programs in education (Ed.D.).

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

No

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

We currently offer an M.Ed. The M.A. would provide a more streamlined and flexible degree option for students who are already certified and a degree option for those interested in a content Masters degree who plan on working and teaching in a nontraditional educational setting including corporations, NGO's, government agencies, and small businesses. The M.Ed. has 18 required credits from 6 core courses. The proposed MA in Education would decrease the required credits to 12 taken from 4 core areas. Students would also be required to take a 3-credit professional project course to prepare them for their thesis. Below is a list of common criteria courses that must be taken to meet the requirements of each core area.

Educational Research Core Criteria

- Students explain the research processes as applicable and essential to educational practice.
- Students conduct systematic literature reviews and critique and analyze research through discussions and written reports.
- Students distinguish and categorize different types of research including qualitative, quantitative, and action research.
- Students develop a research proposal consisting of all essential components.

Proposed Courses the meet this Core Area:
C&I 520 Educational Research and C&I 588 Action Research in the Classroom

Learning and Assessment Core Criteria

- Students are introduced to educational philosophies that match disciplines best practices.
- Students learn how to develop lessons, programs and/or curriculum and apply the products in an educational setting
- Students embed effective assessment and use assessment data to inform best practices
- Students develop instructional methods that reflect local, regional and national state standards and reform efforts.

Proposed Courses the meet this Core Area:
C&I 501 Curriculum Design, Implementation, and Evaluation,
C&I 510 Advanced Educational Psychology and C&I 519 Authentic Assessment

Critical Social Issues Core Criteria

- Students will cultivate an understanding of perennial and idiosyncratic issues in education that is grounded in sociocultural, philosophical, and historical inquiry
- Students will examine the foundations of educational policy, history, and philosophy though a criticalist lens
- Students will consider how research approaches in philosophy, history, ethnography, sociology, and comparative

education shape academic and lay understandings of education issues related to it
- Students will explore how teachers have and do become agents of change and leaders in their field

Proposed Courses the meet this Core Area:
C&I 502 Philosophy of Education, C&I 504 History of American Education, and
C&I 582 Trends and Issues in Educational Technology

Diversity Core Criteria

- Expand student knowledge of diverse cultures (e.g. various races, religions, ethnicity, gender, sexual orientation, dis/abilities, and socio-economic backgrounds);
- Expose students to the complexity of power relations across and within varying cultures;
- Examine historical, economic, psychological and social factors that have influenced present social conditions for many culturally diverse groups in the United States;
- Foster skill development in students for reaching and teaching learners with diverse abilities and cultural backgrounds; and
- Empower students to be change agents toward culturally responsive and inclusive practices in their classrooms and schools.

Proposed Courses that meet this Core Area:
C&I 514 Education Across Cultures and C&I 518 Inclusion and Collaboration

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

The proposed M.A. in Education primarily addresses Issue 2 of the University of Montana strategic plan, Educational for the Global Century. By condensing and providing greater flexibility in course offerings this graduate degree would build on the key strategy of enhancing discovery and innovation through two-year graduate education.

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.

Currently, there are no Master of Arts in Education in Curriculum and Instruction programs in Montana. There are several M.Ed. programs across the state that are geared toward in-service classroom teachers. The M.A. program at the University of Montana will offer a research oriented program for those interested in four core areas noted above and educators including those from corporations, NGO's, government agencies, small businesses Substantial collaboration has occurred within the Phyllis J. Washington College of Education and Human Sciences over the last two years to develop an innovative Master of Arts in Education program that serves a broader constituency in Montana.

5. Program Details

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

Montana Board of Regents

CURRICULUM PROPOSAL FORM

Master of Arts (M.A.) in Education
Department of Curriculum and Instruction
Phyllis J. Washington College of Education and Human Sciences
The University of Montana

Complete this plan, have your advisor sign, and submit to Teacher Education Services during the first term of enrollment.

Name:		Student ID #:
Address:		Phone #:
City:		Admission Date:
State:	Zip:	Advisor:
Email:		

Core Courses

Course #	Title	CR	Semester
	Core: Educational Research (select one)	3	
C&I 520	Educational Research		
C&I 588	Action Research in the Classroom		
	Core: Learning and Assessment (select one)	3	
C&I 501	Curriculum Design, Implementation, and Evaluation		
C&I 510	Advanced Educational Psychology		
C&I 519	Authentic Assessment		
	Core: Critical Social Issues (select one)	3	
C&I 502	Critical Issues, select one from 502, 504, or 582		
C&I 504	History of American Education		
C&I 582	Trends and Issues in Educational Technology		
	Core: Diversity (select one)	3	
C&I 514	Education Across Cultures		
C&I 518	Inclusion and Collaboration		
C&I 589	Professional Project/Thesis (required usually at end of program)	3	

Elective Courses: 15 Credits Minimum

Course #	Title	CR	Semester

Advisor's Signature and Date

Student's Signature and Date

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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

The proposed MA would begin Fall 2016. Based on Masters degree informational requests made to the department it is estimated that 10-20 students would be in the program over a given year when it matures. It should be noted that some courses taken in this program are also taken by graduate students in the M.Ed. options in the department.

6. Resources

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

No

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

None anticipated.

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

Key assessments have been identified through the accreditation process with Council for the Accreditation of Educator Preparation (CAEP). Key assessments will be embedded in each of the core areas to ensure student growth and documentation of learning. Graduates will complete follow-up surveys after graduation.

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 Department of Curriculum and Instruction graduate committee has been working on revising the Masters degree options over the last three years. The proposal was presented to the faculty in the department a number of times and they have been actively involved in the formation and structure of the MA. The head of the accreditation review team also was involved in aligning degree options with the CAEP standards. The department voted in favor of creating the MA option this fall prior to the submission of the proposal.

March 3-4, 2016

ITEM 170-1038-R0316

Request for Authorization to Re-title the Ed.S. Degree in School Psychology to a S.S.P. Degree – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to retitle the EdS degree in School Psychology to an SSP degree.

EXPLANATION

This proposal requests that Specialist level School Psychology graduate students receive an SSP degree (Specialist in School Psychology), instead of the EdS (Education Specialist) degree. This is only a retitling; it does not include any course changes. The School Psychology program is entirely administrated from the Department of Psychology. For example, all core School Psychology faculty are housed in the department, including the director. The vast majority of coursework is taken from faculty in the Department of Psychology as well. The SSP degree is more fitting, given the program's academic location. Education Specialist degrees are traditionally offered from programs within Colleges of Education, whereas the SSP degree is an appropriate title for degrees from Psychology Departments.

ATTACHMENTS

Academic Proposal Request Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1038-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana-Missoula** CIP Code: **42.2805**

Program Title: **School Psychology SSP degree retitled from EdS**

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 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- 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. 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.

X **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)

___ **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 requests that Specialist level School Psychology graduate students receive an SSP degree (Specialist in School Psychology), instead of the EdS (Education Specialist) degree. This is only a retitling; it does not include any course changes. The School Psychology program is entirely administrated from the Department of Psychology. For example, all core School Psychology faculty are housed in the department, including the director. The vast majority of coursework is taken from faculty in the Department of Psychology as well. The SSP degree is more fitting, given the program's academic location. Education Specialist degrees are traditionally offered from programs within Colleges of Education, whereas the SSP degree is an appropriate title for degrees from Psychology Departments.

The history and reason as to why the EdS degree was originally chosen is unclear, especially since the core School Psychology faculty have always been housed in Psychology. Several emails regarding the history that were sent to the originator of the School Psychology program (retired in 2003) were not returned. However, there are two likely reasons. One is that the core program coursework, in the past, did make use of a relatively larger number of courses from the (then) College of Education, particularly counseling courses. This is no longer the case. Second, The EdS tends to be the most common Specialist Level degree, and the person(s) starting the program may not have known of other titling choices. All students that matriculated into the EdS program would be able to choose whether to receive the EdS or the SSP.

March 3-4, 2016

ITEM 170-1039-R0316

Request for Authorization to Offer a Ph.D. in Teaching & Learning – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to offer a PhD in Teaching & Learning.

EXPLANATION

This proposal is to establish a Ph.D. in Teaching and Learning at the University of Montana that will focus on the theme: social change through technology and innovation. The program includes five emphasis areas from which students will select one: 1) Early Childhood Inclusion; 2) Foundations, 3) Literacy, 4) STEM; and, 5) Special Education. Each of these emphasis areas focuses on an area of national need (or projected need) both at the level of classroom teachers and in the professoriate. Each area represents faculty expertise, and an area of study that will make the program distinct from the Ph.D. program at Montana State University.

The proposed PhD in Teaching and Learning is composed of three common curricular areas or cores: the Research Core; the Social Change and Technology Core and Professional Seminars. These common elements are required for all PhD students.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1039-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana** CIP Code: **13.01**

Program Title: **Teaching & Learning PhD**

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 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- 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. 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 is to establish a Ph.D. in Teaching and Learning at the University of Montana that will focus on the theme: social change through technology and innovation. The program includes five emphasis areas from which students will select one: 1) Early Childhood Inclusion 2) Foundations 3) Literacy 4) STEM and 5) Special Education. Each of these emphasis areas focuses on an area of national need (or projected need) both at the level of classroom teachers and in the professoriate. Each area represents faculty expertise, and an area of study that will make the program distinct from the Ph.D. program at Montana State University.

The proposed PhD in Teaching and Learning is composed of three common curricular areas or cores: the Research Core; the Social Change and Technology Core and Professional Seminars. These common elements are required for all PhD students.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

This proposal is to establish a Ph.D. in Curriculum and Instruction (Teaching and Learning) at the University of Montana. The unifying theme across the coursework and other required experiences is: "Social Change through Technology and Innovation." This theme was developed to both reflect current issues in Education as well as topics that will survive the test of time. The proposed program has common coursework that all students will take (i.e., a research core, a core in Social Change through Technology and Education, and a Professional Seminar series). The program also includes five emphasis areas from which students will select one: 1) Early Childhood Inclusion; 2) Critical Social Issues, 3) Literacy, 4) Science and Mathematics; and, 5) Special Education. Each of these emphasis areas focuses on an area of national need (or projected need) both at the level of classroom teachers and in the professoriate, each area represents areas of faculty expertise, and represents an area of study that will make the program distinct from the Ph.D. program at Montana State University.

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

The Department of Curriculum and Instruction (Teaching and Learning), located in the Phyllis J. Washington College of Education and Human Sciences, is proposing a terminal degree, a Ph.D. in Teaching and Learning with five areas of emphasis (e.g., 1) Early Childhood Inclusion; 2) Critical Social Issues, 3) Literacy, 4) Science and Mathematics; and, 5) Special Education). The coursework will be focused around a strong research core, a core in social change through technology and innovation, a series of professional seminars, and courses in an emphasis area. The degree, using the junior colleague model of mentorship, will provide students with all the skills necessary for a career in the professorate as well as educational NGO's, educational research employers, and the like. Thus, students will have structured experiences in research, teaching, and service. Expectations for students include national presentations and publications, making them competitive for employment in Montana and nationally. The proposed program is a residence-based program requiring 64 credits beyond the Master's degree.

3. Need

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

The proposed program aids the University in responding to a number of Montana-specific and national needs. Generally speaking, in Education, the number of professors retiring or projected to retire far outpaces the number of students being trained at the Ph.D. level to fill the vacated positions. This proposed program will have a direct effect on that need.

Moreover, in Montana there are locations where there are chronic teacher shortages (i.e., our most rural and hard-to-reach populations). These area-specific shortages also occur in other states with large rural populations as well as in poor urban areas. Further, due to some state-level hiring practices in the Fall of 2015, many states were having record level teacher shortages. By preparing more Ph.D. level professionals for the professoriate, more teacher candidates can be prepared to fill these shortages. Estimates suggest that for every Ph.D. in education, 22 teacher candidates will be produced each year. Thus, this proposal will have an indirect but important effect on the problem of teacher shortages.

Further, this proposal was developed to meet state, regional, national, and international needs for faculty grounded in robust research programs. In so doing, it is necessary to clarify the distinctions

between the Ed.D. and Ph.D. as terminal degrees. According to the Carnegie Project on the Education Doctorate (2012), the two degrees are distinct in the following ways:

Doctor of Education (Ed.D.)

- *The Doctor of Education degree (Ed.D.) has traditionally been focused more on educational administration and scholarly practice.*
- *Ed.D. programs typically offer more courses related to educational administration and policy of practice.*
- *Ed.D. students focus their dissertation research more narrowly on particular practices or policies that affect state or regional schools or school systems.*

Doctor of Philosophy (Ph.D.)

- *The Doctor of Philosophy degree (Ph.D.) traditionally has been focused on research and scholarship.*
- *Emphasizes greater breadth and depth in theory and research methodology.*
- *Ph.D. programs typically have more courses related to research.*
- *Students who pursue the Ph.D. in Education are more inclined to research nationwide or international trends or large-scale practices.*

See http://cpedinitiative.org/about. Carnegie Project on the Education Doctorate (2012). About CPED .Retrieved from http://cpedinitiative.org/about

Thus, in order to fulfill state, regional, national, and international demand for research-based faculty in institutions of higher education. Specifically, areas of extreme high need are in Special Education and Early Childhood Inclusion. Additional areas in demand are in Literacy, Critical Social Issues, and Science and Mathematics. Each of these is a specialty focus area in the Ph.D. program proposed.

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

This proposed program will equip students with the skills and knowledge necessary for work in the professoriate and other professions requiring a knowledge of research and educational issues (i.e., research centers on campus, work in school districts, LEAs, the Office of Public Instruction and a variety of other educationally-focused for-profit and not-for-profit organizations including high-tech and healthcare-related fields). Data suggests that the vast majority of those who enter Ph.D. programs in Education do so at an older age then in other fields. This is because most of the students will have spent a number of years teaching. Further data suggests that those who enter doctoral programs when they are older are place-bound both in terms of where they attend school and where they are employed after graduation. This will directly benefit Montana where there are extreme and persistent needs in the emphasis areas.

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

Formal and informal processes determined the need for the program. Formally, need was established

through the analysis of local, state, regional, and national data that all indicate a chronic and persistent need in the emphasis areas described in this proposal.

Informal need was determined based on discussions among faculty in a number of Montana IHEs and through faculty report of requests for these programs from potential students or professionals in the Education field.

Further, a UM faculty member (Garfinkle) who is on the U.S. Department of Education's standing committee for the review of Leadership Preparation grants has been appraised of the national need in the areas included in this proposal.

The demand for the program is anticipated to be higher than the program's ability to meet that demand.

4. Institutional and System Fit

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

The proposed program will be housed in the Department of Curriculum and Instruction (Teaching and Learning) in the Phyllis J. Washington College of Education and Human Sciences. The proposed program will augment and enhance the current offering of the Department and the College. The proposal does not duplicate or compete with any existing programs at UM.

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

It is not anticipated that the adoption of the proposed program will require changes to existing programs at UM.

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

Currently, the Department of Curriculum and Instruction (Teaching and Learning) offers an Ed.D .in Education. The purpose of the Ed.D. is to prepare students for more clinically oriented professions, whereas the purpose of the proposed degree is to prepare professionals adept at conducting research and joining the professoriate.

In addition to the distinction of the purpose of the existing Ed.D. and the proposed Ph.D. programs, there are similar differences in the requirements of the programs. These differences are summarized below:

- The existing Ed.D. requires substantial content area course work (30 credits in a primary area of study and 20 credits in a supporting area of study). This content is appropriate for a professional looking to practice clinically. *The proposed Ph.D. emphasizes 12 credits of study focused in specific content areas (early childhood inclusion, critical social issues, literacy, science and mathematics, and special education), such that students will be looking into areas of prospective research.*
- The existing Ed.D. requires research courses (16 credits exclusive of the

dissertation), but these are introductory courses. *The proposed Ph.D. requires more research-focused classes (18 credits exclusive of the dissertation), including two advanced classes and classes in more research methods (i.e., single subject and survey research).* This additional breath and depth of the research requirement for the proposed Ph.D. program is important and purposeful given the different goals of the two programs.

- The existing Ed.D. requires 9 credits in unrelated Foundations Classes and 3 credits in Educational Technology. *The proposed Ph.D. offers emphasis areas in both Critical Social Issues in Education and Technology (12 credits each), and it offers a thematic core of 10 credits related to the theme "Social Change and Technology."* Thus the programs differ in the intentionality and purpose of the common program elements.
- In the existing Ed.D. program, students are required to take 30 credits of directed coursework and 22 credits of electives. *In the proposed Ph.D. program, students take 34 credits of common core and select 12 credits from one area of emphasis.*
- In the existing Ed.D. program, students complete a 10 credit dissertation. *In the proposed Ph.D. program, students complete an 18-credit dissertation.* This significant difference in credit emphasis (and thus expectations) for the dissertation again illustrates the different purposes of each degree option.
- *The proposed program requires a series of professional seminars, an internship, a major paper and the expectation to present and publish.* The existing Ed.D. does not have any similar requirements.

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

The proposed program will support the goals of the institution as stated in the UM strategic plan, UM2020: Building a University for the Global Century. Specifically the proposed program will support the economic drivers in Montana by creating a workforce that is prepared to take and succeed at high-paying jobs. The program will also increase the number of graduate students and the number of out-of-state students attending the University. Finally, the proposed program will increase the research productivity on campus as well as the amount of external funds for research.

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.

MSU has a recently adopted Ph.D. program in Education with emphasis areas in: Leadership and Policy Analysis; STEM Education; the K-20 Trajectory; Online and Distance Education Delivery; Pedagogy and Teacher Preparation; and, Education Evaluation, Assessment, Research Design and Analysis. Four of the five areas (Early Childhood Education; Critical Social Issues in Education; Literacy; and, Special Education) of emphasis in the UM Curriculum and Instruction (Teaching and Learning) proposed program show no overlap at all. The fifth area with a STEM-related Science and Mathematics emphasis is a broad area of study allowing for many specialties within in it. At MSU, the focus of the STEM strand emphasizes content courses in Biology, Chemistry and BioChemistry, Earth Science, Science Education, Electrical Engineering, Geography, Land

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Resources and Environmental Science, Microbiology, Plant Sciences, Physics and Range Science. The emphasis at UM is on Science and Mathematics as P-12 programs. This represents a difference in orientation of the two programs. Further, at UM, Curriculum and Instruction (Teaching and Learning) faculty have emphasis areas of Robotics, Mathematics, and Placed-based Education. Thus, although both the program at MSU and the proposed program at UM provide opportunities in STEM, the approach and the content areas are distinct. They are so distinct that potential students interested in STEM issues could easily distinguish between the programs. Thus, this is a complementary program. Further, the needs in STEM are so great that even if both programs were fully subscribed there will still be huge shortages in this area and Montana needs to prepare students in all aspects of STEM, and including Science and Mathematics in both programs will help.

The Department of Curriculum and Instruction has worked closely with the Counselor Education, Communicative Sciences and Disorders (CSD), and Educational Leadership departments to identify areas where our students might work with one another in their coursework across Ph.D. programs in the College. Notably, each of the College's other departments offering or proposing Ph.D. and Ed.D. degree programs have contributed to the development of the Research Core, and it is expected that their doctoral students will participate in the research courses offered. Similarly, doctoral students from other departments are invited to participate in the Professional Seminar courses.

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.

"Social Change through Technology and Innovation" is the Department of Curriculum and Instruction's (Teaching and Learning) unifying theme for its proposed Ph.D. program. This theme describes the philosophy and orientation of the degree as well as the learning objectives for this course of study. The theme is timely in reflecting the national trends in education today; and, describes ideals that will also stand the test of time. We anticipate this theme to not only focus the curriculum and provide ways to describe a graduate's knowledge but will help to distinguish the program from competitors. Thus, the theme translates into an important aspect of our recruitment strategy. That is, this theme will help attract highly-qualified students into the program.

The proposed Ph.D. in Curriculum and Instruction (Teaching and Learning) is composed of three common curricular areas or cores: the Research Core; the Social Change and Technology Core and Professional Seminars. These common elements are required for all Ph.D. students. The Research Core reflects the program philosophy that the Ph.D. degree should prepare the students to participate in the national discourse on education through contributions to the research literature. The Social Change and Technology Core is directly tied to the theme and although aspects of the theme will be integrated across course work, focused work in classes directly tie to the program's theme allowing for deep learning in these areas. The Professional Seminars are developed to prepare the students to enter and be successful in the professorate. Thus, these courses provide

students with opportunities to learn the skills necessary for that profession.

In addition to the common program features, the proposed program has 5 different focus area: 1) Early Childhood Education; 2) Critical Social Issues, 3) Literacy, 4) Science and Mathematics; and, 5) Special Education. These focus areas were developed because they represent areas of national need; they recognize the faculty's areas of expertise; and, they do not sustainably overlap with other Ph.D. programs in Montana. Students select one focus area. Whereas the philosophy of this program is that the majority of the students content knowledge will be learned in their Master's program and in their choice of topics for assignments in the common courses, these seminars will allow for advanced study in the student's area of interest.

Additional features of the program include an emphasis on mentorship and authentic experiences. As a way to ensure a focus on mentorship, faculty advisors and students will be matched based on mutual interests. Additionally faculty will use the junior faculty model wherein the faculty members treats the student as an apprentice faculty member, meaning that the student is included in the faculty member's teaching, research, and service such that the student is given active support to participate in meaningful ways.

Authentic experiences, beyond those provided through faculty mentoring, will also be provided. While the specific experience will depend on the availability of placements and the student's interests, these experiences may include experiences at IERS, the Rural Institute, an experience with local LEAs, an experience at OPI, and the like. The concept of authentic experiences also extends to the requirements for the degree. These requirements were designed for the student to create real products, not artifacts only used for academic purposes.

The program requirements include: admission to the program, successful completion ("B" or better) of the common courses and the courses in the emphasis area, a successful internship (measured as a proposal for a peer reviewed presentation, a state or national presentation, or a manuscript submitted for publication), experience teaching a face-to-face course and an online course, a major paper (this paper will be a literature review, suitable for publication and/or as Chapter 2 of the student's dissertation), an approved dissertation proposal, and a successfully defended dissertation (the dissertation should be able to be converted into a publishable manuscript). The entire residential program, including the dissertation is 64 credits. The exception to this residence requirement can be the dissertation year, but the student must have the advisor's permission to reside elsewhere for that year.

Informal expectations of the program are thus that the students will graduate with presentation experience, 2-3 manuscripts submitted or accepted for publication, and two classes prepared for teaching in their future employment. These expectations, with other measures, will be part of the program's evaluation system. In order for our graduates to be successful in obtaining nationally competitive jobs in the professoriate, these outcomes are necessary.

The following is a list of the required courses for the degree:

Common Core

All students in the Ph.D. program will take all the courses in the common core. The common core is made up of three strands: the Research Core; the Social Change and Technology Core; and the

Professional seminars. Courses with asterisks denote new course offerings.

Research Core (18 credits)

[Prerequisite: C&I 520 Educational Research (3 Credits)]

EDU 620 Qualitative Research Methods (3 Credits)

EDU 621 Advanced Qualitative Research Methods (3 Credits)*

EDU 625 Quantitative Research Methods (3 Credits)

EDU 626 Mixed Methods Research Design (3 Credits)*

EDU 627 Single Subject Research Designs (3 Credits)*

EDU 628 Instrument Development for Research and Evaluation (3 Credits)*

Social Change and Technology Core (10 Credits)

EDU 607 Seminar in Ethics (2 Credits)*

EDU 514 Education Across Cultures (3 Credits)

EDU 617 Seminar in Policy & Policy Implementation (2 Credits)*

EDU 515 Computer/Technological Application in Education (3 Credits)

Professional Seminars (6 Credits)

EDU 611 Professional Seminar 1: Conducting Literature Reviews (1 Credits)*

EDU 612 Professional Seminar 2: Supervision, Teaching College in Traditional Classrooms and Using Distance Technology (2 Credits)*

EDU 613 Professional Seminar 3: Grant Writing (1 Credit)*

EDU 616 Professional Seminar 4: Professional Presentations and Writing for Publication (1 Credit)*

EDU 697 Internship (1 Credit)

In additional to the common core, each student will select one emphasis area and complete the coursework in that area.

Emphasis Areas

Early Childhood Education (12 Credits)

EDEC 515 Early Childhood Professional Working with Families Experiencing

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Adversity (3 Credits)

C&I 523 Early Childhood Special Education (3 Credits)

EDEC 540 Neuroscience and Its Impact on Child Development (3 Credits)

EDEC 550 Early Childhood Curriculum Analysis, Design, and Assessment (3 Credits)

EDEC 560 Public Policy, Advocacy, and Leadership in Early Childhood Education (3 Credits)

Critical Social Issues in Education (12 Credits)

C&I 502 Philosophy of Education (3 Credits)

C&I 504 History of American Education (3 Credits)

C&I 506 Comparative Education (3 Credits)

C&I 508 Sociology of Education (3 Credits)

C&I 652 Issues in Curriculum and Instruction (3 Credits)

C&I 694 Advanced Seminar in Curriculum and Instruction (3 Credits)

Literacy (12 Credits)

C&I 527 Disciplinary Literacy Strategies (3 Credits)

C&I 530 Trends and Research in Reading and Writing (3 Credits)

C&I 540 Language Arts Pedagogy and Practice (3 Credits)

C&I 541 Genre Studies (3 Credits)

C&I 630 Special Topics in Literacy (3 Credits)

Science and Mathematics (12 Credits)

C&I 521 Foundations of Environmental Education (3 Credits)

C&I 542 Seminar in Current Topics in Mathematics Education (3 Credits)

C&I 552 Models of Professional Development in Mathematics and Science Education (3 Credits)

C&I 570 Instructional Technology Foundations (3 Credits)

C&I 571 Educational Technology Media (3 Credits)

Montana Board of Regents
CURRICULUM PROPOSAL FORM

C&I 580 Distance Learning Theory & Implementation (3 Credits)

C&I 582 Education Technology Trends & Issues (3 Credits)

C&I 652 Issues in Curriculum and Instruction (3 Credits)

C&I 694 Advanced Seminar in Curriculum and Instruction (3 Credits)

Special Education (12 Credits)

C&I 518 Inclusion and Collaboration (3 Credits)

C&I 524 Family and Diversity Issues (3 Credits)

C&I 526 Transition and Communication Support (3 Credits)

C&I 556 Methods in Low Incidence Disabilities (3 Credits)

C&I 560 Response to Intervention (3 Credits)

All students are required to complete a comprehensive examination and dissertation. The student, with input from the advisor, will form a Comprehensive Examination Committee and Dissertation Committee (same committee membership is an option). Each Committee must have at least five members, three from the Curriculum and Instruction (Teaching and Learning) faculty and at least one member from outside the unit. Depending on the topic, the committees may include more members either from Curriculum and Instruction (Teaching and Learning), across the University, or outside the University (see the University of Montana Graduate School Policies D.000 through D5.000, http://www.umt.edu/grad/Academic%20Policies/The%20Doctorate.php).

Dissertation

C&I 699 Dissertation (18 credits required)

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

Upon approval, recruitment for this program will begin immediately and a special admissions date will be set to enroll students into the program as quickly as possible. Admissions requirements will include: a Master's degree in Education or a closely related field, evidence (from a number of sources) of the ability to do advanced-level academic work, a letter of interest, 3 years of teaching or equivalent field-based experience, three letters of recommendation, official transcripts, and a current resume.

Courses in this program would be offered beginning in Fall 2016 and for each semester afterward. The first graduates of the program will be expected in the Spring of 2019.

We anticipate that there will be 2-3 students in each of the five emphasis areas in the first year (10-15 total Ph.D. students in the program). This number is expected to increase each year for the first three

years of the program when it is anticipated that the program will be fully subscribed. The program capacities are directly linked to the resources (i.e., number of faculty) associated with each emphasis area. Program capacities are as follows: Early Childhood, 8 students; Critical Social Issues in Education, 16 students; Literacy, 12 students; Science and Mathematics, 20 students; and, Special Education, 16 students.

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.

Curriculum and Instruction (Teaching and Learning) has recently added 1.5 lines (a repurposed half time position in Early Childhood Education and full time privately-funded endowed Chair in Gifted Education). These positions along with a College proposal for an additional Early Childhood Education line will help support the resource needs of this proposal. Additional department resources like TA support for graduate students will be realigned to support the proposed program and existing courses with low enrollments will be closed or culled to shift resources to support the proposed program. Additionally, as doctoral students progress through the three-year program, they will have teaching responsibilities that will allow faculty to adjust their loads toward the needs of the proposed program. Thus, there are no additional needs for faculty resources at this time.

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 is evidence to suggest that doctoral students are more likely to attend programs for which tuition and stipend support is provided. The department will lobby for more internal funding for RA/TA positions for students in the proposed program.

Additionally, faculty in Curriculum and Instruction (Teaching and Learning) have a long history of applying for and receiving external funding to support doctoral-level students. These grants include research grants that employee doctoral students on the project as well personnel preparation grants that provided tuition and stipend support for students entering high-need areas of study. The Department and the College will encourage and support faculty to apply for this extramural funding. Faculty members have received these awards in the past from the National Science Foundation and U.S. Department of Education. These funders are expected to continue to make these types of awards.

7. Assessment

How will the success of the program be measured?

The success of the program will be measured using a combination of formative and summative measures (that use both qualitative and quantitative data) as well as both proximal and distal factors. Four major processes will be evaluated: recruitment, retention, the number of professional experiences at the time of graduation and successful employment after graduation. The Department's Graduate Committee will work with the Departments' Assessment Committee to collect, synthesize, analyze and act on the data collected through the assessment process.

To measure the effectiveness of the recruitment process, quantitative data will be collected on the number of students who apply for each of the emphasis areas, the number of students admitted, the number of students who accept the admission offer and the number of students who register for classes. Additionally,

data will be collected on the demographic data of the applicants. This demographic data will be used to fine-tune recruitment efforts. Each year qualitative data will also be collected from admitted and enrolled students about their impression of the recruitment and admissions process.

To measure the effectiveness of the retention process quantitate data will be collected on the number of students who enroll in the program graduate from the program. Given that this is a summative measure, formative data will also be collected whereby data are collected each year on each student to track their enrollment. In the case where students leave prior to graduation, students will be interviewed as to why they are leaving the program.

At the time of graduation, the number of professional presentations, publications, manuscripts submitted for publication, grants submitted or funded and the like will be collected and compiled. These data represent a true measure of quality of the program, as these artifacts will be peer-reviewed. And, it is thought that these data points will provide authentic assessments of how the student will perform in his career. For students with relatively few products, information will be sought about barriers experienced and support needs. For students with relatively more products, data will be collected on the support that facilitated the student's productivity.

Post-graduation data will also be collected to track the student's professional accomplishments. The product lists above as well as awards, editorships, promotion and tenure, and related achievements will be used to measure the effectiveness and impact of the program on each of the areas of emphasis.

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.

Both formal and informal processes where used to develop this proposal. In the 2013-2014 academic year, special education and other interested faculty and administrators from UM, MSU and MSU-B participated in a series of conference calls that established the shared concern for need of a doctoral-level degree in Special Education. Prior to the start of school in Fall 2014, the faculty from UM and MSU met to discuss programs and potential collaboration. At that time MSU was preparing its application for a Ph.D. in Education and faculty discussed the need for complementary programs at each institution. UM faculty reviewed the MSU proposal, prior to the Regents approval, to confirm the complimentary nature of the MSU proposal with the proposal UM was in the early stages of creating. At that time UM faculty and administrators agreed that each institution's degree program would be distinct and non-competing. And, that once implemented, Montana would be much better served by the degrees across the institutions.

UM faculty held meetings with Directors of Institutes on campus with related missions (i.e., IERS, the Rural Institute and LAB Preschool) to garner their understanding of need for the proposed program as well as support for the program in terms of providing internships for the participating students. These meetings were universally successful.

Informal discussions were held with directors of multiple education-related agencies across the State and all that we contacted fully support the proposed program (letter of support available upon request). Further informal discussion were held with existing Ed.D. students and potential Ph.D. students as well as with Master's students and teachers in the field who have already earned Master's degrees.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

Finally, the faculty in Department of Curriculum and Instruction (Teaching and Learning) are very invested in the Department offering a Ph.D. program.

March 3-4, 2016

ITEM 170-1040-R0316

Request for Authorization to Offer a Ph.D. in Speech Language Pathology – University of Montana-Missoula

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THAT

The Board of Regents of Higher Education authorizes the University of Montana-Missoula to offer a PhD in Speech Language Pathology.

EXPLANATION

This proposal seeks approval for the development of a Ph.D. Program in Speech-Language Pathology. This proposed program is poised to have a significant impact as no other program like it exists in the state and there is a high demand for such expertise at the state and national levels.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1040-R0316** Meeting Date: **March 3-4, 2016**

Institution: **University of Montana-Missoula** CIP Code: **51.02**

Program Title: **Communicative Sciences and Disorders**

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 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- 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. 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 seeks approval for the development of a Ph.D. Program in Speech-Language Pathology. This proposed program is poised to have a significant impact as no other program like it exists in the state and there is a high demand for such expertise at the state and national levels.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

This proposal seeks approval for the development of a Ph.D. Program in Speech-Language Pathology. This proposed program is poised to have a significant impact as no other program like it exists in the state and there is a high demand for such expertise at the state and national levels.

There is currently a shortage of Ph.D. trained graduates in speech-language pathology and according the American Speech Language Hearing Association it is predicted that nearly a third of all PhD-level faculty positions will remain unfilled between 2012 and 2017. Advancing the knowledge base of the discipline in the context of a limited, if not declining, pool of scientists is a serious concern. Research is one of the cornerstones of evidence-based practice and academic researchers with research doctorates are needed to train the next generation of clinicians and researchers. The training for graduate students is focused on facilitating best-evidence standards to work to serve individuals with speech, language, swallowing, and hearing impairments. Although the state of Montana now has an accredited Masters of Science Program (the terminal degree to be certified as a speech-language pathologist) for speech-language pathologists to serve the needs of this state, Montana still experiences a shortage of trained individuals. The Department of Communication Sciences and Disorders continues to address these issues through innovative training efforts and programs. The addition of a Ph.D.-level training program will allow us to continue to grow our resources to meet the needs of the students, state, and nation.

Scientists in all disciplines are challenged to support their research in the current funding climate; arguably, this situation has potentially perilous effects on smaller disciplines, such as speech-language pathology. Therefore, training academic researchers in PhD-level courses is imperative for the profession of speech-language pathology to survive in the current academic climate.

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

We are proposing the addition of a Ph.D. in Speech-Language Pathology to be offered by the Department of Communicative Sciences and Disorders. We currently do not offer a Ph.D. in our own program, and those who have historically wished to pursue doctoral level studies have been required to pursue the current Interdisciplinary PhD program through the University of Montana or change to another major. The Department of Communicative Sciences and Disorders would like to add the opportunity for students to obtain a Ph.D. in Speech-Language Pathology as related interests and career aspirations would thus be better served. We do not anticipate a large increase in students, but we believe this degree would attract more national and international students, as well as provide Montana students with a masters' degree another viable doctoral degree option.

3. Need

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

At both the national and local levels, we have a significant number of master's level professionals who wish to add a doctoral credential that will enable them to compete for faculty positions nationally and internationally.

The Council on Academic Accreditation for programs of speech-language pathology is a powerful defining force in the content and delivery of licensable speech-language pathology at the masters' level. Accreditation standards require that speech-language pathology graduate training programs hire faculty who have earned a doctoral degree in speech-language pathology. Despite this requirement, our speech-language pathology program, and others nationally, are challenged to hire appropriately qualified faculty as there is a shortage of trained speech-language pathology doctoral graduates nationwide. According to the American Speech Language Hearing Association, the

projected number of PhD level full-time faculty openings in the speech-language pathology field for 2012 - 2017 is 408. The projected number of Ph.D.-level research doctoral graduates who will be available for, and likely to seek, an academic faculty position as their first employment in the same timeframe is 279. Accordingly, it can be expected that nearly a third (31.6%) of faculty openings in speech-language pathology between 2012 and 2017 will remain unfilled. This shortage is even more apparent at universities in rural western states such as University of Montana where few institutions for training doctoral graduates exist.

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

It is anticipated that the other constituencies will not be affected by the addition of this program as University of Montana-Missoula is the only home of the master's level training program in Speech-Language Pathology and thus would be the only campus offering Ph.D.-level training in this area.

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

We have created an appropriate faculty team in anticipation of the developed Ph.D. program. We have a total of seven academic (Doctoral-trained) and three clinical (masters-trained) full-time faculty at present, who handle our undergraduate and graduate degree programs (2 total). One academic faculty with a significant research track record and experience training PhD students as a faculty member at another Research One University was hired as of September 2015 as an Associate Professor and Graduate Program Director with the agreement to serve a large role in implementing, managing, coordinating, and training in the proposed Ph.D program. Thus, given our recent faculty addition and our current full-time faculty team, we expect to be able to fully support this proposed Ph.D. program.

We anticipate more applicants for this degree than we will be able to accept. Our intent is for the program to be competitive for admission. This enables us to be selective in our applicant pool and train only those most able and ready to pursue advanced degrees. Similar to doctorates in special education, psychology, physical therapy, or other helping professions, admissions should be competitive.

We have determined the need for a program through national trends and demands (see aforementioned demands section) and by keeping track of applicants and inquiries over the past years. There is a pool of practitioners in the state who would be interested in pursuing this degree if they could stay in Montana and many individuals who are interested in moving from other states to pursue their studies in Missoula. Moreover, there is a need to programs nationally and internationally and as such there is great potential for this for recruitment potential.

4. Institutional and System Fit

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

The proposed degree would be directly connected to our Master's of Science degree in Speech-Language Pathology that is currently offered in the Department of Communicative Sciences and Disorders. First, students will have the opportunity to take some currently offered content courses with Ph.D. advanced- level course requirements. Moreover, the doctoral curriculum will involve products and training opportunities integrated in the Masters of Science program that will allow Ph.D. students to gain experience in the scholarship of teaching, supervision, research grant writing, research presentation, and potential policy development.

Additionally, as a reflection of the needs and requirements of any degree in Health Sciences, students will have the inter-professional education opportunity to study and learn with others in related professions and take graduate courses of research and related in content when appropriate in associated doctoral training programs such as Counselor Education, Teaching and Learning, Educational Leadership, and Health and Human Performance.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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

No, if we obtain permission to add this degree, it will not affect our existing Master of Science graduate program degree for Speech-Language Pathology at University of Montana.

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

There are no other programs like this at University of Montana, or even in Montana.

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

The University of Montana has identified five strategic directions to guide our identity, growth and future directions. We will briefly mention each as it relates to this request for the Department of Communicative Sciences and Disorders to offer a Ph.D. degree.

Partnering for Student Success: Adding a Ph.D. will inevitably attract a small but high-level set of applicants interested in grant-writing and research in human development, human sciences, and the role of effective intervention programs for pediatric through geriatric populations.

Education for the Global Century: The Ph.D. is a globally-recognized terminal degree and will enhance our international recruitment efforts. Attracting students from diverse backgrounds benefits the university at many levels. It often creates the possibility of pipelines of connections back and forth from countries and reservations to University of Montana.

Discovery and Creativity to serve Montana and the World: As mentioned earlier, Montana (and the world) is currently experiencing a shortage of certified speech-language pathologists to serve the speech, language, literacy, and swallowing needs of children through adults with deficits in related areas. A training program that continues to develop students' abilities to pursue and discover best science to test and treat deficits of speech-language pathology, and then creatively teach and mentor these skills in budding speech-language pathologists appears to be directly in-line with this important institutional goal.

Dynamic Learning Environment: The proposed Ph.D. program is intended to provide a focused and thorough education reflective of research and speech-language pathology, while still encompassing important dynamic learning aspects such as student individualization, inter-professional education, and opportunities for direct mentorship. Indeed, our unique environment at the University of Montana allows us to respond to all our student needs in a unique and focused manner. The proposed Ph.D. program is no exception and we look forward to developing a rich learning community that will be enhanced and influenced by the unique needs of the Ph.D. students.

Planning and Assessment Continuum: As University of Montana devotes time and resources to enhanced fund-raising and accountability, we need to pay attention to our current students both for what they bring to this effort now, and what they might contribute as alumni. When people have earned their terminal degree from an institution, they usually want to be proud of that accomplishment, and to contribute to the health and status of their alma mater. As Ph.D. students go on to present their well-conducted research and disseminate in nationally-ranked forums the reputation of University of Montana will benefit overall.

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

Montana Board of Regents
CURRICULUM PROPOSAL FORM

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 other programs like this at University of Montana, or even in Montana.

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.

Applicants to the Ph.D. in Speech-Language Pathology must have adequate GRE scores in all categories or adequate GPA and other related evidence of academic readiness. On rare occasions, in the event of substitutions, or a lower GRE score, a combination of other factors may allow for provisional acceptance. Application materials include all previous transcripts, professional statement of interest, and three letters of recommendation. After these materials are reviewed, the applicant may be invited for an interview.

Once accepted, a formal program of study is designed in cooperation with an assigned advisor. The Speech-Language Pathology PhD will consist of 60 course and seminar credits.

The specific list of courses and seminars to fulfill these requirements constitutes the student's work program, which must be approved by the student's advisor. All courses in graduate work programs should be at the graduate level although occasional substitutions are allowed and doctoral-level course requirements would be supplemented.

Two or more teaching experiences are required of all students regardless of whether they receive funding as a teaching assistant. Implementation of this requirement is left to the student and his/her advisor. The teaching experiences will enable students to participate in the planning of a course; plan and present lectures; and participate in the evaluation of student performance.

Directed research experiences are a critical element of the student's doctoral program. Doctoral students are expected to be actively involved in research each semester they are enrolled in the university. Students should obtain research experiences with at least two different faculty members. Students are required to write at least two data-based research reports deemed to be of publishable quality by his/her advisor and to present the research findings of at one of these studies to a colloquium of the Department. In accordance with University of Montana policy, students must receive IRB approval before initiating any research project.

Specific requirements include:

A1. Program Specialization: A minimum of 15 semester hours in core content specialization courses and seminars that provide in-depth knowledge of his/her chosen area of specialization (* indicates a course to be developed for this proposed degree).

Possible courses include (* indicates a course to be developed for this proposed degree):

- **CSD 520 Articulation & Phonological Disorders** (3 credits): Theoretical perspectives on phonological and articulation disorders with emphasis on application to clinical management including evaluation, assessment techniques, and intervention strategies.
- **CSD 530 Voice & Motor Speech Disorders** (3 credits): Diagnosis and management of voice and resonance disorders. Neural bases of normal and disordered speech motor control. Assessment and treatment of motor

Montana Board of Regents
CURRICULUM PROPOSAL FORM

speech disorders.

- **SD 560 Lang/Learning Disorders: School-age Childre**n (3 credits): Theoretical perspectives, research, and clinical issues concerning disorders of language, literacy, and learning in the school-age population (elementary through high school) considering contributing factors, special populations and basic assessment and intervention principles.
- **CSD 550 Language/Learning Disorders: Young Children** (3 credits): Theoretical perspectives, research, and clinical issues concerning disorders of language in infants, toddlers and preschoolers considering contributing factors, special populations and basic assessment and intervention principles.
- **CSD 565 Aphasia/Neurocognitive Disorders** (3 credits): Study of anatomy, physiology, and pathology of voice. Diagnosis and management of voice and resonance disorders. Neural bases of normal and disordered speech motor control. Assessment and treatment of motor speech disorders.
- **CSD 696 Independent Study** (1-5 credits): Under faculty mentorship - Course material appropriate to the needs and objectives of the individual student.
- ***CSD 691 Seminar: Advanced Topics** (1-3 credits): Covers issues and doctoral-level research and theory related to selected topics of speech-language pathology.
- ***CSD 694 Journal Reading Group** (1-3 credits): Under faculty direction, students read and discuss published research. Students learn to critique empirical and theoretical papers as well as current research findings in important areas of speech-language pathology.

A2. Research Tools: A minimum of 15 semester hours in research design and data analysis, including at least one basic course in statistics. All doctoral students are required to take graduate level coursework in quantitative, and qualitative research methods, and an advanced statistics course. Usually, these courses must be at the doctoral (600) level, but in consultation with the faculty, occasional substitutions are allowed and doctoral-level course requirements would be supplemented.

Possible courses include (* indicates a course to be developed for this proposed degree):

- **CSD 600 – Research Methods** (3 credits): Research methodologies appropriate for quantitative and qualitative studies in communication sciences and disorders. Focuses on critical reading of research papers, design, and implementation of experiments.
- **EDLD/ C & I 618- Educational Statistics** (3 credits): Advanced statistical methods and use of the mainframe computer and microcomputer for data analysis. Use of a recognized statistical package (e.g., SPPS-X) for research applications.
- **EDLD/C & I 620- Qualitative Research** (3 credits): In-depth review of descriptive, experimental, historiographic, ethnographic, and other qualitative research methods, designs, and approaches. Includes the development of a research proposal.
- **EDLD/ C& I 625 - Quantitative Research** (3 credits): Principles and techniques of quantitative research in educational settings. Students prepare a draft of a research proposal and experience an abbreviated dissertation proposal defense.

3. Related Area: A minimum of 9 semester hours of graduate credit in a field of study related area to one's program specialization. A related area is defined as the development of a content area as opposed to the development of research techniques.

Possible courses include:

- **C & I 660- Special Topics in Literacy** (3 credits) In-depth coverage of selected topics in reading and writing related to current literacy issues and practices.
- **C&I 510 - Advanced Educational Psychology** (3 credits): The exploration of theoretical and empirical issues in psychology related to learning and intelligence.
- **G 511 Theories and Techniques of Counseling** (3 credits): Examination of a set of currently used counseling

Montana Board of Regents
CURRICULUM PROPOSAL FORM

theories and techniques. A supervised laboratory component explores counselor behavior, techniques, and dynamics of counselor-client relationships.

- **G 512 Counseling Fundamental** (3 credits): Overview of counseling's history. Concepts forming the basis of counseling profession including introduction to ethics. Representative counseling theories (cognitive, behavioral, relational) are included.

A4. Products and Internships: *A minimum of 12 semester hours* *of graduate credit:* A set of professional products and internships provide opportunities for mentored experiences in critical professional areas and include the following opportunities
Courses will include all of the following (* indicates class to be developed for this degree program):

- ***CSD 692 Grant Writing** (2 credits): The student, in collaboration with a faculty member, writes and submits a grant to an extramural funding agency.
- ***CSD 696: Conference Presentation** (2 credits): Student prepares for a presentation at a major academic conference, presents a paper, and his/her presentation is evaluated by one or more faculty members.
- ***CSD 697- Publication** (2 credits): The student, in collaboration with a faculty member, prepares a manuscript for publication, and engages in the submission and editorial process through final publication.
- ***CSD 697- Literature Review** (2 credits): The student, in collaboration with a faculty member, prepares a systematic review of a topic and the final product is a manuscript for publication.
- ***CSD 698 Internship Research (**2 credits): Students engage in research on topics of importance in speech-language pathology and supervised by speech-language pathology faculty.
- ***CSD 698: Internship - College Teaching** (2 credits): The student will teach one or more undergraduate courses in professional personnel preparation, including courses that use instructional technologies.
- ***CSD 698: Internship – Policy Development** (2 credits): The student writes a comprehensive analysis of a preapproved (by the committee) health care or human service policy using a specified analysis framework.
- ***CSD 698: Internship - Clinical Supervision** (2 credits): The student will supervise graduate students in a clinical setting and apply theories of learning and supervision accordingly. His/her performance will be mentored and assessed by one or more faculty members.

A5. Directed Research: A minimum of 9 semester hours of graduate credit: will be completed associated with the directed research of the dissertation

CSD 699: Dissertation (9-15 credits): The dissertation is the capstone experience of the doctoral program. In this experience, the student plans, carries out, analyzes, and interprets substantial original research that contributes to the advancement of the field of speech-language pathology.

What follows is what we would publish in the catalog or other recruitment publications:

Comprehensive Examination Policies

After completing at least 15 credits of research tools and program specialization classes and one year of study, students may request to take their comprehensive examination.

All policies developed by the University of Montana Graduate School will be followed for the formation Comprehensive Exam Committee and are found on the Graduate School Website.

Comprehensive Exams involve questions prepared by your committee, intended to address your areas of emphasis and your research knowledge and reflect advanced and broader research capabilities. Depending on examination

Montana Board of Regents
CURRICULUM PROPOSAL FORM

results, remediation may require students to (a) retake a different form of the examination, (b) sit for an oral examination, (c) submit a written assignment, or (d) retake one or more courses.

Dissertation

A dissertation committee oversees the dissertation process. The committee can be appointed as the student nears completion of the comprehensive examinations. The dissertation process begins when the student, in consultation with his/her academic advisor, selects a dissertation committee chair. **P**olicies for University of Montana Graduate school will be followed and prospective committee members shall be chosen by the student in consultation with his or her academic advisor, and the program chair shall forward the nominations to the dean of the Graduate School for his or her approval. Doctoral candidacy is achieved after the student passes a formal proposal defense. A formal dissertation proposal will be prepared with guidance from his/her dissertation chair, and then the student schedules a date with the committee for the formal proposal defense. When the proposal is successfully defended and the committee approves of the student's dissertation research, then the student can proceed to complete and then defend a dissertation. The dissertation is an original contribution to knowledge of such substance and literary quality as to warrant publication. Students must register for dissertation credits every semester in which they are working on the dissertation.

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

We do not anticipate, overall, a significantly large number of students pursuing the Ph.D. and thus are not asking to add faculty lines or facilities. We anticipate no more than 3 students to be accepted in any given year with an average of 4-6 a in any stage of the program. This acceptance rate and program total is equivalent to other similar speech-language pathology Ph.D programs such as that of Utah State University.

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 Department of Communicative Sciences and Disorders currently has seven full-time tenure lines. This is sufficient to meet the need at this time.

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.

At present, the resources at the University of Montana are sufficient to meet the needs of the proposed program.

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

Success for this program will be measures in several ways.

1. Throughout the program, learning outcomes will be assessed through exams, papers, class presentations, and detailed supervision of doctoral students' work. The process of external peer review, the gold standard for academia, will be used as a measure for long-term success and students will have multiple opportunities and products requiring peer-review and associated feedback in their field (e.g., publish paper, research presentation, grant).

2. Key assessment milestones will be conducted throughout the students' tenure as a Ph.D. student to assess

Montana Board of Regents
CURRICULUM PROPOSAL FORM

academic knowledge and success, e.g., comprehensive exams, aforementioned products/internships, the prospectus and dissertation. These milestones will allow for judgments of appropriateness and possible learning/mentorship to be conducted when needed.

2. The program will ultimately be considered a success when a cohort of students successfully completes the program and goes on to accept employment in the discipline. Surveys will be completed on all graduates of the program to determine job placement and exit surveys will be completed to reflect on their job preparation.

3. Finally, as graduate go on to train other students, and continue to have an impact at state, national, and international levels – national recognition of University of Montana will reflect success as will the anticipated research and professional collaborations that could be measured by publications and grants.

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.

All Department of Communicative Sciences and Disorders faculty will be involved in curriculum development and implementation as well as assessment/outcomes tracking systems. In addition, we will develop a system of questions to ask potential employers of Ph.D. graduates as well as conduct ongoing interviews with Ph.D. students during and after their program completion to continue for continued program improvements and developments.

March 3-4, 2016

ITEM 170-1041-R0316

Request for Authorization to Offer an A.A.S. in Hospitality Management – Missoula College University of Montana

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THAT

The Board of Regents of Higher Education authorizes Missoula College to offer an AAS in Hospitality Management.

EXPLANATION

The Associate of Applied Science in Hospitality Management develops the skills students will use in the hospitality and tourism industry and provides students with knowledge and practical experience in the major areas of management and operation: accounting, customer service, hotel management/operation, restaurant management/operation, purchasing, and sanitation practices in foodservice. Graduates prepare for entry-level, professional careers involving business support for restaurants, hotels, resorts, and other hospitality and tourism organizations. The AAS degree option is five semesters, which includes a hospitality geared internship to allow extensive hands-on learning in the industry.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form
Attachment 1 – Letters of Support

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1041-R0316** Meeting Date: **March 3-4, 2016**

Institution: **Missoula College** CIP Code: **52.0901**

Program Title: **Associate of Applied Science in Hospitality Management**

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 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- 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. 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 Associate of Applied Science in Hospitality Management develops the skills students will use in the hospitality and tourism industry and provides students with knowledge and practical experience in the major areas of management and operation: accounting, customer service, hotel management/operation, restaurant management/operation, purchasing, and sanitation practices in foodservice. Graduates prepare for entry-level, professional careers involving business support for restaurants, hotels, resorts, and other hospitality and tourism organizations. The AAS degree option is five semesters, which includes a hospitality geared internship to allow extensive hands-on learning in the industry.

Montana Board of Regents

CURRICULUM PROPOSAL FORM

1. Overview

Missoula College-UM requests to offer an Associate of Applied Science degree in Hospitality Management.

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

The Associate of Applied Science in Hospitality Management develops the skills students will use in the hospitality and tourism industry and provides students with the knowledge and practical experience in major areas of management and operation: accounting, customer service, hotel management/operation, restaurant management/operation, purchasing, and sanitation practices in foodservice. Graduates prepare for entry-level, professional careers involving business support for restaurants, hotels, resorts, and other hospitality and tourism organizations. The AAS degree option is five semesters, which includes a hospitality geared internship to allow extensive hands-on learning in the industry.

3. Need

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

As stated by the 2010 Economic Review of the Travel Industry in Montana, researched by the Institute of Tourism and Economic Research at the University of Montana, the tourism industry accounted for $2.33 billion in total economic impact for Montana for 2009. This number has risen by one billion dollars in three years, bringing in $4.4 billion for the state in 2013 and producing over 44,000 jobs for industry professionals throughout Montana (Montana Office of Tourism, 2014). This brings in over $305 million in revenue for the State of Montana, making the tourism industry one of the leading industries for the State.

Economic trends indicate that this increase in non-residential tourism will not slow down and has grown by 2.3 percent in the last year (ITRR, 2013). The increase is attributed to an increase in domestic vacation and travel due to the current economic situation of the nation, safety concerns abroad, as well as the economic distress of areas once popular for vacationing, such as Europe.

In 2013, revenue gained through non-residential tourism accounted for 18% in total sales from restaurants and bars and 10% of total sales from hotels and lodging (Montana Office of Tourism, 2014). This alone accounts for over $ 1 billion of new money for Montana each year.

Currently, there are no degree programs in Montana that provide specialized training for professionals within the hospitality industry, with the exception of specialized culinary education at Missoula College and at Flathead Valley Community College. Individuals wishing to receive specified training in hospitality management must go to out-of-state schools, with the closest being at Washington State University and multiple schools throughout Colorado. Consequently, local businesses recruit out-of-state for managers and professionals hired within their establishments.

It has been brought to the attention of our academic board that there is an industry need for hospitality professionals in areas beyond food service. This AAS degree would respond to the labor-force trends of the area.

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

Our program will benefit students by providing professional training for well-paying management positions in the hospitality field. According to the Bureau of Labor Statistics, the average pay for Food Service Managers is $22.41/hour, Lodging Managers $19.86/hour, and Chefs $18.30/hour. Entry-level positions within these fields range from minimum wage, plus tips, to $11.67/hour for institutional cooks.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Other constituencies served by the proposed program include students from the Food Service Management Program at Missoula College, the College of Forestry and Conservation at the University of Montana, the Gallagher School of Business Administration (SoBA)at the University of Montana, as well as other programs within the Montana University System providing higher education in business and entrepreneurship.

The Associate in Applied Science in Hospitality Management would be the sister program to the very successful Associate of Applied Science in Food Service Management at Missoula College. The proposed curriculum would coincide with required courses for the AAS in Food Service Management, allowing students to pursue two degree options simultaneously if they choose to train for all the major sectors within the hospitality industry, giving graduates an edge in the field. In regards to the College of Forestry and Conservation, the AAS in Hospitality Management would create a relationship with the Parks, Recreation, and Tourism Program offered through that college and allow for degree options at a baccalaureate level for those who wish to pursue a higher degree. A relationship will be developed with the Entertainment Management program that offers a minor for any student on campus, as well as other programs of the Gallagher School of Business Administration. The general education courses required in the proposed curriculum for the AAS in Hospitality Management coincide with the prerequisites for the SoBA, creating a two-plus-two opportunity for graduates. Likewise, it would give four-year degree seeking students the opportunity to receive education and training in specific courses if they are choosing to seek employment in the hospitality industry.

Overall, the courses offered through the AAS in Hospitality Management have broad-based interest and benefit to a variety of students interested in hospitality, tourism, business, and entrepreneurship by boosting professional and educational opportunities in a myriad of academic disciplines.

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

Student interest in the proposed program is expected to be strong, and continue to gain in popularity as the program becomes vested within the community. In the spring of 2014, Missoula College passed a Professional Certificate in Hospitality Management, which is being taught for the first time in the fall of 2015. The current enrollment for the introductory class (Introduction to Hospitality Management, HTR 107) has seven students, with inquiries received regarding the program on a weekly basis from community members, current students, and alumni of the Food Service Management program. Currently, there are no specific degree programs geared to the hospitality industry offered at a secondary education level, although currently there are expressed needs for pathways being asked for by Family and Consumer Science teachers across the state and potential funding to design these programs in the works. Tourism is one of Montana's major industries and it is growing. Statistics from the Institute for Tourism and Recreation Research indicate that the industry is growing at 2-3% per year and this growth demands more employees to service these tourists. This proposed program would help to meet this need for well trained employees.

Currently, the Big Sky Pathways in Hospitality and Tourism is the largest pathway in the state. At a Family and Consumer Sciences Cluster Training at Missoula College in the spring of 2015, the majority of Montana Family and Consumer Sciences teachers agree that by having an AAS in Hospitality Management would help bring students to Missoula College as well as keep students in Montana by offering curricula that are only offered out-of-state at the time.

According to the Missoula College Advisory Board, it is also expected that a significant amount of interest will be from non-traditional students who already have experience within the industry and are looking for education to bolster their resume and provide more opportunity to succeed and advance within the industry.

In addition to traditional and non-traditional student interest, there is a growing demand for international students to study abroad in areas specific to hospitality management due to the increasing demand abroad. Missoula College is currently in discussion with University of Montana administrators and faculty to begin a relationship with universities in China, Brazil, and Chile to introduce exchange programs in culinary arts and hospitality management.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

The Food Service Management AAS Degree attracts an average of 50 students each fall, with an additional 30 on a waiting list to enter the program. In a survey of current students, approximately 50% said they would be interested in pursuing the Hospitality Certificate, especially if it were to culminate in a four-year degree.

The retention of students in the Food Service Management Program is roughly 50% due to the physical requirements involved with the field of study. It is predicted that the retention for the Associate of Applied Science in Hospitality Management would be close to 75% due to the lesser physical requirements, as well as the opportunity to take the majority courses offered online.

4. Institutional and System Fit

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

The majority of the coursework needed for the AAS in Hospitality Management is already in place at Missoula College. This certificate would partner with the Food Service Management courses, as well as other Business Technology courses in Accounting, Marketing and Sales, and Customer Service.

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

No changes.

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

The Food Service Management Program is closely related to the certificate program, in that it is one of the specific career options within the hospitality field. The AAS in Hospitality Management will offer education in the fields of hotel and lodging management, tourism sales and marketing, and a business management stance rather than culinary specific courses the Food Service Management program offers. The Professional Certificate in Hospitality Management at Missoula College is the first academic year curriculum of the AAS in Hospitality Management. The degree program will give students the opportunity to further their studies beyond the certificate option.

This hospitality program also would complement the Parks, Recreation and Tourism degree and the Entertainment Management certificate at UM. For some students it would be a precursor to these other programs as they decide to pursue higher degrees and certificates. In other ways it would provide a pool of potential employees for those in these other fields to hire when they enter their professions.

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

As the two-year college of the University of Montana, Missoula College has been charged with establishing and maintaining programs for workforce development. The proposed program attempts to establish new opportunities to enhance the economy of Montana through workforce development.

Future goals for the AAS in Hospitality Management include the development of a Bachelor of Science in Hospitality Management within the Montana University System to further the efforts of the students and promote professional growth and partnerships within the local community, nationally, and internationally.

If future goals come to fruition, this would create a direct two-plus-two program, impacting the strategic goals of Missoula College, the University of Montana, and the Montana University System.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

Within the development of the program, there have also been relationships formed to start developing dual credit and pathways options between Missoula College and secondary education in the State of Montana. The Food Service Management program already offers dual credit options for Food Service Sanitation, which is part of the required coursework for the proposed AAS in Hospitality. There would be options for dual credit in the introductory classes in accordance with the Big Sky Pathways and the hospitality cluster.

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.

As stated above, the AAS in Hospitality Management would have a direct relationship with the Food Service Management Program at Missoula College. As a result, this program would also start a relationship with the Culinary Arts Department at Flathead Valley Community College and could benefit their program with students looking to further their education with higher degree options in the culinary field.

There has been no communication as of yet with Flathead Valley Community College because this program, although related in industry, does not directly relate nor coincides with the education they are providing at that institution. Missoula College's food service program is accredited by the American Culinary Federation and is governed by different standards than FVCC.

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.

Program Description:

The Associate of Applied Science in Hospitality Management develops the skills students will use in the hospitality and tourism industry and provides students with the knowledge and practical experience in the major areas of management and operation: accounting, customer service, hotel management/operation, restaurant management/operation, purchasing, and sanitation practices in foodservice. Graduates prepare for entry-level, professional careers involving business support for restaurants, hotels, resorts, and other hospitality and tourism organizations. The AAS degree option is five semesters, which includes a hospitality geared internship to allow extensive hands-on learning in the industry.

Student Outcomes:

Upon completion of the program, students will be able to:

- Understand basic accounting principles in business.
- Have a historical and current knowledge-base in the hospitality industry to include hotel/lodging, food and beverage, and recreation management.
- Discuss different techniques for customer service, marketing and sales strategies within the hospitality and tourism field.
- Demonstrate clarity, style, force of ideas, and structure in writing.
- Solve technical problems involving mathematics at the level of college algebra.

Montana Board of Regents
CURRICULUM PROPOSAL FORM

- Describe business organization, management, economics, financing, labor, and management strategies.
- Demonstrate the basic fundamentals in culinary arts, including theories and practical skills.
- Demonstrate management skills in hospitality management including hands-on practicum in hotel/lodging/foodservice.

Program Requirements and Sequencing:

Courses	Autumn	Spring
HTR 107 Introduction to Hospitality and Tourism	3	
ACTG 101 Accounting Procedures I	4	
PSYX 100S Introduction to Psychology	4	
WRIT 101 College Writing	3	
Total	**14**	
ACTG 102 Accounting Procedures II		4
M 115 Probability and Linear Math		3
HTR 201 Hotel Management and Operation		3
BGEN 105S Introduction to Business		3
Total		**13**
Summer or Fall Semester		
CULA 101 Introduction to Food Service Management	5	
CULA 105 Sanitation and Safety	2	
Total	**7**	

Courses	Autumn	Spring
BMGT 245 Customer Service Management	4	
CULA 270 Purchasing and Cost Controls	5	
CSCI 172 Introduction to Computer Modeling	3	

Montana Board of Regents
CURRICULUM PROPOSAL FORM

COMX 111A Introduction to Public Speaking	3	
Total	**15**	
Hospitality Management Elective		3
BMGT 216 Psychology of Management and Supervision		4
CULA 299 Culinary Arts Capstone		4
HTR 298 Hospitality Internship		4
Total		**15**
AAS Credit Total:	**64**	

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

Upon approval, we plan to implement the program Autumn Term 2016. We anticipate capacity to support 15 new students. We expect to graduate 50% of the cohort by the end of our first degree cycle. Graduation rates at two year institutions range from 25%-40% nationally. Our program seeks to perform at a higher than average rate as a result of the many retention efforts taking place at Missoula College.

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.

A Perkins workforce development grant has been used to fund tenure-track faculty and faculty affiliates for the development and a first-time "run" of new course offerings, which are being offered currently at Missoula College. With the success of these courses, tenure-track faculty and/or established full-time adjuncts will be adding these courses to their regular schedules, eliminating the need for new instructors.

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

No additional resources are required.

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

Multiple indicators will be used to measure the success of the program. General interest will be measured by the number of incoming students entering the program. Curriculum programming and delivery success will be measured through student matriculation and graduation. Overall program effectiveness will be assessed through graduate employment and employer satisfaction. Graduate surveys and employer surveys will be used to measure effectiveness.

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.

Work on this program was initiated by faculty members with interest and background in the hospitality and tourism industry. It was further received by staff members and administrators at Missoula College and the University of Montana who saw the benefit and potential pathways that could be formed with secondary education within the State. Upon proposal to the advisory board for Food Service Management and the Culinary Arts, there was heavy support from community leaders and professionals, as well as support from the President and the Provost at the University of Montana. When expressed to the students, there was much interest, especially in regards to taking the AAS degree program and expanding to higher degrees.

The program was researched and designed by tenure-track faculty within the Food Service Management Program in hopes to respond to the need that is present within the State for more professionals within the industry and by giving the students the ability to pursue degree fields within the industry that go beyond an Associates in Applied Sciences.

The program has been discussed with administrators, Deans, and faculty in multiple programs within the University of Montana and Montana State University and has all been well received, as well as with industry professionals throughout the State.

September 9, 2015

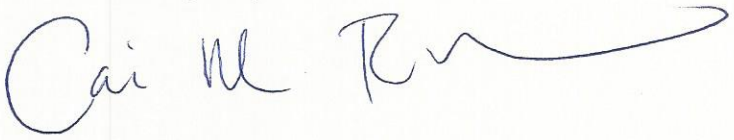
Dear Montana Board of Regents,

As an industry professional and community leader, I am writing this letter in support of Missoula College's effort to introduce an Associates of Applied Science in Hospitality Management. The proposed hospitality curriculum will give students the fundamental understanding in all areas of operations in lodging and foodservice, with courses geared to accounting principles, marketing and sales, customer service, sanitation, and management. These courses align with current industry needs and requirements.

The necessity for formalized education in the hospitality industry is essential with the increasing numbers in tourism across the entire State of Montana. With no other programs offered in the Montana University System, Missoula College will be providing trained professionals to enter the workforce upon graduation.

Please accept this letter as my recommendation to approve the Associates of Applied Science in Hospitality Management at Missoula College.

Yours in Hospitality,



Carrie M. Rasmussen, CHSP
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September 16, 2015

Dear Montana Board of Regents,

During the academic year of 2015-2016, Missoula College will be submitting a proposal to you for the addition of an Associates of Applied Science in Hospitality Management. This new area of study will be the sister program to the very successful Foodservice Management and Culinary Arts program at Missoula College.

The proposed hospitality curriculum will give students the fundamental understanding in all areas of operations in lodging and foodservice, with courses geared to accounting principles, marketing and sales, customer service, sanitation, and management. The program would fill the need for trained professionals to enter the hospitality industry in Montana.

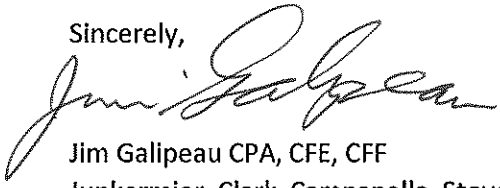
In the spring of 2015, Missoula College successfully passed a Professional Certificate in Hospitality Management. The courses are being taught this semester with great enthusiasm from the student body and the administration at the University of Montana. The AAS Degree will give the students the opportunity to continue their education past the certificate level and advancement to a four-year degree with two-plus-two opportunities partnering with the Gallagher School of Business Administration at the University of Montana.

I am currently the president of Destination Missoula. We are the recipients of the Bed Tax money for Missoula as well as having our own private funding from our members dues. In addition we work in concert with the Missoula Tourism Business Improvement District (TBID). TBID consists of local hoteliers and its sole function is to market the Missoula area to bring in tourism, conferences and events in order to benefit local hotels which also benefits the rest of the local economy immensely. Destination Missoula also works towards increasing tourism for the benefit of its members and the local economy in general.

In discussing member needs one item that always comes up with our hotel and restaurant members is the need for qualified personnel. The culinary program at the Missoula College is excellent. By adding the Associates of Applied Science in Hospitality Management to the Missoula College curriculum you will enhance the ability of local businesses to employ qualified personnel from our local area. I cannot think of a better win win situation for local residents and businesses.

Thank you in advance for your support of this new program and thank you for your service on the Board of Regents.

Sincerely,



Jim Galipeau CPA, CFE, CFF
Junkermier, Clark, Campanella, Stevens PC
Also currently President of Destination Missoula
2620 Connery Way
Missoula, MT 59808
406-549-4148
jgalipeau@jccscpa.com

DOUBLETREE
BY HILTON™

August 3, 2015

Aimee Elliott
Missoula College
909 South Avenue West
Missoula, MT 59801

Dear Aimee,

It was a pleasure to have met you last month at the Destination Missoula Board Meeting and I was intrigued and incredibly impressed with your enthusiasm. In particular, the possibility of a local Hospitality Management Program at the Missoula College really grabbed my attention.

I graduated from Johnson & Wales College back in 1986 with a Degree in Hospitality Management and I have made a great career for myself in the Hospitality Industry. It is the type of industry that is not necessarily on the radar of graduating high school students in Montana and I believe that the vast majority of these graduates are unaware that one could make a career in this industry not only in Montana, but virtually across the globe.

Oftentimes, I find myself in a position where I am relocating hotel professionals to Missoula to fill vacant Management positions. It would be so beneficial to my industry to be able to fill these positions with local talent from a local Hospitality Management Program.

I understand that you may be submitting a proposal to the Montana Board of Regents for an Associate Degree and I am hoping that you will include my letter in that proposal.

Thank you,

Dan Carlino
General Manager

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Missoula, MT 59802
800-399-0408
www.himissoula.com

Matthew Doucette
General Manager
406-532-2052
matt.doucette@himissoula.com

Holiday Inn

August 6, 2015

Aimee Elliott
Missoula College
909 South Avenue West
Missoula, MT 59801

Dear Aimee:

Thank you for attending our recent Destination Missoula Board Meeting. It was refreshing to hear your passion surrounding the possibility of a Hospitality Management Program at Missoula College. I would like to express my overwhelming support of bringing such a program to Missoula and Montana.

As a Johnson & Wales College/University graduate with a Culinary A.S., a Food Service Management B.A. and a Hospitality Management M.S., I understand that value of such an offering in our area. Missoula is becoming a medical, retail, culture and tourism center, bringing with it the expectations and opportunities to showcase hospitality excellence. Up to this point, finding hospitality expertise has often involved relocating hospitality professionals to Missoula or sending local talent elsewhere for training. This program would be an excellent opportunity to keep local students in Montana, would showcase Montana as a culinary contender, and would provide a trained workforce to the ever-growing hospitality industry in Montana.

In conclusion, I fully support the efforts of Missoula College as they seek support for this program. I believe this program will benefit local students, our higher education system, and the community at large.

Sincerely,

Matthew Doucette
General Manager
Sage Hospitality/Holiday Inn Downtown

Missoula's Premier Hotel!

March 3-4, 2016

ITEM 170-1501-R0316

Request for Authorization to Offer a B.S. in Civil Engineering – Montana Tech of the University of Montana

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THAT

In accordance with Montana University System Policy, the Board of Regents of Higher Education authorizes Montana Tech of The University of Montana to establish a Bachelor of Science Degree in Civil Engineering.

EXPLANATION

Montana Tech has offered a Civil Engineering option within our General Engineering Bachelor of Science Degree since 1999. This proposal seeks Board of Regent approval to establish a Bachelor of Science Degree in Civil Engineering.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1501-R0316** Meeting Date: **March 3-4, 2016**

Institution: **Montana Tech** CIP Code: **14.08**

Program Title: **Bachelor of Science Degree in Civil Engineering**

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. Merging or re-titling a department**

___ **4. Revising a program** (Curriculum Proposal Form)

___ **5. Distance or online delivery of an existing degree or certificate program**

___ **6. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist and updated catalog)

___ **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

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

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)** (Curriculum Proposal Form)

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)

5. **Re-titling a college, division, school department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form)

Specify Request:

Montana Tech requests approval to elevate our Bachelor of Science, General Engineering - Civil Engineering Option to a Bachelor of Science Degree in Civil Engineering.

Montana Board of Regents

CURRICULUM PROPOSALS

1. Overview

The purpose of this proposal is to seek Bachelor of Science degree status in Civil Engineering in place of the current Civil Engineering option within the General Engineering Degree Program at Montana Tech.

Montana Tech's General Engineering Department registered 212 undergraduate students for Fall 2015. Upon graduation, the students receive an ABET accredited Bachelor of Science Degree in General Engineering. Within the program at the undergraduate level, options in Civil Engineering, Mechanical Engineering, and Welding Engineering are available to students, as well as a General Engineering degree without an option. Of these choices, Civil and Mechanical Engineering options are by far the most popular among the graduates. During the last 5 academic years, 40% of the General Engineering graduates have completed a Civil Engineering option, while 40% chose the Mechanical Engineering option. The remaining 20% graduate with a general (no option) degree or a Welding Engineering option.

These newly minted Civil and Mechanical Engineering option engineers compete with graduates nationwide for jobs in the Civil and Mechanical Engineering marketplaces. Montana Tech believes that the current General Engineering curricula for its Civil and Mechanical Engineering options are comparable to civil and mechanical degree programs across the nation at both the BS and MS levels, and are ABET accredit-worthy as they exist today. In addition, our graduates complete coursework that make them especially attractive to the energy and natural resource industries. Nevertheless, potential employers question the preparedness of Tech graduates and are unfamiliar with the focus of the Tech degree, since the diploma designates a General Engineering degree with an option.

This proposal seeks Bachelor of Science degree status for the existing Civil Engineering option. A sister submittal seeks degree status for the existing Mechanical Engineering option. We present three compelling reasons for granting degree status to this program:

1. Tech's Civil Engineering option graduates are already completing curricula meeting and exceeding ABET requirements for degrees. Our Civil Engineering option graduates distinguish themselves from most other universities in that they are educated with an emphasis on energy and natural resources.

2. Degree status will clarify the skills and knowledge of Tech graduates for potential employers. Obstacles Tech students currently face in explaining the degree title will be removed.

3. The clarification will allow Tech graduates to be much more competitive in the engineering job market with degree titles in Civil Engineering, rather than options.

In Fall of 2013, the General Engineering Department of Montana Tech surveyed its students and alumni to gauge their interest in converting the Civil and Mechanical Engineering options to B.S. degrees. 135 out of 266 students responded, as did 143 out of 670 alumni. When queried whether the students would switch from options to degrees if B.S. degrees in Civil and Mechanical Engineering were available, 93% of the students said they would switch. 99% of the students supported the initiative to seek degree status. The alumni responded similarly. When asked if they would have chosen a degree in Civil or Mechanical Engineering had the degrees been available when they graduated, 74% responded positively. 98% of the alumni supported the initiative to seek degree status in civil and mechanical.

Montana Board of Regents
CURRICULUM PROPOSALS

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

This proposal seeks Bachelor of Science degree status for the existing Civil Engineering option.

For the Bachelor of Science in Civil Engineering, ABET requires at least four focus areas for accreditation. The focus areas of Tech's program are 1) construction engineering emphasizing construction practices in the mining and petroleum industries, 2) land development including infrastructure for extractive industries, 3) structural engineering emphasizing inspection, testing, and monitoring of structures utilized by mining and petroleum industries, and 4) geotechnical engineering with an emphasis on soil analysis and remediation and water resource management**.** 136 credit hours would be required to earn the degree, the same number of credits as the existing option in Civil Engineering. Current students will have the choice to graduate with a Civil Engineering degree or a degree in General Engineering with a Civil Engineering option.

Upon approval of a degree in Civil Engineering by the Board of Regents, the existing option in Civil Engineering would be phased out over the next four years.

3. Need

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

The new program will significantly improve the employability of the graduates, as potential employers know and value a Civil Engineering degree but are often unfamiliar with the degree title of General Engineering degree with a Civil Engineering option.

Secondly, both petroleum and mining, the legacy industries of Montana Tech, are demanding Civil Engineering graduates able to bring their specialty skills to these industries. Montana Tech's career fairs are dominated by the extractive industries seeking to hire not only petroleum, geologic, and mining engineers, but civil engineers as well.

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

The new program will significantly improve the employability of the graduates, as potential employers know and value Civil Engineering degrees but are often unfamiliar with the degree title of General Engineering degree with a Civil option.

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

The demand for Civil Engineering has been and remains strong. In terms of number of students, the five year period of 2010-2015 shows an average of 91 undergraduates in the Civil Engineering option each Fall. Over 95% of the graduating undergraduate and graduate students obtain gainful employment in a civil engineering-related position. Assuming zero growth, these numbers represent the anticipated demand, as it is assumed that each civil engineering option student will, in the future, be a Civil Engineering degree student. The undergraduate data can be found on the Montana Tech web site at http://www.mtech.edu/about/ir/enrollment.htm. However, growth is expected because incoming students will be more attracted to BS degrees in Civil Engineering than to the previous options.

Montana Board of Regents
CURRICULUM PROPOSALS

4. Institutional and System Fit

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

The new Civil Engineering degree would supplant the General Engineering Civil Engineering option degrees. Civil Engineering has been a popular choice for Tech students, attracting a hundred students per year. Thus, the new program is simply an augmentation of an existing and successful program.

The new program will complement other natural resources/energy-driven engineering programs at Montana Tech including Mining, Geological, Petroleum, and Environmental Engineering, since an overlap of expertise exists among these five programs.

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

No. The new program will continue to be administered by the current (General Engineering) department. The new program will utilize the labs, software, and instructors currently employed by the Civil Engineering option. However, the name of the department will be changed to the Civil and Mechanical Engineering Department and the department will continue to offer fundamental engineering courses for the other engineering departments on campus. Since the curriculum of the new degree will remain the same as the curriculum of the option from which it developed, no new courses, labs, materials, software, instructors, or staff will be required at the onset. Additional resources would only be required if the ability to grant BS degrees result in significant increases in student enrollment. The General Engineering degree will be phased out during the next four years after the students "in the pipeline" graduate or switch to the Civil or Mechanical degree programs. Welding Engineering will become an option under the Mechanical Engineering degree.

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

The new Civil Engineering program is most closely related on campus to the existing Civil Engineering option which it will replace. On some U.S. campuses, Civil and Environmental Engineering are housed in the same department. However, this will not be the case at Montana Tech, as Tech's long-standing Environmental Engineering Department will remain separate from the proposed Civil Engineering degree. Environmental Engineering will continue to teach water and waste water treatment, while the new Civil Engineering degree will handle instruction in other public utilities such streets, storm water, and water delivery, and land development in general.

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

Montana Tech's Mission Statement claims a "strong heritage in engineering." Begun as a mining engineering school, it has developed into an exemplary undergraduate college of engineering. Over half of its "North Campus" students pursue engineering degrees. Establishment of a BS degree in Civil Engineering continues and enhances the strategic goals of the institution. Tech's engineering programs are focused on energy and natural resource development. Having a Civil Engineering program is consistent

with Montana Tech's heritage and mission.

Montana Tech's Strategic Plan is organized into six themes. Theme 1 Section b. states that the institution will "continue to place more than 90% of students prior to graduation". As stated in the Overview of this request, we believe that converting our Civil Engineering option to a degree will make Montana Tech Civil Engineering graduates much more competitive in the engineering job market.

Theme 2 of Tech's Strategic Plan commits to "Capitalize on Montana Tech's role as Montana's Science, Technology, Engineering, and Mathematics (STEM) Broad University" to "support and grow research, scholarship, and technology transfer". We believe that moving from a Civil Engineering option to Civil Engineering degrees will greatly enhance our ability to attract premium students and faculty as well as research grants in the STEM areas.

Theme 5 Section b. aims to "increase enrollment and retention rates". As with most other engineering programs at Montana Tech, the new Civil Engineering program will target students who have an inclination to work in the Energy and Natural Resources industries. Between domestic and international recruits, we anticipate up to 20 additional students per year once the Civil Engineering degrees are in place.

In addition to advancing the strategic goals of Montana Tech, the proposed degree program will also help to advance the three goals contained in the MUS Strategic Plan (Access & Affordability, Workforce & Economic Development, and Efficiency & Effectiveness).

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

The proposed program is similar to the Civil Engineering degree offered by Montana State University Bozeman (MSU). Differences in emphasis between the programs in the two schools exist, and will be presented in this section.

As previously stated for an undergraduate BS degree in Civil Engineering, ABET, the engineering accrediting organization, requires at least four focus areas in any Civil Engineering degree. The focus areas of Tech's program are 1) construction engineering emphasizing construction practices in the mining and petroleum industries, 2) land development including infrastructure for extractive industries, 3) structural engineering emphasizing inspection, testing, and monitoring of structures utilized by mining and petroleum industries, and 4) geotechnical engineering with an emphasis on soil analysis and remediation and water resource management. 136 credit hours would be required to earn the degree. MSU's catalog states that its Civil Engineering program "prepares graduates to become registered professional engineers capable of practicing Civil Engineering in the areas of environmental, geotechnical, structural, transportation and water resources engineering". MSU's B.S. in Civil Engineering requires a minimum of 128 credits. MSU also offers a B.S. degree in Construction Engineering Technology (CET), a four-year, 128 credit degree.

First, consider the construction engineering technology area. MSU's emphasis is on ***management*** of construction. As stated in the MSU catalog, "Building, industrial, and heavy construction are emphasized with particular attention directed toward preparation for employment in management and supervisory

positions …" Education is on the technology level, with math preparation consisting of Pre-calculus, Calculus Technology I & II and Elementary Statistics. Tech's program emphasizes construction ***engineering***, with a required math background of Calculus I, II, and III, Differential Equations, and Statistics for Scientists and Engineers. Tech graduates typically seek a professional engineering license, which they earn by passing the Fundamentals of Engineering and Professional Engineering exams with four years of experience sandwiched between the two exams. CET graduates from MSU may also seek licensure; however *eight* years of experience under a registered engineer would be required of these students because of the differential undergraduate curriculum. So while these two programs have some similarities, they are quite different in education goals and curriculum. Additionally, emphasis at Tech will be on construction practices in the mining and petroleum industries.

Tech's second focus area is land development design. Graduates learn the engineering skills to convert undeveloped land into property for human habitation or industry. These skills are primarily terrain grading, water delivery, sewage collection, roadway design, storm water management, and knowledge of regulations. While many Civil Engineering programs (including MSU's) teach these individual elements, Tech's program applies them directly to land development, culminating in a senior-level capstone class called "Subdivision Design". Some 35% to 50% of Civil Engineering consulting companies' workload nation-wide comes from land development design and inspection/construction oversight. With the rapidly growing demand for infrastructure in the Bakken oilfield, Tech's program in the future will research and address needs for water, waste disposal, and transportation in rapidly growing oilfields.

Tech's third focus area is structural engineering, a subarea of MSU Civil Engineering as well. Tech is developing its niche in the structural field by emphasizing inspection, testing, and monitoring of buildings and bridges. A course entitled "Inspection, Testing, and Monitoring of Buildings and Bridges" is offered to Civil students in Fall of 2015. Professors Kukay and Hunter are currently leading a Capstone Design Group in assessing a compromised and aging building in Uptown Butte. Graduates will also learn the more traditional skills of structural analysis, steel design, reinforced concrete design, timber design, and seismic and wind considerations. As in the land development area, future focus of the structural area will be to meet the demands of the mining and petroleum industries. MSU describes its structural subarea as "structural engineering for buildings, bridges, dams, piers, towers, and other erected facilities".

A fourth Civil Engineering focus area is that of geotechnical engineering. Montana Tech's program seeks to distinguish itself from similar programs with an emphasis on the design and construction of foundations and support structures used in buildings, bridges and other large structures such as mining and petroleum related earthworks. Topics of interest will include foundations and structure of tailings dams and coffer dams as well as groundwater issues facing development of natural resources as required in Montana's corner of the Bakken oilfield.

Thus, while similarities in the fundamentals of a long-established field of Civil Engineering are unavoidable, Tech's program will have substantially different emphases then those existing at MSU.

Collaborations. MSU's and Tech's Civil Engineering programs have recently implemented collaborative efforts. In Spring of 2011, Montana Tech offered an interactive video class entitled "Subdivision Design" to students at MSU. Seven MSU students completed the class, along with their Tech colleagues. Other collaborations have been in the research area. Tech Assistant Professor Brian Kukay is currently collaborating with MSU Professor Jerry Stevens, Assistant Professor Mike Berry, and Eli Cuelho (WTI) on a grant from the MT Department of Transportation (MT DOT). Both MSU and Montana Tech are members of the Western Transportation Institute (WTI), which facilitates easy collaboration between the two

schools. In addition, Montana Tech and MSU work together in preparation for student academic competitions. The two schools recently worked together in preparation for the ASC Region 6 Construction Competition in Reno, Nevada. Occasionally the two schools travel together to these student competitions.

Articulation or transfer agreements. No special articulation or transfer agreement exists between the two schools beyond the wide-ranging common course numbering effort carried out beginning in 2007. MSU's Mechanical Engineering Department and Tech's General Engineering Department were deeply involved in the common course numbering effort and worked together to identify courses with common identification. As of Fall 2014, Tech instituted a Freshman Engineering Program (FEP) with a common core for first year students across all engineering programs. Recent discussions between the Engineering Deans at Tech and MSU indicate collaboration on the FEP will increase transferability and decrease confusion for students.

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 proposed curriculum for a Civil Engineering Degree is presented below. This curriculum is identical to the current Civil Engineering option.

Montana Board of Regents

CURRICULUM PROPOSALS

CURRICULUM WORKSHEET			Name:							
General Engineering - Civil Option, Fall 2014			Advisor:				Date:			
	Course #	Course Description	Grade	Credits	Math/Sci	ENGR	Design	HSS	Other	Total
Freshman	CHMY 141	College Chem I		3	3					
	CHMY 142	College Chem Lab I		1	1					
First	WRIT 121	Intro to Technical Writing		3					3	
Semester	M 171	Calc I		3	3					
	EGEN 101	Intro Engr Calc&Problem Solving I		3		3	D			
	EGEN 194	Intro to Engrineering Seminar		1		1				
	Humanities/SS Elec			3				3		
										17
Freshman	CHMY 143	College Chem II		3	3					
	GEO 101	Introduction to Physical Geology		3	3					
Second	M 172	Calc II		3	3					
Semester	Humanities Elective			3				3		
	EGEN 102	Intro Eng Calc&Prob Solving II		2		2				
	PHSX 234	Gen Phys-Mechanics		3	3					
										17
Sophomore	EGEN 201	Engr Mechanics-Statics		3		3				
	MIN 2100	Plane Surveying		3		3				
First	EGEN 213	Survey of Mat & Met Engring		3		3				
Semester	M 273	Multivariable Calculus		4	4					
	PHSX 235	Gen Phys-Heat, Sound, & Optics		3	3					
	PHSX 236	Gen Phys-Heat, Sound, & Optics Lab		1	1					
										17
Sophomore	ECIV 215	Intro to Modeling for Civil Engineers		1		1	D			
	EGEN 202	Dynamics		3		3				
Second	M 274	Differential Equations		3	3					
Semester	EGEN 305	Mech of Materials		3		3				
	PHSX 237	Gen Phys-Ele, Magn, & Motion		3	3					
	PHSX 238	Gen Phys-Ele, Magn, & Motion Lab		1	1					
	EENV 204	Environmental Processes Engineering		3		3				
										17
Junior	ECNS 203	Prin of Economics		3				3		
	WRIT 321	Advanced Technical Writing		3					3	
First Semester	ECIV 312	Structures I		3		3	D			
	ECIV 208	Construction Contracts		3		3				
	STAT 332	Statistics for Scientists & Engineers		3	3					
	EGEN 325	Engineering Economic Analysis		3					3	
										18
Junior	300/400/500	Traffic / Transportation		3		3	D			
	EGEN 335	Fluid Mechanics		3		3				
Second	EGEN 324	Applied Thermodynamics		3		3				
Semester	EGEN 306	Mech. of Materials Lab		1		1				
	EGEN 336	Fluid Mechanics Lab		1		1				
	Humanities Elective			3				3		
	Professional Electives, >= 300			3		3	D			
										17
	ECIV 405	Planning and Scheduling		3		3				
Senior	EGEN 489	Engineering Design I		2		2	D			
Semester	ECIV 486	Soil Mech. & Found. Design		3		3	D			
	GEO-E 387/487	Soils Lab or Upper Division Professonal Elective		1		1				
	Professional Electives, >= 300			6		6				
										15
	EGEN 499	Engineering Design II		2		2	D			
Senior	ENVE 4020	Surface Water Hydrology		3		3	D			
Second	ECIV 487	Subdivision Design		4		4				
Semester	EGEN 413 or EGEN 414 or ECIV 484	Reinforced Concrete A&D or Wood A&D or Steel A&D		3		3				
	Professional Electives, >= 300			6		6	D			
										18
				136	**37**	**78**		**12**	**9**	**136**

Montana Board of Regents
CURRICULUM PROPOSALS

BS Civil Engineering Professional Electives - Students may choose from the following Courses

A List - ECIV professional Electives (*in regards to Professional Licensure*)

Note: Civil Engineering students must select at least 12 credits from the "A List"

	Course Number	Name of Course	Credits
1	ENGR 5500	Hydraulic Structures	3
2	ECIV 484	Reinforced Concrete Design	3
3	ECIV 312	Structures	3
4	ECIV 491-01	Fundamental of Pavement Design	3
5	EGEN 412	Wind and Seismic Provisions Engineering	1
6	EGEN 413	Wood Analysis and Design	3
7	EGEN 414	Steel Analysis and Design	3
8	ECIV 304	Construction Means and Methods	3
9	ECIV 307	Construction Bidding , Estimating and Planning	3

B List - ECIV professional Electives

	Course Number	Name of Course	Credits
1	MIN 152	Mapping, Surface Modeling, & Volumetrics	3
2	GEOE 420	Hydrogeology For Engineers	3
3	GEOE 422	Groundwater Flow Modeling	3
4	GEOE 440	Engineering Geology	3
5	GEOE 429	Field Hydrogeology	3
6	GEOE 541	Advanced Engineering Geology	3
7	GEOE 542	Slope Stability Analysis & Design	3
8	EENV 403	Water & Wastewater Treatment	3
9	EENV 404	Surface Water Quality	3
10	EENV 414	Land & Stream Restoration	3
11	EENV 445	Hazardous Waste Treatment	3
12	EENV 430	Soil & Subsurface Remediation	3
13	MIN 444	Environmental Management & Design Of Mines	3
15	EELE 423	Process Instrumentation & Control	4
17	MIN 458	Mine Management	3
19	ENGR 5850	Advanced Mechanics Of Materials	3
20	ENGR 5710	Advanced Fluid Mechanics	3
21	EWLD 476	Nondestructive Examination	3
25	Math 405	Advance Engineering Math	3
26	Math 441	Experimental Design	3
27	Math 333	Linear Algebra	3

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

The BS in Civil Engineering degree program is proposed to start in Fall of 2016. Students already pursuing the Civil Engineering option in the General Engineering B.S. degree would be given the choice of continuing with the option or switching to the new degree program. ABET accreditation of the undergraduate program would be pursued immediately, with a proposed visit by an accreditation team in Fall of 2017 and granting of accreditation in Fall of 2018. The current option in Civil Engineering would be phased out by AY 2018-2019.

Table 5.1 below projects the student growth in in Civil Engineering (BS and MS combined) through academic year (AY) 2018-2019.

Table 5.1 Projected Enrollment of Civil Engineering BS and MS Programs

Through Academic Year 2018-2019

	Civil Engineering	
AY 2015-2016	100	
AY 2016-2017	125	
AY 2017-2018	140	
AY 2018-2019	150	
Beyond AY 2018-2019	Varies with Montana	population change

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 has been stated previously, no curriculum changes are required to convert the Civil Engineering option to degree status, thus no additional faculty members are required to staff the new program. Additionally, the new undergraduate program will remain under the administration of the General Engineering Department and the graduate program will remain under the administration of the Graduate School, pre-empting the need for immediate additional administrative staff. If the projected growth (see Table 5.1) is realized, then additional faculty members would be requested, approximately one new faculty member for each additional 25 students to the program. Consequently, should the projected growth occur, new faculty members would be needed in the program in AY 2016-2017 and again in AY 2018-2019. Tuition from the additional students would cover the cost of new faculty.

Montana Board of Regents
CURRICULUM PROPOSALS

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.

As has been stated previously, no curriculum changes are required to convert the Civil Engineering option to degree status, thus no additional resources are projected at the onset of the program. As stated in part 6.A. above, should the projected student growth materialize, additional resources such as laboratory space and software would be needed. Engineering program fees would be the primary funding source for additional resources, and these fees grow in proportion to the student enrollment.

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

The Civil Engineering program plans to seek ABET accreditation after program approval by the Board of Regents. Accordingly, measurement of program success will be identical to that followed for ABET program evaluation. This evaluation consists of setting program objectives and outcomes, designing metrics to measure the success of the objectives and outcomes, measuring and evaluating success, and recommending and implementing changes in a continual cycle of improvement.

The Civil Engineering program has adopted the following objectives:

Civil Engineering Program Educational Objectives

Graduates will be prepared to assume a wide range of positions as engineers in the early years of their careers. In addition to acquiring a broad range of engineering skills, graduates will be able to master workplace skills required in Civil Engineering. In the first years following graduation, graduates are expected to:

a) Perform engineering work in a highly ethical manner, placing public safety and welfare in the forefront while understanding social and global impacts of technology.
b) Progress in their respective fields to become technical and work leaders, assuming advanced responsibilities through experience and licensure.
c) Develop sub-areas of expertise through experience and pursuit of life-long learning opportunities.
d) Take on roles of marketing and project overview by advancing skills in written, oral and graphic communication.
e) Work effectively on cross-functional teams, communicating and coordinating with clients, customers, co-workers, contractors, and public agencies.
f) Instill eagerness to learn and continue learning whether it be through advanced degrees or courses or staying current on industry issues.

Achievement of Program Educational Objectives

The Civil Engineering program will periodically assess and evaluate the extent to which the objectives are being fulfilled. Table 7.1 presents the Civil Engineering program's plans for assessment and evaluation of objectives. The constituents assessed to determine the extent to which the objectives are fulfilled are the:

- Industrial Advisory Board – which represents both graduates and employers. The assessment tools are meetings every semester and a periodic questionnaire on the achievement of objectives.
- General Engineering alumni – which represent both graduates and employers. The assessment tool is

a questionnaire on the achievement of objectives.

- Graduates from the previous year. The assessment tool is the Graduate Survey, which specifically addresses objectives.

Evaluation is performed by the Department Head, the program faculty, and the institution, as shown in Table 7.1.

Table 7.1

Assessment and Evaluation of Educational Objectives

Assessment Date	Assessment Tool	Constituency	Evaluation	Evaluation Date
March every three years	Discussions at Board Meeting—appropriateness of objectives	Industrial Advisory Board	Program Faculty and Head	April following assessment
October of each year	Questionnaire on achievement of objectives	Industrial Advisory Board	Program Head, Faculty	December of each year
December of each year	Questionnaire in newsletter on achievement of objectives	General Alumni	Program Head, Faculty	January of each year
Oct thru Mar each year	Graduate Survey of employment placement	Graduated seniors and Masters students from previous year	Program Head, Faculty, Institution	May of each year

Scheduling of assessment and evaluation of objectives is such that each constituent group has input at least once per year.

Figure 7.1 shows the entire assessment and evaluation process used by the program. The outer loop addresses objectives. Metrics (or instruments) are used to obtain information on the extent to which the objectives are being achieved. These metrics are evaluated by the faculty and department head. The results of the assessment are used by the faculty to implement program changes via curricular and/or extra-curricular activities. (E.C.A. stands for Extra-curricular Activities.) The inner feedback loop involves the outcomes, addressed below.

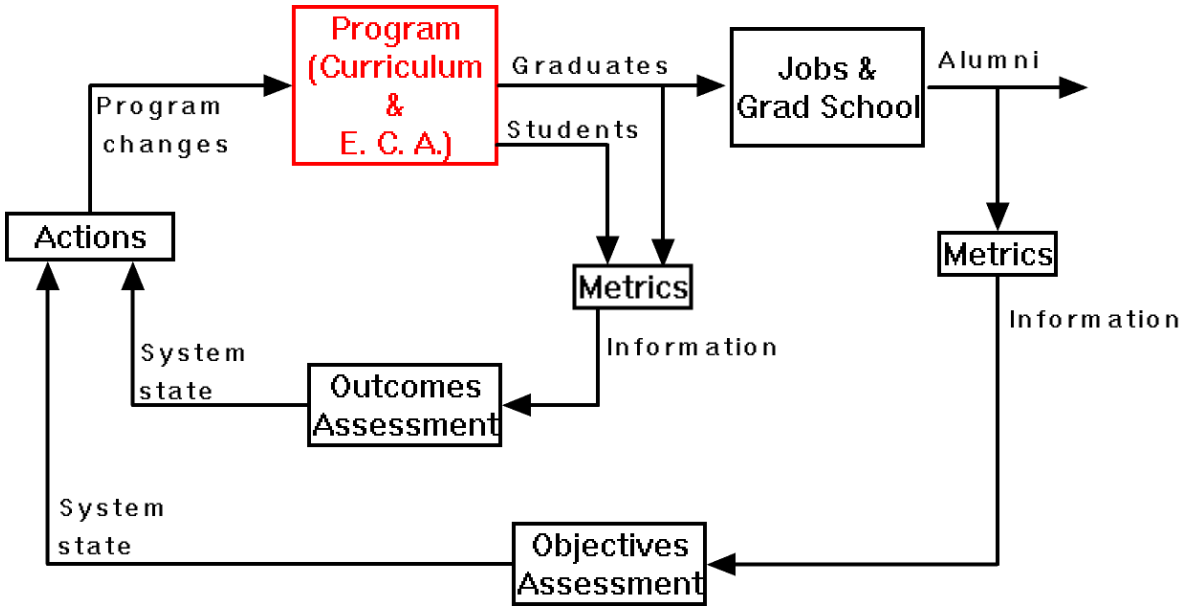

Figure 7.1 Assessment and evaluation flow diagram.

As shown in Table 7.1, the program uses four metrics to conduct objectives assessment: 1) periodic discussions at IAB meetings, 2) IAB questionnaire, 3) alumni questionnaire, and 4) career placement surveys.

The Civil Engineering program has adopted the following outcomes, which are the suggested ABET outcomes for all engineering programs:

Civil Engineering Program Outcomes

Montana Tech's Civil Engineering program outcomes are as follows. Students graduating from these programs at Montana Tech should attain:

a. an ability to apply knowledge of mathematics, science, and engineering
b. an ability to design and conduct experiments, as well as to analyze and interpret data
c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d. an ability to function on multi-disciplinary teams
e. an ability to identify, formulate, and solve engineering problems
f. an understanding of professional and ethical responsibility
g. an ability to communicate effectively
h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
i. a recognition of the need for, and an ability to engage in life-long learning
j. a knowledge of contemporary issues
k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Achievement of Program Outcomes

The Civil Engineering program's plans for assessment and evaluation of educational outcomes are presented in Table 7.2.

Table 7.2 Assessment and Evaluation of Educational Outcomes

Assessment Date	Assessment Tool	Constituency	Evaluation	Evaluation Date
Feb, even-numbered years	Student Satisfaction Inventory, Noel-Levitz	Sophomores	Program Head, Faculty, Institution	April, even-numbered years
Oct & Mar of each year	Student Exit Survey	Graduating seniors	Program Head, Faculty	Apr of each year
At each proposed curriculum change	Curriculum Review Committee (CRC) discussion of program curriculum changes	Campus faculty	Campus Faculty at Instructional Faculty meetings	1-3 weeks after CRC meeting.
End of each semester	Student grades for course components	Sophomore, Junior, Senior students	Course Instructor	Beginning of subsequent semester
Each semester	FE Exam	Seniors	Faculty, Review Course instructor	Nov of even years

Table 7.2 above shows the entire assessment and evaluation process used by the Civil Engineering program. The inner loop pertains to the outcomes and is the job of the faculty to execute. Metrics (or instruments) are used to obtain information on the extent to which the outcomes are being achieved. These metrics are assessed by the faculty. The results of the assessment and any recommended actions are used by the faculty to implement program changes via curricular and/or extra-curricular activities.

The following metrics are employed to assess the outcomes: 1) Noel-Levitz Student Satisfaction Inventory (SSI), 2) Graduate Exit Survey, 3) Curriculum Review Process, 4) course grades, and 5) Fundamentals of Engineering Exam (FE Exam).

The measurements of the success of the Civil Engineering program are largely shaped by ABET requirements and recommendations. As the Civil Engineering program matures, it is expected that objectives, outcomes, and measurements will evolve to address the goals and needs of the program. Finally, enrollment growth is

anticipated after institution of the new program. Enrollment statistics will be collected and reviewed as a metric of success.

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 notion of changing the Civil Engineering option to degree status has long been a topic of conversation on the Montana Tech campus. The Civil Engineering option was first approved by the Board of Regents in 1999. For a number of years prospective students, Montana Tech Alumni, the General Engineering Industrial Advisory Board (IAB) and companies that hire our graduates have asked about the efficacy of changing the Civil Engineering option to degree status. Degree status for Civil Engineering at Montana Tech was first proposed to Montana Tech administration by senior-level faculty in the Fall semester of 2008.

In 2011, Provost Abbott and Dean Knudsen met with MSU-Bozeman Provost Robert Marley to discuss Montana Tech's intent to change the Civil Engineering option to degree status.

In August of 2013, both Tech Provost Abbott and Chancellor Blackketter encouraged pursuit of degree status, beginning with proposals on the Tech Campus and culminating with a Level II request to the Montana Board of Regents. This proposal was never submitted to the BOR by the Montana Tech campus. On August 22, 2013, Chancellor Blackketter, Provost Abbott and Dean Knudsen discussed Montana Tech's intentions of the proposed degree status with MSU acting Dean of Engineering Brett Gunnick.

On January 6, 2015, Montana Tech Dean of Engineering Pete Knudsen again met with MSU Dean of Engineering Gunnick, and this proposal was then elevated to Tech Provost Abbott and Chancellor Blackketter for consideration as an agenda item at the March 2015 BOR meeting. This proposal was pulled from consideration before the March BOR meeting.

The proposed Bachelor and Master of Science Degrees in Civil Engineering has been vetted and approved by the Montana Tech Curriculum Review Committee, the Associated Students of Montana Tech, and the Faculty Senate.

APPENDIX

Montana Board of Regents

CURRICULUM PROPOSALS

Letters of Support

The following are a small sample of the number of letters of support that Montana Tech has received.

Montana Board of Regents

CURRICULUM PROPOSALS

LCDR Christopher S Casne, P.E.
United States Navy Civil Engineer Corps Officer
4320 Waterside Lane
Oxnard, California 22305
November 11, 2013

Montana Tech of the University of Montana
Department Head, General Engineering
Attn: Bruce Magidan, P.E., Ph.D
1300 West Broadway Street
Butte, Montana 59701

Subject: Support for Montana Tech Civil Engineering Degree Program

Dear Dr. Magidan,

I am writing to express my earnest support for the proposed granting of Civil Engineering degrees at Montana Tech. Within the U.S. Navy Civil Engineer Corps it is very difficult to find engineers of the caliber that Montana Tech routinely produces; however, during the accessions process graduates from other Universities are often times given the initial leg up over Tech grads for the simple reason that their degree is a true Civil Engineering Degree (vice the General Engineering Degree that Montana Tech grants).

I graduated from Montana Tech in 2003 with a degree in General Engineering with a Civil Engineering option; however, I often times state that I simply have a General Engineering Degree to avoid the questions about "what a civil engineering option" entails. This is unfortunate since I am very proud of my degree from Montana Tech and feel that it very much prepared me for my future as a professional engineer.

Allowing Montana Tech to award a true Civil Engineering Degree will further the legitimacy of Montana Tech, the Montana Board of Regents, and enhance the initial job placement capacity of future Tech Civil Engineering graduates. Consequently, I strong recommend that the Montana Board of Regents approve the request to allow Montana Tech to grant Civil Engineering Degrees.

Sincerely,

LCDR Christopher S Casne, P.E.
United States Navy
Civil Engineer Corps Officer
2012 U.S. Navy Military Engineer of the Year

Montana Board of Regents

CURRICULUM PROPOSALS

MORRISON MAIERLE, INC.
An Employee-Owned Company

ENGINEERS
SURVEYORS
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OFFICE: 406-587-0721 • FAX: 406-922-6702 • www.m-m.net

October 27, 2013

Bruce Madigan, P.E., Ph.D.
Department Head, General Engineering
Montana Tech
1300 W. Broadway
Butte, MT 59701

Re: Support for Civil and Mechanical Engineering Degree Program at Montana Tech

Dear Dr. Madigan:

As an officer of Morrison-Maierle, I am writing on our firm's behalf in support of granting Civil and Mechanical Engineering degrees from Montana Tech.

Although our firm has had great success in the past hiring students from Montana Tech's General Engineering program, recognition of the specific area of study by awarding Civil and Mechanical degrees will more readily put these highly capable new hires on the same level as others with those degrees from other institutions of higher learning. With a growing economy, Civil and Mechanical Engineers will be in demand in the future and it will be good to have more than one university in Montana awarding these degrees from the standpoint of the number of graduates that can be generated and to create some diversity in the hiring pool.

Additionally, the granting of these degrees can provide tangible and direct benefit to Montana Tech in their pursuit of research grants by simply having degree programs that match those from the other universities that they are competing with. Montana Tech is truly at a disadvantage in this realm when they are competing with another school's "Mechanical Engineering Department" and have to apply as a "General Engineering Department with a Mechanical Option".

And finally, as a 1988 graduate from Montana Tech with a B.S. in Engineering Science (the precursor to the General Engineering Department), I know that there is a lot more to being successful than the title of the degree on your diploma. However, having a degree that matches what others are receiving can keep the playing field even in the competitive world of interviewing and vying for positions in academia and industry. I believe the time is past due for Montana Tech's graduates in the civil and mechanical fields of study to be recognized as equals to those from other institutions and have the name of their degrees reflect the expertise they have earned.

Sincerely,

MORRISON-MAIERLE, INC.

Kurt W. Keith, PE
Vice President

Providing resources in partnership with clients to achieve their goals.

March 3-4, 2016

ITEM 170-1502-R0316

Request for Authorization to offer a B.S. in Mechanical Engineering – Montana Tech of the University of Montana

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THAT

In accordance with Montana University System Policy, the Board of Regents of Higher Education authorizes Montana Tech of The University of Montana to establish a Bachelor of Science Degree in Mechanical Engineering.

EXPLANATION

Montana Tech has offered a Mechanical Engineering option within our General Engineering Bachelor of Science Degree since 1999. This proposal seeks Board of Regent approval to establish a Bachelor of Science Degree in Mechanical Engineering.

ATTACHMENTS

Academic Proposal Request Form
Curriculum Proposal Form

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

Item Number: **170-1502-R0316** Meeting Date: **March 3-4, 2016**

Institution: **Montana Tech** CIP Code: **14.19**

Program Title: **Bachelor of Science Degree in Mechanical Engineering**

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. Merging or re-titling a department**

___ **4. Revising a program** (Curriculum Proposal Form)

___ **5. Distance or online delivery of an existing degree or certificate program**

___ **6. Terminating an existing major, minor, option or certificate – Step 2** (Completed Program Termination Checklist and updated catalog)

___ **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

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

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)** (Curriculum Proposal Form)

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)

5. **Re-titling a college, division, school department, institute, bureau, center, station, laboratory or similar unit** (Curriculum Proposal Form or Center Proposal Form)

Specify Request:

Montana Tech requests approval to elevate our Bachelor of Science, General Engineering - Mechanical Engineering Option, to a Bachelor of Science Degree in Mechanical Engineering.

Montana Board of Regents

CURRICULUM PROPOSALS

1. Overview

The purpose of this proposal is to seek Bachelor of Science degree status in Mechanical Engineering in place of the current Mechanical Engineering option within the General Engineering Degree Program at Montana Tech.

Montana Tech's General Engineering Department registered 212 undergraduate students for Fall 2015. Upon graduation, the students receive an ABET accredited Bachelor of Science in General Engineering. Within the program at the undergraduate level, options in Mechanical Engineering, Civil Engineering, and Welding Engineering are available to students, as well as a General Engineering degree without an option. Of these choices, Mechanical and Civil Engineering options are by far the most popular among the graduates. During the last 5 academic years, 40% of the General Engineering graduates have completed a Civil Engineering option, while 40% chose the Mechanical Engineering option. The remaining 20% graduate with a General Engineering (no option) degree or a Welding Engineering option.

These newly minted Mechanical and Civil Engineering option engineers compete with graduates nationwide for jobs in the Civil and Mechanical Engineering marketplaces. Montana Tech believes that the current General Engineering curricula for its Mechanical and Civil Engineering options are comparable to degree programs across the nation at both the BS and MS level. In addition, our graduates complete coursework that make them especially attractive to the energy and natural resource industries. Nevertheless, potential employers question the preparedness of Tech graduates and are unfamiliar with the focus of the Tech degrees, since the diplomas designate a General Engineering degree with an option.

This proposal seeks Bachelor of Science (B.S.) degree status for the existing Mechanical Engineering option. A sister submittal seeks degree status for the existing Civil Engineering option. We present three compelling reasons for granting degree status:

1. Tech's Mechanical Engineering option graduates are already completing curricula meeting and exceeding ABET requirements for degrees. Our Mechanical Engineering option graduates distinguish themselves from most other universities in that they are educated with an emphasis on energy and natural resources.

2. Degree status will clarify the skills and knowledge of Tech graduates for potential employers. Obstacles Tech students currently face in explaining the degree title will be removed.

3. The clarification will allow Tech graduates to be much more competitive in the engineering job market with degree titles in Mechanical Engineering rather than options.

In Fall of 2013, the General Engineering Department of Montana Tech surveyed its students and alumni to gauge their interest in converting the Civil and Mechanical Engineering options to B.S. degrees. 135 out of 266 students responded, as did 143 out of 670 alumni. When queried whether the students would switch from options to degrees if B.S. degrees in Civil and Mechanical Engineering were available, 93% of the students said they would switch. 99% of the students supported the initiative to seek degree status. The alumni responded similarly. When asked if they would have chosen a BS degree in Civil or Mechanical Engineering had the degrees been available when they graduated, 74% responded positively. 98% of the alumni supported the initiative to seek BS degree status in civil and mechanical engineering.

Montana Board of Regents
CURRICULUM PROPOSALS

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

This proposal seeks Bachelor of Science degree status for the existing Mechanical Engineering option.

For the Bachelor of Science in Mechanical Engineering, the ABET criteria for Mechanical Engineering requires all programs to "prepare students to work professionally in both thermal and mechanical systems areas". Montana Tech's program contains the classic Mechanical Engineering topics of machine design, mechanics, and thermal-energy. The program distinguishes itself in the thermal systems arena by emphasizing thermal power plant (natural gas, waste products, etc.) design and operation. Focus areas in mechanical systems include micro-electro mechanical systems (MEMS) and manufacturing for mining and petroleum tooling (which combines thermal and mechanical systems). 136 credit hours would be required to earn the degree, the same number of credits as the existing option in Mechanical Engineering. Current students will have the choice to graduate with a Mechanical Engineering degree or a degree in General Engineering with a Mechanical Engineering option.

Upon approval of degrees in Mechanical Engineering by the Board of Regents, the existing option in Mechanical Engineering would be phased- out over the next four years. The Welding Engineering option will become an option under Mechanical Engineering.

3. Need

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

The new program will significantly improve the employability of the graduates, as potential employers know and value Mechanical Engineering degrees but are often unfamiliar with the degree title of General Engineering degree with a Mechanical Engineering option.

Secondly, both petroleum and mining, the legacy industries of Montana Tech, are demanding Mechanical Engineering graduates able to bring their specialty skills to these industries. Montana Tech's career fairs are dominated by the extractive industries seeking to hire not only petroleum, geologic, and mining engineers, but mechanical engineers as well.

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

The new program will significantly improve the employability of the graduates, as potential employers know and value Mechanical Engineering degrees but are often unfamiliar with the degree title of General Engineering degree with a Mechanical Engineering option.

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

The demand for Mechanical Engineering at Montana Tech has been and remains strong. In terms of number of students, the five year period of 2010-2015 shows an average of 102 undergraduate students in the Mechanical Engineering option each Fall. Assuming zero growth, these numbers represent the anticipated demand, as it is assumed that each Mechanical Engineering option student will, in the future, be a Mechanical Engineering degree student. The undergraduate data can be found on the Montana Tech web site at http://www.mtech.edu/about/ir/enrollment.htm. However, growth is expected because incoming

students will be more attracted to BS degrees in Mechanical Engineering than to the previous options.

4. Institutional and System Fit

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

The new Mechanical Engineering degrees would supplant the General Engineering - Mechanical Engineering option degrees. Mechanical Engineering has been a popular choice for Tech students, attracting on the order of a hundred students per year. Thus, the new program is simply an augmentation of an existing and successful program.

The new program will complement other natural resources/energy-driven engineering programs at Montana Tech including Mining, Geological, Petroleum, and Environmental Engineering, since an overlap of expertise exists among these five programs.

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

No. The new program will continue to be administered by the current (General Engineering) department. The new program will utilize the labs, software, and instructors currently employed by the Civil and Mechanical Engineering options. However, the name of the department will be changed to the Civil and Mechanical Engineering Department and the department will continue to offer fundamental engineering courses for the other engineering departments on campus as well. Since the curriculum of the new degrees will remain the same as the curriculum of the option from which it developed, no new courses, labs, materials, software, instructors, or staff will be required at the onset. Additional resources would only be required if the ability to grant BS degrees results in significant increases in student enrollment. The General Engineering no-option degree will be phased out during the next four years after the students "in the pipeline" graduate or switch to the Civil and Mechanical Engineering degree programs. Welding Engineering will become an option under the Mechanical Engineering degree.

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

The new Mechanical Engineering program is most closely related on campus to the existing Mechanical Engineering option which it will replace. Mechanical Engineering has no closely related programs at the institution beyond the Mechanical Engineering option.

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

Montana Tech's Mission Statement claims a "strong heritage in engineering". Begun as a mining engineering school, it has developed into an exemplary college of engineering. More than half our "North Campus" students pursue engineering degrees. Establishment of a BS in Mechanical Engineering continues and enhances the strategic goals of the institution. Tech's engineering programs are focused on energy and natural resource development. Having a Mechanical Engineering program is consistent with Montana Tech's heritage and mission.

Montana Tech's Strategic Plan is organized into six themes. Theme 1 Section b. states that the institution will "continue to place more than 90% of students prior to graduation". As stated in the Overview of this

request, we believe that converting our Mechanical Engineering option to degrees will make Montana Tech Mechanical Engineering graduates much more competitive in the engineering job market.

Theme 2 of Tech's Strategic Plan commits to "Capitalize on Montana Tech's role as Montana's Science, Technology, Engineering, and Mathematics (STEM) Broad University" to "support and grow research, scholarship, and technology transfer". We believe that moving from a Mechanical Engineering option to degrees will greatly enhance our ability to attract premium students and faculty as well as research grants in the STEM areas.

Theme 5 Section b. aims to "increase enrollment and retention rates". As with most other engineering programs at Montana Tech, the new Mechanical Engineering program will target students who have an inclination to work in the Energy and Natural Resources industries. We anticipate a demand from Canadian and Saudi energy and natural resources companies for our Mechanical Engineering students as well. Between domestic and international recruits, we anticipate up to 20 additional students per year once the Mechanical Engineering degrees are in place.

In addition to advancing the strategic goals of Montana Tech, the proposed degree program will also help to advance the three goals contained in the MUS Strategic Plan (Access & Affordability, Workforce & Economic Development, and Efficiency & Effectiveness).

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

The proposed Mechanical Engineering program is similar to the Mechanical Engineering degree offered by Montana State University Bozeman (MSU). Differences in emphasis between the programs in the two schools exist, and will be presented in this section.

As previously stated for an undergraduate BS degree in Mechanical Engineering, ABET, the engineering accrediting organization, requires Mechanical Engineering programs to "prepare students to work professionally in both thermal and mechanical systems areas". MSU's Mechanical and Industrial Engineering Department offers B.S. degrees in Industrial Engineering, Mechanical Engineering, and Mechanical Engineering Technology. MSU's B.S. in Mechanical Engineering requires a minimum of 128 credits. MSU's catalog states that the department is "particularly focused on excellence in the following thrust areas: design and manufacture**;** energy systems**;** materials and structures**;** measurement systems**;** service engineering; and, human factors engineering**."**

The Tech program distinguishes itself in the thermal systems arena by emphasizing thermal power plant (natural gas, waste products, etc.) design and operation. Focus areas in mechanical systems include micro-electro mechanical systems (MEMS) and manufacturing for mining equipment and petroleum tooling which combine natural resources, thermal and mechanical systems.

While both Tech and MSU's Mechanical Engineering programs will share the same fundamental education (math, physics, chemistry, dynamics, thermodynamics, mechanics, machine design, and heat transfer), upper-level courses at Tech diverge significantly from those at MSU, and prepare students for careers both

in Southwest Montana and world-wide. Tech's emphasis on micro-electro-mechanical systems (MEMS), nano-technology in general, and additive manufacturing, niche fabrication, and characterization in specific, provides specially trained engineers for industry.

Montana Tech's Mechanical Engineering program will continue to collaborate with its Petroleum Engineering Department to train engineers for the petroleum tooling industry. Major players such as Baker Tools and Halliburton already hire Mechanical Engineering option graduates from Tech, and are demanding more.

Finally, the Montana Tech Mechanical Engineering energy side will focus on thermal power plant design and operation, playing into Tech's legacy of turning natural resources into energy and industry materials.

Thus, while Tech's proposed undergraduate Mechanical Engineering program is similar to the MSU program in name, its targeted careers and subsequent upper-level education diverges significantly from the MSU program.

Collaborations.

Montana Tech's Mechanical Engineering option program has collaborated with MSU in several areas. Tech Assistant Professor Dr. Jack Skinner has an ongoing collaboration with Professor David Dickensheets and Assistant Professor Wataru Nakagawa of MSU's Electrical and Computer Engineering Department. This collaboration includes a lab tour of MSU's Montana Micro-fabrication Facility and other micro-related labs by Professor Skinner's Introduction to MEMS course. Educational and research collaborations have been identified; and given the close proximity between the two campuses, equipment and expertise can be easily shared. Tech and MSU faculty met last year to develop a Major Research Instrumentation proposal to NSF in regards to acquiring a near-field scanning optical microscope (NSOM), which would be the first such tool in the state of Montana. These efforts resulted in the acquisition of an NSOM tool, which is housed in Dr. Skinner's research lab. This tool is the only one of its kind in Montana and provides a unique piece of equipment for both educational and research-based student involvement that is truly cross-disciplinary.

Tech Professor Dr. Bruce Madigan has collaborated with the Montana Manufacturing Extension Center at MSU on a variety of manufacturing and welding related projects for companies around the state. Dr. Madigan was recently awarded a grant from the National Additive Manufacturing Innovation Institute to develop curriculum for additive manufacturing courses.

Articulation or transfer agreements. No special articulation or transfer agreement exists between the two schools beyond the wide-ranging common course numbering effort carried out beginning in 2007. MSU's Mechanical Engineering Department and Tech's General Engineering Department were deeply involved in the common course numbering effort and worked together to identify courses with common identification. As of Fall 2014, Tech instituted a Freshman Engineering Program (FEP) with a common core for first year students across all engineering programs. Recent discussions between the Engineering Deans at Tech and MSU indicate collaboration on the FEP will increase transferability and decrease confusion for students.

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

Montana Board of Regents

CURRICULUM PROPOSALS

the characteristics set out in Regents' Policy 301.12 have been met.

The proposed curriculum for a Mechanical Engineering degree is presented below. This curriculum is identical to the current Mechanical Engineering options.

CURRICULUM WORKSHEET											
General Engineering - Mechanical Engineering Option Revised Fall 2014				Name: Advisor:				Date:			
	Course #	Course Title	Semester	Grade	Credits	Math/Sci	Eng Sci	Design	HSS	Other	Total
Freshman First Semester	CHMY 141	College Chemistry I			3	3					
	CHMY 142	College Chemistry Lab I			1	1					
	EGEN 101	Intr Eng Calc & Probs			3		3	D			
	EGEN 194	Intr Eng Seminar			1		1				
	M 171	Calc I			3	3					
	WRIT 121	Tech Writing			3					3	
		Humanities Elective			3				3		17
Freshman Second Semester	CHMY 143	College Chem II			3	3					
	EGEN 102	Eng Calc & Probs II			2		2				
	GEO 101	Intr Phys Geology			3		3				
	M 172	Calc II			3	3					
	PHSX 234	Gen Phys-Mechanics			3	3					
		Humanities Elective			3				3		17
Sophomore First Semester	CSCI 112/117	Programming with Matlab or C			3					3	
	EGEN 201	Engr Mechanics-Statics			3		3				
	EGEN 213	Survey of Met & Mat Eng			3		3				
	M 273	Multivariable Calc			4	4					
	PHSX 235	Gen Phys-Heat, Sound & Optics			3	3					
	PHSX 236	Gen Phys-Heat, Sound & Optics Lab			1	1					17
Sophomore Second Semester	ECNS 203	Principles of Economics			3				3		
	EGEN 202	Dynamics			3		3				
	EGEN 324	Applied Thermodynamics			3		3				
	EMEC 291	Intro to Mech CAD Modeling			1		1	D			
	M 274	Introduction to Diff Equations			3	3					
	PHSX 237	Gen Phys-Ele, Magn & Motion			3	3					
	PHSX 238	Gen Phys-Ele, Magn & Motion Lab			1	1					17
Junior First Semester	EELE 201	Circuits I for Engineering			3		3				
	ENGR 305	Mech of Materials			3		3				
	ENGR 434	Applied Thermodynamics II			3		3	D			
	WRIT 321	Advanced Techninal Writing			3					3	
		*Math Elective			3	3					
		Social Science Elective			3				3		18
Junior Second Semester	EELE 202	Circuits I for Engineering Lab			1		1				
	EGEN 306	Mech of Materials Lab			1		1				
	EMEC 318	Comp Apps for Mechanical Engineers			2		2	D			
	EGEN 325	Engineering Economic Analysis			3					3	
	EGEN 335	Fluid Mechanics			3		3				
	EMEC 326	Fundamentals of Heat Transfer			3		3	D			
		#Professional Electives, 300 or higher			3		3	D			16
Senior First Semester	EELE 423	Process Instr & Control			3		3	D			
	EELE 424	Process Instr & Control Lab			1		1				
	EGEN 489	Engineering Design I			2		2	D			
	EMEC 445	Mechanical Vibrations			3		3	D			
	EMEC 448	HVAC			3		3	D			
	EMEC 455	Mech Component Design			3		3	D			
		#Professional Electives, 300 or higher			3		3	D			18
Senior Second Semester	EELE 355	Electric Machine Fundamentals			3		3				
	EGEN 336	Fluid Mechanics Lab			1		1				
	EGEN 499	Engineering Design II			2		2	D			
	EMEC 402	Mech Engineering Lab			1		1				
		#Professional Electives, 300 or higher			3		3	D			
		#Professional Electives, 300 or higher			3		3	D			
		#Professional Electives, 300 or higher			3		3	D			16
					136	34	78		12	12	136

Montana Board of Regents
CURRICULUM PROPOSALS

BS Mechanical Engineering Professional Electives - Students may choose from the following Courses

*Math electives are either M 333 (Linear Algebra) or STAT 332 (Statistics).

Note: Intern credits are limited to 4 credits at 2 credits per semester.

#Professional Electives are limited to 300 and 400 level, unless specifically listed belo\

The following courses are recommended:

EELE 203	Circuits II for Engineering
EELE 308	Signals and Systems Analysis
ECIV 312	Structures I
EGEN 488	Fundmentals of Engineering Exam
EGEN 410	Rocket Propulsion
EMEC 492	Machine Design II
EGEN 4XX	Introduction to Microelectromechanical Systems and Nanotechnology
ENGR 5850	Advanced Mechanics Of Materials
EMEC 429	Mechanical Component Design Lab
EMEC 4XX	Rocket Propulsion
EMEC 4XX	Aerospace Propulsion
EWLD 314	Intro to Welding Engineering
EWLD 440	Design of Welded Connections
EWLD 476	Nondestructive Examination
M&ME 5970	Energy Issues and Analysis

3 credits taken from:

M 405	Advanced Engineering Mathematics I
M 410	Numerical Computing for Engineering and Science
M 426	Mathematical Modeling
M 435	Advanced Calculus I
STAT 421	Probability Theory
STAT 432	Regression and Model Building

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

The BS in Mechanical Engineering degree program is proposed to start in Fall of 2016. Students already pursuing the Mechanical Engineering option in General Engineering would be given the choice of continuing with the option or switching to the new degree program. ABET accreditation of the undergraduate program would be pursued immediately, with a proposed visit by an accreditation team in Fall of 2017 and granting of accreditation in Fall of 2018. The current option in Mechanical Engineering would be phased out by AY 2018-2019.

Table 5.1 below projects the student growth in Mechanical Engineering (BS and MS combined) through

academic year (AY) 2018-2019.

Table 5.1 Projected Enrollment of the Mechanical Engineering BS and MS Program

Through Academic Year 2018-2019

		Mechanical Engineering
AY 2015-2016		100
AY 2016-2017		125
AY 2017-2018		140
AY 2018-2019		150
Beyond AY 2018-2019	Varies with Montana	population change

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 has been stated previously, no curriculum changes are required to convert the Mechanical Engineering option to degree status, thus no additional faculty members are required to staff the new program. Additionally, the new undergraduate program will remain under the administration of the General Engineering Department and the graduate program will remain under the administration of the Graduate School, pre-empting the need for immediate additional administrative staff. If the projected growth (see table above) is realized, then additional faculty members would be requested, approximately one new faculty member for each additional 25 students to the program. Consequently, should the projected growth occur, new faculty members would be needed in the program in AY 2016-2017 and again in AY 2018-2019. Tuition from the additional students would cover the cost of new faculty.

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.

As has been stated previously, no curriculum changes are required to convert the Mechanical Engineering option to degree status, thus no additional resources are projected at the onset of the program. As stated in part 6.A. above, should the projected student growth materialize, additional resources such as laboratory space and software would be needed. Engineering program fees would be the primary funding source for additional resources, and these fees grow in proportion to the student enrollment.

7. Assessment

How will the success of the program be measured?

The Mechanical Engineering program plans to seek ABET accreditation after program approval by the Board of

Regents. Accordingly, measurement of program success will be identical to that followed for ABET program evaluation. This evaluation consists of setting program objectives and outcomes, designing metrics to measure the success of the objectives and outcomes, measuring and evaluating success, and recommending and implementing changes in a continual cycle of improvement.

The Mechanical Engineering program has adopted the following objectives:

Mechanical Engineering Program Educational Objectives

Graduates will be prepared to assume a wide range of positions as engineers in the early years of their careers. In addition to acquiring a broad range of engineering skills, graduates will be able to master workplace skills required in Mechanical Engineering. In the first years following graduation, graduates are expected to:

a) Perform engineering work in a highly ethical manner, placing public safety and welfare in the forefront while understanding social and global impacts of technology.
b) Progress in their respective fields to become technical and work leaders, assuming advanced responsibilities through experience and licensure.
c) Develop sub-areas of expertise through experience and pursuit of life-long learning opportunities.
d) Take on roles of marketing and project overview by advancing skills in written, oral and graphic communication.
e) Work effectively on cross-functional teams, communicating and coordinating with clients, customers, co-workers, contractors, and public agencies.
f) Instill eagerness to learn and continue learning whether it is through advanced degrees or courses or staying current on industry issues.

Achievement of Program Educational Objectives

The Mechanical Engineering program will periodically assess and evaluate the extent to which the objectives are being fulfilled. Table 7.1 presents the Mechanical Engineering program's plans for assessment and evaluation of objectives. The constituents assessed to determine the extent to which the objectives are fulfilled are the:

- Industrial Advisory Board – This represents both graduates and employers. The assessment tools are meetings every semester and a periodic questionnaire on the achievement of objectives.
- General alumni – which represent both graduates and employers. The assessment tool is a questionnaire on the achievement of objectives.
- Graduates from the previous year. The assessment tool is the Graduate Survey, which specifically addresses objectives.

Evaluation is performed by the Department Head, the program faculty, and the institution, as shown in Table 7.1.

Table 7.1

Assessment and Evaluation of Educational Objectives

Montana Board of Regents
CURRICULUM PROPOSALS

Assessment Date	Assessment Tool	Constituency	Evaluation	Evaluation Date
March every three years	Discussions at Board Meeting—appropriateness of objectives	Industrial Advisory Board	Program Faculty and Head	April following assessment
October of each year	Questionnaire on achievement of objectives	Industrial Advisory Board	Program Head, Faculty	December of each year
December of each year	Questionnaire in newsletter on achievement of objectives	General Alumni	Program Head, Faculty	January of each year
Oct thru Mar each year	Graduate Survey of employment placement	Graduated seniors and Masters students from previous year	Program Head, Faculty, Institution	May of each year

Scheduling of assessment and evaluation of objectives is such that each constituent group has input at least once per year.

Figure 7.1 shows the entire assessment and evaluation process used by the program. The outer loop addresses objectives. Metrics (or instruments) are used to obtain information on the extent to which the objectives are being achieved. These metrics are evaluated by the faculty and department head. The results of the assessment are used by the faculty to implement program changes via curricular and/or extra-curricular activities. (E.C.A. stands for Extra-curricular Activities.) The inner feedback loop involves the outcomes, addressed below.

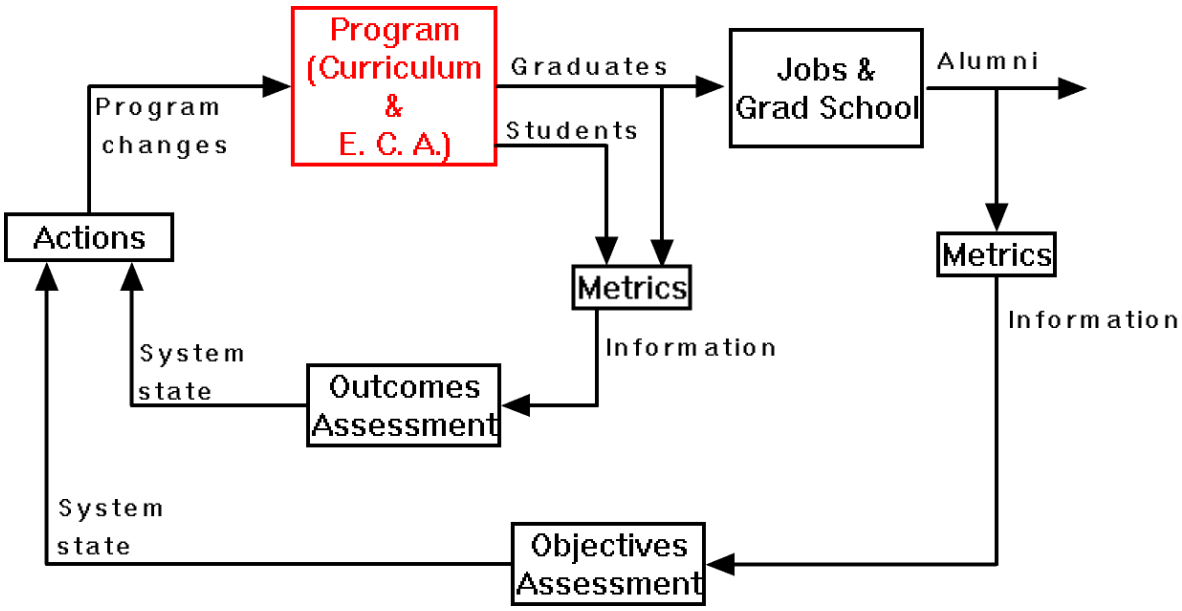

Figure 7.1 Assessment and evaluation flow diagram.

As shown in Table 7.1, the program uses four metrics to conduct objectives assessment: 1) periodic discussions at IAB meetings, 2) IAB questionnaire, 3) alumni questionnaire, and 4) career placement surveys.

The Mechanical Engineering program has adopted the following outcomes, which are the suggested ABET outcomes for all engineering programs:

Mechanical Engineering Program Outcomes

Montana Tech's Mechanical Engineering program outcomes are as follows. Students graduating from these programs at Montana Tech should attain:

a. an ability to apply knowledge of mathematics, science, and engineering
b. an ability to design and conduct experiments, as well as to analyze and interpret data
c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d. an ability to function on multi-disciplinary teams
e. an ability to identify, formulate, and solve engineering problems
f. an understanding of professional and ethical responsibility
g. an ability to communicate effectively
h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
i. a recognition of the need for, and an ability to engage in life-long learning
j. a knowledge of contemporary issues
k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Achievement of Program Outcomes

The Mechanical Engineering program's plans for assessment and evaluation of educational outcomes are presented in Table 7.2.

Table 7.2 Assessment and Evaluation of Educational Outcomes

Assessment Date	Assessment Tool	Constituency	Evaluation	Evaluation Date
Feb, even-numbered years	Student Satisfaction Inventory, Noel-Levitz	Sophomores	Program Head, Faculty, Institution	April, even-numbered years
Oct & Mar of each year	Student Exit Survey	Graduating seniors	Program Head, Faculty	Apr of each year
At each proposed curriculum change	Curriculum Review Committee (CRC) discussion of program curriculum changes	Campus faculty	Campus Faculty at Instructional Faculty meetings	1-3 weeks after CRC meeting.
End of each semester	Student grades for course components	Sophomore, Junior, Senior students	Course Instructor	Beginning of subsequent semester
Each semester	FE Exam	Seniors	Faculty, Review Course instructor	Nov of even years

Table 7.2 above shows the entire assessment and evaluation process used by the Mechanical Engineering program. The inner loop pertains to the outcomes and is the job of the faculty to execute. Metrics (or instruments) are used to obtain information on the extent to which the outcomes are being achieved. These metrics are assessed by the faculty. The results of the assessment and any recommended actions are used by the faculty to implement program changes via curricular and/or extra-curricular activities.

The following metrics are employed to assess the outcomes: 1) Noel-Levitz Student Satisfaction Inventory (SSI), 2) Graduate Exit Survey, 3) Curriculum Review Process, 4) course grades, and 5) Fundamentals of Engineering Exam (FE Exam).

The measurements of the success of the Mechanical Engineering program presented above are largely shaped by ABET requirements and recommendations. As the Mechanical Engineering program mature, it is expected that objectives, outcomes, and measurements will evolve to address the goals and needs of the program. Finally, enrollment growth is anticipated after institution of the new program. Enrollment statistics will be collected and reviewed as a metric of success.

At Montana Tech, ABET accreditation has only been sought for the BS engineering degrees. The General

Montana Board of Regents
CURRICULUM PROPOSALS

Engineering Department has maintained ABET accreditation for its General Engineering – Mechanical Engineering option and will seek accreditation for the new BS in Mechanical Engineering degree. The new MS degree in Mechanical Engineering will remain under the high standards set by the Graduate School and will naturally follow the practices of the ABET accredited BS degree.

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 notion of changing the Mechanical Engineering option to degree status has long been a topic of conversation on the Montana Tech campus. The Mechanical Engineering option was first approved by the Board of Regents in 1999. For a number of years prospective students, Montana Tech Alumni, the General Engineering Industrial Advisory Board (IAB) and companies that hire our graduates have asked about the efficacy of changing the Mechanical Engineering option to degree status. Degree status for Mechanical Engineering at Montana Tech was first proposed to Montana Tech administration by senior-level faculty in the Fall semester of 2008.

In 2011, Provost Abbott and Dean Knudsen met with MSU-Bozeman Provost Robert Marley to discuss Montana Tech's intent to change the Mechanical Engineering option to degree status.

In August of 2013, both Tech Provost Abbott and Chancellor Blackketter encouraged pursuit of degree status, beginning with proposals on the Tech Campus and culminating with a Level II request to the Montana Board of Regents. This proposal was never submitted to the BOR by the Montana Tech campus. On August 22, 2013, Chancellor Blackketter, Provost Abbott and Dean Knudsen discussed Montana Tech's intentions of the proposed degree status with MSU acting Dean of Engineering Brett Gunnick.

On January 6, 2015, Montana Tech Dean of Engineering Pete Knudsen again met with MSU Dean of Engineering Gunnick, and this proposal was then elevated to Tech Provost Abbott and Chancellor Blackketter for consideration as an agenda item at the March 2015 BOR meeting. This proposal was pulled from consideration before the March BOR meeting.

The proposed Bachelor of Science Degree in Mechanical Engineering has been vetted and approved by the Montana Tech Curriculum Review Committee, the Associated Students of Montana Tech, and the Faculty Senate.

Montana Board of Regents
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APPENDIX

Letters of Support

The following are a small sample of the number of letters of support that Montana Tech has received.

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October 27, 2013

Bruce Madigan, P.E., Ph.D.
Department Head, General Engineering
Montana Tech
1300 W. Broadway
Butte, MT 59701

Re: Support for Civil and Mechanical Engineering Degree Program at Montana Tech

Dear Dr. Madigan:

As an officer of Morrison-Maierle, I am writing on our firm's behalf in support of granting Civil and Mechanical Engineering degrees from Montana Tech.

Although our firm has had great success in the past hiring students from Montana Tech's General Engineering program, recognition of the specific area of study by awarding Civil and Mechanical degrees will more readily put these highly capable new hires on the same level as others with those degrees from other institutions of higher learning. With a growing economy, Civil and Mechanical Engineers will be in demand in the future and it will be good to have more than one university in Montana awarding these degrees from the standpoint of the number of graduates that can be generated and to create some diversity in the hiring pool.

Additionally, the granting of these degrees can provide tangible and direct benefit to Montana Tech in their pursuit of research grants by simply having degree programs that match those from the other universities that they are competing with. Montana Tech is truly at a disadvantage in this realm when they are competing with another school's "Mechanical Engineering Department" and have to apply as a "General Engineering Department with a Mechanical Option".

And finally, as a 1988 graduate from Montana Tech with a B.S. in Engineering Science (the precursor to the General Engineering Department), I know that there is a lot more to being successful than the title of the degree on your diploma. However, having a degree that matches what others are receiving can keep the playing field even in the competitive world of interviewing and vying for positions in academia and industry. I believe the time is past due for Montana Tech's graduates in the civil and mechanical fields of study to be recognized as equals to those from other institutions and have the name of their degrees reflect the expertise they have earned.

Sincerely,

MORRISON-MAIERLE, INC.

Kurt W. Keith, PE
Vice President

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ACCESS CONSULTING
TECHNOLOGY FOR THE BUILT ENVIRONMENT

October 21, 2010

Montana Tech of the University of Montana
Attn: Dr. Butch Gerbrandt
1300 W. Park St
Butte, MT 59701

Subject: Support for Civil and Mechanical Engineering Degree Program

Dear Dr. Gerbrandt,

On behalf of Access Consulting, I am writing today to express my wholehearted support for the proposed granting of Civil and Mechanical Engineering degrees at Montana Tech. This support grows from our sense of the profound need in this country for more civil and mechanical engineers and from our firm's experience in hiring and working with Tech graduates. In expressing our support, I would like to highlight three specific reasons, including:

1. Every four years, the American Society of Civil Engineers publishes a report card on the state of the United States' public infrastructure. These report cards document the decline of that infrastructure across the entire country. That decline is also brought home to us all by tragic incidents like the explosion of the gas pipelines in Bozeman and San Bruno and the collapse of the I-35W highway bridge in Minneapolis. To address the infrastructure needs highlighted by these incidents, our country must recruit a new generation of civil and mechanical engineers and provide them the high quality undergraduate education that Tech can provide. Students who respond to this challenge and wish to major in civil or mechanical engineering should be granted a degree that acknowledges the specialized training they have received.
2. Granting specific civil and mechanical engineering degrees will improve industry knowledge of and recognition for the programs at Tech. That recognition will, in turn, lead to more hiring of Tech graduates by Montana firms and the retention of high salary jobs in Montana.
3. Prospective employers of Tech graduates who are not familiar with the quality of the General Engineering curriculum may tend to favor graduates from other institutions whose degree specifies their particular focus on mechanical or civil engineering. By granting specific civil and mechanical degrees, Tech will officially acknowledge the graduate's focused area of study and improve that graduate's chances of competing for employment.

In summary, I believe that granting Civil and Mechanical Engineering degrees at Montana Tech will benefit the graduates who receive the degrees, the companies and agencies that will hire them, and the citizens of the State of Montana. I strongly urge the Board of Regents to approve the granting of Bachelor's Degrees in Civil Engineering and Mechanical Engineering.

Sincerely,

Paul DeWolfe, PE
Principal
Access Consulting, PC

265 WEST FRONT STREET – MISSOULA, MONTANA 59802 – PHONE: 406.327.0629 – FAX: 406.541.9881

Montana Board of Regents

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Daniel T. Berube, P.E.

27 Cedar Lake Drive
Butte, MT 59701
406-494-5152
November 22, 2013

Bruce Madigan, P.E., Ph.D.
Department Head, General Engineering
Montana Tech
1300 W. Broadway
Butte, MT 59701

Re: Support for Civil and Mechanical Engineering Degree Program at Montana Tech

Dear Dr. Madigan:

I am a retired mechanical engineer and utility company executive and I endorse and support your efforts to seek appropriate identification for the mechanical and civil engineering degrees students earn through your department.

While working at The Montana Power Company as a mechanical engineer I earned what was called a Master of Science in Engineering Science, from Montana Tech in 1971. I often was asked to explain the differences between my engineering science degree and a mechanical engineering degree and even that long ago I could not identify many. The engineering courses were fitting for my work in the power generation field and courses in other departments offered opportunities for broadening my education. The degree I earned at Montana Tech increased my value to my employer and assisted me in advancing to the position of corporate CEO before I retired.

There are good reasons in today's job market to make sure that degrees granted by the Montana University System easily convey the nature of the recipient's fields of study to potential employers. Recruiters and personnel managers feel pressure to minimize the expense of their efforts and, when they are looking for mechanical or civil engineering job candidates, it currently appears they tend to favor spending their investigative efforts on graduates with those specific degree designations over a general engineering designation. This in spite of Tech's great track record of preparing graduates for the "real world".

Further, Montana Tech's history, culture and emphasis on responsible development and use of natural resources assures that its graduating engineers are well educated and trained to work in a world where technology and the environment must be considered together. I hope the Board of Regents will see the merits in your proposals and accept them.

Daniel T. Berube

Daniel T. Berube, P. E.
Life Member,
American Society of Mechanical Engineers

Montana Board of Regents

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DOWL HKM

December 3, 2013

Bruce Madigan, P.E., Ph.D.
Department Head, General Engineering
Montana Tech
1300 W. Broadway
Butte, MT 59701

RE: Support for Civil and Mechanical Engineering Degree Program at Montana Tech

Dear Dr. Madigan,

As an employee of DOWL HKM, this letter is to express my support in granting Civil and Mechanical Engineering degrees from Montana Tech.

Montana Tech's General Engineering program has helped construct a sound foundation of Civil and Mechanical Engineering knowledge that has led to the development of excellent engineers located around the world. Montana Tech's Civil and Mechanical option graduates have or already are completing the required Accreditation Board for Engineering and Technology (ABET) engineering credits that are standardized to all engineering institutions of higher learning. However, having a degree title that correlates with industry and academic standards will further allow Montana Tech students to competitively vie with students from other institutions.

Having a Bachelor of Science in Civil or Mechanical Engineering will not only benefit the graduates of Montana Tech; but the State of Montana itself. With an economy beginning to boom in the Rocky Mountain region, the demand for Civil and Mechanical Engineers will be on the rise. Prospective employers of Civil and Mechanical Engineers will be searching for engineers that are native of Montana and/or have familiarity of the Montana engineering landscape. The creation of Civil and Mechanical Engineering degrees at Montana Tech will give potential employers a larger hiring pool of engineers with a particular educational focus on mechanical or civil engineering. Furthermore, the granting of these degrees will promote the collection of degree specific research grants by having degree programs that match those of other institutions. In a world of standardization, a degree program named "Bachelor of Science in General Engineering with a Civil Option" may be confusing to an individual that is not familiar with Montana Tech. However, a degree program named "Bachelor of Science in Civil Engineering" is much more streamlined with common degree type terminology.

In conclusion, I firmly believe that granting Civil and Mechanical Engineering degrees at Montana Tech will benefit the State of Montana, the graduates who receive the degrees and potential employers. The title of the graduates degrees should recognized on the same playing field in this truly competitive environment we all currently live in.

Sincerely,
DOWL HKM

David J. Barrick, P.E.
Geotechnical Engineer
dbarrick@dowlhkm.com

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