# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-1001+R0507** | **Date of Meeting:** | **May 30-June 1, 2007** |
| **Institution:** | **The University of Montana** | | |
| **Program Title:** | **Joint dual degree option consisting of a Masters in Business Adminstration and Doctorate in Physical Therapy (MBA/DPT) between the Schools of Business Administration and Physical Therapy and Rehabilitation Science.** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☐ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☒ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-1001+R0507 | Institution: The University of Montana |
| --- | --- |

**Specify Request:**

The University of Montana seeks permission to offer a new option for a dual degree consisting of a Masters in Business Administration and a Doctorate in Physical Therapy between the Schools of Business Administration and Physical Therapy and Rehabilitation Science.

# M O N T A N A  B O A R D  O F  R E G E N T S
## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

**Institution:** The University of Montana

**Program Title:** Joint dual degree option consiting of a Masters in Business Adminstration and Doctorate in Physical Therapy (MBA/DPT) between the Schools of Business Administration and Physical Therapy and Rehabilitation Science.

1. How does this program advance the campus' academic mission and fit priorities?

An MBA/DPT dual degree option is consistent with The University of Montana mission by offering a program that is responsive to the needs of Montanans and which offers a unique educational experience through the integration of two existing graduate degree programs. This dual degree option would provide a learning experience that would allow students to realize their potential and enter the work force with a complementary set of skills. Precedent for this type of dual degree option already exists on campus with the JD/MBA and MBA/Pharm.D. programs.

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

The MBA/DPT dual degree program would support several BOR goals and objectives. At minimum it would fit with the following goals and objectives:

A.2. - It would be an academic option that is focused around approved campus missions and is consistent with available resources.

B. - It would deliver a high quality, more affordable higher education experience available to qualified students.

B.3. - It would create a more affordable and efficient opportunity to earn two graduate degrees. We are able to offer this efficiency through the concept of reciprocity as each program will waive 8 credits while accepting 8 credits from the other program.

C. - Through the cooperative efforts of the Schools of Business Administration and Physical Therapy and Rehabilitation Science, we would be delivering higher education services in a manner that is efficient, coordinated, and more accessible to students.

D. - Given the challenges of delivering affordable and effective health care services, by graduating students from this dual degree program we would be responsive to market, employment, and economic development needs of the State and the nation as they pertain to health care.

3. How does this program support or advance Montana's needs and interests?

The creation of this dual degree option would further distinguish The University of Montana nationally, as we believe there is only one other university program in the county that offers something similar. There is a current and escalating shortage of physical therapists in the state and nation and there is a tremendous need for health care providers to serve in administrative capacity to develop and coordinate physical therapy and other health care services to the citizens of Montana.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

Given the uniqueness of this dual degree program and student interest, we anticiapte that we could increase our ability to recruit students from in and out of state. We anticipate that individuals graduating with an MBA/DPT dual degree would be highly recruited by health care organizations or be more likely to start their own businesses. There is reason to believe that with this degree, graduates would also have a higher earning capacity, eventually being self-employed business owners or serving in managerial positions.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | N/A FTE students |
| • Enrollments / year? | 1-4 |
| • Graduates / year? | 1-4 |
| • MT jobs / year? | ~15% annual growth in PT positions overall |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 0 |
| • Faculty FTE? | 0 |
| • Staff FTE? | 0 |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ _____

8. How will the campus fund the program?

This option does not require any new faculty, courses, facilities or financial resources. Courses required for the proposed option are offered already on a regular basis with the exception of one new course that will be developed (PT 691).

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

No internal reallocation of resources or personnel is necessary.

**Joint MBA/DPT Degree Option**

## 1. Objectives and Need

**1.1. Description of the Program:** The Schools of Business Administration and Physical Therapy and Rehabilitation Science propose the creation of a joint program resulting in a dual MBA/DPT degree option. This is the combining of two existing programs. A MBA/DPT dual degree program at The University of Montana would recognize the importance and need of educating a subset of health care providers with advanced skills and knowledge in business and administration content. The establishment of a joint MBA/DPT program will allow students the option to earn a dual degree in less time than it would take if both degrees were pursued separately. We are able to offer this efficiency through the concept of reciprocity as each program will adjust curriculums by 8 credits and accept 8 credits from the other. Students would have to meet each program's application requirements and be accepted into each program. Assigned advisors from each program would work closely with qualified students to assist them in creating appropriate curricular schedules.

Program objectives include:

- To provide students who have an interest in both the practice of physical therapy and business and administration a more efficient vehicle to earn both degrees.
- To help meet the demand for health care professionals with additional training in business and administration.
- To achieve additional recognition for The University of Montana and the School of Physical Therapy and Rehabilitation Science and the School of Business Administration as pioneering programs in developing unique educational and degree opportunities that meet student interests and societal needs.

**1.2. Need for the Program:** The creation of this dual degree option would further distinguish The University of Montana nationally, as we believe there is only one other university program in the county that offers something similar. A MBA/DPT dual degree program at The University of Montana would recognize the importance and need of educating a subset of health care providers with advanced skills and knowledge in business and administration content. The changing roles and need for health care providers with business and administrative abilities is well documented in the literature [1, 2, 3, 4, 5, 6, 7, 8]. Leaders in the physical therapy profession endorse this type of opportunity for students (see letter of support attached). Precedent for this type of dual degree program has been established nationally in other health care professions such as medicine and nursing. We are using the established MBA/Pharm.D. and JD/MBA dual degree joint programs here at The University of Montana as models for our proposal.

In a survey of 140 students enrolled in BaDM 100, twenty-three percent (23%) reported that they would be either strongly or somewhat interested in MBA/DPT joint program. Responses from first and second year students enrolled in the DPT program also support the creation of the program with 66% (N=50) responding as being strongly or somewhat interested in a joint program. Though these results may reflect an overly optimistic projection in the number of students that would actually enroll, the results of the surveys do indicate significant student interest.

**1.3. Additional Courses and Course Requirements:** Students completing this dual degree program will receive two separate degrees, the DPT and the MBA. Currently the DPT degree can be earned in two years-nine months and the MBA can be earned in two semesters and a summer. Both programs require the completion of an undergraduate degree and prerequisites prior to acceptance. Under the joint program, an exceptional student could complete both degrees in two years-nine months if the prerequisites from both programs were completed prior to acceptance. (See Appendix A for proposed joint program curriculum for the dual degree) Under this scenario, the student would be taking classes concurrently from both programs for much of the two years-nine months.

The concept of curricular reciprocity between the two schools would be the vehicle for gaining the efficiencies of the dual degree and allowing for a shorter time period to earn the degrees. Each program would waive 8 credits from its curriculum and accept 8 credits from the other program.

The 8 course credits the MBA program would accept as unrestricted elective credits are:

- PT 562 (1 credit) - Scholarly Project I;
- PT 671 (1 credit) - Research in Physical Therapy;
- PT 572 (2 credits) - Practice and Administration I;
- PT 673 (2 credits) - Practice and Administration II;
- PT 691 (2 credits) - PT Business Administration Practicum.*

*PT 691 is a new course that needs to be established. It is carved out of PT 690 – Clinical Internship IV and occurs simultaneously. Two different sections of PT 690 would need to be offered, one of which would be a 10 credit offering associated with the MBA/DPT student needing to complete PT 691.
(See Appendix B for course descriptions)

The School of Physical Therapy and Rehabilitation Science would accept 8 semester credits from the following courses:

- MBA 640 (2 credits) – Organizational Behavior;
- MBA 660 (2 credits) – Marketing Management;
- MBA 665 (2 credits) – Strategic Management Seminar;
- MBA 681 (2 credits) – Financial Management

(See Appendix C for course descriptions).

The School of Physical Therapy and Rehabilitation Science would waive 8 credits of the following courses:

- PT 679 (4 credits) - Trends in PT Practice electives;
- PT 530 (1 credit) - Introduction to Scholarly Project;
- PT 671 (1 credit) - Research in Physical Therapy I;
- PT 672 (2 credits) - Research in Physical Therapy II.

The School of Business Administration would adjust its degree requirements by substituting the 8 PT credits identified above for 8 credits of 600-level MBA unrestrictive electives.
The proposed MBA/DPT curriculum maintains the requirement for scholarly involvement that is imbedded in the DPT curriculum by keeping PT 562 – Scholarly Project I; by creating a variable credit option with a new 1 credit section for PT 671 – Research in Physical Therapy I and by introducing the proposed new course, PT 691 – PT Practice Management Practicum (see Appendix B for descriptions). Participating in PT 562 and 671, MBA/DPT students would be required to develop, identify, investigate, and present a proposal of a project that met advisor approval from both programs. PT 691 would be the vehicle for implementation of the scholarly project proposed through PT 562 and further developed in PT 671.

## 2. Adequacy, Accreditation and Assessment Issues

**2.1. Adequacy of Present Faculty, Facilities, Equipment and Library Holdings:**
Given that this program proposal consists of the merging of two existing degree options, no additional faculty, facilities, library holdings or equipment is anticipated.

**2.2. Accreditation Status:** The School of Physical Therapy and Rehabilitation Science is accredited by the Commission on Accreditation for Physical Therapy Education (CAPTE) through 2008. A self-study will be completed in preparation for the next cycle of accreditation that will include a report on the joint program (pending institutional and BOR approval). The proposed curricular adjustments for the School of Physical Therapy and Rehabilitation Science are not in conflict with accreditation status. The topics offered in PT 679 Trends in PT Practice that would be part of the course waived are electives. Students enrolled in the dual MBA/DPT program will complete a project commensurate with projects completed by students matriculating in the DPT curriculum. The capstone project completed by students in the MBA/DPT program is accomplished through the course sequence as described in Appendix A.

The School of Business Administration is accredited by AACSB International, and the accreditation process requires the submission of various reports on a periodic basis. UM's next Maintenance of Business Accreditation Review will occur during the 2009 – 2010 academic year. Two other joint programs (MBA/PharmD and JD/MBA) already have passed accreditation review by AACSB International; we are aware of no issues associated with this proposed new joint program that would jeopardize continued accreditation of UM's School of Business Administration.

**2.3. Assessment Issues:** The proposed joint program will be assessed through the current methodologies used by both Schools. They include: student, graduate, and employer surveys plus School curricular review. Each School will identify a faculty advisor that will meet regularly to review the assessment data and the MBA/DPT program in general.

## 3. Impact on Faculty, Costs, Students, and Other Departments and Campuses

**3.1. Additional Faculty Requirements:** No additional faculty members are required for the proposed joint program. One current faculty member from each School will assume responsibilities as advisor and coordinator.

**3.2. Advising:** A faculty member from both programs will be identified to work together for advising of students interested in and accepted into the dual degree program.

Potential scheduling conflicts between DPT and MBA courses will be resolved by admitting the joint MBA/DPT student to evening MBA classes. Two sections of each required MBA class are offered, one during the day and one at night, and this scheduling solution is currently used for both the joint JD/MBA and MBA/Pharm. D.

There may be opportunity for customizing the specific schedule of required courses to accommodate students who prefer and need a longer time frame to complete the dual degree option. We can also anticipate a scenario where a student may be accepted into the DPT program but still need to complete some of the MBA prerequisites. A customized curriculum may also be constructed to accommodate this situation and allow the student to complete needed pre-requisites and then after applying and being accepted into the MBA program, integrate MBA classes into their schedule. Advisors from both programs would work closely together to determine the most appropriate schedules.

**3.3. Impact on Facilities:** None

**3.4. Cost Analysis:** No additional expenses or revenues are anticipated. The School of Physical Therapy and Rehabilitation Science plans on keeping enrollment at the same level. The School of Business Administration also plans on maintaining its enrollment caps to accommodate this program. The development of new joint MBA degree programs with other professional schools is a national trend among AACSB accredited business schools today in view of several recent years of enrollment declines. These joint programs are seen as a means of attracting high-caliber students to help restore enrollment to the levels witnessed in the late 1990s.

**3.5. Relationship to other Campus Programs:** No programs outside of the School of Business Administration and Physical Therapy and Rehabilitation Science will be affected.

**3.6. Relationship to other Institutions:** The University of Montana is the only campus in the Montana University system to offer an MBA or degree in physical therapy. The respective Schools will utilize current communication mechanisms to include information about the MBA/DPT option to other Montana University System campuses and students to facilitate effective pre-requisite completion and successful application.

4. **Process Leading to Submission of Proposal:** This proposal has been reviewed and approved by the faculty and Deans of the Schools of Business Administration and Physical Therapy and Rehabilitation Science. With such approval, the proposal advances to the office of the Provost on The University of Montana Campus and from there through the proper channels for review and approval by the Board of Regents of the Montana University System.

**References**

1. Ahadial N. (2002) Demand for college graduates/attributes healthcare organizations seek in recruits in accounting. Career Development International. 7(3), 134-141

2. Blau R et al. (2002). The experiences of providing PT in a changing healthcare environment. Physical Therapy. 82, 648-657.

3. Casebeer AL, Hannah KJ. (1998). The process of change related to health policy shift: reforming a health care system. International Journal of Public Sector Management. 11(7), 566-582.

4. Lopopolo RB. (1999). Hospital restructuring and the changing nature of the physical therapist's role. Physical Therapy. 79, 171-185.

5. Lopopolo RB. (2002). The relationship of role-related variables to job satisfaction/commitment to the org. in a restructured hospital environment. Physical Therapy. 82, 984-999.

6. Lopopolo RB, Schafer DS, Nosse LJ. (2004). Leadership, administration, management, and professionalism (LAMP) in physical therapy: a delphi study. Physical Therapy. 84(2), 137-150.

7. Siddigui J, Kleiner BH. (1998). Human resource management in the healthcare industry. Health Manpower Management. 24(4), 143-147

8. Thredkeld AJ, Jensen GEM, Royee CB. (1999). The clinical doctorate: a framework for analysis in PT education. Physical Therapy. 79(6). 156-173.

**Appendix A**: Proposed two year-nine month joint DPT/MBA schedule for students that have completed the prerequisite requirements and have been accepted into both the MBA and DPT degree programs.

**First Year:**

| | | | |
|---|---|---|---|
| **Fall – Physical Therapy Courses - Required** | | | |
| PT 503 Physical Therapy and the Health Care System | | 4 | |
| PT 510 Applied Clinical Anatomy and Kinesiology | | 4 | |
| PT 511 Applied Clinical Anatomy and Kinesiology Laboratory | | 1 | |
| PT 516 Musculoskeletal Evaluation I | | 5 | |
| PT 526 Physical Therapy Interventions I | | 4 | |
| PT 529 Biomechanics and Exercise Interventions | | 2 | total: 20 |
| **Spring - Physical Therapy Courses – Required** | | | |
| PT 519 Musculoskeletal Evaluation II | 5 | | |
| PT 520 Motor Development Through the Life Span | | 3 | |
| PT 527 Electrophysiological Testing and Therapeutics | 2 | | |
| PT 528 Physical Therapy Interventions II | | 4 | |
| PT 536 Neurosciences for the Health Professions | | 5 | |
| PT 582 Clinical Clerkship | | 1 | total: 20 |
| **Summer - Physical Therapy Courses – Required** | | | |
| PT 587 Clinical Internship I | | 4 | total: 4 |
| **Summer – MBA Courses** | | | |
| none | | | |

**Second Year:**

| | | | |
|---|---|---|---|
| **Fall - Physical Therapy Courses – Required** | | | |
| PT 525 Clinical Medicine and Pharmacology | | 3 | |
| PT 561 Research Methods in Physical Therapy | 2 | | |
| PT 562 Scholarly Project I | | 1 | |
| PT 563 Cardiopulmonary Physical Therapy and Pharmacology | 3 | | |
| PT 565 Physical Therapy for Children | 2 | | |
| PT 566 Advanced Anatomy Laboratory | 1 | | |
| PT 567 Neurorehabilitation I | | 3 | |
| PT 569 Orthopedic Physical Therapy I | 2 | | |
| PT 570 Psychology of Illness and Disability | | 2 | (subtotal: 19) |
| **Fall – MBA Courses** | | | |
| MBA 601 Career and Leadership Skills (orientation week) | | 1 | total: 20 |
| **Spring – Physical Therapy Courses - Required** | | | |
| PT 588 Clinical Internship II | | 4 | |
| PT 568 Neurorehabilitation II | | 2 | |
| PT 671 Research in Physical Therapy | 1 | | |
| PT 572 Practice and Administration | | 2 | |
| PT 573 Orthopedic Physical Therapy II | 1 | | |
| PT 575 Physical Therapy Interventions III | | 4 | |
| PT 576 Synthesis of Clinical Evaluation and Intervention | 1 | | |
| PT 577 Physical Therapy Interventions IV | | 4 | (subtotal: 19) |
| **Spring – MBA Courses** | | | |
| MBA 694 Seminar (unrestricted elective) | 1 | total: 20 | |

**Summer - Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 589 Clinical Internship III * | | 5 | |
| **Summer – MBA Courses** | | | |
| 2 credits each from the following courses | | | |
| MBA 645 Interpersonal Perspective Seminar | 2 | | |
| MBA 655 Technology Perspective Seminar | | 2 | total: 9 |

**Third Year:**

**Fall - Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 626 Primary Care | | 3 | |
| PT 627 Prevention and Wellness for Physical Therapist | 2 | | |
| PT 673 Practice and Administration II | 2 | | |
| PT 676 Clinical Mastery | 4 | | |
| | | | (subtotal: 11) |
| **Fall – MBA Courses** | | | |
| MBA 694 Competitive Strategy | 1 | | |
| IS 574 Management Information Systems | | 2 | |
| MBA 640 Organizational Behavior | | 2 | |
| MBA 660 Marketing Management | | 2 | |
| FIN 681 Financial Management | 2 | total: 20 | |

**Spring – Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 690 Clinical Internship IV | | 10 | |
| PT 691 Business and Administration Practicum** | | 2 | (subtotal: 12) |

**Spring – MBA Courses**

| | | | |
|---|---|---|---|
| MBA 603 Integrated Project | | 1 | |
| MBA 665 Strategic Management Seminar | | 2 | |
| MBA 685 International Business | 2 | | |
| ACCT 605 Administrative (accounting) Controls | 2 | | |
| IS 650 Quantitative Analysis | | 2 | total: 21 |
| | | | Grand total = 134 |

* MBA/DPT Students would have priority for session placement and/or location in Missoula area for their PT 589 internship to allow for attending MBA summer courses.

** PT 691 is a proposed 2 cr. class to be included in the course credits accepted by the MBA program for its degree requirements.

**Appendix B**: Classes that the MBA program will accept from the DPT program in lieu of its 8 unrestricted electives:

**PT 562 Scholarly Project I** (1 cr.) Students enrolled in a MBA/DPT dual degree program will identify, develop, research and present a proposal for a research or special project. Appropriate topics would be linked to the management and administration of PT services. Students would have advisors from both programs. Topic must be approved by faculty advisors. Completion of project would occur during PT 691.

**PT 572 Practice and Administration** (2 cr.) Prerequisite consent of instructor. Organization and practice management issues of the physical therapy clinic with emphases on the clinician's role and responsibilities regarding supervision, billing, marketing, etc.

**PT 671 (Section II)* Research in Physical Therapy I** (1 cr.) (would be a proposed new section that would have to be accepted. Section I is 2 credits) Directed scholarly activity with faculty advisor which may include continued work on literature search, methodology development and data collection.

**PT 673 Advanced Practice and Administration** (2 cr.) This will be a capstone course in the area of practice and administration building off of content covered in PT 503 and 572. The content will not only better prepare the student in the role of clinician in today's practice environment, it will also give them knowledge and skills to serve as a manager or owner of rehabilitation services. The course will be a mixture of faculty lectures, guest lectures, student projects and presentations, and discussions. It will include a review of the pertinent literature to lay a foundation for an understanding of the best evidence to support core practice management processes and human resource management. Projects will be designed for practical application. Content emphasis will be in clinical practice management and include program development, human resource management, private practice ownership, entrepreneurship, leadership, technology associated with practice management, and resource utilization.

**PT 691 PT Business Administration Practicum** ** **(**2 cr.) This customized experience is tailored to the unique professional development interests and needs of the student pursuing the dual MBA/DPT. This course is to be done in conjunction and integrated with PT 690 Clinical Internship IV. The student and the Academic Coordinator of Clinical Education (ACCE), along with each program's MBA/DPT advisors are expected to work closely in developing the goals for the Practicum. The ACCE will work with the student to find a clinical site to meet the student's goals and interact with the clinical site's clinical coordinator to facilitate the activities needed for the achievement of the practicum goals. Practicum goals may include time spent shadowing individuals and assisting with responsibilities for marketing, human resource management, program development, billing and collections, data management, quality assurance and risk management. A scholarly project related to one of these or another appropriate topic will be required. Through PT 562 – Scholarly Project I and PT 671 – Research in Physical Therapy, students will have identified, investigated, developed and presented a formal project proposal acceptable to each programs' advisors. PT 691 will be the vehicle to carry out the proposal objectives with the input and cooperation of the clinical site representatives. The student is expected to deliver the results of the project to the professional staff at the clinical internship site prior to completion of the internship. A presentation will also be required to be given to the faculty and student peers during the final exam week at the University. The faculty advisors will evaluate the written report and oral presentation. ***

* This course would need to be changed to a variable (1-2) credit offering and 2 sections. Section II would be for MBA/DPT students and be a 1 credit offering.

** PT 691 is a proposed class to be included in the course credits accepted by the MBA program for its degree requirements.

*** A more concise course description would be developed for the catalogue.

**Appendix C:** Classes that the DPT program will accept from the MBA program in lieu of 4 credits of PT 679 Trends in PT Practice electives, PT 562 Scholarly Project I (1 credit), 1 credit of PT 671 Research in Physical Therapy I and PT 672 Research in Physical Therapy II (2 credits):

**MBA 640 - Organizational Behavior (2 cr.)**
Application of behavioral theories to organizational settings, particularly as they pertain to human resources and to relevant problems faced by practicing managers. Emphasis placed on tools that managers can use to make their endeavors more productive.

**MBA 660 - Marketing Management (2 cr.)**
Covers marketing decisions faced by managers in a variety of business settings including large corporations, small businesses and not-for-profit organizations. Requires completion of foundation program or equivalent and admission to the MBA Program. Offered every autumn semester. Evening sections delivered on interactive television to designated sites in the state.

**MBA 665 – Strategic Management Seminar (2 cr.)**
Selected topics covering such issues as an analysis of the firm within its industry and structure of the industry, competitive positioning and competitor analysis, decision making under conditions of uncertainty; and developing a competitive advantage in international markets. Offered every spring semester. Evening sections delivered over interactive television.

**MBA 681 - Financial Management (2 cr.)**
Covers advanced theory and analysis in corporate financial management. Requires completion of foundation program or equivalent and admission to the MBA or Masters of Accountancy Program. Offered every autumn semester. Evening sections delivered on interactive television to designated sites in the state.

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

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A.2. - It would be an academic option that is focused around approved campus missions and is consistent with available resources.

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B.3. - It would create a more affordable and efficient opportunity to earn two graduate degrees. We are able to offer this efficiency through the concept of reciprocity as each program will waive 8 credits while accepting 8 credits from the other program.

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Given the uniqueness of this dual degree program and student interest, we anticiapte that we could increase our ability to recruit students from in and out of state. We anticipate that individuals graduating with an MBA/DPT dual degree would be highly recruited by health care organizations or be more likely to start their own businesses. There is reason to believe that with this degree, graduates would also have a higher earning capacity, eventually being self-employed business owners or serving in managerial positions.

5. What is the program's planned capacity?

| | |
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| • Graduates / year? | 1-4 |
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| | |
|---|---|
| • Total program budget? | $ 0 |
| • Faculty FTE? | 0 |
| • Staff FTE? | 0 |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ _____

8. How will the campus fund the program?

This option does not require any new faculty, courses, facilities or financial resources. Courses required for the proposed option are offered already on a regular basis with the exception of one new course that will be developed (PT 691).

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

No internal reallocation of resources or personnel is necessary.

**Joint MBA/DPT Degree Option**

## 1. Objectives and Need

**1.1. Description of the Program:** The Schools of Business Administration and Physical Therapy and Rehabilitation Science propose the creation of a joint program resulting in a dual MBA/DPT degree option. This is the combining of two existing programs. A MBA/DPT dual degree program at The University of Montana would recognize the importance and need of educating a subset of health care providers with advanced skills and knowledge in business and administration content. The establishment of a joint MBA/DPT program will allow students the option to earn a dual degree in less time than it would take if both degrees were pursued separately. We are able to offer this efficiency through the concept of reciprocity as each program will adjust curriculums by 8 credits and accept 8 credits from the other. Students would have to meet each program's application requirements and be accepted into each program. Assigned advisors from each program would work closely with qualified students to assist them in creating appropriate curricular schedules.

Program objectives include:

- To provide students who have an interest in both the practice of physical therapy and business and administration a more efficient vehicle to earn both degrees.
- To help meet the demand for health care professionals with additional training in business and administration.
- To achieve additional recognition for The University of Montana and the School of Physical Therapy and Rehabilitation Science and the School of Business Administration as pioneering programs in developing unique educational and degree opportunities that meet student interests and societal needs.

**1.2. Need for the Program:** The creation of this dual degree option would further distinguish The University of Montana nationally, as we believe there is only one other university program in the county that offers something similar. A MBA/DPT dual degree program at The University of Montana would recognize the importance and need of educating a subset of health care providers with advanced skills and knowledge in business and administration content. The changing roles and need for health care providers with business and administrative abilities is well documented in the literature [1, 2, 3, 4, 5, 6, 7, 8]. Leaders in the physical therapy profession endorse this type of opportunity for students (see letter of support attached). Precedent for this type of dual degree program has been established nationally in other health care professions such as medicine and nursing. We are using the established MBA/Pharm.D. and JD/MBA dual degree joint programs here at The University of Montana as models for our proposal.

In a survey of 140 students enrolled in BaDM 100, twenty-three percent (23%) reported that they would be either strongly or somewhat interested in MBA/DPT joint program. Responses from first and second year students enrolled in the DPT program also support the creation of the program with 66% (N=50) responding as being strongly or somewhat interested in a joint program. Though these results may reflect an overly optimistic projection in the number of students that would actually enroll, the results of the surveys do indicate significant student interest.

**1.3. Additional Courses and Course Requirements:** Students completing this dual degree program will receive two separate degrees, the DPT and the MBA. Currently the DPT degree can be earned in two years-nine months and the MBA can be earned in two semesters and a summer. Both programs require the completion of an undergraduate degree and prerequisites prior to acceptance. Under the joint program, an exceptional student could complete both degrees in two years-nine months if the prerequisites from both programs were completed prior to acceptance. (See Appendix A for proposed joint program curriculum for the dual degree) Under this scenario, the student would be taking classes concurrently from both programs for much of the two years-nine months.

The concept of curricular reciprocity between the two schools would be the vehicle for gaining the efficiencies of the dual degree and allowing for a shorter time period to earn the degrees. Each program would waive 8 credits from its curriculum and accept 8 credits from the other program.

The 8 course credits the MBA program would accept as unrestricted elective credits are:

- PT 562 (1 credit) - Scholarly Project I;
- PT 671 (1 credit) - Research in Physical Therapy;
- PT 572 (2 credits) - Practice and Administration I;
- PT 673 (2 credits) - Practice and Administration II;
- PT 691 (2 credits) - PT Business Administration Practicum.*

*PT 691 is a new course that needs to be established. It is carved out of PT 690 – Clinical Internship IV and occurs simultaneously. Two different sections of PT 690 would need to be offered, one of which would be a 10 credit offering associated with the MBA/DPT student needing to complete PT 691.
(See Appendix B for course descriptions)

The School of Physical Therapy and Rehabilitation Science would accept 8 semester credits from the following courses:

- MBA 640 (2 credits) – Organizational Behavior;
- MBA 660 (2 credits) – Marketing Management;
- MBA 665 (2 credits) – Strategic Management Seminar;
- MBA 681 (2 credits) – Financial Management

(See Appendix C for course descriptions).

The School of Physical Therapy and Rehabilitation Science would waive 8 credits of the following courses:

- PT 679 (4 credits) - Trends in PT Practice electives;
- PT 530 (1 credit) - Introduction to Scholarly Project;
- PT 671 (1 credit) - Research in Physical Therapy I;
- PT 672 (2 credits) - Research in Physical Therapy II.

The School of Business Administration would adjust its degree requirements by substituting the 8 PT credits identified above for 8 credits of 600-level MBA unrestrictive electives.
The proposed MBA/DPT curriculum maintains the requirement for scholarly involvement that is imbedded in the DPT curriculum by keeping PT 562 – Scholarly Project I; by creating a variable credit option with a new 1 credit section for PT 671 – Research in Physical Therapy I and by introducing the proposed new course, PT 691 – PT Practice Management Practicum (see Appendix B for descriptions). Participating in PT 562 and 671, MBA/DPT students would be required to develop, identify, investigate, and present a proposal of a project that met advisor approval from both programs. PT 691 would be the vehicle for implementation of the scholarly project proposed through PT 562 and further developed in PT 671.

## 2. Adequacy, Accreditation and Assessment Issues

**2.1. Adequacy of Present Faculty, Facilities, Equipment and Library Holdings:**
Given that this program proposal consists of the merging of two existing degree options, no additional faculty, facilities, library holdings or equipment is anticipated.

**2.2. Accreditation Status:** The School of Physical Therapy and Rehabilitation Science is accredited by the Commission on Accreditation for Physical Therapy Education (CAPTE) through 2008. A self-study will be completed in preparation for the next cycle of accreditation that will include a report on the joint program (pending institutional and BOR approval). The proposed curricular adjustments for the School of Physical Therapy and Rehabilitation Science are not in conflict with accreditation status. The topics offered in PT 679 Trends in PT Practice that would be part of the course waived are electives. Students enrolled in the dual MBA/DPT program will complete a project commensurate with projects completed by students matriculating in the DPT curriculum. The capstone project completed by students in the MBA/DPT program is accomplished through the course sequence as described in Appendix A.

The School of Business Administration is accredited by AACSB International, and the accreditation process requires the submission of various reports on a periodic basis. UM's next Maintenance of Business Accreditation Review will occur during the 2009 – 2010 academic year. Two other joint programs (MBA/PharmD and JD/MBA) already have passed accreditation review by AACSB International; we are aware of no issues associated with this proposed new joint program that would jeopardize continued accreditation of UM's School of Business Administration.

**2.3. Assessment Issues:** The proposed joint program will be assessed through the current methodologies used by both Schools. They include: student, graduate, and employer surveys plus School curricular review. Each School will identify a faculty advisor that will meet regularly to review the assessment data and the MBA/DPT program in general.

## 3. Impact on Faculty, Costs, Students, and Other Departments and Campuses

**3.1. Additional Faculty Requirements:** No additional faculty members are required for the proposed joint program. One current faculty member from each School will assume responsibilities as advisor and coordinator.

**3.2. Advising:** A faculty member from both programs will be identified to work together for advising of students interested in and accepted into the dual degree program.

Potential scheduling conflicts between DPT and MBA courses will be resolved by admitting the joint MBA/DPT student to evening MBA classes. Two sections of each required MBA class are offered, one during the day and one at night, and this scheduling solution is currently used for both the joint JD/MBA and MBA/Pharm. D.

There may be opportunity for customizing the specific schedule of required courses to accommodate students who prefer and need a longer time frame to complete the dual degree option. We can also anticipate a scenario where a student may be accepted into the DPT program but still need to complete some of the MBA prerequisites. A customized curriculum may also be constructed to accommodate this situation and allow the student to complete needed pre-requisites and then after applying and being accepted into the MBA program, integrate MBA classes into their schedule. Advisors from both programs would work closely together to determine the most appropriate schedules.

**3.3. Impact on Facilities:** None

**3.4. Cost Analysis:** No additional expenses or revenues are anticipated. The School of Physical Therapy and Rehabilitation Science plans on keeping enrollment at the same level. The School of Business Administration also plans on maintaining its enrollment caps to accommodate this program. The development of new joint MBA degree programs with other professional schools is a national trend among AACSB accredited business schools today in view of several recent years of enrollment declines. These joint programs are seen as a means of attracting high-caliber students to help restore enrollment to the levels witnessed in the late 1990s.

**3.5. Relationship to other Campus Programs:** No programs outside of the School of Business Administration and Physical Therapy and Rehabilitation Science will be affected.

**3.6. Relationship to other Institutions:** The University of Montana is the only campus in the Montana University system to offer an MBA or degree in physical therapy. The respective Schools will utilize current communication mechanisms to include information about the MBA/DPT option to other Montana University System campuses and students to facilitate effective pre-requisite completion and successful application.

4. **Process Leading to Submission of Proposal:** This proposal has been reviewed and approved by the faculty and Deans of the Schools of Business Administration and Physical Therapy and Rehabilitation Science. With such approval, the proposal advances to the office of the Provost on The University of Montana Campus and from there through the proper channels for review and approval by the Board of Regents of the Montana University System.

**References**

1. Ahadial N. (2002) Demand for college graduates/attributes healthcare organizations seek in recruits in accounting. Career Development International. 7(3), 134-141

2. Blau R et al. (2002). The experiences of providing PT in a changing healthcare environment. Physical Therapy. 82, 648-657.

3. Casebeer AL, Hannah KJ. (1998). The process of change related to health policy shift: reforming a health care system. International Journal of Public Sector Management. 11(7), 566-582.

4. Lopopolo RB. (1999). Hospital restructuring and the changing nature of the physical therapist's role. Physical Therapy. 79, 171-185.

5. Lopopolo RB. (2002). The relationship of role-related variables to job satisfaction/commitment to the org. in a restructured hospital environment. Physical Therapy. 82, 984-999.

6. Lopopolo RB, Schafer DS, Nosse LJ. (2004). Leadership, administration, management, and professionalism (LAMP) in physical therapy: a delphi study. Physical Therapy. 84(2), 137-150.

7. Siddigui J, Kleiner BH. (1998). Human resource management in the healthcare industry. Health Manpower Management. 24(4), 143-147

8. Thredkeld AJ, Jensen GEM, Royee CB. (1999). The clinical doctorate: a framework for analysis in PT education. Physical Therapy. 79(6). 156-173.

**Appendix A**: Proposed two year-nine month joint DPT/MBA schedule for students that have completed the prerequisite requirements and have been accepted into both the MBA and DPT degree programs.

**First Year:**

| | | | |
|---|---|---|---|
| **Fall – Physical Therapy Courses - Required** | | | |
| PT 503 Physical Therapy and the Health Care System | | 4 | |
| PT 510 Applied Clinical Anatomy and Kinesiology | | 4 | |
| PT 511 Applied Clinical Anatomy and Kinesiology Laboratory | | 1 | |
| PT 516 Musculoskeletal Evaluation I | | 5 | |
| PT 526 Physical Therapy Interventions I | | 4 | |
| PT 529 Biomechanics and Exercise Interventions | | 2 | total: 20 |
| **Spring - Physical Therapy Courses – Required** | | | |
| PT 519 Musculoskeletal Evaluation II | 5 | | |
| PT 520 Motor Development Through the Life Span | | 3 | |
| PT 527 Electrophysiological Testing and Therapeutics | 2 | | |
| PT 528 Physical Therapy Interventions II | | 4 | |
| PT 536 Neurosciences for the Health Professions | | 5 | |
| PT 582 Clinical Clerkship | | 1 | total: 20 |
| **Summer - Physical Therapy Courses – Required** | | | |
| PT 587 Clinical Internship I | | 4 | total: 4 |
| **Summer – MBA Courses** | | | |
| none | | | |

**Second Year:**

| | | | |
|---|---|---|---|
| **Fall - Physical Therapy Courses – Required** | | | |
| PT 525 Clinical Medicine and Pharmacology | | 3 | |
| PT 561 Research Methods in Physical Therapy | 2 | | |
| PT 562 Scholarly Project I | | 1 | |
| PT 563 Cardiopulmonary Physical Therapy and Pharmacology | 3 | | |
| PT 565 Physical Therapy for Children | 2 | | |
| PT 566 Advanced Anatomy Laboratory | 1 | | |
| PT 567 Neurorehabilitation I | | 3 | |
| PT 569 Orthopedic Physical Therapy I | 2 | | |
| PT 570 Psychology of Illness and Disability | | 2 | (subtotal: 19) |
| **Fall – MBA Courses** | | | |
| MBA 601 Career and Leadership Skills (orientation week) | | 1 | total: 20 |
| **Spring – Physical Therapy Courses - Required** | | | |
| PT 588 Clinical Internship II | | 4 | |
| PT 568 Neurorehabilitation II | | 2 | |
| PT 671 Research in Physical Therapy | 1 | | |
| PT 572 Practice and Administration | | 2 | |
| PT 573 Orthopedic Physical Therapy II | 1 | | |
| PT 575 Physical Therapy Interventions III | | 4 | |
| PT 576 Synthesis of Clinical Evaluation and Intervention | 1 | | |
| PT 577 Physical Therapy Interventions IV | | 4 | (subtotal: 19) |
| **Spring – MBA Courses** | | | |
| MBA 694 Seminar (unrestricted elective) | 1 | total: 20 | |

**Summer - Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 589 Clinical Internship III * | | 5 | |
| **Summer – MBA Courses** | | | |
| 2 credits each from the following courses | | | |
| MBA 645 Interpersonal Perspective Seminar | 2 | | |
| MBA 655 Technology Perspective Seminar | | 2 | total: 9 |

**Third Year:**

**Fall - Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 626 Primary Care | | 3 | |
| PT 627 Prevention and Wellness for Physical Therapist | 2 | | |
| PT 673 Practice and Administration II | 2 | | |
| PT 676 Clinical Mastery | 4 | | |
| | | | (subtotal: 11) |
| **Fall – MBA Courses** | | | |
| MBA 694 Competitive Strategy | 1 | | |
| IS 574 Management Information Systems | | 2 | |
| MBA 640 Organizational Behavior | | 2 | |
| MBA 660 Marketing Management | | 2 | |
| FIN 681 Financial Management | 2 | total: 20 | |

**Spring – Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 690 Clinical Internship IV | | 10 | |
| PT 691 Business and Administration Practicum** | | 2 | (subtotal: 12) |

**Spring – MBA Courses**

| | | | |
|---|---|---|---|
| MBA 603 Integrated Project | | 1 | |
| MBA 665 Strategic Management Seminar | | 2 | |
| MBA 685 International Business | 2 | | |
| ACCT 605 Administrative (accounting) Controls | 2 | | |
| IS 650 Quantitative Analysis | | 2 | total: 21 |
| | | | Grand total = 134 |

* MBA/DPT Students would have priority for session placement and/or location in Missoula area for their PT 589 internship to allow for attending MBA summer courses.

** PT 691 is a proposed 2 cr. class to be included in the course credits accepted by the MBA program for its degree requirements.

**Appendix B**: Classes that the MBA program will accept from the DPT program in lieu of its 8 unrestricted electives:

**PT 562 Scholarly Project I** (1 cr.) Students enrolled in a MBA/DPT dual degree program will identify, develop, research and present a proposal for a research or special project. Appropriate topics would be linked to the management and administration of PT services. Students would have advisors from both programs. Topic must be approved by faculty advisors. Completion of project would occur during PT 691.

**PT 572 Practice and Administration** (2 cr.) Prerequisite consent of instructor. Organization and practice management issues of the physical therapy clinic with emphases on the clinician's role and responsibilities regarding supervision, billing, marketing, etc.

**PT 671 (Section II)* Research in Physical Therapy I** (1 cr.) (would be a proposed new section that would have to be accepted. Section I is 2 credits) Directed scholarly activity with faculty advisor which may include continued work on literature search, methodology development and data collection.

**PT 673 Advanced Practice and Administration** (2 cr.) This will be a capstone course in the area of practice and administration building off of content covered in PT 503 and 572. The content will not only better prepare the student in the role of clinician in today's practice environment, it will also give them knowledge and skills to serve as a manager or owner of rehabilitation services. The course will be a mixture of faculty lectures, guest lectures, student projects and presentations, and discussions. It will include a review of the pertinent literature to lay a foundation for an understanding of the best evidence to support core practice management processes and human resource management. Projects will be designed for practical application. Content emphasis will be in clinical practice management and include program development, human resource management, private practice ownership, entrepreneurship, leadership, technology associated with practice management, and resource utilization.

**PT 691 PT Business Administration Practicum** ** **(**2 cr.) This customized experience is tailored to the unique professional development interests and needs of the student pursuing the dual MBA/DPT. This course is to be done in conjunction and integrated with PT 690 Clinical Internship IV. The student and the Academic Coordinator of Clinical Education (ACCE), along with each program's MBA/DPT advisors are expected to work closely in developing the goals for the Practicum. The ACCE will work with the student to find a clinical site to meet the student's goals and interact with the clinical site's clinical coordinator to facilitate the activities needed for the achievement of the practicum goals. Practicum goals may include time spent shadowing individuals and assisting with responsibilities for marketing, human resource management, program development, billing and collections, data management, quality assurance and risk management. A scholarly project related to one of these or another appropriate topic will be required. Through PT 562 – Scholarly Project I and PT 671 – Research in Physical Therapy, students will have identified, investigated, developed and presented a formal project proposal acceptable to each programs' advisors. PT 691 will be the vehicle to carry out the proposal objectives with the input and cooperation of the clinical site representatives. The student is expected to deliver the results of the project to the professional staff at the clinical internship site prior to completion of the internship. A presentation will also be required to be given to the faculty and student peers during the final exam week at the University. The faculty advisors will evaluate the written report and oral presentation. ***

* This course would need to be changed to a variable (1-2) credit offering and 2 sections. Section II would be for MBA/DPT students and be a 1 credit offering.

** PT 691 is a proposed class to be included in the course credits accepted by the MBA program for its degree requirements.

*** A more concise course description would be developed for the catalogue.

**Appendix C:** Classes that the DPT program will accept from the MBA program in lieu of 4 credits of PT 679 Trends in PT Practice electives, PT 562 Scholarly Project I (1 credit), 1 credit of PT 671 Research in Physical Therapy I and PT 672 Research in Physical Therapy II (2 credits):

**MBA 640 - Organizational Behavior (2 cr.)**
Application of behavioral theories to organizational settings, particularly as they pertain to human resources and to relevant problems faced by practicing managers. Emphasis placed on tools that managers can use to make their endeavors more productive.

**MBA 660 - Marketing Management (2 cr.)**
Covers marketing decisions faced by managers in a variety of business settings including large corporations, small businesses and not-for-profit organizations. Requires completion of foundation program or equivalent and admission to the MBA Program. Offered every autumn semester. Evening sections delivered on interactive television to designated sites in the state.

**MBA 665 – Strategic Management Seminar (2 cr.)**
Selected topics covering such issues as an analysis of the firm within its industry and structure of the industry, competitive positioning and competitor analysis, decision making under conditions of uncertainty; and developing a competitive advantage in international markets. Offered every spring semester. Evening sections delivered over interactive television.

**MBA 681 - Financial Management (2 cr.)**
Covers advanced theory and analysis in corporate financial management. Requires completion of foundation program or equivalent and admission to the MBA or Masters of Accountancy Program. Offered every autumn semester. Evening sections delivered on interactive television to designated sites in the state.

February 28, March 1- 2, 2007

**ITEM NO.: 134-1003-R0307** **Approval of a Proposal to Approve the Osher Lifelong Learning Institute of The University of Montana**

**THAT:** In accordance with the Montana University System Policy, the Board of Regents of Higher Education authorizes The University of Montana to host, within Continuing Education, the Osher Lifelong Learning Institute of The University of Montana.

**EXPLANATION:**

Continuing Education of The University of Montana-Missoula is seeking approval of The Osher Lifelong Learning Institute of The University of Montana which offers non-credit, short courses for adults over the age of 55. The courses will be taught three times during the academic year: fall, winter and spring. The programs offered through the proposed institute are designed to help meet the informal educational needs of older adults and are not offered for credit. The Institute is supported by an external grant from the Bernard Osher Foundation and by self-support funding generated through memberships and program/course fees.

While Missoula maintains a large number of social service and health care programs for senior citizens, there are relatively few programs that have an education focus. An online search revealed ninety-five programs and resources, of which only three were related to education. Two of these focus on learning specific skills for people over age eighteen: the Dickinson Lifelong Learning Center offers training programs, most of which provide basic skills while others relate to hobbies such as photography or cooking; and the College of Technology, which offers a limited number of occupationally-focused courses for “non-traditional” students of all ages, although the vast majority of their students are under age fifty. There was only one academically oriented program available, Golden College, offered by The University of Montana. This relatively obscure program enables senior citizens to audit traditional credit courses with on-campus students.

There are few intellectually stimulating, academically-focused programs for individuals over the age of fifty in Missoula, and based on the numbers of students who have attended Institute courses from towns as far away as Hamilton and Superior, this need and lack of opportunity extends well into the state of Montana. In addition, enrollments in the first three terms of courses clearly indicate the need and the desire for programs for older adults in this area.

# M O N T A N A B O A R D O F R E G E N T S

## LEVEL II REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **134-1003-R0307** | **Date of Meeting:** | **February 28, March 1-2, 2007** |
| **Institution:** | **The University of Montana-Missoula** | | |
| **Program Title:** | **The Osher Lifelong Learning Institute of The University of Montana** | | |

Level II proposals require approval by the Board of Regents.

**Level II action requested (check all that apply):** Level II proposals entail substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination of personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other campuses within the Montana University System and community colleges. Board policy 303.1 indicates the curricular proposals in this category:

- ☐ 1. Change names of degrees (e.g. from B.A. to B.F.A.)
- ☐ 2. Implement a new minor where there is no major;
- ☐ 3. Establish new degrees and add majors to existing degrees;
- ☐ 4. Expand/extend approved mission; and
- ☒ 5. Any other changes in governance and organization as described in Board of Regents' Policy 218, such as formation, elimination or consolidation of a college, division, school, department, institute, bureau, center, station, laboratory, or similar unit.

**Specify Request:**

The University of Montana-Missoula requests approval of a new institute, The Osher Lifelong Learning Institute of the University of Montana. The programs offered through the proposed Institute are designed to help meet the informal educational needs of older adults. The short courses offered in the program are not for credit. The Institute is supported by an external grant from the Bernard Osher Foundation and by self-supported funding generated through memberships and program/course fees.

# M O N T A N A B O A R D O F R E G E N T S

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

**Item No.:** **134-1003-R0307**

**Institution:** The University of Montana-Missoula

**Program Title:** The Osher Lifelong Learning Institute of The University of Montana

1. How does this program advance the campus' academic mission and fit priorities?

The Mission Statements for both The University of Montana (UM) and The University of Montana-Missoula (UM-M) include statements about the importance of supporting programs such as The Osher Lifelong Learning Institute, as per the following, the first from UM: "The dedication to education for and throughout life reflects the commitment to service learning and community building on and off the campuses." UM-M's mission statement indicates: "Through its programs and the activities of faculty, staff, and students, The University of Montana-Missoula provides basic and applied research, technology transfer, cultural outreach, and service benefiting the local community, region, state, nation and the world." These statements specifically support the founding of the Institute.

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

The Regents' strategic plan for 2006-2010 includes three specific goals with the main focus on traditional college age students. Of the three, however, one is more relevant to this proposal: "Increase the overall educational attainment of Montanans through increased participation, retention and completion rates in the Montana University System." While not directly addressing the educational needs of older adults, it can be assumed that lifelong learning is within the scope of this goal.

3. How does this program support or advance Montana's needs and interests?

Montana is experiencing the aging of its population and this trend will continue to accelerate as larger numbers of older people retire to Montana. Since 1980, the population aged 60 and over has grown from 119,240 to 158,894 in 2000. [Montana Department of Labor and Industry, Workforce Services Division, Research and Analysis Bureau, June 2001] According to the Montana Census and Economic Information Center, in the next 30-40 years we will continue to have increases in the numbers of older persons. This growth presents challenges as well as opportunities for Montanans in planning to meet the needs of an aging society.

The Institute has been designed to help meet the informal educational needs of older adults. The early successes of the Institute speak to the fact that there is genuine interest and need in the Missoula region for the types of programs offered.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

The impact of the Institute on economic development within Montana would be minimal since it's only goal is to provide non-credit educational programs to older adults.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | The goal for the Institute is to have 500 members by September of 2009 |
| • Enrollments / year? | NA |
| • Graduates / year? | NA |
| • MT jobs / year? | NA |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $165,000 X 3 years |
| • Faculty FTE? | NA |
| • Staff FTE? | .50 |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ NA

8. How will the campus fund the program?

The Institute is funded by a grant from the Bernard Osher Foundation for $100,000 per year for three years with the probable granting of a $1,000,000 endowment to sustain the Institute in the future. In addition, the Institute will have designated funding made available through memberships and course fees.

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

No internal reallocation required.

# PROPOSAL

## I. Objectives and Need

### 1. Description of program

The purposes of the Institute are to promote lifelong learning and personal growth for adults fifty-five and over, as well as to provide accessible programs that address their continuing intellectual needs. Our goal is to create an innovative learning environment so that older adults from all backgrounds and levels of education are able to pursue learning simply for the joy of learning.

The program is structured around the offering of a diverse collection of non-credit short courses at regular intervals during the year, including six-week terms in the fall, winter and spring. Brochures outlining the programs offered to date are available. Currently, all courses are offered on Fridays at times designed to enable students to enroll in more than one course. The length of each class meeting is dependent upon the subject matter, however, most are offered for one and a half hour periods utilizing a seminar format. The focus is on academic programs drawing on the talents of active and retired faculty from The University of Montana.

### 2. Documented Need for the Program

While Missoula maintains a large number of social service and health care programs for senior citizens, there are relatively few programs that have an education focus. Indeed, an online search revealed ninety-five programs and resources, of which only three were related to education. Two of these focus on learning specific skills for people over age eighteen: the Dickinson Lifelong Learning Center offers training programs, most of which provide basic skills while others relate to hobbies such as photography or cooking; and the College of Technology, which offers a limited number of occupationally-focused courses for "non-traditional" students of all ages, although the vast majority of their students are under age fifty. There was only one academically oriented program available, Golden College, offered by The University of Montana. This relatively obscure program enables senior citizens to audit traditional credit courses with on-campus students.

There is a paucity of intellectually stimulating, academically-focused programs for individuals over the age of fifty in Missoula, and based on the numbers of students who have attended Institute courses from towns as far away as Hamilton and Superior, this need and lack of opportunity extends well into the state of Montana.

Enrollments in the first three terms of courses clearly indicate the need and the desire for programs for older adults in this area.

### 3. Additional Courses

Courses offered by the Institute are non-credit and based on older-adult student needs. These will vary in terms of content and instruction, but do not require the same kinds of approvals as courses carrying credit.

## II. Adequacy of Current Resources, Accreditation and Assessment

Faculty or instructors for the Institute are active or retired UM faculty or community members who are knowledge experts in their field. These individuals are paid a small sum to reimburse them for their planning and teaching time. For active UM faculty members, this is paid extra-to-load.

The Institute is an externally funded program, coupled with membership fees and tuition, thus, no internal funding is required. The annual and three-year budgets for the Institute project that the revenues generated by these three sources are adequate to cover all associated costs with the program.
Because the Institute in a non-credit, informal program for older adults, it is not subjected to traditional accreditation, per se. An annual report must be submitted to the Bernard Osher Foundation which describes the programs offered, the numbers of memberships, the numbers of course enrollments as well as the results of course evaluations.

In terms of assessment, each course is evaluated with a standard form that was developed especially for the Institute and is available upon request. Also, each faculty member or instructor is interviewed related to a

number of dimensions of his/her course. Institute members are asked to comment, on numerous occasions, about many aspects of the Institute to enable continuous improvement of services. The annual report for the Osher Foundation also serves as an assessment instrument.

**III. Additional Faculty Requirements**
No additional faculty members are required.

**IV. Impact on Facilities**
There is no impact on facilities in that the courses are held, primarily, within the Continuing Education building, which is a bonded facility requiring rental income to cover the bond payment. As the Institute grows, additional meeting places will be required, however, there are sufficient funds to rent or lease rooms on an "as needed" basis.

**V. Cost Analysis**
There are no direct costs associated with the Institute to The University of Montana. The associated costs of instruction, room rental, marketing and staffing are covered through three sources of funding: the Osher grant, memberships and course tuition. A detailed budget is appended. [Appendix A]

**VI. Enrollment Impact**
There is no impact on student enrollments associated with this Institute.

**VII. Relationship to Other Campus Programs**
The relationship the Institute has with other campus programs is primarily focused on marketing, engaging interested faculty as instructors and for identifying topics that might be of interest to older adults. Since the intent of the Institute is very different from other campus programs, there is no formal relationship, however.

**VIII. Relationship to Other Institutions**
Since the Institute is the only program of its kind in the State of Montana, there should be no impact upon other UM system or the Montana University System schools.

**IX. Process Leading to Submission of Proposal**

**This Proposal was reviewed and approved by the affected departments:**
Department Name: Continuing Education Date: November 15, 2006

**In addition the Deans of the following Schools/Colleges reviewed and approved the Proposal:**
Dean of Continuing Education Sharon E. Alexander Date: November 15, 2006
Associate Provost Arlene Walker Andrews Date: November 15, 2006
Interim Provost/President George M. Dennison Date: November 15, 2006
The proposal was reviewed and approved by the Faculty Senate at the University of Montana
[No outside consultants were employed for the development of this proposal.

**APPENDIX A**
**BUDGET ANALYSIS**

Campus: The University of Montana-Missoula
Proposed Program: The Osher Lifelong Learning Institute of The University of Montana

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| Estimated Enrollment | | | | | |
| FTE Enrollment | NA | NA | NA | NA | NA |
| | | | | | |
| Estimated Incremental Revenue | | | | | |
| Current General Operating Funds | 0 | 0 | 0 | NA | NA |
| State Funding for E. G. | 0 | 0 | 0 | NA | NA |
| Tuition Revenue [A-C] | 0 | 0 | 0 | NA | NA |
| Program/Course Fees | 57,000 | 65,000 | 70,000 | * | * |
| External Funds | 100,000 | 100,000 | 100,000 | * | * |
| Membership Fees | 8,000 | 10,000 | 15,000 | * | * |
| TOTAL Est. Incremental Revenue | 165,000 | 175,000 | 185,000 | * | * |
| | | | | | |
| Estimated Incremental Expense | | | | | |
| Personal Services | | | | | |
| Faculty | 66,600 | 75,000 | 80,000 | * | * |
| Other Staff | 15,000 | 18,000 | 19,000 | * | * |
| Operating Expenses | 78,000 | 80,000 | 82,000 | * | * |
| Equipment | 0 | 0 | 0 | * | * |
| Start-Up Expenditures | 0 | 0 | 0 | * | * |
| TOTAL Est. Incremental Expense | 159,600 | 173,000 | 181,000 | * | * |
| | | | | | |
| Estimated Revenues Over [Under] Expenditures | 5,400 | 2,000 | 4,000 | * | * |

* = Information unavailable at this time as the $1,000,000 endowment will change the budget model; it is anticipated that investment funds will cover expenses when added to program/course fees and membership fees

# M O N T A N A  B O A R D  O F  R E G E N T S

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

| Item No.: 134-1503-R0307 | Institution: Montana Tech COT |
|---|---|

1. How does this program advance the campus' academic mission and fit priorities?

Montana Tech of The University of Montana College of Technology maintains a commitment to be responsive to the changing needs of society by supplying knowledge and education through a strong undergraduate curriculum. This program advances that mission by preparing students to utilize current and emerging web development tools to become competent technicians in the IT industry.

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

The proposed degree program supports the goal of the Board of Regents; "to be responsive to market, employment, and economic development needs of the state and nation."

3. How does this program support or advance Montana's needs and interests?

There currently exists an AAS and BS degree in Network Technology at Montana Tech. Past graduates of these degree areas as well as Advisory Committee members have stated that that many employment opportunities exist in the Web Technology field and that developing and managing a Web presence is an often requested service. Producing competent technicians who are able to develop, manage, and secure a medium sized network infrastructure with a web presence will give students more employmernt choices in this growing field.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

Montana Occupational Projections predict that job opportunities for Computer Technicians will increase by 28% by the year 2012. On the national scene, employment is expected to increase faster than the average for all ocupations through 2014. Employment in the computer industry sector is projected to remain one of the fastest-growing industries in the U.S. economy. Also, students in this field may be able to secure employment with out-of-state companies and be able to stay in Montana, using remote access technology.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | 5 FTE students |
| • Enrollments / year? | 5 |
| • Graduates / year? | 4 |
| • MT jobs / year? | 3 |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 14560/year for 1st 2 years |
| • Faculty FTE? | .4 |
| • Staff FTE? | 0 |

7. Does this program require new resources? ☐ Yes ☒ No
If yes, what is the amount? $ _____

8. How will the campus fund the program?

Current resources.

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

No reallocation is necessary.

**134-1503-R0307**

**Proposal**

1. **Briefly describe the proposed new program. Please indicate if it is an expansion of an existing program, a new program; cooperative effort with another institution, business or industry; or an on-campus or off-campus program. Attach any formal agreements for this cooperative effort.**

   The Associate of Applied Science Degree in Web Development and Administration will prepare students to utilize current and emerging web development tools. The program will also produce competent technicians who are able to develop, manage, and secure a medium sized network infrastructure that supports a web presence. The degree is unique in that it has a major focus in the organization and management aspects of web sites as well as web page creation. This proposal is for a new degree with select components from the existing AAS and BS Network Technology degrees.

2. **Summarize a needs assessment conducted to justify the proposal. Please include how the assessment plan was developed or executed and the data derived from the effort.**

   There currently exists an AAS and BS degree in Network Technology at Montana Tech. Past graduates of these degree areas as well as Advisory Committee members have stated that many employment opportunities exist in the Web Technology field and that developing and managing a Web presence is an often requested service. Also, students in these degrees have continually expressed a desire for additional coursework in web technologies. This degree will prepare technicians who are knowledgeable in computer support, network support, and be able to create and manage an organization's web presence.

3. **Explain how the program relates to the Role and Scope of the institution as established by the Board of Regents.**

   Institutional Mission – Montana Tech of The University of Montana is a specialty institution-emphasizing science and engineering, with occupational programs through graduate work. MT Tech strives to assist every student attain success in their academic, professional, and individual goals.

   The College Of Technology offers a wide array of programs from certificate to AAS Degrees. Many of the COT programs articulate into university level programs. The COT is sensitive to the economic needs of the region and provides opportunities for students to learn skills and techniques necessary for the challenges of our society.

   Montana Tech's vision provides for hands-on learning, which is integral in this degree area.

4. **Please state what effect, if any, the proposed program will have on the administrative structure of the institution. Also indicate the potential involvement of other departments, divisions, colleges, or schools.**

   The proposed new degree program will be placed in the existing Information Technology Department in the College of Technology of Montana Tech. The budgetary support would be provided within that structure.

   Faculty for the Web Technology degree area includes current members of the Network Technology degrees area, current members of the Professional Technical Communications degree area, and possibly part-time instructors. Faculty from the B.S/M.S. Professional Technical Communications department are providing input regarding course content as they may eventually list some of these classes as degree requirements in their department.

**5. Describe the extent to which similar programs are offered in Montana, the Pacific Northwest, and states bordering Montana. How similar are these programs to the one herein described?**

Institutions in Montana and neighboring states offer degrees involving web development. This degree is unique in that it has a major focus in the organization and management aspects of web sites as well as web page creation.

**6. Please name any other accrediting agency(ies) or learned society(ies) that would be concerned with the particular program herein proposed. How has this program been developed in accordance with criteria developed by said accrediting body(ies) or learned society(ies)?**

The program conforms to the requirements of the Northwest Commission on Colleges and Universities. Courses use instructional material endorsed by industry certification organizations.

**7. Prepare an outline of the proposed curriculum showing course titles and credits. Please indicate any plans for expansion of the program during its first three years.**

**Proposed Curriculum**
**Web Development and Administration**

| Semester 1 | | | | Semester 2 | | | |
|---|---|---|---|---|---|---|---|
| COMM | 1046 | English Composition | 3 | IT | 013 5 | Computer Maintenance & Repair | 3 |
| IT | 0110 | Intro. To OS | 3 | IT | 012 6 | Network Fund. - CCNA 1 | 4 |
| IT | 0100 | Web Page Fundamentals (HTML/XHTML/XML) | 3 | IT | 024 7 | Intro. to Programming | 3 |
| Math | 1056 | College Algebra | 3 | PTC | 114 6 | Publications Design | 2 |
| IT | 0270 | Introduction to Oracle | 3 | IT | 013 0 | Intro. to Windows Server | 3 |
| PSYC | 1000 | Psychology | 3 | IT | 011 7 | Web Site Development | 3 |
| | | | 18 | | | | 18 |
| Semester 3 | | | | Semester 4 | | | |
| IT | 0176 | Routing/Switching - CCNA 2 | 4 | IT | 354 6 | Advanced Linux | 3 |
| IT | 0154 | Introduction to Linux | 3 | IT | 305 6 | Web Server Administration | 3 |
| IT | 0250 | Interactive Web Pages | 3 | IT | 025 3 | Java | 3 |
| IT | 0280 | Oracle II | 3 | COMM/PTC | XXX X | Approved COMM/PTC Elective | 3 |
| PTC | 2506 | Webpage Design | 3 | IT | 025 4 | Web Graphics/Video Integration | 3 |
| | | | | IT | 025 5 | Web Scripting/Programming | 3 |
| | | | 16 | | | | 18 |

Total credits - 70

**Faculty and Staff Requirements**

1. **Please indicate, by name and rank, current faculty who will be involved with the program proposed herein.**

   Current faculty to be involved are:
   Jim Freebourn, BS, Instructor, Information Technology
   Rita Lamiaux, BS, Instructor, Information Technology
   Chad Okrush, Ph.D/ABD, Asst. Professor, Professional & Technical Communications
   Ed Metesh, M.Ed., Asst. Professor, Chair, Information Technology

2. **Please project the need for new faculty over the first five-year program. Include special qualifications or training. If present faculty are to conduct the new program, please explain how they will be relieved from present duties.**

   The proposed Associate of Applied Science Degree in Web Development and Administration requires 6 new courses. These new courses would be offered once per academic year. Two members of the Information Technology Department currently teach a service course each semester outside of the Department's course requirements. These instructors would now teach exclusively in the Department's degree requirements. The remaining 2 courses may be on a summer semester rotation or perhaps some other required courses may be contracted to a part-time instructor.

   Current IT Department faculty will most likely be asked to attend training in preparation for some of the classes.

3. **Please explain the need and cost for support personnel or other required personnel expenditures.**

   No additional costs will be incurred.

**Capital Outlay, Operating Expenditures, and Physical Facilities**

1. **Please summarize operating expenditure needs.**

The current College of Technology operational dollars within the Information Technology Department will cover the cost of the program.

2. **Please evaluate library resources. Are they adequate for operation of the proposed program? If not, how will the library need to be strengthened during the next three years?**

   The program is currently serviced by resources in the library. No new library sources will be required.

3. **Please indicate special clinical, laboratory, and/or computer equipment that will be needed. List those pieces of equipment or computer hardware presently available in the department.**

   The current classrooms and computer equipment will be adequate if kept on a reasonable and continual replacement/upgrade plan.

4. **Please describe facilities and space required for the proposed program. Are current facilities adequate for the program? If not, how does the institution propose to provide new facilities?**

   Current classrooms and facilities are adequate.

**Evaluation of Proposed Program**

1. **Please name faculty committees or councils that have reviewed and approved the program herein proposed.**

   Montana Tech Web Curriculum Advisory Committee
   Montana Tech Curriculum Review Committee
   Montana Tech Full Faculty

2. **If outside consultants have been employed, please list the names of these consultants, their current positions and titles. Append copies of their written reports (this is a requirement of new doctoral programs).**

   No outside consultants were employed.

## BUDGET ANALYSIS

**ITEM: 134-1503-R0307**
**Campus: Montana Tech College of Technology**
**Proposed Program: Web Development and Administration**

| | Year 1 | | Year 2 | | Year 3 | | Year 4 | | Year 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Estimated **ENROLLMENT** | | | | | | | | | | |
| FTE Enrollment | 4.8 | | 10.8 | | 10.8 | | 10.8 | | 10.8 | |
| Estimated Incremental **REVENUE** | | | | | | | | | | |
| Use of Current General Operating Funds | | | | | | | | | | |
| State Funding for Enrollment Growth | 0 | | 0 | | 0 | | 0 | | 0 | |
| Tuition Revenue | | | | | | | | | | |
| A. Gross Incremental Tuition Revenue | 12000 | | 27000 | | 27000 | | 27000 | | 27000 | |
| B. Reductions to Incremental Tuition | | | | | | | | | | |
| C. Net Tuition Revenue (A-B) | 12000 | | 27000 | | 27000 | | 27000 | | 27000 | |
| Program/Course Fees | 1000 | | 2250 | | 2250 | | 2250 | | 2250 | |
| External Funds | | | | | | | | | | |
| Other Funds (please specify) | | | | | | | | | | |
| **TOTAL Estimated Incremental Revenue** | 13000 | | 29250 | | 29250 | | 29250 | | 29250 | |
| Estimated Incremental **EXPENDITURES** | | | | | | | | | | |
| Personal Services | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** |
| Faculty | 0.4 | 11000 | 0.4 | 11000 | 0.4 | 11000 | 0.4 | 11000 | 0.4 | 11000 |
| Other Staff | | | | | | | | | | |
| Operating Expenses | | | | | | | | | | |
| Equipment | | | | | | | | | | |
| Start-up Expenditures | 4000 | | 4000 | | | | | | | |
| **TOTAL Estimated Incremental Expenditures** | 15000 | | 15000 | | 11000 | | 11000 | | 11000 | |
| **Estimated Revenues Over/(Under) Expenditures** | -2000 | | 14250 | | 18250 | | 18250 | | 18250 | |

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL II REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **134-2010-R0307-Revised** | **Date of Meeting:** | **May 31-June 1, 2007** |
| **Institution:** | **Montana State University-Bozeman** | | |
| **Program Title:** | **Bachelor Of Arts In Music Technology** | | |

Level II proposals require approval by the Board of Regents.

**Level II action requested (check all that apply):** Level II proposals entail substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination of personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other campuses within the Montana University System and community colleges. Board policy 303.1 indicates the curricular proposals in this category:

- ☐ 1. Change names of degrees (e.g. from B.A. to B.F.A.)
- ☐ 2. Implement a new minor or certificate where there is no major or no option in a major;
- ☒ 3. Establish new degrees and add majors to existing degrees;
- ☐ 4. Expand/extend approved mission; and
- ☐ 5. Any other changes in governance and organization as described in Board of Regents' Policy 218, such as formation, elimination or consolidation of a college, division, school, department, institute, bureau, center, station, laboratory, or similar unit.

**Specify Request:**

Montana State University - Bozeman seeks approval from the Montana Board of Regents to offer a Bachelor of Arts in Music Technology.

The Program would be managed by the Director of Music Technology and the Department Head of the Department of Music. The proposed program includes both specialized Music Technology coursework and interdisciplinary work in conjunction with other University departments.

Professionals in sound and music are called upon to handle a wide range of work, from music composition to sound synthesis to equipment installation and operation. Students are best prepared to direct their own careers when they have educational background in all of these areas. The Music Technology program at MSU - Bozeman meets this need, integrating theory and performance, composition, acoustics, audio engineering, music for visual media, and interdisciplinary studies.

# M O N T A N A  B O A R D  O F  R E G E N T S

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

| Item No.: 134-2010-R0307-Revised | Institution: Montana State University-Bozeman |
|---|---|

1. How does this program advance the campus' academic mission and fit priorities?

Mission Statement
* To provide a challenging and richly diverse learning environment in which the entire university community is fully engaged in supporting student success.
* To provide an environment that promotes the exploration, discovery, and dissemination of new knowledge.

The Bachelor of Arts in Music Technology is a comprehensive program with proven appeal to a large and varied student population. This program, if approved, will prepare students for the diverse and ever-changing opportunities in multimedia production, electronic music, audio engineering, and related fields with which music technology shares interdisiplinary connections. The curriculum focuses on interdisciplinary collaboration and multiimedia art, research and critical inquiry, and hands-on creative projects. The academic quality of this program will elevate the Department of Music's national reputation and provide interdisciplinary courses to enhance MSU - Bozeman's Media and Theatre Arts, Art, Architecture, and Engineering degrees. The new program will allow MSU - Bozeman to expand its course offerings into popular music studies and music production for electronic and interdisciplinary media. An established Music Technology program will also contribute to MSU - Bozeman's flagship Music Education degree, giving Music Education graduates more tools for building K-12 music education in Montana. Finally, the Music Technology program will serve the previously untapped market for multimedia and electronic music performance in the Bozeman area, institute community learning opportunities for adults and youth, and support the film, theatre, audio, and music industries and communities of Montana.

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

The Music Technology program will further the Board of Regents' strategic goals:
- A Music Technology degree will dramatically increase enrollment and retention, as it has already attracted a diverse population of students who would not otherwise have sought out the Music Department. Our experience in this first year has revealed a student demand equal to twice the available space.

- This program will help to build and diversify Montana's economic base; graduates in Music Technology will be prepared for graduate study in music, employment in audio, film, and multimedia, and entrepreneurship in their own audio-related ventures (an industry with much potential for expansion in Montana).

- This new program has already begun to improve departmental effectiveness by bringing in new technology resources, by opening new fields of study and new avenues for interdisciplinary collaboration, and by attracting high-achieving students to MSU - Bozeman from across the nation. Similarly, we are already developing interdisciplinary courses that will contribute to MSU - Bozeman's Five-Year Vision of an increasingly interdisciplinary undergraduate curriculum.

3. How does this program support or advance Montana's needs and interests?

Music Technology provides expertise to existing Montana firms producing: multimedia, computer applications and games, technical training programs, video, CD and DVD. In addition, the Montana government is working to expand and improve the film industry in Montana, and MSU - Bozeman's Music Technology program will provide students and graduates ready to assist in that effort. The fields of music production, sound design, and recording are primed for growth in Montana as they are elsewhere in the nation. The MSU - Bozeman music education graduates will also gain expertise in technology that can better serve the youth of Montana when their

undergraduate program provides technological tools and guidance in deploying them for classroom use. Similarly, proficiency with music technology is essential for graduate study in music composition. Placement of MSU graduates in prestigious graduate programs will further the academic reputation of MSU - Bozeman and Montana in general.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

As the tools of music production become increasingly consolidated inside a single computer, multimedia and film producers seek out "one-stop shopping" for music and sound design. Today's music industry offers more and more self-directed career paths and opportunities for composer/engineers who can handle every step in the process of music creation. MSU - Bozeman's Music Technology graduates will be prepared to establish themselves in this effort, thereby increasing small business ownership and entrepreneurship in Montana. As Montana's popularion grows, businesses involving audio and music will grow correspondingly. In particular, representatives from the live sound reinforcement industry report a growing need for qualified employees. Montana businesses have recently made inroads into the pro audio equipment industry as well. Music Technology graduates will be prepared for further study or entry-level work in audio equipment design and research, in music composition, in sound design, or in some combination of all of these. Insofar as this Music Technology program can increase the national perception of Montana as an attractive location for the film and audio industries, it will help to attract larger employers and easily measurable economic development.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | 7 majors plus 21 pre-majors per year |
| • Enrollments / year? | 12 majors plus 24-36 pre-majors |
| • Graduates / year? | 12 |
| • MT jobs / year? | 10 |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 386,200 (year 5 estimate) |
| • Faculty FTE? | 1.85 |
| • Staff FTE? | 1.0 |

7. Does this program require new resources? ☒ Yes ☐ No

If yes, what is the amount? $ 146,159

8. How will the campus fund the program?

Reallocation of existing funds, external grands and sponsorship

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

Redistribution within the College of Arts and Architecture and within the Department of Music: Reassignments of existing faculty lines (due to retirement), redistribution of operational dollars currently used for electives, revise faculty teaching assignments, redistribution of resources for new sections of course work.

**ITEM 134-2010-R0307**

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# Proposal for a Bachelor of Arts in Music Technology at Montana State University – Bozeman

## VISION

In the past ten years, the widespread proliferation of devices for recording and manipulation of digital audio has redefined the music industry. Music production-- composing, performing, recording, and mixing-- no longer requires a commercial recording studio. While high-end studios still attract elite clientele, the once-ubiquitous 24-track tape studio has been nearly squeezed out of business by musicians learning to self-produce using only software and affordable, portable hardware. The traditional roles of composer, producer, promoter, and sound engineer mesh and overlap. Today's music industry offers fewer opportunities for specialist engineers and strictly pen-and-paper composers, and more opportunities for composer/recordists who can work in all aspects of sound and music production.

Student demand for university education in music technology is rising rapidly, as the tools of the trade become more affordable and widely available. Nationwide, growing numbers of high school students are discovering an aptitude for creating sound and music with computers. Every year more of these students seek out university degree programs to prepare them for future work in this new and evolving field.

Professionals in sound and music are called upon to handle a wide range of work, from composing music to creating sound effects to designing and operating recording studios and equipment. One common scenario is a "package deal" in which a composer is hired to compose, notate, conduct, and record a film soundtrack. Composition and sound effects are also increasingly linked, as composers and sound designers work together closely, often using similar source materials. The composer, sound designer, and sound board operator may be the same person, particularly in multimedia and theatre performance.

Students are best prepared to direct their own careers when they have educational background in all of these areas. The Music Technology program at MSU – Bozeman meets this need, integrating theory and performance, composition, acoustics, audio engineering, music and sound design for visual media, and interdisciplinary studies. Students will work in creative teams, solve technical and musical problems, explore the history and significance of multimedia art through reading and critical analysis, and find their own paths in the world of artistic communication through sound.

## OBJECTIVES AND NEEDS

**Degree requirements -** Attached is a list of degree requirements with course descriptions for existing and new courses.

### Need for the program

Student demand for a Bachelor of Arts in Music Technology is extraordinarily high. As of November 30, 2006, we had 22 prospective majors waiting to hear whether the program will continue into its second year to become a new major. The vast majority of these students are attending MSU –Bozeman specifically to study music technology. The number of prospective students exceeds capacity in the required courses, necessitating a "gate" to admit twelve pre-majors to major status each year.

Of the eleven prospective students who entered the program in Fall 2006, ten have indicated they would definitely leave MSU if Music Technology is not offered as a major. Five students this year took a leap of faith by coming to MSU – Bozeman from out of state for this program, even before the new courses had been added to the course schedule. This fall we turned away sixteen prospective majors due to insufficient room in the introductory class, and the spring Introduction to Digital Music course has a waiting list of twelve. Six of the 22 total prospective majors are currently declared as music majors; the others are in University Studies or hope to switch majors. Of the six declared music majors in this group, only two would have declared as music majors without the Music Technology program.

This Music Technology program will build and enhance the national reputation of MSU – Bozeman's Department of Music, and it will connect the music department to other departments and colleges through interdisciplinary coursework. Our courses will add value to the Media and Theatre Arts program, one of the top film programs in the country, as a significant number of film students have expressed interest in learning the basics of film music composition and furthering their work in sound design. Music technology is also valuable to sound and audio research initiatives within the engineering department, as digital recordings of musical sound are a well-known challenge for engineers working in digital signal processing. (One example would be recent efforts in the engineering field to build a bionic ear that can intelligently discriminate between musical sound and other sound, or between different kinds of musical sounds.) In many universities, acoustical engineering students take music technology courses to gain a musician's perspective on these challenges. Finally, MSU – Bozeman's existing Music Education degree and focus on the Music Education field will be correspondingly strengthened as the Music Technology program grows.

The U.S. Bureau of Labor Statistics anticipates growth in audio production jobs through 2014.[i] While consolidation limits job growth within the largest media conglomerates, smaller companies are flourishing nationwide through a combination of niche marketing and diversification.[ii] The following list of industry growth areas is likely to change every year, as new technologies shift the landscape of the industry:

- composition, production, and marketing of independent music (concert and popular genres alike)
- composition and sound design for film, television programs and commercials, theater, visual art, video games, virtual environments, and consumer devices such as mobile phones
- design, installation, and operation of live sound systems for concerts and other events
- content for new internet and broadcast media
- musical instrument and audio equipment design, manufacture, and sales
- audio software research and programming
- music education at all levels. The connection with music education is increasingly important, as new technology encourages young people to become music creators instead of passive consumers.

Graduates with degrees in Music Technology will be prepared to build their own studios and music-related businesses, increasing entrepreneurship and expanding the music and audio industry in Montana. Continuous improvement in internet-based collaboration tools will allow composers in Montana to work on Hollywood films and other projects with fewer geographical limitations than ever before. In developing this program, MSU faculty have consulted with representatives from the Montana music, pro audio, theatre, and film communities. Montana's growing film industry in particular produces a corresponding need for music and sound design. Similarly, local musicians report a need for new employees and entrepreneurs in the Montana recording industry, as major projects are currently forced out of state to find recording studios that meet their needs. Representatives from the live sound reinforcement industry in Montana also report a need for technicians with musical knowledge and technical skills.

The program we propose, with no equal in Montana or neighboring states, offers unique benefits to MSU – Bozeman:

- Enhancing the university mission to support student success in a world of diverse and constantly-evolving technology
- Attracting top students from across the nation, as do similar programs in other states
- Additional study and future development of a minor for students in MTA and other departments, making those degrees more marketable. Specific courses already in the planning process include Physics of Sound and Interdisciplinary Film and Music Projects. Other potential interdisciplinary courses could involve engineering electronic musical instruments, creation of installation pieces and sound environments for architectural models, CD design and marketing with graphic design students, or digital audio software design and programming with engineering and computer science students.
- The successful Sunday Night Multimedia Series, which has revealed an untapped market for multimedia performance in the Bozeman community
- Potential for equipment sponsorships, technology grants, and audio-related research funding
- Summer music technology camps for youth and adults, as a venue for fundraising, community service and nationwide recruiting.
- Several of the music technology courses we envision, such as Words and Music/Songwriting, Music Business, and History of Film Music, could be developed as Core 2.0 courses and opened to large numbers of non-majors, provided that we have sufficient faculty in Music Technology.

While the music department will require additional infrastructure to support a new degree program, the academic environment for such a program at MSU is ideal. Between MSU – Bozeman's location, a cutting-edge curriculum that adapts to the ever-changing industry, and established connections with MTA and Engineering, a Music Technology degree offers enormous potential to attract high-achieving students. Based on the work already being produced by our prospective Music Technology majors, it is evident that MSU – Bozeman has potential to grow into the major center for music technology in this region of the United States.

# ADEQUACY, ACCREDITATION, AND ASSESSMENT ISSUES

## Adequacy and Accreditation

Our accrediting body, the National Association of Schools of Music (NASM), will need to ensure that all music majors have access to the required music core classes for a degree in Music Technology.

NASM will review the new program for "Plan Approval" once the new degree program has received institutional approval but before the program admits students. The proposal for Plan Approval will detail the new degree program and assess compliance with NASM standards. NASM has additional standards specifically for programs focusing on electronic media. Based on our examination of similar Music Technology programs nationwide, we anticipate that our proposed curriculum will meet these standards. If time permits, we may also submit the plan for a consultative review prior to Board of Regents approval in order to obtain guidance on any potential areas of concern for NASM. We have spoken directly with Sam Hope, the Executive Director of NASM, and incorporated his suggestions in order to ensure that our curriculum meets national standards for a Bachelor of Arts degree. We plan to submit the new degree for Plan Approval on May 1, 2007, for a decision at the NASM meeting in June of 2007.

Once Plan Approval is achieved and at least three students have completed the program, NASM will review the degree program and confer Final Approval for Listing in their national directory of degree programs.

## Assessment

Intermediate assessment of students in the program will be accomplished by the gate, which will follow the first-year Music Theory sequence and the first two Music Technology courses. The Department of Music conducts alumni assessment through our Department Student Assessment and Outcomes Policy, which includes questionnaires and tracking of post-graduate employment data. Program review will be conducted periodically by the Music Department Head and Music Technology Committee.

# IMPACT ON FACULTY, FACILITIES, COSTS, STUDENTS, AND OTHER DEPARTMENTS AND CAMPUSES

The Music Technology program will increase the number of music majors by 72-84, which is an increase of nearly 100%. Tuition revenues will grow correspondingly, though the program will require an increase in the Department of Music annual budget to cover faculty and staffing needs. The required music core courses in the Department of Music, the administrative staff, and many of our faculty are functioning under overload conditions this year, even without the 36-48 new music majors and 36 pre-majors that the Music Technology program will bring.

## Personnel

Of the schools with Music Technology degrees in the U.S., virtually all comparable or smaller public institutions have at least two faculty positions in music technology and at least three administrative staff positions in the music department. (See, for example: the University of Alabama at Birmingham, Western Carolina University, California State University-Chico, Oregon State University, St. Cloud State University, and Indiana University Southeast.)

Mid-size programs, of the size to which ours could eventually grow, have two or more music technology faculty and 4-12 staff positions in the music school. (These include Virginia Tech, Bowling Green State University, Wayne State University, University of Denver, California State-Northridge, San Jose State University, Georgia State University, and Florida International University.) The largest and most well-

known Music Technology programs at public institutions (such as the University of Michigan, Ball State University, the University of Oregon, the University of Colorado at Boulder, and Northwestern University) have between three and five music technology faculty and 12-30 staff positions in the music school. Private schools with music technology programs are also typically staffed at high levels. Our Music Technology program can become a national contender for top students, provided our staffing starts at the minimum level to support at least 36 majors and 36 pre-gate prospective majors each year.

Costs and revenues associated with the new program are enumerated on the attached spreadsheet. Personnel costs include 30% of salary for University benefits.

**Faculty - Theory/Aural Skills/Keyboard Skills**
Our Theory I and Keyboard Skills I classes are filled to capacity with music majors, and Aural Skills I currently has only three empty spots. For ideal pedagogical effectiveness, the Theory/Keyboard Skills/Aural Skills sequence should be taken together prior to the gate for all prospective music technology students. For a cost of approximately $22,100, a new half-time adjunct faculty member with a Master of Music degree could teach two additional sections of Aural Skills I and Keyboard Skills I as well as a second section of Theory I.

**Faculty - Applied Music (Lessons on principal musical instrument or voice)**
We will require each Music Technology student to demonstrate proficiency on a principal instrument or voice. This proficiency requirement is not only essential for program accreditation, it is necessary to prepare students for the variety of opportunities in employment and graduate education. In 2007-2008, approximately 9 to 18 new music technology students will enter Applied Music as guitarists. Our professor of guitar is part-time and can only accommodate four additional students. Several more students will enter with piano as a principal instrument, yet our piano studio has no additional capacity. For a cost of approximately $7,800, we can add .25 FTE of capacity to these studios to accommodate these students.

**Faculty - Music Technology**
We currently have one tenure-track line available for Music Technology, currently filled by our Director of Music Technology on a full-time adjunct basis. To implement the entire Music Technology program we will need a second faculty line to teach new large core courses and new interdisciplinary courses. This interdisciplinary collaboration is the critical link that will elevate the proposed program above competing programs nationwide. We anticipate that an additional tenure-track line will be available for a second Music Technology professor (doctorate preferred or ABD), and that filling this line would cost approximately $54,600. If necessary, the additional Music Technology classes could also be taught by adjunct faculty with at least a Master of Music degree.

**Faculty - "Buyouts" for interdisciplinary courses**
The Music Technology program may need to provide funding for faculty from other departments to teach interdisciplinary courses such as Physics of Sound. Adjunct faculty may also be needed to teach the MTA Editing course, allowing MTA Assistant Professor Theo Lipfert to team-teach the new Interdisciplinary Projects course and add a new section of MTA 254 (Sound) to accommodate Music Technology students.

**Professional staff**
This year the Director of Music Technology position requires overnight shifts several nights per week on department-wide technical support, supervision of recordings, technical coordination of events, and equipment maintenance. These tasks are performed by staff members in other similar music technology programs, just as our MTA program has staff for analogous tasks. With the addition of a professional staff position to the department, the Director of Music Technology will be able to design and implement the new courses planned for the upper-level Music Technology curriculum. This new staff member, hired as a 12-month half-time technical coordinator and recording engineer, would cost approximately $19,500 per year, including benefits. In the fourth year, as the number of music majors approaches 200% of the pre-program number, this staff position would increase to 1.0 FTE for a cost of approximately $39,000.

**Student employment**
Work-study computer lab monitors costing from $4,022 to $4,826 annually will be needed to increase lab hours as the program grows. One or two student employees will also be needed at $10 per hour for 10 hours per week, for a total cost of $3,017 to $6,033 per year. These student employees, hired as Music

Technology assistants, would enable the Director of Music Technology to continue curriculum development as the program population grows to its steady-state size (with approximately 36 majors and 36 pre-majors).

**Equipment**

Equipment needs will vary by year. This year we received start-up funding from the Office of the Provost to convert two rooms in Howard Hall into work space for upper-level Music Technology students. Though we currently use some cords and speakers borrowed from the Director of Music Technology's home studio, we anticipate that these and other needed items for 2007-2008 will be obtainable through EFAC, CFAC, and course fees and program fees similar to the fees required in our Media and Theatre Arts program. Funding for equipment may also be secured through grants from outside sources, particularly for community-based initiatives, such as a summer program or a weekend program for high school students. A small number of CDs, documenting the history of music technology and electronic music, will be needed in library holdings for Music Technology classes. (Currently the Director of Music Technology provides CDs from a personal music library for this purpose.)

## Sources of Funds

**Anticipated revenues from the Music Technology program**

- Program fees
- Full-time out-of-state tuition for approximately 4 new majors and 8 new pre-majors per year (assuming 66% in-state students and 33% out-of-state students).
- Tuition for a summer music technology camp and/or weekend community programs (in planning stages)
- Possible technology grants for community-based programs
- Possible research funding for advanced research in digital signal processing and related areas

## Student Population

The attached budget figures assume 24 pre-gate prospective majors and 12 students accepted into the major program the first year. If a second faculty position is created in Music Technology, the number of students accepted into the program could grow to a total of 36 majors and 36 pre-majors once the program reaches its steady-state level. Increasing the number of majors beyond this level would require additional faculty, and significant increases beyond this level would require additional facilities.

**Student/Faculty Ratio**

The student/faculty ratio for the existing Music Technology courses (Introduction to Digital Music 115, MIDI Sequencing and Notation 230 and Recording 221) is 16:1. The majority of upper-level courses in Music Technology will vary from 6:1 to 12:1, with some individual instruction courses (i.e. Composition 406 and applied instrumental lessons) also required.

**Recruiting**

The Department of Music has an established recruiting system involving contacts with high schools and faculty travel for meetings with prospective students. Recruiting initiatives for Music Technology will focus on four main student categories:

- Students in high school band, orchestra, and choir, both within Montana and out of state, who display an interest in creating music with computers and electronic keyboards.
- Students who study piano, guitar, or another instrument and display an interest in creating music with computers and electronic keyboards.
- Students from all states with high school or community college experience in music technology, multimedia, and music theory programs. Many of the high schools offering Music Technology as a magnet program are located in urban areas and serve under-represented populations.
- Students who have less experience in a high school music education setting, but who display a self-taught ability to create music and multimedia pieces using computer software.

**Time to complete degree**

Students who pass the gate into the Music Technology degree program can reasonably expect to complete the B.A. in Music Technology in a total of four years. It would be possible to institute agreements for credit transfer from community college in Theory, Keyboard Skills, and Aural Skills.

## The Necessity of a Core Music Curriculum

Employment opportunities in music technology are likely to change every year, as new technologies shift the landscape of the industry. Nevertheless, every art form connected to music technology depends upon the skills and principles taught in a core music curriculum. Music theory, aural skills, and keyboard skills give aspiring audio artists the tools to create and manipulate musical lines, progressions, forms, and structures. Those same skills apply to popular music in virtually any genre, concert and electronic music, music and sound design for film and theatre, radio documentaries, DJ sets, and any other form of temporal art with sound. Learning an instrument and playing in an ensemble provide necessary experience in collaboration with other musicians. The audio engineers and technicians who obtain repeat business from musicians are the ones who are fluent in communication about music itself.

Keyboard skills, in particular, are integral to the study of music technology:

- Every music major must reach a certain level in keyboard skills for the degree program to receive accreditation by the National Association of Schools of Music.
- Keyboard skills are part of the music theory curriculum. Scales, intervals, chords, and other building blocks of music cannot be fully mastered without visual/tactile reinforcement at the keyboard.
- Computers are increasingly used as virtual instruments, played by an electronic MIDI keyboard. Virtually every piece of music software now includes virtual instruments, from free entry-level tools, such as Apple's GarageBand, to the most powerful professional music production packages.
- The piano keyboard is the interface to music notation software, much as the computer keyboard is the interface to a word processor. Creating sheet music requires keyboard skills to enter the notes.
- In spotting sessions and other film applications, the composers, orchestrators, and sound editors communicate with the director about musical phrases and timings by playing them at a piano keyboard.
- In the studio, recording engineers and recording artists communicate about song structure and chord changes by demonstrating at the keyboard.
- Certain contemporary genres of music are created using nothing but electronic keyboards, much as early blues music was created entirely at the guitar.
- Keyboard skills are required for entry into graduate programs in music and music technology.

MSU – Bozeman has a strong curriculum in music theory, aural skills, and keyboard skills. With modest expansion this course sequence could accommodate the addition of 24 new prospective majors per year.

## Relationship to Other Institutions

Currently there is no other comparable four-year Music Technology program in this region of the United States. The University of Montana offers a Bachelor of Music degree in Composition and Music Technology, structured according to the conservatory model and requiring admittance as a Music Composition major. The music technology component of UM's degree program includes five courses (four of which are required) and focuses on traditional electroacoustic composition, excluding popular music studies.

While most major universities offer classes in electronic music within a degree program in music composition, Oregon and Colorado are the nearest states with specialized Music Technology degree programs comparable to ours. None of the major state universities in Wyoming, Idaho, Utah, or the Dakotas offer four-year degree programs specializing in music technology or electronic music composition. Universities throughout the Northwest report that the number of prospective music technology students they encounter each year exceeds their capacity.

## Unique strengths of the Music Technology program at MSU – Bozeman

MSU – Bozeman has a strong existing core music curriculum, as well as strengths specific to music technology:

**The traditional music conservatory vs. MSU – Bozeman's interdisciplinary model**

The traditional music-conservatory approach to music technology, adopted at many schools including the University of Montana, offers music technology as part of a Bachelor of Music degree in music composition. These are academically rigorous programs, particularly effective as preparation for graduate study in music. The conservatory curriculum, however, has limited room for undergraduate-level collaboration with film and theatre, graphic design, architecture, physics, engineering, and computer science. College graduates with experience in collaboration have an advantage in the increasingly interdisciplinary

field of audiovisual media arts.

**Exclusive focus on concert music vs. MSU – Bozeman's inclusion of popular and commercial music**
In the conservatory model, popular and commercial styles are often addressed only peripherally in favor of traditional concert music. In today's music industry, however, the rift between art and popular music is closing as new economic realities render it irrelevant. As worldwide marketing and distribution becomes feasible even without a large record company, the music industry is splitting into hundreds of niche markets populated by independent artists of all genres. Our program can help students to find markets for their own music, and to produce music of the highest compositional and technical quality in a variety of concert and popular genres.

**Exclusive admittance of classically-trained students vs. MSU – Bozeman's diverse student population**
The conservatory model limits the music-major population to students who already have classical training. Since many students begin learning music using software instead of classical instruments, our program provides a path to a degree in music technology for motivated and talented students with little to no classical experience. Students in this category will be allowed more time to complete the degree as they bring their general musicianship skills up to a music-major level. This is essential because classical theory and performance courses teach the language and skills musicians use in their professional work.

**Vocational education vs. MSU – Bozeman's broad and comprehensive curriculum**
Another common approach to music technology is a vocational model, sometimes advertised as "Sound Recording" or "Commercial Music Production." One problem with the vocational approach is its overly narrow scope. An ideal music technology curriculum covers recording and commercial music, but always as part of a broader study of music theory and history, composition, the science of sound, and interdisciplinary studies. This broader curriculum prepares students for today's real-world environment, where multiple specialties are highly valued, and where recording and engineering are inextricably linked with composition and sound design.

**Software training vs. MSU – Bozeman's inquiry-based learning and critical thinking**
Another limitation of the trade-school approach is an excessive focus on software training as opposed to critical inquiry. For example, while Digidesign's Pro Tools software is an industry standard, a class that teaches "Pro Tools" does students a disservice when it does not simultaneously introduce students to fundamental acoustics and sound design. Ten years from now, Pro Tools may be so advanced as to be unrecognizable, or it may have been entirely replaced by new technology. It does little good to focus instruction solely on "which button to press" when the buttons change from version to version. By giving students opportunities to learn how software functions (why the buttons are there in the first place), we prepare them for any future software they might encounter.

Our proposed B.A. in Music Technology, not being limited to a particular conservatory or trade-school approach, can overcome the limitations inherent to these competing models. At the same time, our Core 2.0 curriculum gives students a broad liberal-arts education and a solid foundation for intellectual inquiry. This combination is in high demand across the nation.

## Opportunities for Graduates

Graduates with a B.A. in Music Technology will be prepared for a wide variety of employment opportunities as well as graduate study in music composition, film music, audio engineering, or interdisciplinary media. Through involvement in academic organizations and conferences, the Director of Music Technology will maintain connections with graduate programs throughout the nation.

In addition to careers specifically related to the Music Technology field, Music Technology graduates will be prepared for further study and/or training in a number of fields such as music equipment sales, advertising and commercial production, studio design, technical support, software programming, and equipment design. According to the U.S. Department of Labor, the following are nationwide median income figures for professions related to music technology. [1]

**Median yearly salaries in music and multimedia:**
Music directors and composers $34,570
Radio and television producers $43,890

Multimedia artists/animators $94,000

**Median salaries in audio fields:**
Sound engineering technicians $38,110
Sales engineers $70,620

**Median salaries in broadcasting:**
Audio and video equipment technicians $32,570
Broadcast technicians $28,010

**Median hourly earnings in the Motion Picture and Video industries:**
Entertainers and performers $17.44
Audio and video equipment technicians $16.19

**Median hourly earnings for related professions outside the Motion Picture and Video industries:**
Musicians and singers $17.85
Music equipment repairers $13.47
Private music instructors $14.85 to $28.85
Radio producers and directors $25.40
Disc jockeys $10.64
Home entertainment equipment installers and repairers $13.44

**For selected students who go on to complete doctoral programs in electronic music, music composition, or interdisciplinary multimedia studies - median salary:**
Post-secondary teaching $51,800

**For students who complete further education in music and audio software engineering - median hourly earnings:**
Computer software application engineers $38.43
Computer programmers $35.13
Computer support specialists $21.58

# PROCESS LEADING TO SUBMISSION OF PROPOSAL

The initial draft curriculum was designed by music faculty members Johan Jonsson, Ilse-Mari Lee, and Jerry Makeever, film professor Theo Lipfert, Engineering professor Rob Maher (all MSU-Bozeman faculty), and Matt Ridgeway of Ridgeway Sound, in consultation with Russell Pinkston of the University of Texas. Kristi McGarity, Director of Music Technology, worked in conjunction with Johan Jonsson to continue curriculum development and write course descriptions for new courses. McGarity has also founded the Sunday Night Multimedia Series, a performance showcase for collaborative multimedia, multi-speaker sound diffusion, and electronic music and multimedia works by MSU – Bozeman Music Technology students.

We have conducted preliminary discussions with regard to internship and Montana employment opportunities for graduates of the Music Technology program, and will continue with that process.

As of Spring 2007, Music Technology courses already developed and/or established are as follows:
- Kristi McGarity has developed and established three of the courses in the Music Technology program: Introduction to Digital Music, Recording I, and MIDI Sequencing and Notation.
- Two new interdisciplinary courses have reached the preliminary stages in course development: Interdisciplinary Projects MTA, to be team-taught with Theo Lipfert of the MTA department, and Physics of Sound, to be developed in conjunction with the College of Engineering.
- Ilse-Mari Lee has developed and established a Film Music course for upper-level music majors, including the Music Technology majors.
- Kristi McGarity, Ilse-Mari Lee, and Jerry Makeever have jointly developed and established a music technology course for music education majors, outside of the Music Technology degree sequence (MUS 220, Introduction to Computer Applications for Music Education Majors).

# CONCLUSION

In the first year, this new program has brought nearly two dozen new students to the Department of Music. Some of these students show exceptional promise in the field, but nearly all may leave if the department cannot ensure the survival of the program. The curriculum outlined on the following pages assumes that 12 students per year will be admitted to the upper level. With a larger annual operating budget we could increase that number. We are committed to the work that must be done to bring this new degree to fruition, for the students we already have and the students we will meet in the future.

**Department of Music, Montana State University - Overview of B.A. in Music Technology**

Curriculum design by: Johan Jonsson, Kristi McGarity, Ilse-Mari Lee, Jerry Makeever, Theo Lipfert, Rob Maher, and Matt Ridgeway

**Note on pre-gate coursework:**
Admission to the Music Technology major will be based on a rubric consisting of portfolio review, grades in pre-gate coursework, and service credits for participation and volunteerism.

**Courses to develop for possible Core 2.0 designation:**
**Words and Music (Songwriting), Music Business, History of Film Music**

**Ideal sequence for Music Technology majors**

| | | | |
|---|---|---|---|
| Freshman Year - Fall | | | |
| Aural Skills I | 103 | 1 | |
| Theory I | 105 | 3 | |
| Keyboard Skills I | 150 | 1 | |
| Applied Music or | 160 | 1 | * Applied Music 160, |
| Ensemble | xxx | 1 | 2 semesters of ensemble, and |
| University Core | xxx | 3 | Music 260 required for graduation. |
| University Core | xxx | 3 | |
| Introduction to Digital Music | MUS 115 | 3 | |
| Total | | 15 | |
| | | | |
| Freshman Year - Spring | | | |
| Aural Skills II | 104 | 1 | |
| Theory II | 106 | 3 | |
| Keyboard Skills II | 151 | 1 | |
| Applied Music or | 160 | 1 | |
| Ensemble | xxx | 1 | |
| University Core | xxx | 3 | |
| University Core | xxx | 3 | |
| MIDI Sequencing and Notation | MUS 230 | 3 | |
| Total | | 15 | |
| | | | |
| Sophomore Year - Fall | | | |
| Electives | xxx | 6 | |
| Applied Music or | 160 or 260 | 1 | |
| Ensemble | xxx | 1 | |
| University Core | xxx | 3 | |
| Recording I | MUS 221 | 3 | |
| Interdisciplinary Film and Music Projects | MUS 347 | 3 | *At least 1 Interdisciplinary |
| or Physics of Sound | PHYS 2xx | 2 | Projects and 1 Physics of Sound |
| Total | | 16-17 | required for graduation. |
| | | | |
| Sophomore Year - Spring | | | |
| Electives | xxx | 6 | |
| Applied Music | 260 | 1 | |
| Ensemble | xxx | 1 | |
| University Core | xxx | 3 | |
| MTA Sound | MTA 254 | 3 | |
| Composition or | 406 | 2 | *At least 1 Composition and |
| Film Scoring | 349 | 3 | 1 Film Scoring required for |
| Total | | 16-17 | graduation. |

| Junior Year - Fall | | |
|---|---|---|
| (Music History I | 310 | 3) |
| University Core | xxx | 3 |
| World Music | 312 | 3 |
| Sound Design and Synthesis | MUS 341 | 3 |
| Interdisciplinary Film and Music Projects | MUS 347 | 3 |
| or Physics of Sound | PHYS 2xx | 2 |
| Total | | 11-14 |

* Either Music History I or Music History II required for graduation.

| Junior Year - Spring | | |
|---|---|---|
| Univ Core | xxx | 3 |
| Elective | xxx | 3 |
| (Music History II | 311 | 3) |
| Orchestration | 305 | 2 |
| Interdisciplinary Projects 2 | MUS 348 or CAA 490R | 3 |
| Composition or | 406 | 2 |
| Film Scoring | 349 | 3 |
| Total | | 13-17 |

| Senior Year - Fall | | |
|---|---|---|
| Electives | xxx | 9 |
| Computer Science or Business elect. | xxx | 3 |
| Internship or | MUS 472 | 3 |
| Upper-division elective | xxx | 3 |
| Total | | 15 |

Possible Music Technology courses that could also be developed as Core courses with an additional faculty line:
Words and Music/Songwriting
History of Film Music
The Music Business

| Senior Year - Spring | | |
|---|---|---|
| Elective | xxx | 3 |
| Internship or | MUS 472 | 3 |
| Upper-division elective | xxx | 3 |
| Upper-division elective | xxx | 3 |
| 20th Century Music | 321 | 3 |
| Senior Project | MUS 405R | 3 |
| Total | | 15 |

Total credits: 120
Total required music credits: 52
Percentage: 43.33%

## Course descriptions for new courses in the Music Technology curriculum

**MUS 115 - Introduction to Digital Music**
Music Technology faculty
Prerequisites: None; the ability to read music is recommended.
First course in the Music Technology Sequence. Covers concepts and terms, creative projects using software and hardware, an introduction to the music industry, and tools for building self-directed careers within the changing field of music technology. Introduces the history and critical theory of electronic music and multimedia through listening, reading, and presentations.

**MUS 221 - Recording I**
Music Technology faculty
Prerequisite: Admission into Music Technology program
Introduction to, and exploration of, technologies and concepts used to create, record, edit, format, manufacture, reinforce and reproduce audio. Combination of lecture and hands-on learning.

**MUS 230 - MIDI Sequencing and Notation**
Music Technology faculty
Prerequisite: Introduction to Digital Music or permission of instructor
Continuation of the MIDI component of Introduction to Digital Music. Composition and music notation, synthesizer programming, constructing an integrated music technology studio, and advanced applications for film and theatre. Students combine creative projects with critical analysis evaluating historical and current relationships between electronic sound and live performance.

**[MUS 347 - Interdisciplinary Film and Music Projects]**
Team-taught by Music Technology faculty and MTA Film faculty
Prerequisite: Admission into Music Technology program
For upper-level film students and upper-level Music Technology students. Examination of techniques in multimedia art, beginning with an introduction to filmmaking for music students and an introduction to music composition for film students. Students will complete individual projects with visuals and sound, group projects with designated collaborative roles, and a final project using student-designed collaborative strategies. Students will explore an overview of the history of avant-garde music, audio art, video art, and experimental film through readings, lectures, and presentations.

**[MUS 348 - Interdisciplinary Projects 2]**
To be team-taught by Music Technology faculty and "bought-out" faculty in other departments
Prerequisite: Admission into Music Technology program
Topics vary by semester in this interdisciplinary course connecting Music Technology with other departments. Possible projects include CD production and marketing with Graphic Design students, installation pieces with Architecture students, instrument building with Mechanical Engineering students, or sound design and composition for large Theatre productions.

**[xxx - Physics of Sound]**
To be taught by "bought-out" Engineering or Physics faculty or new Music Technology faculty
Prerequisite: None
Enables students not in the Physics and Engineering programs to learn the principles of acoustics, speech, music, and audio. Covers acoustic principles of musical instruments, sound reflection and absorption behavior in rooms, characteristics of human hearing, and basic audio electronics.

**[MUS 341 - Sound Synthesis and Design]**
Music Technology faculty
Prerequisite: Admission into Music Technology program
Students will explore artistic and scientific applications of recent research in sound, including software for emulation and physical modeling, analysis-resynthesis, noise reduction, cross-synthesis, speech synthesis, and acoustical analysis. Mutually beneficial links between acoustical engineering, computer science, sound design for music composition, and multimedia post-production are emphasized.

**[MUS 305 - Orchestration]**
To be taught by music department faculty or new Music Technology faculty
Prerequisite: MUS 205 or permission of instructor
Continuation of MUS 303 (Instrumentation), focusing on analysis of orchestral literature and contemporary film scores. Exercises and projects cover idiomatic uses and specific problems for each instrumental section, acoustical properties of the orchestra, and notation for instrumental parts.

**[MUS 231 - History of Film Music]**
To be taught by music department faculty, possibly in conjunction with MTA Film faculty
Prerequisite: None
A survey of techniques, aesthetics, and trends in film music, from the early days of silent film and live accompaniment to the contemporary film industry.

**MUS 349 - Film Scoring**
Music department faculty
Prerequisite: MUS 205 or permission of instructor
The course objective is to provide the student with knowledge and guidance through the various stages of the process of creating original music to accompany a visual medium. While no previous film scoring experience is required, a fundamental background in music theory, keyboard skills, and music technology is preferred.

**[MUS 322 - Recording 2]**
To be taught by new Music Technology faculty (possibly in conjunction with a local studio)
Prerequisite: Admission into Music Technology program and MUS 221
Continuation of Recording I, taught in partnership with a local recording studio. Students work with studio personnel to set up full recording sessions and gain experience with mixing and mastering techniques.

**[MUS 321 - 20th-Century Music]**
To be taught by music department faculty or new Music Technology faculty
Prerequisite: MUS 311 or permission of instructor
Advanced integrated study of the theory and history of 20th-century musical styles. Analysis and historical context, with an introduction to jazz/pop history and notation.

**[MUS 472 - Internship in Music Technology]**
To be taught by Music Technology faculty
Prerequisite: Senior standing in Music Technology program
Topics vary by semester. Students work with private companies in setting up sound systems for concerts and other events, sound design for web development, concert recording for public schools, or other organized internships.

**[MUS 405R-02 - Capstone Project in Music Technology]**
To be taught by Music Technology faculty
Prerequisite: Senior standing in Music Technology program
Each senior Music Technology major composes and produces a large-scale work incorporating original sound design: a film score, an audiovisual multimedia work, an EP-length album of songs, an interactive installation, a theatrical soundtrack, or a large multichannel electronic piece with live instrumental performance. Senior projects will be publicly performed (at a film screening, at a self-produced show, or on the Multimedia Series.)

**[MUS 232 - Words and Music/Songwriting]**
To be taught by new or existing Music Technology faculty (possible summer course)
Prerequisite: None
For music majors and non-majors. Analysis of the relationship between English words and music from literary and technical perspectives. Students learn poetic analysis, principles of melodic structure, song forms, and techniques for effective text setting. The class will analyze historical and contemporary songs along with musical theater and opera excerpts. Students will work collaboratively on setting original texts to original melodies.

**[MUS 233 - The Music Business]**
To be taught by new Music Technology faculty (possible summer course)
Prerequisite: None
For music majors and non-majors. An introduction to historical and recent practices in the music business and the practice of entertainment law. Clarifies common myths and misconceptions about major-label record deals, radio play, publicity and promotion, royalties, and copyright. Students will analyze sources of income, interpret recording and publishing contracts, research landmark cases, and work together to design an internet-based music marketing and merchandising plan.

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[i] Bureau of Labor Statistics, U.S. Department of Labor, *Career Guide to Industries, 2006-07 Edition,* Arts, Entertainment, and Recreation, on the Internet at http://www.bls.gov/oco/cg/cgs031.htm (visited November 30, 2006).
Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition,* Musicians, Singers, and Related Workers, on the Internet at http://www.bls.gov/oco/ocos095.htm (visited November 30, 2006)
Bureau of Labor Statistics, U.S. Department of Labor, *Career Guide to Industries, 2006-07 Edition*, Motion Picture and Video Industries, on the Internet at http://www.bls.gov/oco/cg/cgs038.htm (visited November 30, 2006)
Bureau of Labor Statistics, U.S. Department of Labor, *Career Guide to Industries, 2006-07 Edition*, Broadcasting, on the Internet at http://www.bls.gov/oco/cg/cgs017.htm (visited November 30, 2006).
Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition,* Broadcast and Sound Engineering Technicians and Radio Operators, on the Internet at http://www.bls.gov/oco/ocos109.htm (visited November 30, 2006).
Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition,* Sales Engineers, on the Internet at http://www.bls.gov/oco/ocos123.htm (visited November 30, 2006)
Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition,* Precision Instrument and Equipment Repairers, on the Internet at http://www.bls.gov/oco/ocos199.htm (visited November 30, 2006)
Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition,* Teachers—Self-Enrichment Education, on the Internet at http://www.bls.gov/oco/ocos064.htm (visited November 30, 2006)
Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition,* Electronic Home Entertainment Equipment Installers and Repairers, on the Internet at http://www.bls.gov/oco/ocos187.htm (visited November 30, 2006)
Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition,* Teachers—Postsecondary, on the Internet at http://www.bls.gov/oco/ocos066.htm (visited November 30, 2006)
Bureau of Labor Statistics, U.S. Department of Labor, *Career Guide to Industries, 2006-07 Edition*, Software Publishers, on the Internet at http://www.bls.gov/oco/cg/cgs051.htm (visited November 30, 2006)

[ii] Weiss, David. "Studio Survival." *Mix* 30, no. 5 (May 2006): 40-44.

**ITEM 134-2010-R0307 (REVISED)**

## BUDGET ANALYSIS

**Proposed Program: Bachelor of Arts in Music Technology**
**Campus: Montana State University--Bozeman**

Note: As of Fall 2006, for the first group of 11 "Year 0" pre-majors, 36% are out-of-state; 91% are here specifically for this program. The following figures assume 33% out-of-state students and 75% here specifically for this program (new revenues).

| | Year 1 | | Year 2 | | Year 3 | | Year 4 | | Year 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Estimated **Enrollment** | | | | | | | | | | |
| FTE Enrollment | 36 | | 60 | | 72 | | 84 | | 72 | |
| Estimated Incremental **Revenue*** | | | | | | | | | | |
| Use of Current General Operating Funds | 0 | | 0 | | 0 | | 0 | | 0 | |
| State Funds | 0 | | 0 | | 0 | | 0 | | 0 | |
| State Funding for Enrollment Growth | 0 | | 0 | | 0 | | 0 | | 0 | |
| Tuition Revenue [1] | 0 | | 0 | | 0 | | 0 | | 0 | |
| A. Gross Incremental Tuition Revenue | 189,200 | | 315,333 | | 378,400 | | 441,467 | | 378,400 | |
| B. Reductions to Incremental Tuition | 0 | | 0 | | 0 | | 0 | | 0 | |
| C. Net Applied Tuition Revenue (A-B) → | 0 | | 0 | | 0 | | 0 | | 0 | |
| Program Fees | 4,200 | | 6,000 | | 7,800 | | 9,600 | | 7,800 | |
| External Funds | | | | | | | | | | |
| Other Funds | | | | | | | | | | |
| **TOTAL Estimated Revenue** | 193,400 | | 321,333 | | 455,104 | | 531,455 | | 386,200 | |
| Estimated Incremental **Expenditures** | | | | | | | | | | |
| | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** |
| Personal Services | | | | | | | | | | |
| Faculty | .85 | 33,900 | 1.85 | 88,500 | 1.85 | 88,500 | 1.85 | 88,500 | 1.85 | 88,500 |
| Student | .5 | 19,500 | .5 | 19,500 | .5 | 19,500 | 1.0 | 39,000 | 1.0 | 13,000 |
| Professional | | 10,055 | | 10,055 | | 10,859 | | 10,859 | | 10,859 |
| Operating Expenses | 4,200 | | 6,000 | | 7,800 | | 9,600 | | 7,800 | |
| Equipment | | | | | | | | | | |
| Start-up Expenditures | | | | | | | | | | |
| **TOTAL Estimated Expenditures** | 67,655 | | 124,055 | | 126,659 | | 147,959 | | 146,159 | |
| **Estimated Revenues Over/Under ( - ) Expenditures** | +125,745 | | +197,278 | | +328,445 | | +383,496 | | +240,041 | |

[1] In-state yield rate = $4,276; Out-of-state yield rate = $12,553

# M O N T A N A  B O A R D  O F  R E G E N T S

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

| Item No.: 134-2802-R0307 | Institution: Montana State University-Northern |
|---|---|

1. How does this program advance the campus' academic mission and fit priorities?

This program complements the exisiting Plumbing Technology and Electrical Technology programs and completes MSU-Northern's trade program offerings. The program is consistent with the mission and vision of the institution and the role of Northern in supporting economic growth and development in North Central Montana.

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

The Carpentry Technology programs developed statewide are reflective of the goal of the Montana BOR in responding to industry and community needs.

3. How does this program support or advance Montana's needs and interests?

Based on the growing need for workers in these trades, and the aging of Montana's workforce, the Carpentry Technogy program addresses both the need to replace retiring workers and the need for new construction occurring statewide. In addition, the development of a statewide program with cooperation among the campuses listed in addition to virtually every two-year college of technology, community college and tribal college in the state is consistent with the direction and goals of the Montana MUS as directed by the Board of Regents.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

This program is designed to support the currently booming construction industry. As indicated in attached documentation, there is a current need for trained capenters that far outstrips the ability of Union and independent contractors to supply. There is no foreseeable lessening of that need.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | 8 FTE students |
| • Enrollments / year? | 12 |
| • Graduates / year? | 10 |
| • MT jobs / year? | 100 |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 100,000 /year (see budget) |

| | |
|---|---|
| • Faculty FTE? | 2.5 |
| • Staff FTE? | .125 |

7. Does this program require new resources? ☒ Yes ☐ No

If yes, what is the amount? $ 316,103

8. How will the campus fund the program?

Initial funding for the program is provided as part of the $2million Montana BILT grant. This funding is expected to provide equipment, tools, and personnel until the program becomes self-sustaining as a result of state FTE funding, student tuition and both direct and indirect industry support.

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

Reallocation of shop space has already taken place, utilizing space vacated as a result of construction of Northern's Applied Technology Center. As indicated in question 8, funding for the program does not require reallocation.

# Proposal to Offer a Certificate of Applied Science and Associate of Applied Science Degree in Carpentry

## Description of Program

The Certificate and Associate degree at Montana State University – Northern are offered as part of the BILT consortium with curriculum developed in cooperation with MSU-Billings, UM-Tech COT, UM-Helena COT, and UM – COT. The program is designed to provide entry level skills and knowledge for a graduate to pursue a career in the carpentry trade area. Specific curriculum items are designed to meet the National Center for Construction Education and Research (NCCER) curriculum. Students may be able to attain national registry of skill and knowledge areas as a result of completing coursework at MSU-Northern.

## 1. Pedagogical Objectives and Competencies

### Theoretical Principals and Concepts

CAS students will understand;

- Fundamentals of the Building trade
- Basic safety principals and practices
- Construction math and calculations needed in the construction industry
- Basic construction theory
- Electrical basics in new and remodel construction

AAS students will understand

- Principals of finish carpentry
- Rigging principals
- Commercial construction principals
- Operation of light equipment
- Use of Computer Aided design in Construction applications

### Practical Skills and Abilities

CAS students will be able to demonstrate;

- Basic hand and power tool usage
- Print reading and basic framing
- Basic roofing, wall and floor construction
- Principals of finish carpentry

AAS students/graduates will be able to demonstrate

- Construction leadership skills
- Advanced framing and construction techniques
- Intermediate and advanced hand and power tool operation and maintenance
- Building forms and pouring foundations and flat work

- Advanced roof, floor, wall and stair construction
- Written and oral communications appropriate to the construction trade
- Metal work, including metal building construction, welding and use of commercial building systems such as steel studs, etc.

## 2. Requirements

### Documented Need

As evidence of need, an excerpt from the original 'Montana BILT grant' application is included in this document as appendix A.

### Additional Courses

The AAS degree will require development and offering thirteen new courses (thirty-eight semester credits) in carpentry technology and general trades knowledge and skills areas.

### Adequacy of Current Courses

The carpentry degree and certificate will utilize eight courses (twenty eight semester credits) of existing coursework currently being offered in other degree programs, or as part of general education core.

### Accreditation Status

The curriculum is being developed in cooperation with the Independent Contractors Association, and will be recognized by the National Center for Construction Education and Research (NCCER).

### Assessment Plan

Students will be required to participate in knowledge area testing resulting in certification by the NCCER. Skills and knowledge areas evaluated by testing and by observation of program faculty will be recognized by registration in the NCCER system.

### Additional Faculty Requirements

A new faculty member will be hired to support and develop degree curriculum. In addition a second faculty member will be assigned on a part time basis to the Carpentry program as well as to the existing Industrial Technology degree program.

## Impact on Facilities

Underutilized facilities have been assigned to support carpentry labs, collocated with other trades programs on the Northern campus (plumbing and electrical technology). Reassignment of lab and classroom space has resulted in better utilization of facilities. At some point, additional in-door facilities will be required to allow construction projects to be performed on a semester-long basis with some protection from inclement weather. This additional facility is expected to serve all three trades areas, and will be provided through industry support of the programs.

## Cost Analysis

Financial support for the first three years of the program is provided through the Montana BILT grant, administer through MSU-Billings. These finances (see budget) provide funding for faculty, staff support and initial equipment acquisitions. Based on enrollment at our sister institutions, student interest is expected to be very high, as is support from industry. The program is expected to be self-sustaining after the grant period.

## Enrollment Impact

Based on interest and enrollment in the other carpentry programs in the state, enrollment in the first year of classes is expected to exceed capacity very rapidly. With an expected cap on program enrollment at twenty students per year, and an anticipated retention rate of 75% from the certificate to associate degree level, the program is expected to result in a roughly 35 FTE increase after the second year is in place. Based on industry demand and the ability of the Montana economy to support the current rate of construction activity, and with an aging construction workforce, additional resources may be utilized to increase the program capacity to roughly double of the stated figures.

## Relationship to Other Campus Programs

As indicated above, the carpentry program complements existing programs in plumbing and electrical technology, and utilizes coursework from both of these trades programs. In addition, courses offered to a variety of programs in the College of Technical Sciences are incorporated into the Carpentry program, increasing productivity across the MSU-Northern campus.

## Relationship to Other Institutions

As indicated above this program is developed in cooperation with Northern's Montana BILT partners. Curriculum, recruiting, and articulation have been coordinated and built into the project from the beginning. Based on strong interest, Northern is currently working on cooperative and articulation agreements with Tribal and community colleges throughout Montana and in particular in North Central Montana.

## Description of Proposal Development Process

Curriculum was developed in cooperation with industry and university partners as described above. After course and program flow were determined by program faculty, the proposal was reviewed by the College of Technical Sciences at MSU-Northern, then by the MSU-Northern Academic Senate, and finally through the administration review process at MSU-Northern.

## Supporting Documents

Letters of support and curriculum paperwork are attached.

## Appendix A: Excerpt from Montana BILT Grant Application

**A. Statement of Need:**

**a. Identifying the industry of focus.** The industry of focus in this statewide proposal is the construction-trades industry. The construction industry faces a critical and growing shortage of workers. There is a growing gap between the supply of and demand for skilled construction laborers due to industry image issues, limited career paths for youth, the aging of the construction workforce and increasing issues of limited English proficiency. Montana will experience a need of 9,560 trained construction workers by 2012, while nationally the number will exceed 1 million new jobs (data from Dr. Brad Eldridge, chief economic forecaster of the Montana Bureau of Labor and Statistics.)

**b. industry is high growth.** In Montana, as in the nation as a whole, the construction industry has grown steadily, with increasing numbers of jobs, over the past several years. Jerry Laughery, Training and Education Director for the Montana Contractors' Association, notes that growth in 2004 and 2005 has continued at about 8% annually, and is projected to continue at that rate. In a speech to the Montana Workforce Conference in Great Falls, MT, on June 22, 2005, Byron Roberts, Executive Director of the Montana Building Industry Association, pointed out that the growth in Montana's building industry is not due to "the bubble" being debated in other areas of the nation. Roberts noted that the rate of over 5,000 homes built in Montana annually is just keeping up with the one percent per year growth rate in Montana due to in-migration and natural population increase.

Data in the table on the following page document the projected need for employees in the construction and building trades industry.

**c.providing evidence of industry demand.** However, while the pressure to add jobs and skilled workers continues, industry struggles to find sufficiently trained employees. As Dave Kalberg, Manager of Commercial Operations for Pierce Flooring and Design (the State's largest flooring installer and supplier) noted in a personal communication with Dean Cech, MSU-Billings College of Technology, recently, "the

**Table 1. Hot Careers** – By State **Montana**

| # | Top Occupations | Projected Need for Employees (2002 - 2012) | Projected Growth | Average Job Openings | In a High Growth Industry? |
|---|---|---|---|---|---|
| 1 | Carpenters | 4,100 | 21-35% | 620 | ☑ Construction |
| 3 | General and Operations Managers | 2,260 | 21-35% | 430 | |
| 4 | Construction Laborers | 1,750 | 21-35% | 240 | ☑ Construction |

| | | | | | |
|---|---|---|---|---|---|
| **6** | First-Line Supervisors/Managers of Construction Trades and Extraction Workers | 1,290 |  | 190 | ☑ Construction<br>☑ Energy |
| **8** | Painters, Construction and Maintenance | 1,210 |  | 160 | ☑ Construction |
| **10** | Construction Managers | 1,080 |  | 160 | ☑ Construction |
| **18** | Electricians | 820 |  | 120 | ☑ Construction<br>☑ Energy |

Source: http://www.acinet.org/acinet/acinet_emerging_start.asp?stfips=30

entire flooring industry is facing [problems] to get new qualified people into this profession . . . the experienced installers are either nearing retirement or their bodies are wearing down from the physical work. Nationwide there is a huge shortage of installers . . ."

Ironically, this industry growth and demand for new workers is taking place in a state whose median household income is 47th in the nation; whose overall unemployment rate is 6.0%, and on the reservations rises as high as 75% ("2001 Local estimate of Indian Service Population and Labor Market Information," Bureau of Indian Affairs). Montana is 4$^{th}$ in the nation in percentage of multiple job holders; our families' wage earners must work two jobs to make ends meet. At the same time, industry is reaching out for workers; the Montana Department of Labor notes that there were 21,525 estimated construction-related job openings in 2002 with an annual growth rate of 3.2% per year. This growth rate is higher in areas of the state with higher population concentrations, such as Billings and Missoula. On June 22, 2005, there were approximately 400 job openings in the construction trades in Montana which represents 12% of the 3,400 open jobs posted on the www.jobs.mt.gov website. This figure only counts those positions that are advertised through Job Service and is a fraction of the actual number of open positions as per industry representatives. Meeting industry demand for a trained workforce would both alleviate much individual poverty, and enable the growth of an entire industry sector.

**ITEM 134-2802-R0307**

## BUDGET ANALYSIS

**Campus:** Montana State University-Northern
**Proposed Program:** Certificate of Applied Science and Associate of Applied Science Degree in Carpentry Technology

| | Year 1 | | Year 2 | | Year 3 | | Year 4 | | Year 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Estimated **ENROLLMENT** | | | | | | | | | | |
| FTE Enrollment | 8 | | 18 | | 24 | | 24 | | 24 | |
| Estimated Incremental **REVENUE** | | | | | | | | | | |
| Use of Current General Operating Funds | 8500 | | 8500 | | 8500 | | 8500 | | 8500 | |
| State Funding for Enrollment Growth | 0 | | 33984 | | 45312 | | 45312 | | 45312 | |
| Tuition Revenue | | | | | | | | | | |
| A. Gross Incremental Tuition Revenue | 35040 | | 78840 | | 105120 | | 105120 | | 105120 | |
| B. Reductions to Incremental Tuition | | | | | | | | | | |
| C. Net Tuition Revenue (A-B) | 35040 | | 78840 | | 105120 | | 105120 | | 105120 | |
| Program/Course Fees | 4000 | | 4000 | | 4000 | | 4000 | | 4000 | |
| External Funds | 15000 | | 25000 | | 35000 | | 50000 | | 100000 | |
| Other Funds (please specify) | 128314 | | 130156 | | | | | | | |
| **TOTAL Estimated Incremental Revenue** | 190854 | | 280480 | | 197932 | | 212932 | | 262932 | |
| Estimated Incremental **EXPENDITURES** | | | | | | | | | | |
| Personal Services | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** |
| Faculty | 1.2 | 62554 | 1.2 | 65156 | 1.5 | 84703 | 1.5 | 88091 | 1.5 | 91615 |
| Other Staff | 0.125 | 4000 | 0.125 | 4000 | 0.125 | 4000 | 0.125 | 4000 | 0.125 | 4000 |
| Operating Expenses | 13500 | | 13500 | | 13500 | | 13500 | | 13500 | |
| Equipment | 36000 | | 15000 | | 15000 | | | | | |
| Start-up Expenditures | 52260 | | 51500 | | | | | | | |
| **TOTAL Estimated Incremental Expenditures** | 168314 | | 149156 | | 117202.8 | | 105591 | | 109115 | |
| **Estimated Revenues Over/(Under) Expenditures** | 22540 | | 131324 | | 80729.2 | | 107341 | | 153817 | |

# M O N T A N A  B O A R D  O F  R E G E N T S

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

| Item No.: 134-2852-R307 | Institution: Montana State University-Great Falls COT |
|---|---|

1. How does this program advance the campus' academic mission and fit priorities?

MSU-Great Falls College of Technology has a dual-pronged mission, with one prong committing the College to providing programs that prepare students for direct entry into high-demand, high-skilled occupations. The Montana Board of Regents approved the College's proposal to establish a Certificate program in Surgical Technology in September 2000. Since then a Certificate program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and endorsed by the Accreditation Review Committee on education in Surgical Technology (ARC-ST) has been offered through the College to serve Great Falls and other healthcare providers in Central and Eastern Montana.

The program was initiated in response to direct requests by healthcare providers in the Great Falls region and in Central and Eastern Montana for personnel who are specially trained to function as the sterile member of the surgical team, providing patient care before, during, and after surgery. There continues to be strong support for a program in Great Falls, specifically from Benefis Healthcare, and they along with other providers report that the shortage of surgical technologists that they are experiencing will continue to be an issue in providing high-quality, affordable health care to the area's residents.

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

The College's Surgical Technology program has, since its inception, provided an educational opportunity for Great Falls and Montana residents to attain a valuable credential in postsecondary education. The College prides itself on having a diverse and responsive healthcare program portfolio, and the Surgical Technology program is one component of that. The program provides a gateway for students, both traditional and non-traditional, to obtain high-demand, high-wage jobs currently available in Great Falls and the state. Through the program's accreditation efforts and active advisory board, as well as the interaction with and commitment from the healthcare community in Great Falls, the program provides a high-quality offering for students seeking a career in the field of Surgical Technology. The completion of the program not only awards an Associate of Applied Science Degree, but also prepares graduates to earn their certification as a Certified Surgical Technologist, a credential highly sought by employers looking to hire individuals for work in this field.

In addition, the AAS in Surgical Technology responds directly to the changing marketplace and workforce needs of the healthcare community. The Certificate program was established in response to requests from Benefis Healthcare, the state's largest, and arguably most diverse, hospital and healthcare provider. Along with other providers, Benefis continues to invest in the program as active partners in what they see as an excellent partnership to ensure that workforce needs in the thriving healthcare sector of the regional economy are met.

3. How does this program support or advance Montana's needs and interests?

In Montana, healthcare is one of the fastest-growing industries, contributing significantly to the economy. In the rural communities the College serves, healthcare is often the major employer, with the best opportunities for high-wage jobs for residents. Coupled with the aging population of the state and expanding technology in the field of Surgical Technology, workers with advanced preparation and certification will be in higher and higher demand. According to the US Department of Labor, employment for Surgical Technologists is expected to grow much faster than the average for all occupations through the year 2014. Hospitals will continue to be the primary

employer, although much faster employment growth is expected in offices of physicians and in outpatient care centers, including ambulatory surgical centers.

Presently there are nearly 300 Surgical Technologists employed in Montana and according to the Montana Department of Labor and Industry this number will increase by nearly 100 over the next seven years. The Department also reports that out of the state's 20 top employers, six are hospitals, and the largest of those six is Benefis Healthcare located in Great Falls. According to the Department's Occupational Employment Statistics (OES) in 2005 Surgical Technologists earned a median hourly wage of $17 per hour or an annual salary of approximately $36,211.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

Providing workforce opportunities to Great Falls and Montana residents where they earn a salary in the established range contributes directly to the economic development of the state and region. Of the 28 graduates in the Certificate program for Surgical Technology who have reported on placement surveys, 89% (25) are currently employed as Surgical Technologists in Montana, with the remaining three either working in another field, seeking further education, or not currently seeking employment. The economic impact of these graduates since 2002, considering wages only and using the average annual salary data provided by the Montana Department of Labor & Industry has been, cumulatively, over $3.3 Million. This does not take into account the increased surgical capacity Montana hospitals and health care providers have been able to accommodate because of these graduates, with the resulting additional healthcare dollars brought into the economy. Continuation of this program as an Associate of Applied Science Degree should ensure a continued, if not increased, trend of economic impact along these lines.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | 20 FTE students |
| • Enrollments / year? | 20 FTE |
| • Graduates / year? | 10 |
| • MT jobs / year? | 10 |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 90,700 |
| • Faculty FTE? | 1.5 |
| • Staff FTE? | 0 |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ _____

8. How will the campus fund the program?

The campus is currently funding the program and its 1.5 FTE in faculty/staff. Funding for faculty, equipment, and supplies is through a combination of tuition, state allocation, health care community donations, industry partnerships, and student program fees.

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

N/A

## Associate of Applied Science in Surgical Technology

## PROGRAM DESCRIPTION

**1. Briefly describe the proposed new program. Please indicate if it is (a) an expansion of an existing program or a new program; (b) a cooperative effort with another institution, business, or industry; or (c) an on-campus or off-campus program. Attach any formal agreements established for cooperative efforts.**

MSU-Great Falls College of Technology currently has a Certificate program in Surgical Technology. This proposal seeks to transition that program to an Associate of Applied Science degree for four primary reasons:

(1) The trend in the field of Surgical Technology is moving away from certificate-level and toward associate degree-level educational preparation.

(2) The current certificate program has too many credits to comply with Board of Regents Policy 301.12, for Certificate of Applied Science programs, and course work cannot be reduced without jeopardizing accreditation.

(3) Converting the program to an AAS degree will align its curriculum and degree more closely with other Surgical Technology programs in Montana.

(4) Providing students with the added value of an AAS degree, as opposed to a Certificate of Applied Science, can be done within the current academic offerings of MSU – Great Falls.

Like the Certificate program, the AAS in Surgical Technology will be delivered in Great Falls, although some coursework within the program may be accessed through online or mixed-mode (hybrid) classes.

Please see the attached comparison of the current Certificate program and the proposed Associate of Applied Science Degree program curricula.

**2. Summarize the needs assessment conducted to justify the proposal.**

From the inception of the Certificate program, the need for qualified Surgical Technologists has been evident. In February 2000, health care professionals from Benefis Healthcare in Great Falls approached the College to request that a surgical technology program be initiated in Great Falls. With their assistance, an advisory committee comprised of other health care professionals, primarily from Great Falls, was assembled. All members concurred that the need for surgical technologists in central and eastern Montana was significant. Wishing to document that need, they solicited letters of support for a program in Great Falls from other health care providers. For its part, the College engaged in a more formal needs assessment, surveying health care providers in the region. Responses indicated strong support and a significant need for a surgical technology program in Great Falls.

In 2004 the program lost its program director and the College struggled to find a qualified replacement. Benefis Healthcare again approached the College to stress the

need for this program and Surgical Technologists in Great Falls and Montana. To demonstrate their commitment, they contributed financial and in-kind support to the program to ensure its continuance.

When considering options for the program as we considered the three reasons for justification for this proposal noted above, the College has consulted with US Department of Labor and Montana Department of Labor & Industry to evaluate the occupational outlook for this profession. In Montana, health care is one of the fastest-growing industries contributing significantly to the economy and society. Coupled with the aging population of the state and expanding technology in the field of Surgical Technology, workers with advanced preparation and certification will be in higher and higher demand. According to the US Department of Labor employment for Surgical Technologists is expected to grow much faster than the average for all occupations through the year 2014.

Presently there are nearly 300 Surgical Technologists employed in Montana and according to the Montana Department of Labor & Industry, this number will increase by nearly 100 over the next seven years. The Department also reports that out of the state's 20 top employers, six are hospitals, and the largest of those six is Benefis Healthcare located in Great Falls. The recent introduction of a surgical hospital in Great Falls increases the demand for surgical technologists in the community.

**3. Explain how the program relates to Role and Scope of the institution as established by the Board of Regents.**

Within the Montana University System, colleges of technology are charged by the Board of Regents to provide access to higher education programs that prepare students to obtain and succeed in technical, high-skill, and high-demand occupations. This is typically done through one- and two-year programs (Certificates and Associates of Applied Science) specifically aligned with a recognized occupation in the workforce. Surgical technology is a recognized occupation with high demand, and the proposed curriculum aligns with the trend in the field.

**4. State (a) what effect, if any, the proposed program will have on the administrative structure of the institution. Also indicate (b) the potential involvement of other departments, divisions, colleges, or schools.**

The proposed transition of the Certificate in Surgical Technology to an Associate of Applied Science will have no impact on the administrative structure of the College. The curriculum differences between the two programs are primarily in the general education coursework, while the discrete coursework remains the same. The College currently offers all courses necessary to complete the Associate of Applied Science program and therefore the transition would have little or no impact on any other departments or divisions within the institution.

With two very similar AAS degree programs in the state, the potential for partnership certainly exists. Such partnerships have challenges when the partnering colleges have

existing programs with tenure-track faculty and established relationships with local healthcare providers. MSU - Great Falls will continue to seek partnership arrangements that work well for students, faculty, and the healthcare community.

**5. Describe the extent to which similar programs are offered in Montana, the Pacific Northwest, and states bordering Montana. How similar are these programs to the one proposed?**

In Montana, two other institutions of higher education offer an Associate of Applied Science Degree in Surgical Technology. They are The University of Montana-Missoula College of Technology and Flathead Valley Community College. Those programs and the proposed one at MSU-Great Falls are nearly identical, with the only variances occurring in some of the general education courses required within the program. Technical electives and discrete coursework are virtually the same. See the attached comparison of program curriculum.

Programs across the Pacific Northwest are also similar to the program being proposed. For all accredited Surgical Technology programs the required curricula content is fairly well set by the Accreditation Review Committee on education in Surgical Technology (ARC-ST). As an accredited program, the proposed program complies with these standards and thus is similar to other programs found in the Pacific Northwest and across the nation.

**6. Please name any accrediting agency (ies) or learned society (ies) that would be concerned with particular program herein proposed. How has this program been developed in accordance with criteria developed by said accrediting body (ies) or learned society (ies)?**

The current Certificate program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) with continued endorsement by the Accreditation Review Committee on education in Surgical Technology (ARC-ST). The accreditation for the Associate of Applied Science Degree will also fall within the accreditation purview of these two groups. All curriculum and coursework is in compliance with accreditation standards.

**7. Prepare an outline of the proposed curriculum showing course titles and credits. Please include any plans for expansion of the program during its first three years.**

**Prerequisite Courses**

| Course | No. | Title | Credits |
|---|---|---|---|
| AH | 145 | Introduction to Medical Terminology | 1 |
| BIO | 107 | Fundamentals of Human Bio/Lab | 4 |
| BIO | 213 | A&P I with lab | 4 |
| BIO | 214 | A&P II with lab | 4 |
| MATH | 103 | Introductory Algebra** | 4 |
| ENGL | 119 | Intro to Composition** **OR** | |
| ENGL | 124 | Business & Professional Communication | 3 |

| | | | |
|---|---|---|---|
| PSY | 101 | Introduction to Psychology **OR** | |
| COMM | 135 | Interpersonal Communication | 3 |
| | | | Subtotal 23 |

**Requirements after Formal Acceptance**

**Spring Semester**

| Course No. | | Title | Credits |
|---|---|---|---|
| PHIL | 238 | Ethics, Health Profession | 3 |
| BIO | 280 | Microbiology with lab | 4 |
| SURG | 101 | Introduction to Safe Patient Care+* | 3 |
| SURG | 109 | Surgical Procedures Lab I+ | 3 |
| SURG | 154 | Surgical Pharmacology+* | 3 |
| | | | Subtotal 16 |

**Fall Semester**

| Course No. | | Title | Credits |
|---|---|---|---|
| SURG | 200 | Operating Room Techniques+* | 5 |
| SURG | 201T | Surgical Procedures I+* | 4 |
| SURG | 110 | Surgical Procedures Lab II+ | 3 |
| SURG | 192 | Clinical Experience I+ | 4 |
| | | | Subtotal 16 |

**Spring Semester**

| Course No. | | Title | Credits |
|---|---|---|---|
| SURG | 205 | Surgical Procedures II+* | 5 |
| SURG | 193 | Clinical Experience II+ | 5 |
| SURG | 194 | Internship+ | 5 |
| | | | Subtotal 15 |

**Total Program Credits – 70**

+ A grade of "C" or above required for graduation | * Indicates prerequisites needed | ** Placement in course(s) is determined by admissions assessment

## FACULTY AND STAFF REQUIREMENTS

1. **Please indicate, by name and rank, current faculty who will be involved with the program proposed herein.**

   Sandra I. Ondler, RN, CNOR – 1.0 FTE Program Director/Faculty
   Shon Hueth, Surgical Technologist – 0.5 FTE Adjunct Faculty

2. **Please project the need and cost for new faculty over the first five years of the program. Include special qualifications or training. If present faculty is to conduct the new program, please explain how they will be relieved from present duties.**

One full-time faculty member and one half-time faculty member will be required for the program. All faculty members in the program must meet the Regents' requirements for qualifications of faculty in two-year programs. In addition, Surgical Technology program faculty must hold or be working towards a Certified Surgical Technologist (CST) certification to instruct in an accredited program.

Surgical Technology program faculty are currently in place and instructing in the Certificate program, and general education faculty also currently in place will include Surgical Technology program students in related instruction courses offered to a broader population of students at the College. The projected impact of additional workforce development students in these courses is minimal, given the small number of students and the number of sections of general education courses available. Therefore, it is anticipated that little or no new costs for faculty and staff will be required by this proposal.

Total personnel costs FY08 = $81,900

- 1.0 FTE faculty: Salary of 39,280 + benefits of 15,320 total cost = $54,600

**3. Please explain the need and cost for support personnel or other required personnel expenditures.**

Support will be provided by existing clerical staff within the Health Sciences Department of the College, Clinical Site Instructors/Preceptors are provided by the Hospital/Clinical site.

| | |
|---|---|
| Clerical Staff support - | No additional cost |
| Clinical Instructors/Preceptors - | No additional cost |

## CAPITAL OUTLAY, OPERATING EXPENSES AND PHYSICAL FACILITIES

**1. Please summarize operating expenditure needs.**

| | | |
|---|---|---|
| **a.** | Contracted Services – | ~~2,000~~ 400 |
| **b.** | Supplies & Materials – | ~~3,500~~ 400 |
| **c.** | Communications – | ~~2,000~~ 605 |
| **d.** | Travel & Professional Development – | ~~2,000~~ 2,195 |
| **e.** | Repairs and Maintenance – | ~~1,500~~ 250 |
| **f.** | Other Expenses (e.g. Accreditation Fees) - | ~~2,410~~ 4,950 |
| | **Total Operating Expenses FY08** | **~~$5,700~~ 8,800** |

**2. Please evaluate library resources. Are they adequate for operation of the proposed program? If not, how will the library need to be strengthened during the next three years?**

The College's library resources are adequate for the proposed program. All materials required for the proposed Associate of Applied Science Degree are the same as those required for the coursework currently delivered in the Certificate program.

3. **Please indicate special clinical, laboratory, and/or computer equipment that will be needed. List those pieces of equipment or computer hardware presently available in the department.**

No additional equipment will be needed.

**Equipment presently available:**

Arthroscopy shaver
Backtable, stainless steel x2
Camera, Stryker medical video
Cautery machine
EKG, Hewitt Packard strip printer
Gurney, patient transport
IV poles x4
Instruments, surgical (wide variety of single instruments, including complete major tray)
Instrument stands x2
Kickbucket x1
Laptop, Dell
Light, operating room overhead x2
Lightsource, endoscopy
Light, exam, standing
Linen hamper, OR
Manikin
Mayo stand, surgical x4
Mayo stand, nonsurgical x1
Pressure bag, IV
Ringstands x2
Screens, privacy, foldable x3
Shelving, stainless steel six shelf
Sink, stainless steel double scrub with eye sensor
Stool, rolling medical
Table, operating room, Amsco manual control
Table Accessories, operating room: clark sockets, stirrups
Video Tower

4. **Please describe facilities and space required for the proposed program. Are current facilities adequate for the program? If not, how does the institution propose to provide new facilities?**

The proposed Associate of Applied Science Degree program will utilize the same space currently in use by the Certificate program. The space on campus and at the clinical locations is both adequate for the proposed program. On campus there are two types of classroom spaces utilized by the program:

1. Traditional Lecture Classrooms
2. Surgical Technology Laboratory – Classroom designed to imitate a surgical setting for practical, hands-on student work aligned with didactic course materials.

Regular clinical locations and sites are Benefis Healthcare, Great Falls Clinic Surgery Center and Central Montana Hospital. These facilities are typically the operating rooms and surgical centers used by this institution. In the event the demand for the program surpasses the clinical locations available in Great Falls, regional locations include Northern Montana Hospital in Havre, St. Peter's Hospital in Helena, St. Vincent's Hospital in Billings, Deaconess Billings Clinic in Billings, and Marias Medical Center in Shelby.

## Current Certificate and Proposed AAS Degree Curricula

| Current Certificate* | Proposed AAS |
|---|---|
| **First Year**<br>**Fall/Spring (Prerequisites)**<br>AH 108 Disease Concepts<br>AH 145 Intro to Med Terminology<br>AH 194 Basic Pharmaceuticals<br>BIO 107 Fund of Human Biology/Lab<br>COMM 135 Interpersonal Communication<br>ENGL 120 Intro to Composition **OR**<br>ENGL 121 Composition I<br>MATH 103 Introductory Algebra<br>**Total Credits 18**<br><br>**Second Year**<br>**Fall Semester**<br>SURG 102 Safe Pat Care & Operating Room Tech<br>SURG 104 Surgical Technology Lab<br>SURG 105 Surgical Procedures I<br>**Total Credits 16**<br><br>**Spring Semester**<br>SURG 106 Surgical Procedures II<br>SURG 192 Clinical Experience I<br>SURG 193 Clinical Experience II<br>SURG 194 Internship<br>**Total Credits 17**<br><br>***Total Program Credits – 51***<br><br>**** NOTE:** This program curriculum is currently out of compliance with Montana Board of Regents Policy 301.12 for total program credits and required length of time to degree.* | **First Year**<br>**Summer Semester (Prerequisites)**<br>BIO 107 Fundamentals of Human Bio<br>BIO 213 Anatomy and Physiology I<br>**Total Credits 8**<br>**Fall Semester (Prerequisites)**<br>PSY 101 Intro to Psychology **OR**<br>COMM 135 Interpersonal Communication<br>AH145 Intro to Medical Terminology<br>BIO 214 Anatomy and Physiology II<br>MATH103 Introductory Algebra<br>ENGL 119 Intro to Composition **OR**<br>ENGL 124 Business & Professional Communication<br>**Total Credits 15**<br>**Spring Semester**<br>PHIL 238 Ethics, Health Profession<br>BIO 280 Microbiology with lab<br>SURG 101 Intro to Safe Patient Care<br>SURG109 Surgical Procedures Lab I<br>SURG 154 Surgical Pharmacology*<br>**Total Credits 16**<br><br>**Second Year**<br>**Fall Semester**<br>SURG 200 Operating Room Techniques<br>SURG 201Surgical Procedures I<br>SURG 110 Surgical Procedures Lab II<br>SURG 192 Clinical Experience I<br>**Total Credits 16**<br>**Spring Semester**<br>SURG 205 Surgical Procedures II<br>SURG 193 Clinical Experience II<br>SURG 194 Internship<br>**Total Credits 15**<br><br>***Total Program Credits - 70*** |

## Curriculum Comparison of Surgical Technology Programs in Montana

| MSU-Great Falls | UM-Missoula COT | Flathead Valley CC |
|---|---|---|
| **First Year**<br>**Summer Semester (Prerequisites)**<br>BIO 107 Fundamentals of Human Bio<br>BIO 213 Anatomy and Physiology I<br>**Total Credits 8**<br>**Fall Semester (Prerequisites)**<br>PSY 101 Intro to Psychology **OR**<br>COMM 135 Interpersonal Comm<br>AH145 Intro to Medical Terminology<br>BIO 214 Anatomy and Physiology II<br>MATH103 Introductory Algebra<br>ENGL 119 Intro to Composition **OR**<br>ENGL 124 Business & Professional Communication<br>**Total Credits 15**<br>**Spring Semester**<br>PHIL 238 Ethics, Health Profession<br>BIO 280 Microbiology with lab<br>SURG 101 Intro to Safe Patient Care<br>SURG109 Surgical Procedures Lab I<br>SURG 154 Surgical Pharmacology*<br>**Total Credits 16**<br>**Second Year**<br>**Fall Semester**<br>SURG 200 Operating Room Techniques<br>SURG 201Surgical Procedures I<br>SURG 110 Surgical Procedures Lab II<br>SURG 192 Clinical Experience I<br>**Total Credits 16**<br>**Spring Semester**<br>SURG 205 Surgical Procedures II<br>SURG 193 Clinical Experience II<br>SURG 194 Internship<br>**Total Credits 15**<br>***Total Program Credits - 70*** | **First Year**<br>**Prerequisites**<br>COM 115 Technical Writing **or**<br>COM 101 English Composition<br>CRT 100 Computer Literacy or equivalent<br>MAT 100 Intermediate Algebra **or**<br>MAT 117 Probability and Linear Math<br>MED 154 Beginning Medical Terminology<br>PSY 100S Introduction to Psychology<br>SCN 201N Anatomy and Physiology I<br>**Total Credits 18**<br>**Spring Semester**<br>BIOL 106 Elementary Medical Biology<br>SCN 202N Anatomy and Physiology II<br>SUR 101 Introduction to Safe Patient Care<br>SUR 102 Surgical Procedures Lab I<br>SUR 154T Surgical Pharmacology<br>**Total Credits 15**<br>**Second Year**<br>**Fall Semester**<br>SUR 200T Operating Room Techniques<br>SUR 201T Surgical Procedures I<br>SUR 202T Surgical Procedures Lab II<br>SUR 203T Surgical Lab Practicum I<br>SUR 204 Ethical Dimensions in Health Professions<br>**Total Credits 18**<br>**Spring Semester**<br>SUR 205T Surgical Procedures II<br>SUR 206T Surgical Lab Practicum II<br>SUR 290T Surgical Internship<br>**Total Credits 15**<br>***Total Program Credits - 66*** | **First Year**<br>**Fall Semester**<br>BIOL 133 Medical Terminology<br>BIOL 261 Anatomy & Physiology I<br>ENGL 111 English Composition<br>MATH 78 Introductory Algebra<br>SURG 101 Intro to Surgical Technology<br>**Total Credits 17**<br>**Spring Semester**<br>BIOL 207Microbiology of Infectious Diseases w/Lab<br>BIOL 262 Anatomy & Physiology II<br>CMPA 130 Integrated Software Apps<br>PSY 110 Introduction to Psychology<br>SURG 105 Surgical Techniques I<br>**Total Credits 19**<br>**Second Year**<br>**Fall Semester**<br>BIOL 170 Disease Process/Pharmacology<br>HS/SP 120 Interpersonal Relations/ Communication<br>SURG 106 Surgical Techniques II<br>SURG 110 Applied Surgical Technology Procedures<br>SURG 120 Surgical Technology Clinical I<br>**Total Credits 19**<br>**Spring Semester**<br>SURG 107 Professional Development and Leadership<br>SURG 130 Surgical Technology Clinical II<br>**Total Credits 13**<br>***Total Program Credits - 68*** |

## BUDGET ANALYSIS

**Proposed Program:**

**Program Name: Surgical Technology**

**Campus: MONTANA STATE UNIVERSITY - GREAT FALLS COLLEGE OF TECHNOLOGY**

| | Year 1 | | Year 2 | | Year 3 | | Year 4 | | Year 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | FY 08 | | FY 09 | | FY 10 | | FY 11 | | FY 12 | |
| Estimated **ENROLLMENT** | | | | | | | | | | |
| FTE Enrollment | 20 | | 20 | | 20 | | 20 | | 20 | |
| Estimated Incremental **REVENUE** | | | | | | | | | | |
| Use of Current General Operating Funds | | | | | | | | | | |
| State Funding for Enrollment Growth | 37,760 | | 37,760 | | 37,760 | | 37,760 | | 37,760 | |
| Tuition Revenue | | | | | | | | | | |
| A. Gross Incremental Tuition Revenue | 50,000 | | 50,000 | | 50,000 | | 50,000 | | 50,000 | |
| B. Reductions to Incremental Tuition | | | | | | | | | | |
| C. Net Tuition Revenue (A-B) | 50,000 | | 50,000 | | 50,000 | | 50,000 | | 50,000 | |
| Program/Course Fees ($190/student) | 3,800 | | 3,800 | | 3,800 | | 3,800 | | 3,800 | |
| External Funds | | | | | | | | | | |
| Other Funds (please specify) | | | | | | | | | | |
| **TOTAL Estimated Incremental Revenue** | 91,560 | | 91,560 | | 91,560 | | 91,560 | | 91,560 | |
| Estimated Incremental **EXPENDITURES** | | | | | | | | | | |
| Personal Services | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** |
| Faculty | 1.5 | 81,900 | 1.5 | 84,357 | 1.5 | 86,888 | 1.5 | 86,888 | 1.5 | 86,888 |
| Staff | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - |
| Operating Expenses | | 8,800 | | 9,064 | | 9,336 | | 9,616 | | 9,904 |
| Equipment | | | | | | | | | | |
| Start-up Expenditures | | | | | | | | | | |
| **TOTAL Estimated Incremental Expenditures** | 90,700 | | 93,421 | | 96,224 | | 96,504 | | 96,792 | |
| **Estimated Revenues Over/(Under) Expenditures** | 860 | | (1,861) | | (4,664) | | (4,944) | | (5,232) | |

# M O N T A N A  B O A R D  O F  R E G E N T S

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

| Item No.: 134-2857-R0307 | Institution: Montana State University-Great Falls COT |
|---|---|

1. How does this program advance the campus' academic mission and fit priorities?

Preparing individuals to work in high-skilled environments is one prong of the College's two-pronged mission. Responding to the demand for skilled trades workers has been identified as a strategic goal for the College, with the need identified as a result of environmental scanning projects both in the Great Falls and the Gallatin Valley. Currently the Certificate in Auto Body Repair & Refinishing (ABR&R) is the only trades-related workforce program the College offers in Great Falls, and therefore is vital to ensuring a broad selection of programs responding to the interests and aptitudes of a diverse student body.

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

The proposed transition of an existing program from a 59-credit Certificate program to a 61-credit Associate of Applied Science Degree reflects the goals and objectives of the Board of Regents in numerous ways. First, it brings the program into compliance with BOR Policy 301.12 by revising the general education course requirements to align with those of similar programs in the state and by adding one course to meet the baseline credit requirements of an Associate of Applied Science Degree. It is this Regential goal for consistency among degree programs, combined with the desire for an appropriately upgraded credential for our ABR&R students, that have prompted this request for change.

Both the current program and the proposed program increase access to and enrollments in two-year programs by both traditional and non-traditional students, another Regential goal. In Great Falls this program is the only trades-related option for students wishing to pursue higher education in the community. In its long history as a Certificate program, the program has educated individuals ranging from high school students enrolled in dual credit opportunities to non-traditional students seeking a career change. The ABR&R program also responds to the goal of workforce development by continuing to offer high-tech trades programming to meet occupational demands in the College's service area.

3. How does this program support or advance Montana's needs and interests?

According to the US Department of Labor's Bureau of Labor Statistics employment of automotive body repairers is expected to grow as fast as average for all occupations through the year 2014 (approximate average change of 12%). Opportunities will be best for persons with formal training in automotive body repair and refinishing. Those without formal training in automotive body refinishing or collision repair will face competition for these jobs. Demand for qualified body repairers will increase as the number of motor vehicles in operation continues to grow in line with the Nation's population. In Montana projected growth is higher than the national expectations with an average growth through 2014 of about 20%. Currently there is an estimated 1160 employed in this industry in the State with projected 42 annual openings due to new jobs created and replacement of existing workers.

Within Great Falls students have very few opportunities to advance in the automobile service industry past secondary education. The interest in this field has peaked with the addition of an automobile service and repair program for high school students in the Great Falls Public Schools. Providing a post secondary option , specifically an Associate of Applied Science Degree, will encourage those students who wish to stay in Great Falls to continue their education past high school. Coupled with the success of the Dual Credit option within the

current Certificate program this pathway will ensure that the College's diverse constituency's needs are met through a broad spectrum of programmatic offerings.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

The economic impact of program graduates thus far, considering wages only and using the average annual salary data provided by the Montana Department of Labor & Industry has been over $1.5 Million. This does not take into account the increased productivity of companies in the automotive industry in Great Falls, where the majority of the graduates have been employed. Continuation of this program as an Associate of Applied Science Degree should increase enrollment and improve retention, thereby ensuring a continued, if not increased, trend of economic impact along these lines. Providing workforce opportunities to Great Falls and Montana residents where they earn a salary in this range contributes directly to the economic development of the state and region.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | 21 FTE students |
| • Enrollments / year? | 22 |
| • Graduates / year? | 8 |
| • MT jobs / year? | 8 |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 93,600 |
| • Faculty FTE? | 1.0 |
| • Staff FTE? | 0.5 |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ ____

8. How will the campus fund the program?

The program will be funded through tuition, state allotment, and student program fees.

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

None required.

## Associate of Applied Science in Auto Body Repair and Refinishing

## PROGRAM DESCRIPTION

**1. Briefly describe the proposed new program. Please indicate if it is (a) an expansion of an existing program or a new program; (b) a cooperative effort with another institution, business, or industry; or (c) an on-campus or off-campus program. Attach any formal agreements established for cooperative efforts.**

MSU-Great Falls College of Technology currently has a Certificate program in Auto Body Repair and Refinishing. This proposal seeks to transition that program to an Associate of Applied Science degree for two (2) primary reasons:

(1) to bring the current program into compliance with Board of Regents Policy 301.12 which stipulates the credit range for Certificate and Associate Degree programs; and

(2) to align the proper academic credential, in this case the Associate of Applied Science Degree, with the amount and level of coursework involved in the program. Like the Certificate program, the AAS in Auto Body Repair and Refinishing will be delivered on campus in Great Falls.

Please see the attached comparison of the current Certificate program and the proposed Associate of Applied Science Degree program curricula.

**2. Summarize the needs assessment conducted to justify the proposal.**

The Certificate program in Auto Body Repair and Refinishing has been active at the College since its "vo-tech" days with the local school district and has had recurrent community and industry support. Through an active advisory committee, industry has continued to provide connection between the program and occupations in the field and assures the College that the demand for these employees continues. According to the US Department of Labor, automotive technology is rapidly increasing in sophistication, and most training authorities strongly recommend that persons seeking automotive body repair and related jobs complete a formal training program in automotive body repair or refinishing. The proposed Associate of Applied Science Degree in Auto Body Repair and Refinishing will provide this avenue for those interested in this career field.

Data shows employment of automotive body repairers is expected to grow as fast as average for all occupations through the year 2014 (approximate average change of 12%). Opportunities will be best for persons with formal training in automotive body repair and refinishing. Those without formal training in automotive body refinishing or collision repair will face competition for these jobs. Demand for qualified body repairers will increase as the number of motor vehicles in operation continues to grow in line with the Nation's population. In Montana projected growth is higher than the national expectations with an average growth through 2014 of about 20%. Currently there is an estimated 1160 employed in this industry in the State with projected 42 annual openings due to new jobs created and replacement of existing workers.

**3. Explain how the program relates to Role and Scope of the institution as established by the Board of Regents.**

Within the Montana University System, Colleges of Technology are charged by the Board of Regents to provide access to higher education programs that prepare students to obtain and succeed in technical, high-skill, and high-demand occupations. This is typically done through one and two-year programs (Certificate/Associate of Applied Science) specifically aligned with a recognized occupation in the workforce. As with any institution within the Montana University

System, it is also expected that each campus strive to provide higher educational opportunities that will cover the diverse interests of the student body. The Auto Body Repair and Refinishing program relates to both of these considerations. First, programs across the nation are typically offered in high school or in postsecondary vocational schools and community colleges, and secondly, this program is the only trades related option for students with these interests and/or aptitude in Great Falls.

Within Great Falls students have very few opportunities to advance in the automobile service industry past secondary education. The interest in this field has peaked with the addition of an automobile service and repair program for high school students in the Great Falls Public Schools. Providing a postsecondary option, specifically an Associate of Applied Science Degree, will encourage those students who wish to stay in Great Falls to continue their education past high school. Coupled with the success of the dual credit option within the current Certificate program, this pathway will ensure that the College's diverse constituency's needs are met through a broad spectrum of programmatic offerings.

**4. State (a) what effect, if any, the proposed program will have on the administrative structure of the institution. Also indicate (b) the potential involvement of other departments, divisions, colleges, or schools.**

The proposed transition of the Certificate in Auto Body Repair and Refinishing to an Associate of Applied Science will have no impact on the administrative structure of the College. The current Certificate program is just one (1) credit shy of the minimum credit requirements for an Associate of Applied Science Degree, which will be added through better integration of general education coursework and the addition of the introductory computer course common to AAS degrees. All technical coursework will remain the same. The College currently offers all courses within the proposed program and therefore the transition will have little or no impact on any other departments or divisions within the institution. Most importantly, the upgraded credential comes at no additional cost to students.

**5. Describe the extent to which similar programs are offered in Montana, the Pacific Northwest, and states bordering Montana. How similar are these programs to the one proposed?**

In Montana, two other institutions of higher education offer similar Associate of Applied Science Degrees in automotive repair and refinishing. They are MSU-Billings College of Technology and MSU-Northern. Those programs, as well as both the current and proposed program at MSU-Great Falls are similar, specifically so in the technical areas covered within the auto body repair and refinishing coursework. The differences are primarily in how the content is covered within the courses, and thus the titles for specific classes. Because the local industry that this program serves has guided and continually validated the current technical course work of the College's current Certificate program, the College made only the minimal changes in its curriculum necessary to upgrade the credential to an AAS degree and align with Regent policy. This will also allow current students to transition seamlessly into the AAS degree program.

**6. Please name any accrediting agency (ies) or learned society (ies) that would be concerned with particular program herein proposed. How has this program been developed in accordance with criteria developed by said accrediting body (ies) or learned society (ies)?**

As part of the College's academic menu, the Auto Body Repair and Refinishing program has been included in the accreditation reviews of Northwest Commission on Colleges and Universities in 1994 and 2005. The College has sought no additional accreditation for the program; however, the curriculum was developed and has been revised to align with the guidelines for automotive

service and repair training provided by the National Automotive Technician Education Foundation (NATEF) and the Inter-Industry Conference on Auto Collision Repair (I-CAR).

**7. Prepare an outline of the proposed curriculum showing course titles and credits. Please include any plans for expansion of the program during its first three years.**

The curriculum provided below presents the course work in the program in the same four-semester delivery used for the current Certificate program. The College is beginning to explore the retention benefits of continuous enrollment that could be achieved through a summer intercession.

**Fall Semester**

| Course No. | Title | Credits |
|---|---|---|
| MATH 106 | Math for Trades Programs | 3 |
| TB 112 | Auto & Paint Shop Safety | 1 |
| TB 130 | Basic Auto Construction | 2 |
| TB 134 | Correcting Sheet Metal | 3 |
| TB 141 | Surface Prep and Undercoats | 3 |
| TB 142 | Top Coat Applications | 3 |
| | **Subtotal** | **15** |

**Spring Semester**

| Course No. | Title | Credits |
|---|---|---|
| CIT 110 | Introduction to Computers | 3 |
| TB 136* | Correcting Collision Damage | 5 |
| TB 150* | Paint Removal | 3 |
| TB 153* | Overall Refinishing | 3 |
| TB 154* | Paint Problems | 1 |
| | **Subtotal** | **15** |

**Fall Semester**

| Course No. | Title | Credits |
|---|---|---|
| COMM 135 | Interpersonal Communication | 3 |
| TB 220* | Fiberglass & Plastic Repair | 3 |
| TB 243* | Panel Replacement | 3 |
| TB 248* | Spot Repair and Blending | 3 |
| TB 249* | Paint Formulation and Tinting | 3 |
| | **Subtotal** | **15** |

**Spring Semester**

| Course No. | Title | Credits |
|---|---|---|
| ENGL 119 or higher | Intro to College Writing | 3 |
| TB 245* | Production Body Repair | 3 |
| TB 246* | Total Body Rebuilding & Sectioning | 3 |
| TB 250* | Production Refinishing | 3 |
| TB 254* | Specialty Finishes | 1 |
| TB 255* | Estimating Collision Damage | 3 |
| | **Subtotal** | **16** |
| | **TOTAL PROGRAM CREDITS -** | **61** |

## FACULTY AND STAFF REQUIREMENTS

1. **Please indicate, by name and rank, current faculty who will be involved with the program proposed herein.**

   Steve Thurston, Program Director and Tenured Faculty Member
   Gene Stewart, Shop Aide

2. **Please project the need and cost for new faculty over the first five years of the program. Include special qualifications or training. If present faculty is to conduct the new program, please explain how they will be relieved from present duties.**

One full-time faculty member and one half-time shop aide are required for the proposed program. All faculty members in the program must meet the Regents' requirements for qualifications of faculty in two-year programs. If enrollments grow with the transition of this program to an AAS, potentially the shop aide position may be eliminated and replaced with a part time or adjunct faculty member. Increases in tuition revenue will accommodate for this addition.

Auto Body Repair and Refinishing program faculty are currently in place and instructing in the Certificate program, and general education faculty also currently in place will include the proposed program's students in related instruction courses offered to a broader population of students at the College. The projected impact of additional program students in these courses is minimal, given the small number of students and the number of sections of general education courses available. Therefore it is anticipated that little or no new costs for faculty and staff will be required by this proposal.

Total personnel costs FY08 = $68,600

- 1.0 FTE faculty: Salary of 39,280 + benefits of 15,320 total cost = $54,600
- 0.5 FTE shop aide: Salary of 10,220+ befits of 3,780 total cost = $14,000

3. **Please explain the need and cost for support personnel or other required personnel expenditures.**

Support will be provided by existing clerical staff within the Business and Technology Department of the College.

Clerical Staff support - No additional cost

## CAPITAL OUTLAY, OPERATING EXPENSES AND PHYSICAL FACILITIES

1. **Please summarize operating expenditure needs.**

| | | |
|---|---|---|
| **a.** | Contracted Services – | 75 |
| **b.** | Supplies & Materials – | 23,282 |
| **c.** | Communications – | 263 |
| **d.** | Travel & Professional Development – | 200 |
| **e.** | Repairs and Maintenance – | 480 |
| **f.** | Other Expenses - | 700 |
| | **Total Operating Expenses FY08 - $25,000** | |

2. **Please evaluate library resources. Are they adequate for operation of the proposed program? If not, how will the library need to be strengthened during the next three years?**

The College's library resources for the current program are adequate for the proposed program.

**3. Please indicate special clinical, laboratory, and/or computer equipment that will be needed. List those pieces of equipment or computer hardware presently available in the department.**

No additional special laboratory or computer equipment will be necessary for the proposed program.

**4. Please describe facilities and space required for the proposed program. Are current facilities adequate for the program? If not, how does the institution propose to provide new facilities?**

Facilities for the current program will be more than adequate to serve the proposed program.

## Current Certificate and Proposed AAS Degree Curricula

| Current Certificate* | | | Proposed AAS | | |
|---|---|---|---|---|---|
| **First Year** | | | **First Year** | | |
| **Fall Semester** | | | **Fall Semester** | | |
| MATH --- ** | MATH 085 or higher | 4 | MATH 106 | Math for Trades Programs | 3 |
| TB 112 | Auto & Paint Shop Safety | 1 | CIT 110 | Introduction to Computers | 3 |
| TB 130 | Basic Auto Construction | 2 | TB 112 | Auto & Paint Shop Safety | 1 |
| TB 134 | Correcting Sheet Metal | 3 | TB 130 | Basic Auto Construction | 2 |
| TB 141 | Surface Preparation & Undercoats | 3 | TB 134 | Correcting Sheet Metal | 3 |
| TB 142 | Top Coat Application | 3 | TB 141 | Surface Prep and Undercoats | 3 |
| | | **Subtotal 16** | TB 142 | Top Coat Applications | 3 |
| | | | | | **Subtotal 15** |
| **Spring Semester** | | | **Spring Semester** | | |
| COMM 135 | Interpersonal Communication | 3 | CIT 110 | Introduction to Computers | 3 |
| TB 136* | Correcting Collision Damage | 5 | TB 136* | Correcting Collision Damage | 5 |
| TB 150* | Paint Removal | 3 | TB 150* | Paint Removal | 3 |
| TB 153* | Overall Refinishing | 3 | TB 153* | Overall Refinishing | 3 |
| TB 154* | Paint Problems | 1 | TB 154* | Paint Problems | 1 |
| | | **Subtotal 15** | | | **Subtotal 15** |
| **Second Year** | | | **Second Year** | | |
| **Fall Semester** | | | **Fall Semester** | | |
| ENGL --- ** | ENGL 120 or higher | 3 | COMM 135 | Interpersonal Communication | 3 |
| TB 220* | Fiberglass & Plastic Repair | 3 | TB 220* | Fiberglass & Plastic Repair | 3 |
| TB 243* | Panel Replacement | 3 | TB 243* | Panel Replacement | 3 |
| TB 248* | Spot Repair and Blending | 3 | TB 248* | Spot Repair and Blending | 3 |
| TB 249* | Paint Formulation and Tinting | 3 | TB 249* | Paint Formulation and Tinting | 3 |
| | | **Subtotal 15** | | | **Subtotal 15** |
| **Spring Semester** | | | **Spring Semester** | | |
| TB 245* | Production Body Repair | 3 | ENGL 119 | Intro to College Writing | 3 |
| TB 246* | Total Body Rebuild & Section | 3 | TB 245* | Production Body Repair | 3 |
| TB 250* | Production Refinishing | 3 | TB 246* | Total Body Rebuild & Section | 3 |
| TB 254* | Specialty Finishes | 1 | TB 250* | Production Refinishing | 3 |
| TB 255* | Estimating Collision Damage | 3 | TB 254* | Specialty Finishes | 1 |
| | | **Subtotal 13** | TB 255* | Estimating Collision Damage | 3 |
| | | | | | **Subtotal 16** |
| | | **TOTAL PROGRAM CREDITS - 59** | | | **TOTAL PROGRAM CREDITS - 61** |

## Curriculum Comparison of Surgical Technology Programs in Montana

| MSU-Great Falls | MSU-Billings COT | MSU-Northern |
|---|---|---|
| **First Year** | **First Year** | |
| **Fall Semester** | **Fall Semester** | **General Education** |
| MATH 106 Math for Trades Programs 3 | ABDY 111 Intro to Auto Body Repair 5 | ENGL 111 Written Communication I OR |
| CIT 110 Introduction to Computers 3 | ABDY 112 Minor Collision Repair 6 | SPCH 141 Fundamentals of Speech OR |
| TB 112 Auto & Paint Shop Safety 1 | TRID 150 Envir and Shop Practices 2 | SPCH 142 Interpersonal Comm 3 |
| TB 130 Basic Auto Construction 2 | TRID 140 Auto Sheet Metal and Structural | MAAS 106 Elementary Technical Math OR |
| TB 134 Correcting Sheet Metal 3 | MIG Welding 2 | MATH 110 Math for Liberal Arts OR MATH |
| TB 141 Surface Prep and Undercoats 3 | MATH 122 College Math for Tech 3 | 112 College Algebra 3-4 |
| TB 142 Top Coat Applications 3 | **Subtotal 18** | CIS 110 Intro to Computers 3 |
| **Subtotal 15** | **Spring Semester** | **Subtotal 9-10** |
| **Spring Semester** | ABDY 131 Intro to Refinish Principles 6 | **Required Courses** |
| CIT 110 Introduction to Computers 3 | ABDY 132 Intro to Auto Undercoats & | ATDI 134 Auto/Diesel Electrical/Electronic |
| TB 136* Correcting Collision Damage 5 | Plastics 6 | Systems I 4 |
| TB 150* Paint Removal 3 | TRID 152 Vehicle Heating, Ventilation & Air | ATDI 265 Heating & Air Conditioning 4 |
| TB 153* Overall Refinishing 3 | Conditioning 3 | AUTO 220 Automotive Steering and |
| TB 154* Paint Problems 1 | CMP 105 Intro to Computers 3 | Suspension 4 |
| **Subtotal 15** | **Subtotal 18** | BODY 140 Panel Adjustment & Glass 2 |
| | | BODY 141 Intro to Metal Refinishing 3 |
| **Second Year** | **Second Year** | BODY 142 Metal Repair Lab 3 |
| **Fall Semester** | **Fall Semester** | BODY 143 Refinishing 3 |
| COMM 135Interpersonal Comm 3 | ABDY 141 Advanced Automotive Refinishing | BODY 144 Refinishing Lab 3 |
| TB 220* Fiberglass & Plastic Repair 3 | 6 | BODY 215 Principles of Unibody Repair |
| TB 243* Panel Replacement 3 | ABDY 142 Introduction to Automotive Paint | Fundamentals 3 |
| TB 248* Spot Repair and Blending 3 | Blending and Color Matching 7 | BODY 216 Unibody Repair Tech 3 |
| TB 249* Paint Formulation & Tinting 3 | COMT 109 Human Relations 3 | BODY 241 Estimating 4 |
| **Subtotal 15** | **Subtotal 16** | BODY 243 Shop Production 3 |
| **Spring Semester** | **Spring Semester** | BODY 244 Shop Production Lab 3 |
| ENGL 119Intro to College Writing 3 | ABDY 121 Automobile Body Structural Repair | METL 140 Introduction to Welding and |
| TB 245* Production Body Repair 3 | 6 | Cutting 3 |
| TB 246* Tot. Body Rebuild & Section 3 | ABDY 122 Auto Collision Mechanics 5 | METL 154 Gas Arc Welding Processing |
| TB 250* Production Refinishing 3 | TRID 180 Electrical Systems 4 | Advisor Approved Electives 3 |
| TB 254* Specialty Finishes 1 | ENGL 140 Business Writing 3 | |
| TB 255* Estimating Collision Damage 3 | **Subtotal 18** | |
| **Subtotal 16** | | |
| **Total Program Credits - 61** | **Total Program Credits - 70** | **Total Program Credits – 60-61** |

ITEM 134-2857-R0307 budget

## BUDGET ANALYSIS

**Proposed Program:**
**Program Name: Auto Body Repair and Refinishing**
**Campus:** **Montana State University - Great Falls College of Technology**

| | Year 1 | | Year 2 | | Year 3 | | Year 4 | | Year 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | FY 08 | | FY 09 | | FY 10 | | FY 11 | | FY 12 | |
| Estimated **ENROLLMENT** | | | | | | | | | | |
| FTE Enrollment | 22 | | 22 | | 22 | | 22 | | 22 | |
| Estimated Incremental **REVENUE** | | | | | | | | | | |
| Use of Current General Operating Funds | | | | | | | | | | |
| State Funding for Enrollment Growth | 41,536 | | 41,536 | | 41,536 | | 41,536 | | 41,536 | |
| Tuition Revenue | | | | | | | | | | |
| A. Gross Incremental Tuition Revenue | 55,000 | | 55,000 | | 55,000 | | 55,000 | | 55,000 | |
| B. Reductions to Incremental Tuition | | | | | | | | | | |
| C. Net Tuition Revenue (A-B) | 55,000 | | 55,000 | | 55,000 | | 55,000 | | 55,000 | |
| Program/Course Fees ($110/student) | 2,420 | | 2,420 | | 2,420 | | 2,420 | | 2,420 | |
| External Funds | | | | | | | | | | |
| Other Funds (please specify) | | | | | | | | | | |
| **TOTAL Estimated Incremental Revenue** | 98,956 | | 98,956 | | 98,956 | | 98,956 | | 98,956 | |
| Estimated Incremental **EXPENDITURES** | | | | | | | | | | |
| Personal Services | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** |
| Faculty | 1 | 54,600 | 1 | 56,238 | 1 | 57,925 | 1 | 57,925 | 1 | 57,925 |
| Staff (Shop Aide) | 0.5 | 14,000 | 0.5 | 14,420 | 0.5 | 14,853 | 0.5 | 14,853 | 0.5 | 14,853 |
| Operating Expenses | | 25,000 | | 25,750 | | 26,523 | | 27,318 | | 28,138 |
| Equipment | | | | | | | | | | |
| Start-up Expenditures | | | | | | | | | | |
| **TOTAL Estimated Incremental Expenditures** | | 93,600 | | 96,408 | | 99,300 | | 100,096 | | 100,915 |
| **Estimated Revenues Over/(Under) Expenditures** | | 5,356 | | 2,548 | | (344) | | (1,140) | | (1,959) |

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-1001+R0507** | **Date of Meeting:** | **May 30-June 1, 2007** |
| **Institution:** | **The University of Montana** | | |
| **Program Title:** | **Joint dual degree option consisting of a Masters in Business Adminstration and Doctorate in Physical Therapy (MBA/DPT) between the Schools of Business Administration and Physical Therapy and Rehabilitation Science.** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☐ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☒ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-1001+R0507 | Institution: The University of Montana |
| --- | --- |

**Specify Request:**

The University of Montana seeks permission to offer a new option for a dual degree consisting of a Masters in Business Administration and a Doctorate in Physical Therapy between the Schools of Business Administration and Physical Therapy and Rehabilitation Science.

# M O N T A N A  B O A R D  O F  R E G E N T S
## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

**Institution:** The University of Montana

**Program Title:** Joint dual degree option consiting of a Masters in Business Adminstration and Doctorate in Physical Therapy (MBA/DPT) between the Schools of Business Administration and Physical Therapy and Rehabilitation Science.

1. How does this program advance the campus' academic mission and fit priorities?

An MBA/DPT dual degree option is consistent with The University of Montana mission by offering a program that is responsive to the needs of Montanans and which offers a unique educational experience through the integration of two existing graduate degree programs. This dual degree option would provide a learning experience that would allow students to realize their potential and enter the work force with a complementary set of skills. Precedent for this type of dual degree option already exists on campus with the JD/MBA and MBA/Pharm.D. programs.

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

The MBA/DPT dual degree program would support several BOR goals and objectives. At minimum it would fit with the following goals and objectives:

A.2. - It would be an academic option that is focused around approved campus missions and is consistent with available resources.

B. - It would deliver a high quality, more affordable higher education experience available to qualified students.

B.3. - It would create a more affordable and efficient opportunity to earn two graduate degrees. We are able to offer this efficiency through the concept of reciprocity as each program will waive 8 credits while accepting 8 credits from the other program.

C. - Through the cooperative efforts of the Schools of Business Administration and Physical Therapy and Rehabilitation Science, we would be delivering higher education services in a manner that is efficient, coordinated, and more accessible to students.

D. - Given the challenges of delivering affordable and effective health care services, by graduating students from this dual degree program we would be responsive to market, employment, and economic development needs of the State and the nation as they pertain to health care.

3. How does this program support or advance Montana's needs and interests?

The creation of this dual degree option would further distinguish The University of Montana nationally, as we believe there is only one other university program in the county that offers something similar. There is a current and escalating shortage of physical therapists in the state and nation and there is a tremendous need for health care providers to serve in administrative capacity to develop and coordinate physical therapy and other health care services to the citizens of Montana.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

Given the uniqueness of this dual degree program and student interest, we anticiapte that we could increase our ability to recruit students from in and out of state. We anticipate that individuals graduating with an MBA/DPT dual degree would be highly recruited by health care organizations or be more likely to start their own businesses. There is reason to believe that with this degree, graduates would also have a higher earning capacity, eventually being self-employed business owners or serving in managerial positions.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | N/A FTE students |
| • Enrollments / year? | 1-4 |
| • Graduates / year? | 1-4 |
| • MT jobs / year? | ~15% annual growth in PT positions overall |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 0 |
| • Faculty FTE? | 0 |
| • Staff FTE? | 0 |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ _____

8. How will the campus fund the program?

This option does not require any new faculty, courses, facilities or financial resources. Courses required for the proposed option are offered already on a regular basis with the exception of one new course that will be developed (PT 691).

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

No internal reallocation of resources or personnel is necessary.

**Joint MBA/DPT Degree Option**

## 1. Objectives and Need

**1.1. Description of the Program:** The Schools of Business Administration and Physical Therapy and Rehabilitation Science propose the creation of a joint program resulting in a dual MBA/DPT degree option. This is the combining of two existing programs. A MBA/DPT dual degree program at The University of Montana would recognize the importance and need of educating a subset of health care providers with advanced skills and knowledge in business and administration content. The establishment of a joint MBA/DPT program will allow students the option to earn a dual degree in less time than it would take if both degrees were pursued separately. We are able to offer this efficiency through the concept of reciprocity as each program will adjust curriculums by 8 credits and accept 8 credits from the other. Students would have to meet each program's application requirements and be accepted into each program. Assigned advisors from each program would work closely with qualified students to assist them in creating appropriate curricular schedules.

Program objectives include:

- To provide students who have an interest in both the practice of physical therapy and business and administration a more efficient vehicle to earn both degrees.
- To help meet the demand for health care professionals with additional training in business and administration.
- To achieve additional recognition for The University of Montana and the School of Physical Therapy and Rehabilitation Science and the School of Business Administration as pioneering programs in developing unique educational and degree opportunities that meet student interests and societal needs.

**1.2. Need for the Program:** The creation of this dual degree option would further distinguish The University of Montana nationally, as we believe there is only one other university program in the county that offers something similar. A MBA/DPT dual degree program at The University of Montana would recognize the importance and need of educating a subset of health care providers with advanced skills and knowledge in business and administration content. The changing roles and need for health care providers with business and administrative abilities is well documented in the literature [1, 2, 3, 4, 5, 6, 7, 8]. Leaders in the physical therapy profession endorse this type of opportunity for students (see letter of support attached). Precedent for this type of dual degree program has been established nationally in other health care professions such as medicine and nursing. We are using the established MBA/Pharm.D. and JD/MBA dual degree joint programs here at The University of Montana as models for our proposal.

In a survey of 140 students enrolled in BaDM 100, twenty-three percent (23%) reported that they would be either strongly or somewhat interested in MBA/DPT joint program. Responses from first and second year students enrolled in the DPT program also support the creation of the program with 66% (N=50) responding as being strongly or somewhat interested in a joint program. Though these results may reflect an overly optimistic projection in the number of students that would actually enroll, the results of the surveys do indicate significant student interest.

**1.3. Additional Courses and Course Requirements:** Students completing this dual degree program will receive two separate degrees, the DPT and the MBA. Currently the DPT degree can be earned in two years-nine months and the MBA can be earned in two semesters and a summer. Both programs require the completion of an undergraduate degree and prerequisites prior to acceptance. Under the joint program, an exceptional student could complete both degrees in two years-nine months if the prerequisites from both programs were completed prior to acceptance. (See Appendix A for proposed joint program curriculum for the dual degree) Under this scenario, the student would be taking classes concurrently from both programs for much of the two years-nine months.

The concept of curricular reciprocity between the two schools would be the vehicle for gaining the efficiencies of the dual degree and allowing for a shorter time period to earn the degrees. Each program would waive 8 credits from its curriculum and accept 8 credits from the other program.

The 8 course credits the MBA program would accept as unrestricted elective credits are:

- PT 562 (1 credit) - Scholarly Project I;
- PT 671 (1 credit) - Research in Physical Therapy;
- PT 572 (2 credits) - Practice and Administration I;
- PT 673 (2 credits) - Practice and Administration II;
- PT 691 (2 credits) - PT Business Administration Practicum.*

*PT 691 is a new course that needs to be established. It is carved out of PT 690 – Clinical Internship IV and occurs simultaneously. Two different sections of PT 690 would need to be offered, one of which would be a 10 credit offering associated with the MBA/DPT student needing to complete PT 691.
(See Appendix B for course descriptions)

The School of Physical Therapy and Rehabilitation Science would accept 8 semester credits from the following courses:

- MBA 640 (2 credits) – Organizational Behavior;
- MBA 660 (2 credits) – Marketing Management;
- MBA 665 (2 credits) – Strategic Management Seminar;
- MBA 681 (2 credits) – Financial Management

(See Appendix C for course descriptions).

The School of Physical Therapy and Rehabilitation Science would waive 8 credits of the following courses:

- PT 679 (4 credits) - Trends in PT Practice electives;
- PT 530 (1 credit) - Introduction to Scholarly Project;
- PT 671 (1 credit) - Research in Physical Therapy I;
- PT 672 (2 credits) - Research in Physical Therapy II.

The School of Business Administration would adjust its degree requirements by substituting the 8 PT credits identified above for 8 credits of 600-level MBA unrestrictive electives.
The proposed MBA/DPT curriculum maintains the requirement for scholarly involvement that is imbedded in the DPT curriculum by keeping PT 562 – Scholarly Project I; by creating a variable credit option with a new 1 credit section for PT 671 – Research in Physical Therapy I and by introducing the proposed new course, PT 691 – PT Practice Management Practicum (see Appendix B for descriptions). Participating in PT 562 and 671, MBA/DPT students would be required to develop, identify, investigate, and present a proposal of a project that met advisor approval from both programs. PT 691 would be the vehicle for implementation of the scholarly project proposed through PT 562 and further developed in PT 671.

## 2. Adequacy, Accreditation and Assessment Issues

**2.1. Adequacy of Present Faculty, Facilities, Equipment and Library Holdings:**
Given that this program proposal consists of the merging of two existing degree options, no additional faculty, facilities, library holdings or equipment is anticipated.

**2.2. Accreditation Status:** The School of Physical Therapy and Rehabilitation Science is accredited by the Commission on Accreditation for Physical Therapy Education (CAPTE) through 2008. A self-study will be completed in preparation for the next cycle of accreditation that will include a report on the joint program (pending institutional and BOR approval). The proposed curricular adjustments for the School of Physical Therapy and Rehabilitation Science are not in conflict with accreditation status. The topics offered in PT 679 Trends in PT Practice that would be part of the course waived are electives. Students enrolled in the dual MBA/DPT program will complete a project commensurate with projects completed by students matriculating in the DPT curriculum. The capstone project completed by students in the MBA/DPT program is accomplished through the course sequence as described in Appendix A.

The School of Business Administration is accredited by AACSB International, and the accreditation process requires the submission of various reports on a periodic basis. UM's next Maintenance of Business Accreditation Review will occur during the 2009 – 2010 academic year. Two other joint programs (MBA/PharmD and JD/MBA) already have passed accreditation review by AACSB International; we are aware of no issues associated with this proposed new joint program that would jeopardize continued accreditation of UM's School of Business Administration.

**2.3. Assessment Issues:** The proposed joint program will be assessed through the current methodologies used by both Schools. They include: student, graduate, and employer surveys plus School curricular review. Each School will identify a faculty advisor that will meet regularly to review the assessment data and the MBA/DPT program in general.

## 3. Impact on Faculty, Costs, Students, and Other Departments and Campuses

**3.1. Additional Faculty Requirements:** No additional faculty members are required for the proposed joint program. One current faculty member from each School will assume responsibilities as advisor and coordinator.

**3.2. Advising:** A faculty member from both programs will be identified to work together for advising of students interested in and accepted into the dual degree program.

Potential scheduling conflicts between DPT and MBA courses will be resolved by admitting the joint MBA/DPT student to evening MBA classes. Two sections of each required MBA class are offered, one during the day and one at night, and this scheduling solution is currently used for both the joint JD/MBA and MBA/Pharm. D.

There may be opportunity for customizing the specific schedule of required courses to accommodate students who prefer and need a longer time frame to complete the dual degree option. We can also anticipate a scenario where a student may be accepted into the DPT program but still need to complete some of the MBA prerequisites. A customized curriculum may also be constructed to accommodate this situation and allow the student to complete needed pre-requisites and then after applying and being accepted into the MBA program, integrate MBA classes into their schedule. Advisors from both programs would work closely together to determine the most appropriate schedules.

**3.3. Impact on Facilities:** None

**3.4. Cost Analysis:** No additional expenses or revenues are anticipated. The School of Physical Therapy and Rehabilitation Science plans on keeping enrollment at the same level. The School of Business Administration also plans on maintaining its enrollment caps to accommodate this program. The development of new joint MBA degree programs with other professional schools is a national trend among AACSB accredited business schools today in view of several recent years of enrollment declines. These joint programs are seen as a means of attracting high-caliber students to help restore enrollment to the levels witnessed in the late 1990s.

**3.5. Relationship to other Campus Programs:** No programs outside of the School of Business Administration and Physical Therapy and Rehabilitation Science will be affected.

**3.6. Relationship to other Institutions:** The University of Montana is the only campus in the Montana University system to offer an MBA or degree in physical therapy. The respective Schools will utilize current communication mechanisms to include information about the MBA/DPT option to other Montana University System campuses and students to facilitate effective pre-requisite completion and successful application.

4. **Process Leading to Submission of Proposal:** This proposal has been reviewed and approved by the faculty and Deans of the Schools of Business Administration and Physical Therapy and Rehabilitation Science. With such approval, the proposal advances to the office of the Provost on The University of Montana Campus and from there through the proper channels for review and approval by the Board of Regents of the Montana University System.

**References**

1. Ahadial N. (2002) Demand for college graduates/attributes healthcare organizations seek in recruits in accounting. Career Development International. 7(3), 134-141

2. Blau R et al. (2002). The experiences of providing PT in a changing healthcare environment. Physical Therapy. 82, 648-657.

3. Casebeer AL, Hannah KJ. (1998). The process of change related to health policy shift: reforming a health care system. International Journal of Public Sector Management. 11(7), 566-582.

4. Lopopolo RB. (1999). Hospital restructuring and the changing nature of the physical therapist's role. Physical Therapy. 79, 171-185.

5. Lopopolo RB. (2002). The relationship of role-related variables to job satisfaction/commitment to the org. in a restructured hospital environment. Physical Therapy. 82, 984-999.

6. Lopopolo RB, Schafer DS, Nosse LJ. (2004). Leadership, administration, management, and professionalism (LAMP) in physical therapy: a delphi study. Physical Therapy. 84(2), 137-150.

7. Siddigui J, Kleiner BH. (1998). Human resource management in the healthcare industry. Health Manpower Management. 24(4), 143-147

8. Thredkeld AJ, Jensen GEM, Royee CB. (1999). The clinical doctorate: a framework for analysis in PT education. Physical Therapy. 79(6). 156-173.

**Appendix A**: Proposed two year-nine month joint DPT/MBA schedule for students that have completed the prerequisite requirements and have been accepted into both the MBA and DPT degree programs.

**First Year:**

| | | | |
|---|---|---|---|
| **Fall – Physical Therapy Courses - Required** | | | |
| PT 503 Physical Therapy and the Health Care System | | 4 | |
| PT 510 Applied Clinical Anatomy and Kinesiology | | 4 | |
| PT 511 Applied Clinical Anatomy and Kinesiology Laboratory | | 1 | |
| PT 516 Musculoskeletal Evaluation I | | 5 | |
| PT 526 Physical Therapy Interventions I | | 4 | |
| PT 529 Biomechanics and Exercise Interventions | | 2 | total: 20 |
| **Spring - Physical Therapy Courses – Required** | | | |
| PT 519 Musculoskeletal Evaluation II | 5 | | |
| PT 520 Motor Development Through the Life Span | | 3 | |
| PT 527 Electrophysiological Testing and Therapeutics | 2 | | |
| PT 528 Physical Therapy Interventions II | | 4 | |
| PT 536 Neurosciences for the Health Professions | | 5 | |
| PT 582 Clinical Clerkship | | 1 | total: 20 |
| **Summer - Physical Therapy Courses – Required** | | | |
| PT 587 Clinical Internship I | | 4 | total: 4 |
| **Summer – MBA Courses** | | | |
| none | | | |

**Second Year:**

| | | | |
|---|---|---|---|
| **Fall - Physical Therapy Courses – Required** | | | |
| PT 525 Clinical Medicine and Pharmacology | | 3 | |
| PT 561 Research Methods in Physical Therapy | 2 | | |
| PT 562 Scholarly Project I | | 1 | |
| PT 563 Cardiopulmonary Physical Therapy and Pharmacology | 3 | | |
| PT 565 Physical Therapy for Children | 2 | | |
| PT 566 Advanced Anatomy Laboratory | 1 | | |
| PT 567 Neurorehabilitation I | | 3 | |
| PT 569 Orthopedic Physical Therapy I | 2 | | |
| PT 570 Psychology of Illness and Disability | | 2 | (subtotal: 19) |
| **Fall – MBA Courses** | | | |
| MBA 601 Career and Leadership Skills (orientation week) | | 1 | total: 20 |
| **Spring – Physical Therapy Courses - Required** | | | |
| PT 588 Clinical Internship II | | 4 | |
| PT 568 Neurorehabilitation II | | 2 | |
| PT 671 Research in Physical Therapy | 1 | | |
| PT 572 Practice and Administration | | 2 | |
| PT 573 Orthopedic Physical Therapy II | 1 | | |
| PT 575 Physical Therapy Interventions III | | 4 | |
| PT 576 Synthesis of Clinical Evaluation and Intervention | 1 | | |
| PT 577 Physical Therapy Interventions IV | | 4 | (subtotal: 19) |
| **Spring – MBA Courses** | | | |
| MBA 694 Seminar (unrestricted elective) | 1 | total: 20 | |

**Summer - Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 589 Clinical Internship III * | | 5 | |
| **Summer – MBA Courses** | | | |
| 2 credits each from the following courses | | | |
| MBA 645 Interpersonal Perspective Seminar | 2 | | |
| MBA 655 Technology Perspective Seminar | | 2 | total: 9 |

**Third Year:**

**Fall - Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 626 Primary Care | | 3 | |
| PT 627 Prevention and Wellness for Physical Therapist | 2 | | |
| PT 673 Practice and Administration II | 2 | | |
| PT 676 Clinical Mastery | 4 | | |
| | | | (subtotal: 11) |
| **Fall – MBA Courses** | | | |
| MBA 694 Competitive Strategy | 1 | | |
| IS 574 Management Information Systems | | 2 | |
| MBA 640 Organizational Behavior | | 2 | |
| MBA 660 Marketing Management | | 2 | |
| FIN 681 Financial Management | 2 | total: 20 | |

**Spring – Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 690 Clinical Internship IV | | 10 | |
| PT 691 Business and Administration Practicum** | | 2 | (subtotal: 12) |

**Spring – MBA Courses**

| | | | |
|---|---|---|---|
| MBA 603 Integrated Project | | 1 | |
| MBA 665 Strategic Management Seminar | | 2 | |
| MBA 685 International Business | 2 | | |
| ACCT 605 Administrative (accounting) Controls | 2 | | |
| IS 650 Quantitative Analysis | | 2 | total: 21 |
| | | | Grand total = 134 |

* MBA/DPT Students would have priority for session placement and/or location in Missoula area for their PT 589 internship to allow for attending MBA summer courses.

** PT 691 is a proposed 2 cr. class to be included in the course credits accepted by the MBA program for its degree requirements.

**Appendix B**: Classes that the MBA program will accept from the DPT program in lieu of its 8 unrestricted electives:

**PT 562 Scholarly Project I** (1 cr.) Students enrolled in a MBA/DPT dual degree program will identify, develop, research and present a proposal for a research or special project. Appropriate topics would be linked to the management and administration of PT services. Students would have advisors from both programs. Topic must be approved by faculty advisors. Completion of project would occur during PT 691.

**PT 572 Practice and Administration** (2 cr.) Prerequisite consent of instructor. Organization and practice management issues of the physical therapy clinic with emphases on the clinician's role and responsibilities regarding supervision, billing, marketing, etc.

**PT 671 (Section II)* Research in Physical Therapy I** (1 cr.) (would be a proposed new section that would have to be accepted. Section I is 2 credits) Directed scholarly activity with faculty advisor which may include continued work on literature search, methodology development and data collection.

**PT 673 Advanced Practice and Administration** (2 cr.) This will be a capstone course in the area of practice and administration building off of content covered in PT 503 and 572. The content will not only better prepare the student in the role of clinician in today's practice environment, it will also give them knowledge and skills to serve as a manager or owner of rehabilitation services. The course will be a mixture of faculty lectures, guest lectures, student projects and presentations, and discussions. It will include a review of the pertinent literature to lay a foundation for an understanding of the best evidence to support core practice management processes and human resource management. Projects will be designed for practical application. Content emphasis will be in clinical practice management and include program development, human resource management, private practice ownership, entrepreneurship, leadership, technology associated with practice management, and resource utilization.

**PT 691 PT Business Administration Practicum** ** **(**2 cr.) This customized experience is tailored to the unique professional development interests and needs of the student pursuing the dual MBA/DPT. This course is to be done in conjunction and integrated with PT 690 Clinical Internship IV. The student and the Academic Coordinator of Clinical Education (ACCE), along with each program's MBA/DPT advisors are expected to work closely in developing the goals for the Practicum. The ACCE will work with the student to find a clinical site to meet the student's goals and interact with the clinical site's clinical coordinator to facilitate the activities needed for the achievement of the practicum goals. Practicum goals may include time spent shadowing individuals and assisting with responsibilities for marketing, human resource management, program development, billing and collections, data management, quality assurance and risk management. A scholarly project related to one of these or another appropriate topic will be required. Through PT 562 – Scholarly Project I and PT 671 – Research in Physical Therapy, students will have identified, investigated, developed and presented a formal project proposal acceptable to each programs' advisors. PT 691 will be the vehicle to carry out the proposal objectives with the input and cooperation of the clinical site representatives. The student is expected to deliver the results of the project to the professional staff at the clinical internship site prior to completion of the internship. A presentation will also be required to be given to the faculty and student peers during the final exam week at the University. The faculty advisors will evaluate the written report and oral presentation. ***

* This course would need to be changed to a variable (1-2) credit offering and 2 sections. Section II would be for MBA/DPT students and be a 1 credit offering.

** PT 691 is a proposed class to be included in the course credits accepted by the MBA program for its degree requirements.

*** A more concise course description would be developed for the catalogue.

**Appendix C:** Classes that the DPT program will accept from the MBA program in lieu of 4 credits of PT 679 Trends in PT Practice electives, PT 562 Scholarly Project I (1 credit), 1 credit of PT 671 Research in Physical Therapy I and PT 672 Research in Physical Therapy II (2 credits):

**MBA 640 - Organizational Behavior (2 cr.)**
Application of behavioral theories to organizational settings, particularly as they pertain to human resources and to relevant problems faced by practicing managers. Emphasis placed on tools that managers can use to make their endeavors more productive.

**MBA 660 - Marketing Management (2 cr.)**
Covers marketing decisions faced by managers in a variety of business settings including large corporations, small businesses and not-for-profit organizations. Requires completion of foundation program or equivalent and admission to the MBA Program. Offered every autumn semester. Evening sections delivered on interactive television to designated sites in the state.

**MBA 665 – Strategic Management Seminar (2 cr.)**
Selected topics covering such issues as an analysis of the firm within its industry and structure of the industry, competitive positioning and competitor analysis, decision making under conditions of uncertainty; and developing a competitive advantage in international markets. Offered every spring semester. Evening sections delivered over interactive television.

**MBA 681 - Financial Management (2 cr.)**
Covers advanced theory and analysis in corporate financial management. Requires completion of foundation program or equivalent and admission to the MBA or Masters of Accountancy Program. Offered every autumn semester. Evening sections delivered on interactive television to designated sites in the state.

# M O N T A N A  B O A R D  O F  R E G E N T S
## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

**Institution:** The University of Montana

**Program Title:** Joint dual degree option consiting of a Masters in Business Adminstration and Doctorate in Physical Therapy (MBA/DPT) between the Schools of Business Administration and Physical Therapy and Rehabilitation Science.

1. How does this program advance the campus' academic mission and fit priorities?

An MBA/DPT dual degree option is consistent with The University of Montana mission by offering a program that is responsive to the needs of Montanans and which offers a unique educational experience through the integration of two existing graduate degree programs. This dual degree option would provide a learning experience that would allow students to realize their potential and enter the work force with a complementary set of skills. Precedent for this type of dual degree option already exists on campus with the JD/MBA and MBA/Pharm.D. programs.

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

The MBA/DPT dual degree program would support several BOR goals and objectives. At minimum it would fit with the following goals and objectives:

A.2. - It would be an academic option that is focused around approved campus missions and is consistent with available resources.

B. - It would deliver a high quality, more affordable higher education experience available to qualified students.

B.3. - It would create a more affordable and efficient opportunity to earn two graduate degrees. We are able to offer this efficiency through the concept of reciprocity as each program will waive 8 credits while accepting 8 credits from the other program.

C. - Through the cooperative efforts of the Schools of Business Administration and Physical Therapy and Rehabilitation Science, we would be delivering higher education services in a manner that is efficient, coordinated, and more accessible to students.

D. - Given the challenges of delivering affordable and effective health care services, by graduating students from this dual degree program we would be responsive to market, employment, and economic development needs of the State and the nation as they pertain to health care.

3. How does this program support or advance Montana's needs and interests?

The creation of this dual degree option would further distinguish The University of Montana nationally, as we believe there is only one other university program in the county that offers something similar. There is a current and escalating shortage of physical therapists in the state and nation and there is a tremendous need for health care providers to serve in administrative capacity to develop and coordinate physical therapy and other health care services to the citizens of Montana.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

Given the uniqueness of this dual degree program and student interest, we anticiapte that we could increase our ability to recruit students from in and out of state. We anticipate that individuals graduating with an MBA/DPT dual degree would be highly recruited by health care organizations or be more likely to start their own businesses. There is reason to believe that with this degree, graduates would also have a higher earning capacity, eventually being self-employed business owners or serving in managerial positions.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | N/A FTE students |
| • Enrollments / year? | 1-4 |
| • Graduates / year? | 1-4 |
| • MT jobs / year? | ~15% annual growth in PT positions overall |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 0 |
| • Faculty FTE? | 0 |
| • Staff FTE? | 0 |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ _____

8. How will the campus fund the program?

This option does not require any new faculty, courses, facilities or financial resources. Courses required for the proposed option are offered already on a regular basis with the exception of one new course that will be developed (PT 691).

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

No internal reallocation of resources or personnel is necessary.

**Joint MBA/DPT Degree Option**

## 1. Objectives and Need

**1.1. Description of the Program:** The Schools of Business Administration and Physical Therapy and Rehabilitation Science propose the creation of a joint program resulting in a dual MBA/DPT degree option. This is the combining of two existing programs. A MBA/DPT dual degree program at The University of Montana would recognize the importance and need of educating a subset of health care providers with advanced skills and knowledge in business and administration content. The establishment of a joint MBA/DPT program will allow students the option to earn a dual degree in less time than it would take if both degrees were pursued separately. We are able to offer this efficiency through the concept of reciprocity as each program will adjust curriculums by 8 credits and accept 8 credits from the other. Students would have to meet each program's application requirements and be accepted into each program. Assigned advisors from each program would work closely with qualified students to assist them in creating appropriate curricular schedules.

Program objectives include:

- To provide students who have an interest in both the practice of physical therapy and business and administration a more efficient vehicle to earn both degrees.
- To help meet the demand for health care professionals with additional training in business and administration.
- To achieve additional recognition for The University of Montana and the School of Physical Therapy and Rehabilitation Science and the School of Business Administration as pioneering programs in developing unique educational and degree opportunities that meet student interests and societal needs.

**1.2. Need for the Program:** The creation of this dual degree option would further distinguish The University of Montana nationally, as we believe there is only one other university program in the county that offers something similar. A MBA/DPT dual degree program at The University of Montana would recognize the importance and need of educating a subset of health care providers with advanced skills and knowledge in business and administration content. The changing roles and need for health care providers with business and administrative abilities is well documented in the literature [1, 2, 3, 4, 5, 6, 7, 8]. Leaders in the physical therapy profession endorse this type of opportunity for students (see letter of support attached). Precedent for this type of dual degree program has been established nationally in other health care professions such as medicine and nursing. We are using the established MBA/Pharm.D. and JD/MBA dual degree joint programs here at The University of Montana as models for our proposal.

In a survey of 140 students enrolled in BaDM 100, twenty-three percent (23%) reported that they would be either strongly or somewhat interested in MBA/DPT joint program. Responses from first and second year students enrolled in the DPT program also support the creation of the program with 66% (N=50) responding as being strongly or somewhat interested in a joint program. Though these results may reflect an overly optimistic projection in the number of students that would actually enroll, the results of the surveys do indicate significant student interest.

**1.3. Additional Courses and Course Requirements:** Students completing this dual degree program will receive two separate degrees, the DPT and the MBA. Currently the DPT degree can be earned in two years-nine months and the MBA can be earned in two semesters and a summer. Both programs require the completion of an undergraduate degree and prerequisites prior to acceptance. Under the joint program, an exceptional student could complete both degrees in two years-nine months if the prerequisites from both programs were completed prior to acceptance. (See Appendix A for proposed joint program curriculum for the dual degree) Under this scenario, the student would be taking classes concurrently from both programs for much of the two years-nine months.

The concept of curricular reciprocity between the two schools would be the vehicle for gaining the efficiencies of the dual degree and allowing for a shorter time period to earn the degrees. Each program would waive 8 credits from its curriculum and accept 8 credits from the other program.

The 8 course credits the MBA program would accept as unrestricted elective credits are:

- PT 562 (1 credit) - Scholarly Project I;
- PT 671 (1 credit) - Research in Physical Therapy;
- PT 572 (2 credits) - Practice and Administration I;
- PT 673 (2 credits) - Practice and Administration II;
- PT 691 (2 credits) - PT Business Administration Practicum.*

*PT 691 is a new course that needs to be established. It is carved out of PT 690 – Clinical Internship IV and occurs simultaneously. Two different sections of PT 690 would need to be offered, one of which would be a 10 credit offering associated with the MBA/DPT student needing to complete PT 691.
(See Appendix B for course descriptions)

The School of Physical Therapy and Rehabilitation Science would accept 8 semester credits from the following courses:

- MBA 640 (2 credits) – Organizational Behavior;
- MBA 660 (2 credits) – Marketing Management;
- MBA 665 (2 credits) – Strategic Management Seminar;
- MBA 681 (2 credits) – Financial Management

(See Appendix C for course descriptions).

The School of Physical Therapy and Rehabilitation Science would waive 8 credits of the following courses:

- PT 679 (4 credits) - Trends in PT Practice electives;
- PT 530 (1 credit) - Introduction to Scholarly Project;
- PT 671 (1 credit) - Research in Physical Therapy I;
- PT 672 (2 credits) - Research in Physical Therapy II.

The School of Business Administration would adjust its degree requirements by substituting the 8 PT credits identified above for 8 credits of 600-level MBA unrestrictive electives.
The proposed MBA/DPT curriculum maintains the requirement for scholarly involvement that is imbedded in the DPT curriculum by keeping PT 562 – Scholarly Project I; by creating a variable credit option with a new 1 credit section for PT 671 – Research in Physical Therapy I and by introducing the proposed new course, PT 691 – PT Practice Management Practicum (see Appendix B for descriptions). Participating in PT 562 and 671, MBA/DPT students would be required to develop, identify, investigate, and present a proposal of a project that met advisor approval from both programs. PT 691 would be the vehicle for implementation of the scholarly project proposed through PT 562 and further developed in PT 671.

## 2. Adequacy, Accreditation and Assessment Issues

**2.1. Adequacy of Present Faculty, Facilities, Equipment and Library Holdings:**
Given that this program proposal consists of the merging of two existing degree options, no additional faculty, facilities, library holdings or equipment is anticipated.

**2.2. Accreditation Status:** The School of Physical Therapy and Rehabilitation Science is accredited by the Commission on Accreditation for Physical Therapy Education (CAPTE) through 2008. A self-study will be completed in preparation for the next cycle of accreditation that will include a report on the joint program (pending institutional and BOR approval). The proposed curricular adjustments for the School of Physical Therapy and Rehabilitation Science are not in conflict with accreditation status. The topics offered in PT 679 Trends in PT Practice that would be part of the course waived are electives. Students enrolled in the dual MBA/DPT program will complete a project commensurate with projects completed by students matriculating in the DPT curriculum. The capstone project completed by students in the MBA/DPT program is accomplished through the course sequence as described in Appendix A.

The School of Business Administration is accredited by AACSB International, and the accreditation process requires the submission of various reports on a periodic basis. UM's next Maintenance of Business Accreditation Review will occur during the 2009 – 2010 academic year. Two other joint programs (MBA/PharmD and JD/MBA) already have passed accreditation review by AACSB International; we are aware of no issues associated with this proposed new joint program that would jeopardize continued accreditation of UM's School of Business Administration.

**2.3. Assessment Issues:** The proposed joint program will be assessed through the current methodologies used by both Schools. They include: student, graduate, and employer surveys plus School curricular review. Each School will identify a faculty advisor that will meet regularly to review the assessment data and the MBA/DPT program in general.

## 3. Impact on Faculty, Costs, Students, and Other Departments and Campuses

**3.1. Additional Faculty Requirements:** No additional faculty members are required for the proposed joint program. One current faculty member from each School will assume responsibilities as advisor and coordinator.

**3.2. Advising:** A faculty member from both programs will be identified to work together for advising of students interested in and accepted into the dual degree program.

Potential scheduling conflicts between DPT and MBA courses will be resolved by admitting the joint MBA/DPT student to evening MBA classes. Two sections of each required MBA class are offered, one during the day and one at night, and this scheduling solution is currently used for both the joint JD/MBA and MBA/Pharm. D.

There may be opportunity for customizing the specific schedule of required courses to accommodate students who prefer and need a longer time frame to complete the dual degree option. We can also anticipate a scenario where a student may be accepted into the DPT program but still need to complete some of the MBA prerequisites. A customized curriculum may also be constructed to accommodate this situation and allow the student to complete needed pre-requisites and then after applying and being accepted into the MBA program, integrate MBA classes into their schedule. Advisors from both programs would work closely together to determine the most appropriate schedules.

**3.3. Impact on Facilities:** None

**3.4. Cost Analysis:** No additional expenses or revenues are anticipated. The School of Physical Therapy and Rehabilitation Science plans on keeping enrollment at the same level. The School of Business Administration also plans on maintaining its enrollment caps to accommodate this program. The development of new joint MBA degree programs with other professional schools is a national trend among AACSB accredited business schools today in view of several recent years of enrollment declines. These joint programs are seen as a means of attracting high-caliber students to help restore enrollment to the levels witnessed in the late 1990s.

**3.5. Relationship to other Campus Programs:** No programs outside of the School of Business Administration and Physical Therapy and Rehabilitation Science will be affected.

**3.6. Relationship to other Institutions:** The University of Montana is the only campus in the Montana University system to offer an MBA or degree in physical therapy. The respective Schools will utilize current communication mechanisms to include information about the MBA/DPT option to other Montana University System campuses and students to facilitate effective pre-requisite completion and successful application.

4. **Process Leading to Submission of Proposal:** This proposal has been reviewed and approved by the faculty and Deans of the Schools of Business Administration and Physical Therapy and Rehabilitation Science. With such approval, the proposal advances to the office of the Provost on The University of Montana Campus and from there through the proper channels for review and approval by the Board of Regents of the Montana University System.

**References**

1. Ahadial N. (2002) Demand for college graduates/attributes healthcare organizations seek in recruits in accounting. Career Development International. 7(3), 134-141

2. Blau R et al. (2002). The experiences of providing PT in a changing healthcare environment. Physical Therapy. 82, 648-657.

3. Casebeer AL, Hannah KJ. (1998). The process of change related to health policy shift: reforming a health care system. International Journal of Public Sector Management. 11(7), 566-582.

4. Lopopolo RB. (1999). Hospital restructuring and the changing nature of the physical therapist's role. Physical Therapy. 79, 171-185.

5. Lopopolo RB. (2002). The relationship of role-related variables to job satisfaction/commitment to the org. in a restructured hospital environment. Physical Therapy. 82, 984-999.

6. Lopopolo RB, Schafer DS, Nosse LJ. (2004). Leadership, administration, management, and professionalism (LAMP) in physical therapy: a delphi study. Physical Therapy. 84(2), 137-150.

7. Siddigui J, Kleiner BH. (1998). Human resource management in the healthcare industry. Health Manpower Management. 24(4), 143-147

8. Thredkeld AJ, Jensen GEM, Royee CB. (1999). The clinical doctorate: a framework for analysis in PT education. Physical Therapy. 79(6). 156-173.

**Appendix A**: Proposed two year-nine month joint DPT/MBA schedule for students that have completed the prerequisite requirements and have been accepted into both the MBA and DPT degree programs.

**First Year:**

| | | | |
|---|---|---|---|
| **Fall – Physical Therapy Courses - Required** | | | |
| PT 503 Physical Therapy and the Health Care System | | 4 | |
| PT 510 Applied Clinical Anatomy and Kinesiology | | 4 | |
| PT 511 Applied Clinical Anatomy and Kinesiology Laboratory | | 1 | |
| PT 516 Musculoskeletal Evaluation I | | 5 | |
| PT 526 Physical Therapy Interventions I | | 4 | |
| PT 529 Biomechanics and Exercise Interventions | | 2 | total: 20 |
| **Spring - Physical Therapy Courses – Required** | | | |
| PT 519 Musculoskeletal Evaluation II | 5 | | |
| PT 520 Motor Development Through the Life Span | | 3 | |
| PT 527 Electrophysiological Testing and Therapeutics | 2 | | |
| PT 528 Physical Therapy Interventions II | | 4 | |
| PT 536 Neurosciences for the Health Professions | | 5 | |
| PT 582 Clinical Clerkship | | 1 | total: 20 |
| **Summer - Physical Therapy Courses – Required** | | | |
| PT 587 Clinical Internship I | | 4 | total: 4 |
| **Summer – MBA Courses** | | | |
| none | | | |

**Second Year:**

| | | | |
|---|---|---|---|
| **Fall - Physical Therapy Courses – Required** | | | |
| PT 525 Clinical Medicine and Pharmacology | | 3 | |
| PT 561 Research Methods in Physical Therapy | 2 | | |
| PT 562 Scholarly Project I | | 1 | |
| PT 563 Cardiopulmonary Physical Therapy and Pharmacology | 3 | | |
| PT 565 Physical Therapy for Children | 2 | | |
| PT 566 Advanced Anatomy Laboratory | 1 | | |
| PT 567 Neurorehabilitation I | | 3 | |
| PT 569 Orthopedic Physical Therapy I | 2 | | |
| PT 570 Psychology of Illness and Disability | | 2 | (subtotal: 19) |
| **Fall – MBA Courses** | | | |
| MBA 601 Career and Leadership Skills (orientation week) | | 1 | total: 20 |
| **Spring – Physical Therapy Courses - Required** | | | |
| PT 588 Clinical Internship II | | 4 | |
| PT 568 Neurorehabilitation II | | 2 | |
| PT 671 Research in Physical Therapy | 1 | | |
| PT 572 Practice and Administration | | 2 | |
| PT 573 Orthopedic Physical Therapy II | 1 | | |
| PT 575 Physical Therapy Interventions III | | 4 | |
| PT 576 Synthesis of Clinical Evaluation and Intervention | 1 | | |
| PT 577 Physical Therapy Interventions IV | | 4 | (subtotal: 19) |
| **Spring – MBA Courses** | | | |
| MBA 694 Seminar (unrestricted elective) | 1 | total: 20 | |

**Summer - Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 589 Clinical Internship III * | | 5 | |
| **Summer – MBA Courses** | | | |
| 2 credits each from the following courses | | | |
| MBA 645 Interpersonal Perspective Seminar | 2 | | |
| MBA 655 Technology Perspective Seminar | | 2 | total: 9 |

**Third Year:**

**Fall - Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 626 Primary Care | | 3 | |
| PT 627 Prevention and Wellness for Physical Therapist | 2 | | |
| PT 673 Practice and Administration II | 2 | | |
| PT 676 Clinical Mastery | 4 | | |
| | | | (subtotal: 11) |
| **Fall – MBA Courses** | | | |
| MBA 694 Competitive Strategy | 1 | | |
| IS 574 Management Information Systems | | 2 | |
| MBA 640 Organizational Behavior | | 2 | |
| MBA 660 Marketing Management | | 2 | |
| FIN 681 Financial Management | 2 | total: 20 | |

**Spring – Physical Therapy Courses – Required**

| | | | |
|---|---|---|---|
| PT 690 Clinical Internship IV | | 10 | |
| PT 691 Business and Administration Practicum** | | 2 | (subtotal: 12) |

**Spring – MBA Courses**

| | | | |
|---|---|---|---|
| MBA 603 Integrated Project | | 1 | |
| MBA 665 Strategic Management Seminar | | 2 | |
| MBA 685 International Business | 2 | | |
| ACCT 605 Administrative (accounting) Controls | 2 | | |
| IS 650 Quantitative Analysis | | 2 | total: 21 |
| | | | Grand total = 134 |

* MBA/DPT Students would have priority for session placement and/or location in Missoula area for their PT 589 internship to allow for attending MBA summer courses.

** PT 691 is a proposed 2 cr. class to be included in the course credits accepted by the MBA program for its degree requirements.

**Appendix B**: Classes that the MBA program will accept from the DPT program in lieu of its 8 unrestricted electives:

**PT 562 Scholarly Project I** (1 cr.) Students enrolled in a MBA/DPT dual degree program will identify, develop, research and present a proposal for a research or special project. Appropriate topics would be linked to the management and administration of PT services. Students would have advisors from both programs. Topic must be approved by faculty advisors. Completion of project would occur during PT 691.

**PT 572 Practice and Administration** (2 cr.) Prerequisite consent of instructor. Organization and practice management issues of the physical therapy clinic with emphases on the clinician's role and responsibilities regarding supervision, billing, marketing, etc.

**PT 671 (Section II)* Research in Physical Therapy I** (1 cr.) (would be a proposed new section that would have to be accepted. Section I is 2 credits) Directed scholarly activity with faculty advisor which may include continued work on literature search, methodology development and data collection.

**PT 673 Advanced Practice and Administration** (2 cr.) This will be a capstone course in the area of practice and administration building off of content covered in PT 503 and 572. The content will not only better prepare the student in the role of clinician in today's practice environment, it will also give them knowledge and skills to serve as a manager or owner of rehabilitation services. The course will be a mixture of faculty lectures, guest lectures, student projects and presentations, and discussions. It will include a review of the pertinent literature to lay a foundation for an understanding of the best evidence to support core practice management processes and human resource management. Projects will be designed for practical application. Content emphasis will be in clinical practice management and include program development, human resource management, private practice ownership, entrepreneurship, leadership, technology associated with practice management, and resource utilization.

**PT 691 PT Business Administration Practicum** ** **(**2 cr.) This customized experience is tailored to the unique professional development interests and needs of the student pursuing the dual MBA/DPT. This course is to be done in conjunction and integrated with PT 690 Clinical Internship IV. The student and the Academic Coordinator of Clinical Education (ACCE), along with each program's MBA/DPT advisors are expected to work closely in developing the goals for the Practicum. The ACCE will work with the student to find a clinical site to meet the student's goals and interact with the clinical site's clinical coordinator to facilitate the activities needed for the achievement of the practicum goals. Practicum goals may include time spent shadowing individuals and assisting with responsibilities for marketing, human resource management, program development, billing and collections, data management, quality assurance and risk management. A scholarly project related to one of these or another appropriate topic will be required. Through PT 562 – Scholarly Project I and PT 671 – Research in Physical Therapy, students will have identified, investigated, developed and presented a formal project proposal acceptable to each programs' advisors. PT 691 will be the vehicle to carry out the proposal objectives with the input and cooperation of the clinical site representatives. The student is expected to deliver the results of the project to the professional staff at the clinical internship site prior to completion of the internship. A presentation will also be required to be given to the faculty and student peers during the final exam week at the University. The faculty advisors will evaluate the written report and oral presentation. ***

* This course would need to be changed to a variable (1-2) credit offering and 2 sections. Section II would be for MBA/DPT students and be a 1 credit offering.

** PT 691 is a proposed class to be included in the course credits accepted by the MBA program for its degree requirements.

*** A more concise course description would be developed for the catalogue.

**Appendix C:** Classes that the DPT program will accept from the MBA program in lieu of 4 credits of PT 679 Trends in PT Practice electives, PT 562 Scholarly Project I (1 credit), 1 credit of PT 671 Research in Physical Therapy I and PT 672 Research in Physical Therapy II (2 credits):

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Covers marketing decisions faced by managers in a variety of business settings including large corporations, small businesses and not-for-profit organizations. Requires completion of foundation program or equivalent and admission to the MBA Program. Offered every autumn semester. Evening sections delivered on interactive television to designated sites in the state.

**MBA 665 – Strategic Management Seminar (2 cr.)**
Selected topics covering such issues as an analysis of the firm within its industry and structure of the industry, competitive positioning and competitor analysis, decision making under conditions of uncertainty; and developing a competitive advantage in international markets. Offered every spring semester. Evening sections delivered over interactive television.

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# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-1009+R0507** | **Date of Meeting:** | **May 30-June 1, 2007** |
| **Institution:** | **The University of Montana - Missoula** | | |
| **Program Title:** | **Field Ecology Option In Biology** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☐ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☒ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-1009+R0507 | Institution: The University of Montana - Missoula |
|---|---|

**Specify Request:**

The University of Montana – Missoula requests permission to establish a “Field Ecology" option in Biology using lecture and laboratory courses on campus and field courses at Flathead Lake Biological Station. Whether on campus or at the biological station, all courses are already being taught on a regular basis.

# M O N T A N A  B O A R D  O F  R E G E N T S

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

| Item No.: 135-1009-R0507 | Institution: The University of Montana - Missoula |
|---|---|

1. How does this program advance the campus' academic mission and fit priorities?

The overall mission of the Montana University system is to "prepare students for success by creating an environment of ideas and excellence that nurtures intellectual, social, economic, and cultural development." This mission is enhanced by the Field Ecology Option in Biology that directly involves the Flathead Lake Biological Station in a functioning degree Option at the university. It gives studnets at UM-M the unique opportunity to organize their curriculum around the excellence that has developed at the Station and obtain hands-on experience in the theory and practice of Field Ecology.

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

The availability of this Option is concistent with the Vision and Goals of the Montana University System especially with regard to fostering scientific development, while being responsible to market, employment, and economic development needs.

3. How does this program support or advance Montana's needs and interests?

The Option offers students educational opportunities and provides valuable applied research experience that can be used to respond to critical environmental changes occurring in the state and nation.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

Graduates of the program will be competitive for positions in the growing area of Field Ecology and management of resources.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | N/A FTE students |
| • Enrollments / year? | 10; after 4 years, 20-25 |
| • Graduates / year? | 5 |
| • MT jobs / year? | 5 |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ N/A |
| • Faculty FTE? | no new faculty (30+ faculty involved in the program) |
| • Staff FTE? | no new staff |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ _____

8. How will the campus fund the program?

UM-M is using the resources available at the Flathead Lake Biological Station to augment the experience of students already majoring in the Division of Biological Sciences. The coursework is currently offered at the Station and/or The University of Montana--Missoula campus.

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

## I. Objectives and Need

**Description of Program:** The University of Montana—Missoula proposes to introduce an undergraduate Option in Field Ecology in the Division of Biological Sciences. This will be a rigorous biology degree with selected coursework outside the Division of Biological Sciences. The focal point of the program is built around a series of field courses at Flathead Lake Biological Station (FLBS).

The Flathead Lake Biological Station, a fully functional part of The University of Montana - Missoula since 1899, has developed during the past 25 years into an internationally recognized center for interdisciplinary research and teaching in freshwater ecology and terrestrial ecology of watersheds. The Flathead Lake Biological Station provides a truly unique educational experience for undergraduate students where the field of ecology is experienced firsthand – in the field.

The Field Ecology option will provide students with the background necessary to be employable, productive field ecologists. The program will prepare graduates for positions in state and federal agencies dealing with environmental issues, as well as most entry-level positions in general field ecology. Graduates will also have the coursework and exposure to research and research experience opportunities required for acceptance into graduate programs in either aquatic or terrestrial ecology.

The Field Ecology option includes the core chemistry, physics, biology and mathematics courses required for all Biology degree options. Additional requirements for the Field Ecology option include either the aquatic ecology series of courses or the terrestrial ecology series of courses, both series only available at FLBS. These courses have been developed at FLBS and have been taught in their current form for over six years. (In several cases the courses have been taught at FLBS for several decades, with continual updating). This program utilizes existing resources for all courses, seminars and research experiences, and complements existing B.A. and M.A. degrees within the Division of Biological Sciences.

### 2. Documented Need for the Program:

The overall mission of the Montana University System is to "…prepare students for success by creating an environment of ideas and excellence that nurtures intellectual, social, economic, and cultural development." This mission is enhanced by the Field Ecology option in Biology that directly involves FLBS in a functioning degree option at the university. FLBS has become one of the world-class leaders in freshwater science and ecology. This program will give a suite of biology students at The University of Montana - Missoula the unique opportunity to organize their curriculum around the excellence that has been developed at FLBS.

A significant portion of the critical issues facing Montana, the nation, and the globe during the 21$^{st}$ century will be related to environmental change. This program, at no cost to the institution, will take advantage of the existing expertise of the nationally and internationally recognized Flathead Lake Biological Station. Montana is one of the great "water towers" of the North American continent; three great river basins (Columbia, Missouri, Saskatchewan) flowing into the Pacific, Atlantic and Arctic Oceans, respectively, originate in Montana. There are few amenities in Montana that are more important than our clean environment. Furthermore, as stated in the Montana Constitution, the people have a right to a clean and healthy environment. This program will substantively support the academic need in our state for ecological literacy and will advance Montana as a national leader in the interdisciplinary science of Field Ecology.

The proposed program in Field Ecology, as an Option in Biology, gets additional benefits out of existing resources. Following an extensive search, we have found no other programs like it in the country, where a Biological Field Station is fully-integrated into a degree option. Thus, we expect few competitors in the region, and we expect to be able to draw extensively within and from out-of-state. Over the past 20 years, between 40-60% of the students attending the FLBS summer session have come from out-of-state. Thus, we believe that this record can be continued and clearly demonstrates a need across the country for a rigorous program in this field. Additionally, for the past four years FLBS has maintained a rigorous REU (research experience for undergraduates) program funded by the National Science Foundation. This program at FLBS, organized in conjunction with the Field Ecology option, will provide outstanding research opportunities for the top-tier University of Montana students in the option.

**3. Course Requirements**

**Required Courses:** 102 core credits in specified courses are required for the degree option. These credits are:

| Course # | Name | Credits |
|---|---|---|
| **Biology/Microbiology Core Courses** | | |
| BIOL 108N/109N | Diversity of Life & Lab | 5 |
| BIOL 110N | Principles of Biology | 4 |
| BIOL 221 | Cell and Molecular Biology | 4 |
| BIOL 223 | Genetics and Evolution | 4 |
| *BIOL 342 | Field Ecology (or BIOL 340/341) | 5 |
| *‡BIOL 343 | Field Ecology Methods and Analysis | 5 |

* Course offered at FLBS
‡recommended course for those students taking BIOL 342

**Other Major Courses required for Field Ecology option**
***Choose either A or B to be taken at Flathead Lake Biological Station, during one summer:***

**A) Aquatic Emphasis**:

| | | |
|---|---|---|
| BIOL 451 | Landscape Ecology | 3 |
| BIOL 453 | Lake Ecology | 3 |
| BIOL 454 | River Ecology | 3 |
| BIOL 452 | Conservation Ecology | 3 |
| BIOL 492 | Seminars in Ecology & Res. Man. | 1 |

**B) Terrestrial Emphasis**:

| | | |
|---|---|---|
| BIOL 451 | Landscape Ecology | 3 |
| BIOL 458 | Ecology of Forests and Grasslands | 3 |
| BIOL 459 | Alpine Ecology | 3 |
| BIOL 452 | Conservation Ecology | 3 |
| BIOL 492 | Seminars in Ecology & Res. Man. | 1 |

***Choose an additional 8 cr. of upper division BIOL or MICB—at least one from each category C & D; one must be a writing course (marked with *)***

**C) –Ology courses (focus on a group of organisms):**

| | | |
|---|---|---|
| *BIOL 304 | Ornithology | 4 |
| *BIOL 306 | Mammalogy | 4 |
| * BIOL 308 | Biolology & Management of Fishes | 4 |
| *BIOL 316 | Plant Form & Function | 5 |
| BIOL 350 | Rocky Mountain Flora | 3 |
| BIOL 400/401 | Parasitology & Lab | 4 |
| *BIOL 410 | Insect Biology | 4 |
| *BIOL 418 | Fungal Biology | 3 |
| MICB 300/301 | Gen. Microbiology & Lab | 5 |

**D) Evolutionary Biology courses:**

| | | |
|---|---|---|
| *BIOL 405 | Animal Behavior | 5 |
| *****BIOL 406 | Evolution of Behavior | 4 |
| *****BIOL 480 | Conservation Genetics | 3 |
| BIOL 482 | Evolution & Development | 3 |
| BIOL 484 | Ecological & Evolutionary Genetics | 3 |

**Other Courses required for Field Ecology option**

| | | |
|---|---|---|
| MATH 150 | Applied Calculus | 4 |

***Statistics: choose A or B (B is recommended for graduate school prep in ecology):***

| | | |
|---|---|---|
| A) MATH 241 | Statistics | 4 |
| B) MATH 444/447 | Stat Meth/Comp Analy I | 4 |
| MATH 445/448 | Stat Meth/Comp Analy II | 4 |

***Chemistry: choose sequence E or F:***

| | | |
|---|---|---|
| E) CHEM 151N | General & Inorganic Chemistry | 3 |
| CHEM 152N/154N | Org. & Biol. Chemistry & Lab | 5 |
| F) CHEM 161N | College Chemistry I | 5 |
| CHEM 162N | College Chemistry II | 5 |
| CHEM 221/223 | Organic Chemistry I and Lab | 5 |
| CHEM 222/224 | Organic Chemistry II and Lab | 5 |
| PHYS 121N | Fundamentals of Physics I (or PHYS 221) | 5 |
| PHYS 122N | Fundamentals of Physics II (or PHYS 222) | 5 |

**Example: CURRICULUM**

| YEAR/Semester | COURSE # and name | CREDITS |
|---|---|---|
| **First Year:** | | |
| **Fall Semester** | | |
| | BIOL 108N—Diversity of Life | 3 |
| | BIOL 109N—Diversity of Life Lab | 2 |
| | CHEM 151N—General and Inorganic Chemistry | 3 |
| | MATH 150*—Applied Calculus | 4 |
| | GER—General Education Requirements | 3 |
| | | **15** |
| | *Depends on placement exam | |
| **Spring Semester** | | |
| | BIOL 110N—Principles of Biology | 4 |
| | CHEM 152N—Organic and Biological Chemistry | 3 |
| | CHEM 154N—Organic and Biological Chemistry Lab | 2 |
| | GER—General Education Requirements | 6 |
| | | **15** |

**Second Year:**

**Fall Semester**

| | |
|---|---|
| BIOL 221—Cell and Molecular Biology | 4 |
| PHYS 121N—Fundamentals of Physics I (or PHYS 221) | 5 |
| MATH 444/447—Statistical Methods/Computer Analysis | 4 |
| GER—General Education Requirement | 2 |
| | **15** |

**Spring Semester**

| | |
|---|---|
| BIOL 223—Genetics and Evolution | 4 |
| PHYS 122N—Fundamentals of Physics II (or PHYS 221) | 5 |
| MATH 445/448—Statistical Methods/Computer Analysis | 4 |
| GER—General Education Requirements | 2 |
| | **15** |

13 Students may take Track A to the Field Ecology Option taking advantage of two summers at FLBS; all other students would take Track B (further below)

**Track A**

**Third Year:**

**Summer Session at Biological Station**

| | |
|---|---|
| BIOL 342—Field Ecology w/Lab | 5 |
| BIOL 343—Field Ecol Methods & Anal | 5 |
| BIOL 491—Seminars in Ecology and Resource Management | 1 |
| | **11** |

**Fall Semester**

| | |
|---|---|
| BIOL 403—Vertebrate Design and Evolution | 5 |
| BIOL 480—Conservation Genetics | 3 |
| GER—General Education Requirements | 7 |
| | **15** |

**Spring Semester**

| | |
|---|---|
| BIOL—Upper Div BIOL Elective | 4 |
| GER—General Education Requirements | 7 |
| UD—Upper Division Elective | 4 |
| | **15** |

**Fourth Year:**

**Summer Session at Biological Station**

***Choose either the Aquatic Series or the Terrestrial Series (only available at FLBS)*:**

***Aquatic Series:***

| | |
|---|---|
| BIOL 451—Landscape Ecology | 3 |
| BIOL 453—Lake Ecology | 3 |
| BIOL 454—Stream Ecology | 3 |
| BIOL 452—Conservation Ecology | 3 |
| BIOL 492—Seminars in Ecology and Resource Management | 1 |
| | **13** |

***Terrestrial Series:***

| | |
|---|---|
| BIOL 451—Landscape Ecology | 3 |
| BIOL 458— Forest and Grassland Ecology | 3 |
| BIOL 459—Alpine Ecology | 3 |
| BIOL 452— Conservation Ecology | 3 |
| BIOL 492—Seminars in Ecology and Resource Management | 1 |
| | **13** |

**Autumn Semester**

| | |
|---|---|
| GER—General Education Requirements | 6 |
| | **6** |

**Track B**
**Third Year:**

**Fall Semester**

| | |
|---|---|
| BIOL 340—Ecology | 3 |
| BIOL 341—Ecology Lab | 2 |
| BIOL 403—Vertebrate Design and Evolution | 5 |
| BIOL 480—Conservation Genetics | 3 |
| GER—General Education Requirements | 3 |
| | **16** |

**Spring Semester**

| | |
|---|---|
| BIOL—Upper Div BIOL Elective | 4 |
| GER—General Education Requirements | 8 |
| UD—Upper Division Elective | 4 |
| | **16** |

**Fourth Year:**

**Summer Session at Biological Station**

***Choose either the Aquatic Series or the Terrestrial Series (only available at FLBS)*:**

***Aquatic Series:***

| | |
|---|---|
| BIOL 451—Landscape Ecology | 3 |
| BIOL 453—Lake Ecology | 3 |
| BIOL 454—Stream Ecology | 3 |
| BIOL 452—Conservation Ecology | 3 |
| BIOL 492—Seminars in Ecology and Resource Management | 1 |
| | **13** |

***Terrestrial Series:***

| | |
|---|---|
| BIOL 451—Landscape Ecology | 3 |
| BIOL 458— Forest and Grassland Ecology | 3 |
| BIOL 459—Alpine Ecology | 3 |
| BIOL 452— Conservation Ecology | 3 |
| BIOL 492—Seminars in Ecology and Resource Management | 1 |
| | **13** |

**Autumn Semester**

| | |
|---|---|
| BIOL—Upper Div BIOL Elective | 4 |
| GER—General Education Requirements | 7 |
| UD—Upper Division Elective | 4 |
| | **15** |

The majority of core and elective courses are offered under the current curriculum structure. What makes this option fundamentally different is the core suite of field courses as either an Aquatic Series or as a Terrestrial Series offered only through the Flathead Lake Biological Station. These courses are extremely field-oriented with more than 70% of the total contact hours spent in highly focused field instruction where students learn “hands-on” both the theory and the practice of Field Ecology.

## II. Adequacy, Accreditation, and Assessment Issues

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

**Faculty and Staff**

The Faculty of the Flathead Lake Biological Station, the Faculty in the Division of Biological Sciences (note: FLBS faculty are faculty in DBS), and the affiliated faculty in the interdepartmental program of Wildlife Biology program (administered through the College of Forestry and Conservation) have the required expertise to teach all of the courses in the core biology degree (see faculty list below). As an interdisciplinary program, the Field Ecology Option will also draw on the expertise of faculty and staff in several other departments, including Chemistry, Wildlife Biology, and Mathematics and Physics (see curriculum above).

**Professors/Academic Areas**
Current DBS faculty in Evolutionary Biology and Ecology

Allendorf, Fred W., Regents Professor, evolution and conservation biology
Breuner, Creagh, Assistant Professor, evolutionary biology
Brewer, Carol A. , Professor, science education, plant ecology
Bromenshenk, Jerry J. , Research Professor, ecotoxicology
Callaway, Ragan M., Professor, plant ecology
Dial, Kenneth P., Professor, animal design and functional morphology
Emlen, Douglas J., Associate Professor, developmental biology
Ezenwa, Vanessa O., Assistant Professor, wildlife diseases and parasitology
Fishman, Lila, Assistant Professor, evolutionary plant biology
Foresman, Kerry R., Professor, mammalogy
Greene, Erick P., Professor, evolutionary biology and conservation
Hauer, F. Richard, Professor of Limnology, stream and wetland ecology
Hutto, Richard L., Professor, ornithology
Kimball, John, Research Associate Professor, ecosystem process modeling
Kukuk, Penelope F., Research Professor, evolution of sociality in social bees
Lorang, Mark S., Research Assistant Professor, process physical limnology
Lowe, Winsor H., Assistant Professor, stream biodiversity and ecology
Maron, John L., Associate Professor, species interactions and invasion ecology
Martin, Thomas E., Adjunct Professor, avian behavior and life histories
Sala, Anna, Associate Professor, plant physiological ecology
Stanford, Jack A. Bierman Professor of Ecology and Director of the Flathead Lake Biological Station, ecosystems ecology
Woods, Art, Assistant Professor, ecology and evolution

**Current collaborating DBS Microbial Ecology and Evolution faculty:**

James E. Gannon, Professor, applied Environmental Microbiology
William E. Holben, Professor, molecular microbial ecology
Matthias C. Rillig, Associate Professor, biology and ecology of soil fungi
R. Frank Rosenzweig, Associate Professor, microbial population ecology

**Current collaborating Wildlife Biology faculty (not listed above):**

Crone, Elizabeth, Associate Professor, quantitative ecology
Eby, Lisa, Assistant Professor, aquatic vertebrate ecology
Hebblewhite, Mark, Assistant Professor, ungulate habitat ecology
Mills, L. Scott, Professor, wildlife population ecology
Naugle, David, Associate Professor, large scale wildlife ecology
Pletcher, Dan, Professor and Wildlife Biology Program Director, population biology

**Library Resources:** A review of the current breadth and depth of library holdings indicates that there exists a solid resource on biology, field ecology, chemistry, and experimental design. General monographs on limnology, stream ecology, plant and animal population biology, and general ecology are in the holdings of Mansfield Library and the FLBS Library. Many biology and ecology journals are available electronically, and the Mansfield Library maintains numerous subscriptions in the interdisciplinary sciences associated under field ecology.

**Facilities and Equipment:** The option places an emphasis on ecology and ecological methods experienced in the field for both aquatic and terrestrial ecology and requires that teaching laboratories be equipped with state-of-the-art analytical instrumentation. The proposed option does not increase these needs: both laboratory and field instrumentation is already an integral part of the FLBS research and teaching program and on campus for all other required courses that support other degrees and degree options in the biology program. All of the instrumentation is currently in place. FLBS regularly updates and upgrades instrumentation through various grant sources, particularly NSF. Having the program in place will assist both FLBS and the DBS in obtaining grants for instrumentation.

**2. Accreditation Status:**

The department also offers options in several disciplines in Biology. These options will be complimented by the Field Ecology option, which stresses applied ecology in the field setting.

The botanical sciences include the study of various aspects of plant life such as form, structure, development, physiology, ecology, and evolution. Plant science is important for many different fields such as forestry, wildlife biology, pharmacy, and agriculture. This option is designed for students who plan careers in government agencies, environmental consulting companies, as well as for those students planning to continue their education at the graduate level.

Cellular and molecular biology is the study of cellular and physiological aspects of biology. In the last several years there has been an explosion of knowledge and technology which has merged several fields of science such as microbiology, biochemistry, immunology, virology, and others into what is know as molecular biology. This option is designed for those students planning to work in research or private labs or continue their studies at the graduate level or in the medical sciences.

The study of ecology has course offerings in organismal, ecological, and conservation biology. This option is designed for students seeking employment with various state and federal government agencies, environmental consulting, or continuing their education at the graduate level.

The Human Biological Sciences option is for students planning careers in the health science field. The following is a partial list of careers: physical therapy, medicine, dentistry, physician assistant, alternative medicine, and public health offices. This option would also work well for students seeking entry-level health careers without additional schooling.

The natural history option is designed for students who seek an interdisciplinary science program. This option is designed for students seeking careers in environmental education, science journalism, communication and natural history museums.

The study of zoological sciences includes various aspects of animal life such as form, structure, development, physiology, evolution, and ecology. Students choosing this option prepare for technical laboratory jobs, positions in consulting firms, governmental agencies, or continuing their education at the graduate level or in the medical sciences.

Although there are no specific accreditation societies, all the options in the Biological Sciences are highly rigorous meeting the undergraduate curriculum commensurate with a PhD granting department.

**Assessment Issues:**

The department will use a variety of tools to measure the degree of program success. Recruitment and completion of the program, as well as success after graduation, are the critical points to measure program success. The department will track the number of students who declare their major in the option. Students also will be tracked using average course work GPA, competence on exams, and other criteria to monitor program quality. The department also recognizes that student retention rates are an indicator of program health and rigor. Accordingly, the department will keep records of the success rate of students in the program, and will conduct exit interviews of students who drop out or change majors part way through the program. Successful employment of graduates will also be tracked, and the department will track graduates for up to three years after graduation to determine their success in the field.

A program assessment committee composed of faculty from FLBS, campus-based faculty in DBS, and from the Wildlife Biology program will meet on annual basis for the first five years to discuss the assessment data and the strengths and weaknesses of the program. Assessment results will be reported to the faculty via faculty planning meetings. Based on these discussions and the assessment data, the assessment committee, FLBS and Biology faculty, and the program advisor will make suggestions for changes to the program.

## III. Impact on Faculty, Costs, Students, and Other Departments and Campuses

**1. Additional Faculty Requirements:** Because the program takes advantage of courses already offered in Biology and other departments, no additional faculty will be required to implement and maintain the program.

**2. Impact on Facilities:** The program should have no significant impact on facilities.

**3. Cost Analysis**

*Enrollment*

There is a documented need for appropriately trained scientists to work in the interdisciplinary sciences associated with Field Ecology and a significant interest among students is anticipated. We anticipate an annual enrollment for the first two years to be approximately ten per year, thereafter increasing to 20-25 per year after four or five years. We anticipate that the new option will assist with recruiting through retention of Montana students who currently are enrolled as Biology majors, but are looking for a rigorous field component to their education. We anticipate a strong recruitment from out-of-state students as the option becomes better known and is listed as a formally recognized program in the Biological Sciences at UM - Missoula. Based on our experience teaching UM and out-of-state students through the FLBS summer program, we anticipate numerous students will choose to move to this option from this campus. Because the first two years of coursework in the field Ecology Option is the same as or similar to that for many other science programs on campus, students should be able to do this seamlessly.

**5. Relationship to Other Campus Programs**

The Division of Biological Sciences collaborates closely with the College of Forestry and Conservation in the co-management and shared faculty of the Wildlife Biology program. Biological Sciences students have courses in Chemistry, Math and Physics as a core component to their program-of-study. This option in the Biological Sciences will only enhance those interdepartmental relationships.

**6. Relationship to Other Institutions:**

As noted above, no other university in Montana currently offers a rigorous field ecology degree or option. The closest institutions offering such degrees are the University of Washington and Oregon State University. This program will provide an opportunity for enhanced and continuing collaboration between the UM and the Department of Ecology at Montana State University, which has close collaborative ties with FLBS faculty at the graduate level. This collaboration will take the form of invited lectures, internet-based course offerings and collaborative research projects involving UM students and faculty.

## IV. Process Leading to Submission of Proposal

This program and proposal have been developed in consultation with UM faculty at FLBS, DBS, and the Wildlife Biology program. Program content and the development of the basic program outline was approved in concept by DBS faculty in 2004. This outline was refined in discussion with the Wildlife Biology Director (Dan Pletcher), Associate Dean Christian, Acting Associate Dean Greene, and the entire Ecology and Evolutionary Biology faculty over the ensuing two years.

This proposal has been reviewed and approved by the Organismal Biology and Ecology graduate program faculty in DBS, the full DBS faculty, the Dean of the College of Arts and Sciences, the Graduate Council for the Senate, the Dean of the School of Graduate Studies, the Provost and Vice President for Academic Affairs, and the Faculty Senate of the University of Montana.

**This proposal was reviewed and approved by the affected departments as follows:**
Department Name: Educational Leadership and Counseling Date: 2/2/07

**In addition, the Deans of the following Schools/Colleges reviewed and approved the proposal:**
Dean of: School of Education Date: 2/6/07

This proposal was reviewed and approved by the Faculty Senate at The University of Montana on:
Date: 3/8/07

No outside consultants were employed for the development of this proposal

# MONTANA BOARD OF REGENTS

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-1010+R0507** | **Date of Meeting:** | **May 30 – June 1, 2007** |
| **Institution:** | **The University of Montana - Missoula** | | |
| **Program Title:** | **Film Studies As A Fourth Option For English Department Majors** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☐ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☒ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-1010+R0507 | Institution: The University of Montana - Missoula |
|---|---|

**Specify Request:**

The English Department of the University of Montana - Missoula together with the University of Montana Film Committee propose that Film Studies be placed in the English Department as a fourth option for English majors (in addition to the Literature, Creative Writing and Teaching Emphasis options).

# MONTANA BOARD OF REGENTS

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

**Institution:** University of Montana--Missoula

**Program Title:** Film Studies Option in English

1. How does this program advance the campus' academic mission and fit priorities?

This program fulfills the mission by "providing unique educational experiences through the integration of the liberal arts, graduate study, and professional training with international and interdisciplinary emphases." By being the first program to approach the field through theory and criticism, as well as presenting opportunities to explore both Native American and international film genres, this program will result in educating "competent and humane professionals and informed, ethical, and engaged citizens of local and global communities."

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

We believe that this option will "serve the students of the University of Montana through the delivery of high quality, accessible educational opportunities, while actively participating in the preservation and advancement of Montana's economy and society." Film is a significant and popular component of our society-- both in terms of its influence and economic potential. This option will increase awareness of film's importance and foster not only a critical appreciation of film, but also knowledge of the workings of the film industry.

3. How does this program support or advance Montana's needs and interests?

Although both MSU and UM have Media Arts programs, both are production-oriented, and neither offers an option in theory and/or criticism. We believe that it is time that our University system offer such a degree, and UM already has all of the faculty and the majority of the classes to do so. This Film Studies degree promotes media literacy within our state, and given the prevalence of the visual media, this is an essential offering.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

Film Studies programs tend to be very popular, and we are anticipating that our Film Studies option will increase UM's out-of-state enrollment. This option will also facilitate the Governor's commitment to promoting the film industry in Montana.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | 30 FTE students |
| • Enrollments / year? | 100 majors in this option after 3 years |
| • Graduates / year? | 25 |
| • MT jobs / year? | 15 |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 0 |
| • Faculty FTE? | 1.0 - Negotiations are underway to assign Sean O'Brien, currently teaching full time in Philosophy, a full-time lectureship in English. All other Film Studies faculty will remain in their respective departments, and continue to teach film courses offered by these departments but included in the Film Studies curriculum. |
| • Staff FTE? | $0 |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ _____

8. How will the campus fund the program?

The option will be funded through the existing College of Arts and Science budget. All of the faculty and all but two of the required courses for the option are in place.

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

none

**Proposal for a Film Studies Option in the English Department**

**The Request**
The English Department together with The University of Montana Film Committee propose that Film Studies be placed in the English Department as a fourth option for English majors (in addition to the Literature, Creative Writing and Teaching Emphasis options).

The UM Film Committee, established approximately 30 years ago, has successfully promoted the development of a wide range of film courses throughout the curriculum. The formalization of this curriculum is long overdue, and this proposal is the culmination of the committee's efforts to structure the already existing film courses (with the addition of just two new required courses) into what we believe is a solid undergraduate film-oriented BA degree.

**Description of the Proposed Option**
A solid academic program in film is one that acknowledges the various cultures and theoretical traditions that have informed the development of the medium. Consequently, the proposed curriculum has an interdisciplinary bent. In deepening their understanding of film conventions, history and criticism, students in Film Studies will also deepen their understanding of a range of disciplines from which the curriculum draws.

More specifically, the Film Studies curriculum is designed to:
1) Give the student a solid background in film history and the various approaches to film criticism;
2) Provide students with the theoretical sophistication needed to acquire a solid grasp of the various approaches to film theory;
3) Expose students to films from other cultures and traditions;
4) Heighten students' media literacy by sharpening their ability to critically assess images.

In achieving these goals, the curriculum draws from:

ENLT/ENFM – (ENFM is the Film Studies option designation proposed by the English Department.) Students will take particular literature courses, and one or more courses involving a comparison of literary works and their filmic counterparts (ENLT/LS227, ENLT/LS 325, ENLT 320).

MCLG - Students taking French, German, Spanish and/or Latin American film courses will be introduced to quality films as well as the cultures that have produced them.

PHIL - Students will be encouraged to take PHIL 340 (Aesthetics) to enrich their understanding of both pre-and post-film aesthetic theory and its influence on both film production and criticism. They will also be encouraged to take PHIL 444 (Topics in the Philosophy of Art).

MAR - Students will learn the principles involved in constructing a film from the point of view of production (MAR 101). Production-oriented courses deepen students' understanding of film and enhance their capacity for criticism.

NAS - Students will be encouraged to take NAS 344 (Native Americans and Film) recently submitted to ASCRC for approval.

**Suitability of Placement**
The Film Committee believes that the English Department is the best possible placement for Film Studies for the following reasons:

1. There are currently four English faculty members on the Film Committee who teach film courses (John Glendening, Phil Fandozzi, Casey Charles, and Katie Kane), in addition to a significant number of faculty members in English who are eager to teach and/or develop film courses.

2. The curriculum would dovetail nicely with all three options currently housed in English:
   a. The Teaching With Film Institute (TWFI), which we plan to incorporate into Film Studies, will be a helpful supplement to the teaching program. TWFI is an Institute designed to help high school and college instructors use film effectively in the classroom.

b. The recently developed "Writing about Film" course will be used as an experimental ENEX 101 section.
c. Faculty in the Creative Writing emphasis may want to develop a course in screenwriting (given the approval and cooperation of the Media Arts Department.) Such a course might be developed in conjunction with as well as cross-listed with Media Arts, thereby expanding both programs and forging interdisciplinary connections.
d. Film and literature make great bedfellows, and rather than substituting for the written text, film can be used effectively (via comparison, for example) to draw students into the written text.

**Documented Need**
The UM Film Committee believes that the development of Film Studies is long overdue. Although both MSU and UM have Media Arts programs, both are practice-oriented, and neither offers an option in theory and/or criticism. Given the prevalence and significance of film in our society, we believe that it is time that UM offer a degree that explores this significance and promotes a critical approach to film. There has been a high demand for film courses in recent years, and we have included enrollment figures from our Intro to Film courses (LS 180) from the past five years.

**Additional Required Courses Needed**
Because of the interdisciplinary nature of the program and the significant number of film courses already listed in the UM catalog, the Film Studies Option can get started with an addition of just two required courses. We have at least three qualified faculty currently on the Film Studies Committee willing to teach these courses. (See attached course proposal forms.)

1. ENFM 330 (History of Film)
2. ENFM 427 (Film Theory)

**Additional Elective Courses:**
Native American Studies is petitioning ASCRC to add NAS 344 (Native Americans and Film) to the course catalog, and the English Department is attempting to add (in addition to the two film courses listed above) ENLT 380 (Topics in Irish Studies). ENLT 380 will be the course number under which the Irish/American film course will be taught. Both of these courses will be included as Film Studies electives if and when they are approved by ASCRC.

**Additional Faculty Requirements**
All of the faculty needed to staff the curriculum are already in place, and have taught or are currently teaching the courses they will be assigned in Film Studies. Although we are not requesting new hires for the option's inception, discussions are underway to assign Sean O'Brien, currently an adjunct professor in Philosophy, a lectureship in English. Professor O'Brien has successfully taught a wide range of film courses at UM.

**Relationship to Other Campus Programs**
As stated earlier, given its interdisciplinary nature, Film Studies will involve a wide range of disciplines. We are happy to report that we are planning this emphasis in full cooperation with Media Arts. Rick Hughes, chairman of the Media Arts Department, has expressed support for the placement of Film Studies in English, and Michael Murphy, a MAR faculty member, is a member of the Film Studies planning committee. (See attached e-mail from Rick Hughes.) Media Arts has recently developed a major that offers two tracks, both involving production. Should Media Arts want to develop a third track in the future that emphasizes media theory, the UM Film Committee is committed to fully supporting that emphasis.

All other departments whose courses are listed in the curriculum have agreed to allow us to include these courses in the curriculum. (See signatures at the end of the proposal.)

**Relationship to Other Institutions**
Montana State University in Bozeman offers a BA in Media and Theater Arts with options, among others, in Motion Pictures and Video. We believe that the proposed Film Studies Program neither duplicates nor threatens MSU's program in any way. Although their major offers theory courses, it is primarily a

production program, and ours has a theoretical/analytical emphasis. We believe that adding a program at UM will offer the large number of aspiring film students an additional choice without disrupting the program in Bozeman.

**Accreditation Status**
There are no accrediting agencies that assess Film Studies programs. Our option will be included in the English Department's evaluation by the Northwest Association of Schools and Colleges (NASC).

**Assessment Plan**
Students will be required to compile an ongoing portfolio of their written work over the course of their academic career. All faculty will have access to the students' former work in order to help them address needs and challenges faced by these students. There will be an intermediate assessment of student performance in film classes and a standardized exam that will be administered in all 300 level film classes. At the end of their academic career, all students will be given an exit interview to determine knowledge of the field and evaluation of the option.

The film faculty will engage in yearly retreats to discuss Film Studies problems and successes. A program review will take place every five years.

Students must achieve a 3.0 in introductory courses (ENFM/LS180 & ENFM/LS 230) to move on to higher level courses. They must demonstrate proficiency in writing and knowledge of the basic terminology and genres of film, in addition to this genre's relationship to the literature upon which it is based. Criteria for writing will follow ASCRC guidelines.

Grading: Successful students must demonstrate:
1. understanding and application of film theory and history
2. excellence in writing and research
3. understanding of the vital relationship between film and literature
4. growth in artistic/analytical skill

**Impact on Facilities**
The only potential additional impact on facilities posed by the Film Studies option would be the increased use of the University Theater for certain film courses. The UM Film Committee will work out an agreement for the use of the University Theater for specific classes and/or special film showings.

**Impact on Other Departments**
As stated earlier, we have developed the Film Studies curriculum with the full support and input from the Media Arts Department. We believe that MAR students will benefit from our program by having the opportunity to take film theory courses not offered in their major.

We are an interdisciplinary option within English, drawing courses and faculty from MCLG, Philosophy, Native American Studies and Media Arts. As stated earlier, all but two of the required courses are in place, and they are taught on a regular basis.

We will encourage additional faculty with film expertise to offer courses in their own disciplines. This option encourages students to explore related areas (history, sociology, anthropology, etc.) and to double major with other departments.

**Cost Analysis**
There will be no impact on current budgets; faculty and resources are in place.

**Proposed Film Studies Curriculum**

**Required courses:** (total of 18 credits)

ENFM/LS 180 – Intro to Film (3 credits)
ENLT/LS 227 – Film as Literature, Literature as Film (3 credits)
ENLT 301 – Applied Literary Criticism (3 credits)
*ENLT 320 – Shakespeare and Film (3 credits)
A 3-credit upper division History of Film course—ENFM 330-- to be submitted to ASCRC for approval.
A 3-credit 400 level Film Theory seminar—ENFM 427-- to be submitted to ASCRC for approval.
*Taught every other year under 320 or submitted as a new course.

**Students would be required to take 27 credits from the following selection of courses:**

MAR 101 – Introduction to Media Arts (3 credits)
MCLG 222/LS 361 – German Cinema (3 credits)
MCLG 338/LS 338 – French Cinema (3 credits)
MCLG 358/LS 358 – Latin-American Civilization Through Literature and Film (3 credits)
SPAN 359 – Spanish-American Civilization Through Literature and Film (3 credits)
ENLT 325/LS 356 – Studies in Literature and Film (3 credits)
ENFM/LS 38 – Studies in Film (3 credits): This course number will be used for courses that focus on genre, directors and "special topics" in film. It may be taken more than once as long as the content of the course differs.
PHIL 340 – Aesthetics (3 credits)
PHIL 444 – Topics in Philosophy of Art (3 credits)
NAS 344 – Native Americans and Film (3 credits) to be submitted to ASCRC for approval (3 credits)
ENLT 380 – Topics in Irish Studies (Irish/American Film will be taught under this course number (to be submitted to ASCRC for approval).
ENT 442 – Teaching Oral Language and Media Literacy (3 credits)

**LS 180 (Intro to Film) Enrollment Figures***

| Semester | Subject | Course | Section | Actual Enrollment |
|---|---|---|---|---|
| 200070 | LS | 180 | 1 | 58 |
| 200150 | LS | 180 | 1 | 5 |
| 200330 | LS | 180L | 1 | 59 |
| 200430 | LS | 180L | 1 | 72 |
| 200570 | LS | 180L | 1 | 66 |
| 200670 | LS | 180L | 1 | 59 |

**Please note that the semester that only five students enrolled was a summer semester.*

**Member of the UM Film Committee:**

John Glendening, English
Casey Charles, English
Phil Fandozzi, English
Kathleen Kane, English
Angelica Lawson, NAS
Clairy Loisel, MCLG, Spanish
Michel Valentin, MCLG, French
Bob Acker, MCLG, German
Sean O'Brien, Philosophy

**This proposal was reviewed and approved by the affected departments as follows:**

Department Name: Department of English Date: 9/29/06
Department Name: Department of Modern and Classical Languages & Literatures
Date: 9/25/06
Department Name: Department of Native American Studies Date: 9/25/06
Department Name: Media Arts Date: 9/25/06
Department Name: Department of Philosophy Date: 9/25/06
Department Name: Liberal Studies Program Date: 9/25/06

In addition the deans of the following Schools/Colleges reviewed and approved the proposal:
Dean of: College of Arts & Sciences Date: 10/2/06

The proposal was reviewed and approved by the Faculty Senate at the University of Montana:
Date: 2/08/07

[No outside consultants were employed for the development of this proposal.]

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**From:** rick hughes [mailto:rh167284e@mail1.umt.edu]
**Sent:** Wednesday, September 13, 2006 1:36 PM
**To:** Sean O'Brien
**Subject:** Re: film studies program

Sean:

Sorry for the delay in getting back to you. After speaking with the faculty and the Dean, we all recognize the advantage to having a film studies program that would compliment the curriculum that we currently offer. Your proposal seems to fit the bill and we would have no problem seeing your program get established. Michael Murphy has expressed interest in getting together with you to offer any advice or suggestions that you might look for. We support your development and we look forward to seeing expanded opportunities for our students.

Good luck.

Rick Hughes
Director
Media Arts Program

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-1011+R0507** | **Date of Meeting:** | **May 30-June 1, 2007** |
| **Institution:** | **The University of Montana - Missoula** | | |
| **Program Title:** | **Merge Ecology, Botany, and Zoology options into an option in Ecology and Organismal Biology** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☒ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☒ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-1011+R0507 | Institution: The University of Montana - Missoula |
|---|---|

**Specify Request:**

The Division of Biological Sciences wishes to merge the Ecology, Botany, and Zoology options into one option in Ecology and Organismal Biology.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-1012+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **The University of Montana - Missoula COT** | | |
| **Program Title:** | **Temporary A.A.S in Energy Technology** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☐ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-1012+R0507 | Institution: The University of Montana - Missoula COT |
|---|---|

**Specify Request:**

The Department of Applied Computing and Electronics requests approval for a temporary A.A.S. degree program in Energy Technology.

# M O N T A N A  B O A R D  O F  R E G E N T S

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

| Item No.: 135-1012+R0507 | Institution: The University of Montana - Missoula COT |
|---|---|

1. How does this program advance the campus' academic mission and fit priorities?

The proposed temporary Associate of Applied Science program in Energy Technology supports the mission of the University of Montana, College of Technology to develop the Montana workforce and provide students with access to well-paying jobs

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

The proposed temporary Associate of Applied Science program in Energy Technology responds to Goal II Assist in the expansion and improvement of the economy by increasing responsiveness to workforce development needs by expanding and developing programs in high demand fields in the state.

3. How does this program support or advance Montana's needs and interests?

The program increases the number of trained employees in an area of rapid job growth. Providing a career opportunity for Montanans with the potential for an above average salary with benefits advances Montana's needs and interests.

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

The expansion of conventional and alternative energy development and production in Montana as well as the Governor's policy to grow an "energy economy" has created a need for trained technicians in fields associated with traditional, emerging and alternative energies. A well-trained workforce is necessary component in supporting these industries.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | 0 FTE students |
| • Enrollments / year? | 25 |
| • Graduates / year? | 20 |
| • MT jobs / year? | 15 |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 572,734 |
| • Faculty FTE? | 3 first year/3.5 second year |
| • Staff FTE? | 3.5 first year/4.25 second year |

7. Does this program require new resources? ☒ Yes ☐ No

If yes, what is the amount? $ $572,734

8. How will the campus fund the program?

The experimental program will initially be funded through a WIRED grant fund allocated through the Department of Commerce and the UM Online Department

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

No internal reallocation is necessary.

**Associate of Applied Science Degree in Energy Technology**
**Department of Applied Computing and Electronics**
**College of Technology**
**The University of Montana, Missoula**
**March 2007**

## I. Objectives and Needs

### 1. Description of Program:

The expansion of conventional and alternative energy development and production in Montana as well as the Governor's policy to grow an "energy economy" has created a need for trained technicians in fields associated with traditional, emerging and alternative energies. The University of Montana, College of Technology (UM COT) has been awarded funding for two years through a Workforce Innovation in Regional Economic Development (WIRED) grant to train Energy Technicians. In response, the Department of Applied Computing and Electronics (ACE) is requesting approval for an experimental Associate of Applied Science degree program in Energy Technology to begin Autumn Semester 2007.

Goals of the program are to provide the fundamental underpinnings of science and mathematics; familiarize students to the full slate of energy technologies and their application, installation, operation and maintenance; and introduce the diverse career possibilities available in the industry. Graduates of the Energy Technology program are best described as general practitioners who may be involved in energy systems design, operation, maintenance, integration, and installation; component procurement; economic assessment; troubleshooting; sales; regulatory compliance; site selection; research and development; project management; and, a variety of other activities in the energy industry. The program will provide students with a broad familiarity of energy systems and technologies; develop critical and analytical thinking skills; refine adaptive problem-solving skills; and establish research skills, resources and pathways to additional learning.

The learner objectives for the program are:

- Identify Safe Workplace Habits and Practices
- Develop and Practice Professional Standards of Communication
- Identify Concepts Affecting Energy Efficiency and Conservation
- Understand Energy Production, Delivery, Consumption, and Disposal
- Comprehend Traditional, Alternative, and Sustainable Energy Production Technologies
- Evaluate Energy Production Sites
- Design, Install, and Manage Energy Systems
- Assess Societal, Economic, Environmental, Ethical, and Legal Implications and Constraints in Energy Systems.

The degree program will be available online and include initial partnerships with Dawson Community College, Miles Community College, and Montana Tech's College of Technology. All students will complete a summer practicum at the University of Montana using the energy learning sites located at Montana Technology Enterprise Center (MonTEC), the College of Technology's West Campus, and other approved sites. Students will also complete local and regional internships.

Curriculum and graduation requirements for the 64-credit experimental associate of applied science degree program, along with course descriptions, can be found in the attached appendix.

**2. Documented Need:**
A paramount issue at both the state and national levels is our country's attempt to move toward energy self-reliance. Montana's natural resources are at the forefront of producing a new energy economy for the state. These resources include renewable resources, like biomass, seed oils, wind, and solar systems. They also include traditional fossil fuels. Although these natural resources exist throughout Montana, the greatest opportunities may exist in remote locations found in the northern and eastern areas of the state. These areas have not seen the economic prosperity found in the "boot shaped areas" of western and central Montana. The economic disparity in rural Montana and Native American Reservations is compounded by the dispersed nature of the educational resources of those areas. The program will partner with local institutions in these areas to provide a workforce for Montana's energy economy.



Support from local and regional employers has been obtained with nearly twenty letters of support endorsing the program and its curriculum. Initial funding for the program was recently received through a state WIRED grant program. The program is a product of two years of research at the University of Montana resulting in the curriculum and a learning and demonstration site.

The U.S. Department of Labor (DOL) predicts a continued demand for engineering technicians over the next ten years in its Occupational Outlook Handbook. The educational expectation for an engineering technician is completion of a two-year associate degree. The median annual income in the engineering technician field varies from $38,480 to $52, 500. The DOL predicts job opportunities for environmental engineers to grow at a rate "much faster than average" for all occupations. Technicians to support environmental engineers will be needed.

**3. Additional Courses:**
All general education and professional courses have been offered. The majority of courses involving the specific skills required for energy technicians are partially or fully developed. Several have been successfully offered as experimental special topics.

No new courses will be requested at this time. Standard UM curricular approval processes will be followed for future new courses. This experimental degree program includes traditional courses already offered by departments on campus and experimental specialty topics.

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

**1. Adequacy of Present Faculty, Facilities, Equipment, and Library Holdings**
A majority of the special topics courses are fully developed and several have been successfully offered in past semesters. Traditional courses are offered on an annual basis by full-time and adjunct faculty. Grant funding is available for additional faculty where needed. Courses offered online will have a minimal impact on facilities. Partnership will allow students to complete traditional courses online or regionally at local institutions. A learning site has been developed at MonTEC and on the COT West Campus. A 10 kilowatt wind turbine and 2 kilowatt photovoltaic hybrid system has been deployed. Both are operational providing student training and public demonstrations. A 1 kilowatt wind turbine, 50 kilowatt wind turbine, fuel cell, and state-of-the-art biomass gasifier/power generator have been procured. Further learning sites will be created as each of these technologies is deployed. Current library holdings in the MUS are sufficient.

**2. Accreditation**
The proposed certificate program meets the minimum standards for regional accreditation through the Northwest Association of Schools and Colleges and all requirements for the Associate of Applied Science Degree from The University of Montana, College of Technology.

**3. Assessment Plan**

A local advisory committee will be formed to provide assessment of the program, its curriculum, and its appropriateness in meeting the regional demands of the workforce. Periodic review, faculty assessment, student perception course surveys, employer surveys, and student exit interviews will all be used in providing assessment data.

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

### 1. Impact on Faculty
WIRED grant funding and UMOnline will provide the additional faculty needed to support experimental courses in energy-related topics and additional sections of traditional courses. Funding for a full-time program coordinator and for coordination at partnership sites are covered by WIRED grant funding for the next two years.

### 2. Cost Analysis
To be included in appendix

### 3. Enrollment Impact
Initial enrollment goals will be 20-25 students annually. Prospective students will only be accepted during Autumn Term.

### 4. Relationship to Other Campus Programs
Partnerships have been established on campus with the Department of Applied Arts and Sciences, Department of Business Technology, Department of Industrial Technology, Department of Environmental Studies, UMOnline, and COT Outreach. All departments will be working together with the Department of Applied Computing and Electronics to support the experimental degree program.

### 5. Relationship to Other Institutions
Initial partnerships with Dawson Community College, Miles Community College, MSU-Billings College of Technology, and the Montana Tech College of Technology are being pursued to offer the program to audiences throughout the state of Montana. Financial support through the WIRED grant will be provided to assist these institutions in advising and directing students accessing the program from remote sites. Plans for additional partnerships with Montana Tribal Colleges are slated for the program's second year.

## IV. Proposal Development Process

The proposal has been developed through the research work of a number of entities at the University of Montana. Experimental courses have been successfully offered. A learning and demonstration site has been created. An experimental curriculum has been adopted and supported by local industry leaders.

**Course Descriptions**

**AASC195T Special Topics: Issues in Sustainability** 2 cr. This literature-intensive course is intended to expose the student to a variety of essays addressing the balance of economic development with the principles of sustainability and social equity. The student is offered an introduction to sustainability concepts, natural systems/cycles and environmental economics. Natural capitalism and triple bottom line maximization is explored, along with the role of corporations and small businesses in sustainable development. A survey of issues surrounding corporate social responsibility and sustainability-driven innovation will be conducted.

**BUS 103S Principles of Business** 3 cr. Introduction to the world of business. Examines capitalism, the economic environment, the types of business organizations, management, marketing, production, labor, financing, and business/governmental relations. Credit not allowed for both BUS 103S and BADM 100S.

**BUS 135T Business Law** 3 cr. Offered spring. An overview of law as it applies to business transactions. Topics include the nature and source of law; courts and procedure; contracts, sales, and employment; commercial paper; bailments; property; business organizations; insurance; wills and estate planning; consumer and creditor protection; torts; criminal law; and agency law. Credit not allowed for both BUS 135T and BADM 257.

**COM 150S Interpersonal Communication** 3 cr. Offered every term. Focus on communicating and listening more clearly to improve personal and professional relationships. Topics include forms of communication, communication and identity, emotion, conflict, climates, gender, and cultural diversity. Credit not allowed for both COM 150S and COMM 110S.

**CRT 172 Introduction to Computer Modeling** 3 cr**.** Offered autumn and spring. Prereg., CRT 111 or demonstrated computing experience. Problem solving and data modeling using computer productivity software. Emphasis using spreadsheets and databases for data analysis. Formal presentation of results. Credit not allowed for both CRT 172 & CS 172.

**CRT 209T Project Management** 3 cr. Offered intermittently. Prereq., CRT 172. Investigation of topics in project management including scope, definition, risk, procurement and the RFP. Management of time, cost, quality, and human resources. Concepts are reinforced with PM software.

**EET195T Special Topics: Basic Electricity** 4 cr.
Introduction to the concepts of electricity, current flow, direct current (DC) and alternating current (AC) electrical circuits. The course covers passive components; scientific notation and metric conversions; voltage, current, and resistance units of electrical measurement; Ohm's Law; analysis of series, parallel, and series-parallel circuits; the use of electrical circuit theorems; electromagnetism; capacitance; inductance; transformers; and motors.

**EET195T Special Topics: Energy Systems** 3 cr. A comprehensive and technical examination of traditional and alternative energy systems and the energy industry, energy production, and patterns of consumption. Introduces the concept of life cycle assessment and applies it to various forms of energy as a means to evaluate social, economic, political and environmental impacts.

**EET295T Special Topics: Solar and Wind Systems** 3 cr. An overview of the basic concepts and procedures used in designing and installing small solar and wind projects. The focus is on photovoltaic power systems, but systems that produce electricity from wind, and systems that produce hot water from the sun will also be considered.

**EET195T Special Topics: Power Systems Technology** 3 cr. An introduction to the basic devices and techniques used to generate, transmit, and use electrical power. Investigates generators, motors, and the electrical supply system known as "the grid."

**EET195T Special Topics: Energy Technology Practicum** 2 cr. Offered Summers Provides opportunity for practical application of classroom experience and skill development. To be completed at a regional energy learning site.

**EET295T Special Topics: Energy Conservation and Efficiency** 2 cr. Explores how advancements in equipment, structural design and materials, and changes in operations can result in improved energy efficiency and conservation in residential and commercial buildings. Examines the analysis techniques used for reduction of energy consumption and addresses energy management in terms of energy accounting and energy auditing.

**EET295T Special Topics: Alternative Fuels** 3 cr. An introduction to alternative fuels. Defines and identifies alternative fuels; explores fuel characteristics; the infrastructure required to produce, store, distribute, and use them; discusses emissions and conversion details; assesses social, environmental and economic impacts.

**EET295T Special Topics: Bioenergy and Other Renewable Energy Sources** 2 cr. Investigates the issues surrounding production and use of bioenergy. Also introduces other alternative sources of energy such as geothermal, micro-hydro, ocean energy, clean coal, hydrocarbon reforming, nuclear fusion, superconducting magnets, and magnetohydrodynamics.

**EET295T Special Topics: Fuel Cells** 3 cr. An introduction to the different types of fuel cells (hydrogen, biological, metal/air, proton exchange membrane, etc.), accompanied by a critical examination of their applications, operation, efficiencies, advantages and disadvantages.

**EET295T Special Topics: Storage and Distribution Systems** 2 cr. Examines the methods of storage, transportation, and transfer for different types of energy. Explores emergent technologies and mechanisms designed to enhance efficiency.

**EET295T Special Topics: Fossil Fuels** 3 cr. An introduction to fossil fuels and technologies. Examines exploration, production, transportation, and distribution systems, and assesses social, environmental, economic, and political issues associated with the production and use of fossil fuels.

**EET 295T Special Topics: Government and Energy** 2 cr. Tax laws, policies, regulations, financial incentives or disincentives, criminal penalties, and other government programs influence the development, commercialization, and deployment of traditional and alternative energy systems. This course investigates the role of government in energy systems.

**EET 295T Special Topics: Energy Economics** 3 cr. Energy Economics is the use of mathematical methods in cost-benefit analyses (CBA) of alternative energy solutions. The information gained from CBA can then be used to evaluate the desirability, feasibility, and value of a proposed engineering project. Energy Economics is a subset of Engineering Economics devoted specifically to calculating the costs and benefits associated with alternatives in energy projects in the supply, utilization, and conservation of energy.

**EET 295T Special Topics: Energy Sources for the Future** 3 cr. Political and social instability in oil-producing countries, depletion of petroleum reserves, increasing demand for fossil-fuel based products and services, and increasing concern over environmental impacts is driving efforts to develop alternative energy paradigms to power the world's economies. This course explores, within a cultural context, the issues of energy supply, sustainability, security, economic development, transition, and environmental protection, as they relate to traditional, alternative, and emerging energy technologies.

**EET 295T Special Topics: Introduction to Coalbed Methane** 3 cr. Introduction to overview of the geology and mechanics of coal seam gas reservoirs. This course includes exploring for, assessing, developing, or investing in coalbed methane. Topics included in this course are sedimentary geology of coal, coal primary characteristics, coalbed gas storage, coalbed permeability, hydrologic regime, phased prospect assessment, cbm wells, water and environmental issues, ECBM and $CO_2$ sequestration.

**EET 295T Special Topics: Hydrology and Hydroelectric Systems** 3 cr. An introduction to hydrology, and the application of knowledge and principles toward recognition of and responding to water-related problems in society including quantity, quality, and availability. Exploration of hydroelectric generation systems will be included.

**EET 295T Special Topics: Petroleum Technology** 3 cr. An overview and history of the petroleum industry. Purposes and proper procedures in a variety of different petroleum technologies: exploration, drilling,

production, transportation, marketing, and refining are topics included. Other topics included are health, safety, and environmental issues related to 'job' activities, regulatory requirements, and regulating compliance issues.

**EET295T Special Topics: Internship** 2 cr. On-the-job training in positions related to each student's career goal. This experience prepares students for initial employment and increases occupational awareness.

**EVST 101N Environmental Science** 3 cr. Offered autumn. An introduction to the scientific principles that underpin environmental science and discussion of how these shape national and local environmental laws and policies. Features local approaches to solving environmental problems.

**MAT 100 Intermediate Algebra** 3 cr. Prereq., MAT 005 or appropriate placement score. Topics include linear equations and systems of linear equations, inequalities, applications and graphing; polynomials; rational expressions and equations; radicals, rational exponents and complex numbers; quadratic equations; introduction to exponential and logarithmic functions. Credit not allowed for both MAT 100 and MATH 100.

**MAT 120 Elementary Functions** 4 cr. Offered autumn and spring. Prereq., MAT 100 or appropriate score on the ASSET placement test. Algebraic, trigonometric, exponential/ logarithmic functions of one real variable and their graphs. Inverse functions, complex numbers and polar coordinates. Conic sections. Credit not allowed for both MAT 120 and MATH 121.

**PSY 110S Organizational Psychology** 3 cr. Offered autumn and spring. Foundation in the psychological processes that influence behavior of people in work settings.

**SCN 175T Integrated Sciences** 3 cr. Offered every term. Prereq. or coreq., MAT 005. An introduction to the basic principles of physics, chemistry, environmental and earth sciences, biology, and astronomy, emphasizing the scientific method and real-world applications.

**WTS 101 English Composition** 3 cr. Prereq., COM 090T or passing score on placement test. Instruction and practice in both the expository writing and research process. Emphasis on the use of specific techniques of writing to develop style, unity, clarity, and force of ideas, and structure. Students are expected to write without major errors in sentence structure or mechanics. Credit not allowed for both COM 101 and ENEX 101. Grading A-F, or NC.

**Regional Letters of Support**

The following regional private employers, state agencies, and industry leaders have provided letters of support for the program and its curriculum:

- Sage Mountain Center
- CTA Architects Engineers
- Montana Dept of Environmental Quality
- Thirsty Lake Solar
- Gross Electric
- Interstate Renewable Energy Council
- WindCatcher and Windraulics
- Montana Community Development Corporation
- Montana Associated Technology Roundtables
- Sundance Solar Systems
- United Hydrogen Sources
- Solar Plexus, LLC
- Montana Renewable Energy Association
- Oasis Montana, Inc
- National Center for Appropriate Energy
- Sunelco, Inc
- Windpark Solutions America
- Community Power Corporation
- Independent Power Systems, Inc
- North American Board of Certified Energy Practitioners

## BUDGET ANALYSIS

**ITEM:**

**Campus: The University of Montana College of Technology**

**Proposed Program: Energy Technology**

| | Year 1 | | Year 2 | | Year 3 | | Year 4 | | Year 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Estimated **ENROLLMENT** | | | | | | | | | | |
| FTE Enrollment | 25 | | 20 | | | | | | | |
| Estimated Incremental **REVENUE** | | | | | | | | | | |
| Use of Current General Operating Funds | 0 | | 0 | | | | | | | |
| State Funding for Enrollment Growth | 106985 | | 75520 | | | | | | | |
| Tuition Revenue | | | | | | | | | | |
| A. Gross Incremental Tuition Revenue | 109773 | | 76752 | | | | | | | |
| B. Reductions to Incremental Tuition | | | | | | | | | | |
| C. Net Tuition Revenue (A-B) | 109773 | | 76752 | | 0 | | 0 | | 0 | |
| Program/Course Fees | 0 | | 0 | | | | | | | |
| External Funds | 253800 | | 318934 | | | | | | | |
| Other Funds (please specify) | | | | | | | | | | |
| **TOTAL Estimated Incremental Revenue** | 470558 | | 471206 | | 0 | | 0 | | 0 | |
| Estimated Incremental **EXPENDITURES** | | | | | | | | | | |
| Personal Services | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** | **FTE** | **Cost** |
| Faculty | 3 | 65000 | 3.5 | 81000 | | | | | | |
| Other Staff | 3.5 | 119800 | 4.25 | 149434 | | | | | | |
| Operating Expenses | 59000 | | 88500 | | | | | | | |
| Equipment | | | | | | | | | | |
| Start-up Expenditures | 20000 | | 10000 | | | | | | | |
| **TOTAL Estimated Incremental Expenditures** | 263800 | | 328934 | | 0 | | 0 | | 0 | |
| **Estimated Revenues Over/(Under) Expenditures** | 206758 | | 142272 | | 0 | | 0 | | 0 | |

CTA
ARCHITECTS
ENGINEERS

October 26, 2005

Brian Kerns
UM College of Technology
909 South Avenue West
Missoula, MT 59801

Dear Mr. Kerns:

We at CTA are pleased to hear about your progress in developing an Alternative Energy Technician Degree Program. This is an important and timely move on your part and we offer our support and assistance. We have several engineers in this field and could make them available for class presentations.

If you have any questions, please do not hesitate to call.

Best regards,

CTA ARCHITECTS ENGINEERS

Kent C. Bray, AIA, CSI
Principal

c: CTA File -

j:\users\kentb\kerns_l01.doc



306 West Railroad Avenue • Suite 104 • Missoula, Montana 59802 • 406. 728. 9522 • Fax: 406. 728. 8287
www.ctagroup.com • msla.info@ctagroup.com

SAGE MOUNTAIN CENTER
79 Sage Mountain Trail • Whitehall, MT 59759 • 406.494.9875

October 10, 2005

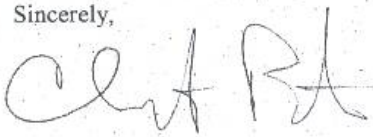
Greetings,

My name is Christopher Borton and I am director of Sage Mountain Center, LLC. We are a small business in Montana with 3 employees. We have been in operation for about 10 years promoting sustainable living skills through workshops, lectures, and tours. Of particular interest to us within the renewable energy field are solar electricity, solar thermal, and small wind generation. Our staff has been trained purely by the trial and error of hands-on applications. This learning process could be greatly enhanced by a structured knowledge base presented in a coherent and systematic way. We strongly believe that some type of curriculum in alternative energy is greatly needed in our state, especially as interest in this field continues to dramatically expand worldwide.

Sage Mountain Center is also a hub for environmentally conscious consumers, architects, and alternative builders. These fields, by there very nature, overlap into alternative energy. Regularly we are asked for contact information for skilled and knowledgeable workers in these areas, but can only offer a few suggestions as to who to contact. We would love to be able to draw from a larger skilled workforce.

Thanks for your concern and we hope very soon to see alternative energy education become a part of UM's curriculum.

Sincerely,



Christopher Borton
Director
Sage Mountain Center

Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.state.mt.us

September 23, 2005

Brian Kerns
University of Montana College of Technology
909 South Avenue West
Missoula, MT 59801

Brian,

I am the Deputy Director of the Montana Department of Environmental Quality (DEQ). I am pleased to take this opportunity to support the new Alternative Energy Technician curriculum for the College of Technology. Our agency supports the development of renewable and alternative energy in Montana. Because Montana is so rich in alternative energy resources, these developments will provide environmental, economic, and reliability benefits to Montana and our nation.

Among our staff, we currently employ more than 12 individuals that are required to possess some of the skills that you are proposing to develop with your program. The agency also contracts with dozens of professional consulting firms that are required to have qualified energy technicians. I project the number of employees and contracted personnel may increase due to new duties that our agency is being required to fulfill. For instance our Permitting Department is reviewing, for the first time, plans to expand a transmission line for a proposed wind plant. The U.S. Department of Environmental Quality and Department of Energy are encouraging states to develop plans to utilize alternative energy to reduce air pollution, and DEQ may need to staff up in the future to implement these plans.

I also envision the increased need in the private sector for skilled professionals in the emerging field of alternative energy. The increasing energy costs in the state has required that consumers look at alternatives. Recent national events have reminded us of the need for reliable, diverse, and domestic energy resources development. Our agency has tracked the increased utilization of alternative energy. Wind energy may provide close to 10% of our electrical energy use by the end of this year with the commercial wind plant at Judith Gap coming into production. Alternative energy is showing significant gains in the heating and transportation fuel sectors also. The

Montana Legislature passed the Renewable Portfolio Standard in 2005, which provid alternative energy an established role in our state's energy planning process.

I appreciate this opportunity to support the efforts of your alternative energy program.

Sincerely,

Tom Lives

Brian Kerns
U of Montana College of Technology
909 South Avenue West
Missoula, MT 59801

Jeff Wongstrom
Thirsty Lake Solar
POB 538
Eureka, MT 59917

September 27, 2005

Thirsty Lake Solar is a small renewable energy system design, install, and maintenance company mainly servicing residential off grid clients within a 2 hour driving radius of Eureka Montana. Our home and business operate off grid.

We endorse a renewable energy program offered at the College of Technology. My background includes a BS Materials Science and Engineering degree from the University of Michigan and I started the company by traveling from Montana to Colorado to receive solar design and install training. Our part time apprentice is currently in New Mexico pursuing a renewable energy degree and may continue on afterwards at a school in Oregon.

This is only our third year in business and we have done twice as many installs this year compared with the first two years. We expect continued growth as our reputation becomes known. We are finding that many of the people out there doing installs are not properly trained and are doing substandard work, hurting the industry and sending work our way. We hope to employ an apprentice full time next year to meet the increase in demand for our work.

We support a program which puts skilled and properly trained people into the industry.

Jeff Wongstrom
NABCEP Certified Solar Installer
Thirsty Lake Solar

BRIAN KERNS
C/O UNIVERITY of montana
College of Technology

909 South AVE WEST
missoula mT 59801

In Regards to our phone Conversation
I do support The need for RENEWABLE ENERGY
being Taught to the general population and
to improve Knowledge Sharing of Installers w/ a
good Electrical background

I support Your Efforts

Sincerely William Edward Gross 9/27/05


**Gross Electric**

*Alternative Energy Design & Installation*

**892-4940**

892-4914 FAX

*Since 1978*

IREC INTERSTATE RENEWABLE ENERGY COUNCIL

September 16, 2005

Brian Kerns
UM College of Technology
909 South Avenue West
Missoula, MT 59801

Dear Dr. Kerns:

The Interstate Renewable Energy Council, a national, non profit organization, applauds your Alternative Energy Technician Degree Program. It is an important educational offering and will bring the renewable energy industry into step with other recognized craft labor trades.

Both national and international forecasts and government and private reports show major growth patterns for renewable energy technologies and products. The Worldwatch Institute says that renewable energy is entering a boom period, with global wind energy use tripling since 1988 and annual solar cell production increasing 150 percent in the past thee years. A study from Navigant Consulting, Inc. states that the wind and solar electric markets have seen 15-25 percent annual growth over the past five years. The report predicts that renewable energy use will more than double over the next decade in the United States and Canada.

Other economic signals include that 18 states now have laws that require a percentage of generating capacity be derived from renewable sources and 15 states have Public Benefit Funds which assure continued support for renewable and energy efficiency initiatives. And, Renewable Energy Certificates, which generate resources to support renewable energy, are estimated to reach $600 million by 2010.

A University of Berkley report finds that an investment in solar, wind, and biomass energy produces more jobs than a comparable investment in fossil fuel sources. A 2001 report by the Renewable Energy Policy Project found that wind and solar electricity production offer 40 percent more jobs than coal.

The evidence is overwhelming that the renewable energy sector of the economy will continue to grow and create industry demand for skilled renewable energy technicians.

The UMCOT Alternative Energy Technician Degree Program provides educational, training and experiences that lead to defined workplace knowledge, skills, and abilities. And, the Program appropriately addresses issues of safety and codes.

IREC encourages the University and the State to approve the Alternative Energy Technician curriculum.

Sincerely,

Jane M. Weissman, Executive Director
Interstate Renewable Energy Council
(781)461-8167
jane@irecusa.org

Missoula, September 23, 2005.

Mr. Brian Kerns
Project Manager
Alternative Energy Program
College of Technology
University of Montana
909 South Avenue West
Missoula, MT 59801

Dear Mr. Kerns,

We represent the Research and Development Corporations WindCatcher, Windraulics and H2GO which are, at this time, being relocated to Missoula, Montana.
WindCatcher Windmills LLC is developing a new design for wind machines based on higher efficiency and lower costs.
Windraulics LLC has a new technology for power storage, variable ratio transmission and the integration of multiple systems for wind machines, solar systems and other backup power sources.
H2GO LLC has a novel design for hydrogen powered hydraulic assisted electric motor for the transportation industry.
We are and we intend to continue to be exclusively Research and Development companies, in order to create new and innovative Intellectual Properties to be licensed and manufactured for the clean efficient renewable realm of the power industry.
It is our primary intention to develop an Apprentice Program to integrate young innovative minds with high technology specialists to create a working environment that will not only build up stockholder value but will make real contributions to the changes that will be required in the next generation of the power industry.
These programs will include our first sources of personnel to be hired full time in the coming year to include at least 15 people. Due to the progress in our research work we expect to be hiring students within 90 days to assure their participation in the process of building, testing and certifying the first units of our technologies.
In reference to your Letter of Support Request, we strongly uphold your views and intentions and we are very pleased and honored to have the opportunity to be included in the Alternative Energy Program of the College of Technology.
Sincerely,

James Lee Bailey
Director of Engineering

Maria Tereza Couto Buck
CEO

September 20, 2005

Brian Kerns
University of Montana College of Technology
909 South Avenue West
Missoula, MT 59801

Brian,

I represent Montana Community Development Corporation (MCDC) which is a private non profit business specializing business consulting, technical assistance, and financing.

MCDC strongly endorses the new Alternative Energy Technician curriculum that the College of Technology has developed. This program helps fill a growing need for skilled professionals in the emerging field of alternative energy. High energy prices are expected to drive economic growth in this industry which would further add to workforce demands in the immediate future.

I appreciate this opportunity to support the efforts of your alternative energy program.

Sincerely,
Montana Community Development Corporation

C. Craig Rawlings
Business Development Specialist

Montana Associated Technology Roundtables
339 S. 5th St. E.
Missoula, MT 59801

Brian Kerns
UM College of Technology
909 South Avenue West
Missoula, MT 59801

9/20/05

To whom it may concern:

On behalf of the Montana Associated Technology Roundtables, I would like to voice my strong support for the development of a 2 year University of Montana College of Technology Alternative Energy Technician Degree Program.

Montana is uniquely situated with an abundance of the elements necessary for alternative energy solutions including the hydrogen, wind, bio-fuels and other opportunities. What we need are the skilled personnel to realize these opportunities.

The COT is well situated to educate the best and the brightest in these technologies and help them develop the solutions of tomorrow.

I have no idea on how many will be employed or how many companies will be started from the innovation and collaboration among the students but, if we don't have this type of education, we won't benefit from the exploding alternative energy industry. Montana cannot afford to ignore this promising sector of the economy and it will never develop it if we don't have the trained work force.

I encourage full and ever-expanding support for this program by the University System and the State of Montana.

Sincerely,

Russ Fletcher

# *SUNDANCE SOLAR SYSTEMS*

***HC 50, Box 4404***
***Red Lodge, MT 59068***
***406/425-1153***


September 20, 2005

Brian Kerns
UM College of Technology
909 South Avenue West
Missoula, MT 59801

Dear Brian:

I am writing in support of your proposed Alternative Energy Technician Degree Program. Sundance Solar Systems has been providing on and off-grid photovoltaic and wind energy systems in Montana for 11 years. We have seen not only tremendous local growth in this industry but also changes in its application. Montana has vast areas of land that have no utility service. Remote home PV and wind systems are a viable source of electricity for these areas. This application of PV and wind systems accounted for almost all of our early business. Since the 1997 Utility Deregulation Act and the accompanying Net Meter law, a large sector of grid-connected people have incorporated PV into their homes. This has established Montana as a leader in promoting renewable energy technologies and has opened a much wider customer base.

It is imperative for those of us in this industry to stay informed and current to provide state of the art, code compliant installations and support. Our employees must have the expertise and technical knowledge of photovoltaics and wind energy to be effective. An alternative energy technical degree program would provide this training locally and contribute to meeting the growing demand for this progressive technology. I fully support the development of such a program and would be willing to help with its creation. Thank you very much for your efforts to bring this necessary training to Montana.

Sincerely,

Henry Dykema
Sundance Solar Systems (owner)


4317 Nicole Ct
Missoula, MT 59803

Brian Kerns
UM College of Technology
909 South Avenue West
Missoula, MT 59801

Dear Brian,

I have recently started a company called United Hydrogen Sources, which is located in Missoula, Montana. The business consists of producing hydrogen gas as an clean fuel by utilizing renewable energy sources. Our goal is to begin the transition process from fossil fuel energy to a hydrogen-based energy paradigm. We believe that hydrogen and a distributed network of renewable power systems will help make Montana and the United States more energy self-sufficient.

In order for my business to succeed, I will need assistance in a variety of fields, which will be covered in the alternative energies program. I plan to hire personnel from the qualified individuals that will complete this program. In the immediate future, I will need at least two workers to convert a vehicle to bi-fuel, which will be offered in the program. I will also need a project manager, who can help with the business modeling. In the extended future, I will need many employees to carry out my goals. From skilled factory workers, to expert analyzers and problem-solvers, we will unquestionably need a quality team to overcome obstacles in the alternative energies field. It is crucial for the success of my business to have capable employees.

I feel that this program will help the University of Montana, College of Technology to become a leading school in the nation for alternative energies. It will help the struggling econmony of this state by creating jobs and will appeal to other businesses looking for skilled workers. I hope the academic review personnel will approve this curriculum and make it a part of the already phenomenal courses that are currently offered.

Regards,

Christopher Schafer
CEO
United Hydrogen Sources

United Hydrogen Sources
Christopher Schafer, CEO
4317 Nicole Ct, Missoula, MT 59803
406.370.6846

Brian Kerns
UM College of Technology
909 South Avenue West
Missoula, MT 59801

Hi Brian.

We are following the development of the College of Technology's renewable energy program with interest and are excited that you are developing such a program. Currently sound educational options in renewable energy are scattered, and comprehensive long-term programs (longer than two weeks) are rare.

At present we have a staff of 5 people engaged in the renewable energy business, and 3 of those spend the majority of their time installing solar, wind, and hydroelectric systems.

We had already anticipated substantial growth in our solar installation business, and with the new Energy bill solar tax credits we anticipate even more growth. With that growth we will have a need for additional trained employees, for installation and for design. I anticipate that in the next few years we will likely need to double the size of our staff.

Being able to call on a ready source of well-trained people to fill our staff needs would be a great help four our business. We look forward to helping you develop your program and we look forward to hiring from your eventual pool of trained graduates.

Thank you.

Lee Tavenner
Solar Plexus

MREA
Montana Renewable Energy Association

Brian Kerns
University of Montana College of Technology
909 South Avenue West
Missoula, MT 59801

Brian,

I represent The Montana Renewable Energy Association which is a 501 c3 non profit incorporated in Montana. The MREA membership includes utilities, government agencies, and renewable energy businesses located both inside and outside Montana.

The Montana Renewable Energy Association strongly endorses the new Alternative Energy Technician curriculum that the College of Technology has developed. We are seeing an expansion in the use of renewable energy worldwide. As the use of renewable energy expands, the need for qualified professionals and technicians will grow. The Alternative Energy Technician curriculum will help fill this growing need. High energy prices and a growing concern for the environment are driving growth in this industry which will add to workforce demands of the renewable energy industry in the future.

I commend the College of Technology for taking on the task of developing this curriculum. Having reviewed the course outlines, I believe that the curriculum will well serve students interested in a career in renewable energy.

I appreciate this opportunity to support the efforts of your alternative energy program.

Sincerely,

David Ryan PE
President, Montana Renewable Energy Association
2910 Floral Blvd, Butte, MT. 59701
(406) 494-0930



PO Box 263 • Butte, MT 59701 • (406) 494-0930

436 Red Fox Lane
Stevensville, MT 59870
Fax: 406 777-0830 Local Line: 406 777-4321 or 4309
Toll Free: (877) OASISMT (877-627-4768 or 4778)
Web Page: www.oasismontana.com
E-Mail: info@oasismontana.com

20th September, 2005

To Whom It May Concern:

Our business name is Oasis Montana Inc. and we are located in Stevensville, MT. We design systems for and sell renewable energy power equipment (photovoltaic solar modules, wind generators, inverters, batteries, other balance of system components) for remote homes, utility-tied systems, water pumping, UPS and back up power needs, telemetry and related sensor devices, and RV/marine use. We provide detailed wiring diagrams, installation as needed, and tech support for all the systems and equipment we sell.

While we are a small woman-owned business (our staff consists of three persons including myself), we hope that with increasing sales, we will be able to add another sales technician down the line, perhaps in several years.

We live in an exciting time for the field of renewable energy, and it is heartening that the UMCOT is considering adding this sort of training for those entering the future workforce. Worldwide, solar and wind power are among the fastest growing industries of the energy sector, and specialists in those fields will, I suspect, prove very invaluable.

Regards,

Christine Daum
President, Oasis Montana Inc.

**National Center for Appropriate Technology**

3040 Continental Drive • P.O. Box 3838 Butte, MT 59702
406/494-4572 FAX: 406/494-2905 E-MAIL: info@ncat.org

September 12, 2005

Brian Kerns
UM College of Technology
909 South Avenue West
Missoula, MT 59801

Re: Alternative Energy Technician Program Curriculum Approval

Dear Brian:

The Alternative Energy Technician Program proposed for the University of Montana College of Technology ("UMCOT") is the right program at the right time. As an architect and energy specialist I have an excellent view of trends in the energy marketplace. Issues such as rising traditional energy costs, the future carbon constrained economy, and emerging alternative technologies make the proposed program timely and appropriate.

The National Center for Appropriate Technology (NCAT) has played a significant role in advancing the use of wind and solar technologies in Montana and elsewhere in the country. In the last six years we have witnessed a growing interest in alternative energy. When combined with energy efficiency, renewable energy, and distributed generation technologies represent the greatest potential for meeting out nation's energy needs in the long term.

NCAT currently employees five staff members who daily work with the implementation of renewable energy systems. We hope to build our workforce as we offer technical assistance and oversight to utilities and local nonprofit organizations outside the state. In the next five years we would like to double our workforce.

The knowledge and skills that will result from the Alternative Energy Technician Program are applicable both to alternative technologies and energy conservation. Each complements the other and provides employers with hiring options that are not currently available in the marketplace.

I strongly urge the appropriate university and state authorities to approve the Alternative Energy Technician Program.

Sincerely,

Dale Horton

Dale Horton, Architect
NCAT Sustainable Energy Program Manager

SUNELCO
THE SUN ELECTRIC COMPANY

9/16/05

Brian Kerns
UM College of Technology
909 South Avenue West
Missoula, MT 59801

Dear Mr. Kerns,

Concerning the proposed Alternative Energy Technician Degree Program, I would like to offer my wholehearted support. My company, Sunelco, Inc., located in Victor, MT currently employs 6 people. As a growing company we are always looking for qualified personnel to fill vacancies and increase our capacity to meet the growing demand for renewable energy systems across the U.S. We are a bricks and mortar business with one of the best renewables catalogs on the market and a web site which was designed primarily as an educational tool for those interested in learning more about alternative energy. It can be accessed at www.sunelco.com.

We currently have three technologists who design, sell, install and troubleshoot renewable energy systems. Their backgrounds are in education, journalism and diesel mechanics. While the individual talents work well together, the cross training to facilitate their current responsibilities requires months of extensive work and is expensive. It would be economically advantageous for us to locate and employ people who have had previous training in the renewable energy field.

I would be happy to host visits from students who wish to see what the day to day employment routine consists of and would not rule out summer internships and apprenticeships after completion of the program with an eye to permanent employment.

The technicians (we refer to them as technologists) must have a broad base of knowledge from mathematics to aesthetics and specific knowledge about the products they are working with. A sound basis in the fundamentals of electricity is also essential for the starting technologist if they are to be effective at the start of their career. I feel that the College of Technology is ideally suited to provide this training and sincerely hope that this program is approved and implemented.

The field of alternative energy is rapidly expanding as can be seen by the deployment of huge wind farms around the world, the current European (specifically German and Spanish) programs to install grid connected solar systems and the increased fuel cost for operating fossil fueled generators domestically. The role that hydrogen fuel cells will play in the future should not be overlooked as a renewable resource and the technicians needed to advance their usage should be in training now.

Please feel free to contact me should you wish further information concerning the job market in renewable energy or for additional information about Sunelco, Inc.

Respectfully,
Tom Bishop
President, Sunelco, Inc
2086 Highway 93 North, Suite 130
Victor, MT 59875
1-800-338-6844

**WINDPARK SOLUTIONS AMERICA**

154 Johannes Avenue
PO Box 70
Big Sandy, MT 59520
Phone (406) 378-2179
Fax (406) 378-2657

WPS

September 16, 2005

Brian Kerns
University of Montana College of Technology
909 South Avenue West
Missoula, MT 59801

Brian,

I represent WindPark Solutions America. Our offices are located in Big Sandy, MT, and we are the company that developed the Judith Gap Wind Farm in Wheatland County, MT.

According to the American Wind Energy Association, the next few years will show record breaking growth for the wind industry in the United States and as the industry grows, skilled professionals will be needed. We at WindPark Solutions America strongly endorse the new Alternative Energy Technician curriculum that the College of Technology has developed. This program will not only benefit the wind industry, as well as the entire alternative energy industry, but provide a skilled workforce in a state that has a tremendous future in renewable energy.

I appreciate the opportunity to support this program.

Sincerely,

Wendy Kleinsasser

Wendy Kleinsasser
Project Coordinator

Community Power Corporation

Energy Systems for Sustainable Power

September 29, 2005

Brian Kerns
University of Montana College of Technology
909 South Avenue West
Missoula, MT 59801

Brian,

Community Power Corporation (CPC) is a small business specializing in the design, installation, operation and maintenance of small modular biopower systems. Our Product Development Facility is located in Littleton, CO.

CPC strongly endorses the new Alternative Energy Technician curriculum that the College of Technology has developed. This program helps fill a growing need for skilled workers in the emerging field of alternative energy. In our business high energy prices are expected to increase the demands for our products.

Our staffing level currently consists of seventeen people involved in the development, demonstration and deployment of modular biopower systems. The breakdown is as follows: three management, eight professional, and six non-exempt. The professionals are engineers and scientists in the mechanical engineering (three), chemical engineering (three) and electrical engineering (two) disciplines. The non-exempts are mechanical (five) and electrical (one) technicians. As our backlog increases we will be looking to increase staff in both the professional (two) and non-exempt (two) ranks in the near future. Over the next five years we hope to make the transition to commercial status. If we accomplish that goal we will either add to staff or align with a strategic partner. In either case, the commercialization of our product will create at least twenty new positions in all of disciplines previously cited.

I have been impressed with the leadership of the University of Montana College of Technology in helping to educate users in the field of bioenergy; therefore I strongly support this innovative new initiative within your alternative energy program.

Sincerely,

Art Lilley
Chairman

Brian Kerns
U of Montana College of Technology
909 South Avenue West
Missoula, MT 59801

Jeff Wongstrom
Thirsty Lake Solar
POB 538
Eureka, MT 59917

September 27, 2005

Thirsty Lake Solar is a small renewable energy system design, install, and maintenance company mainly servicing residential off grid clients within a 2 hour driving radius of Eureka Montana. Our home and business operate off grid.

We endorse a renewable energy program offered at the College of Technology. My background includes a BS Materials Science and Engineering degree from the University of Michigan and I started the company by traveling from Montana to Colorado to receive solar design and install training. Our part time apprentice is currently in New Mexico pursuing a renewable energy degree and may continue on afterwards at a school in Oregon.

This is only our third year in business and we have done twice as many installs this year compared with the first two years. We expect continued growth as our reputation becomes known. We are finding that many of the people out there doing installs are not properly trained and are doing substandard work, hurting the industry and sending work our way. We hope to employ an apprentice full time next year to meet the increase in demand for our work.

We support a program which puts skilled and properly trained people into the industry.

Jeff Wongstrom
NABCEP Certified Solar Installer
Thirsty Lake Solar

**Independent Power Systems, Inc.**
1404 Gold Ave. Unit #4
Bozeman, MT 59715
Tel: 406-587-5295 Fax: 406-587-5332

Brian Kerns
College of Technology

September 30, 2005

Subject: Letter of support for 2 year alternative energy program

My name is Tony Boniface president of Independent Power Systems, Inc based in Bozeman, Montana. My business designs, sells, and installs solar, wind, and generator based power systems for both the off-grid and grid-connected market.

I have been actively involved in alternative energy for 12 years as I see it being a necessary component of energy production for a sustainable world. I have had to learn much of what I know by diligent self learning most of the time. Certainly my BSEE and various tech seminars have assisted me but I have always believed that there needs to be a university based curriculum that educates in the realm of alternative energy if this industry is to flourish. I have spoken with Brian Kerns about his plans for such a curriculum and would like to see it happen.

I currently have three active employees all of whom I have had to train in these technologies. While there are many tasks to running the business that are not specific to technology, the critical jobs do. As my business grows, I will be seeking individuals with either experience or education in this field. I am expanding into the state of Colorado as there is now great incentive for individuals to adopt solar and wind energy and I will be requiring hiring knowledgeable individuals. I hope to be able to look to UM for candidates.

Respectfully,

Tony Boniface
President

North American Board of
NABCEP

Saratoga Technology + Energy Park
10 Hermes Road, Suite 400
Malta, NY 12020

Phone: (518) 889-8126
Fax: (518) 899-1622

September 29, 2005

Mr. Brian Kerns
University of Montana College of Technology
909 South Avenue West
Missoula, MT 59801

Dear Brian,

I represent the North American Board of Certified Energy Practitioners (NABCEP) which is the nationally-recognized certification program for installers of photovoltaic systems. We have developed our rigorous qualification standards and examination after a wide ranging consensus building process with many PV stakeholders.

We strongly endorse the new Alternative Energy Technician curriculum that the College of Technology has developed. This program helps fill a growing need for skilled professionals in the emerging field of alternative energy. Indeed, NABCEP is very concerned and supports efforts to increase the number of qualified installers of renewable energy technology. It is imperative that such systems are installed in accordance with the applicable codes such as the National Electric Code and, meet the expectations of consumers. Having a well-trained workforce is critical in making this happen.

Nationally, we currently have 177 NABCEP® Certified Solar PV Installers, including five within the state of Montana. With energy prices skyrocketing, and with growth estimates of solar panel production at approximately 30% per year, we believe there will a critical need for a qualified work force in the state of Montana, particularly with its excellent solar resource.

Thank you for the opportunity to support the Alternative Energy Technician curriculum at the University. If I can be of any assistance, please let me know.

Sincerely,

Peter Sheehan
Executive Director

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-1501+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **Montana Tech COT** | | |
| **Program Title:** | **Certificate Of Applied Science Degree In Automotive Technology** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☒ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☐ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☒ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-1501+R507 | Institution: Montana Tech COT |
|---|---|

**Specify Request:**

Montana Tech of The University of Montana College of Technology seeks approval to add a Certificate of Applied Science degree to the existing Associate of Applied Science Automotive Technology program. The certificate will include four of the following eight National Automotive Technicians Education Foundation areas required for minimum certification of the program: Brakes, Electrical/Electronic Systems, Engine Performance, Engine Repair, Suspension and Steering, Heating & Air Conditioning, Manual Transmissions & Transaxles, and Automatic Transmissions & Transaxles. This certificate was recommended by the industry as the entry level requirement for an automotive technician.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-1603+R0507** | **Date of Meeting:** | **May 30-June 1, 2007** |
| **Institution:** | **The University of Montana - Western** | | |
| **Program Title:** | **Business** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☒ **A.** **Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

campuses receive program information well in advance of submission.

| Item No.: 135-1603+R507 | Institution: The University of Montana - Western |
|---|---|

**Specify Request:**

Change the name of the degree from a B.S. in Business to a B.S. in Business Administration because the new degree title better matches the underlying curriculum. This new title would be in line with titles of similar programs at other institutions across the country. The change came about after the department compared its curriculum with the Business Administration curricula from similar programs across the country.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-1604+R507** | **Date of Meeting:** | **May 31, 2007** |
| **Institution:** | **The University of Montana - Western** | | |
| **Program Title:** | **New B.A. Option In Mathematics** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☐ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☒ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-1604+R507 | Institution: The University of Montana - Western |
|---|---|

**Specify Request:**

The University of Montana-Western proposes offering a B.A. Option in Mathematics for those students with a strong interest in mathematics but who do not want to be mathematics teachers. UMW's mathematics programs underwent a rigorous review process during 2005-2006. Developing a mathematics degree program for non-educators was one of the recommendations of the external reviewer brought in during this process. UMW already offers a B.S. in Secondary Education with a Mathematics Option (major). The proposed B.A. Option in Mathematics would make use of the same courses already being offered for the B.S. program.

# M O N T A N A  B O A R D  O F  R E G E N T S

## NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

| Item No.: 135-1604-R507 | Institution: The University of Montana - Western |
|---|---|

1. How does this program advance the campus' academic mission and fit priorities?

The primary objective of this program is to provide graduates with a broad education in mathematics to prepare them for graduate school or employment in mathematics intensive jobs. UMW already does this for students who are studying to be teachers of mathematics through its B.S. in Secondary Education, Mathematics Option (Major). The B.A. Option in Mathematics would serve the needs of those students who are not interested in becoming K-12 teachers of mathematics. It advances the priorities established by program review and fits the mission of the campus to provide accessible education in areas of need.

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

This program increases access to a mathematics program while making more efficient use of MUS resources.

3. How does this program support or advance Montana's needs and interests?

Individuals trained in mathematics are in short supply in society in Montana and beyond. Graduates of this program will be prepared to go on to graduate school or accept employment in a variety of mathematics-intensive positions

4. How will this program contribute to economic development in Montana? (Note projected annual economic impact both regionally and statewide.)

This program is not expected to have a direct major impact on economic development in Montana but graduates have the potential to be of major value to employers in the state.

5. What is the program's planned capacity?

| | |
|---|---|
| • Break-even point? | 2 FTE students |
| • Enrollments / year? | 5 |
| • Graduates / year? | 5 |
| • MT jobs / year? | 3 |

6. Resource Allocation:

| | |
|---|---|
| • Total program budget? | $ 0 |
| • Faculty FTE? | 5.0 |
| • Staff FTE? | 0 |

7. Does this program require new resources? ☐ Yes ☒ No

If yes, what is the amount? $ _____

8. How will the campus fund the program?

The only costs of the program will be some minor amounts of faculty, staff and administration time to promote and administer the program. No additional faculty, staff or administration will be hired to do this but these duties will be added to what they are already doing.

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

N/A

The University of Montana Western
Proposal for a New B.A. Option in Mathematics
May-June 2007

a. Specify the objectives to be achieved by this program
The primary objective of this program is to provide graduates with a broad education in mathematics to prepare them for graduate school or employment in mathematics intensive jobs. UMW already does this for students who are studying to be teachers of mathematics through its B.S. in Secondary Education, Mathematics Option (Major). The B.A. Option in Mathematics would serve the needs of those students who are not interested in becoming K-12 teachers of mathematics.

b. Specify in detail present faculty, facilities, and equipment, and library holdings in support of this program, and compare them to known or anticipated standards for accreditation.
There are currently three tenure-track faculty, all of whom possess doctorates in mathematics or related areas, and one full-time non tenure-track faculty member with a masters in mathematics. There are several classrooms devoted primarily to teaching mathematics, a computer lab equipped with Mathematica software, and a mathematics learning center that the faculty take turns staffing. The library possesses a mathematics collection sufficient for regional accreditation purposes, including increasing electronic access to databases.

c. Detail additional faculty requirements as to qualifications, salary, and recruitment.
No additional faculty will be needed since all of the courses are already being taught for the existing Mathematics Education degree.

d. Submit budget information that describes estimated incremental revenues and expenditures associated with the program for a three- to five-year period; and estimated student enrollments for the same time period.

e. Student enrollment is expected to be low in this program (see attached budget form). However, since all of the courses are currently scheduled to be taught for the benefit of existing programs, only minimal administrative costs are associated with this program.

f. List the new courses this program will add to the curriculum and specify course requirements for the degree.
There are no new courses required for this degree. Degree requirements are attached.

g. Indicate the interdepartmental implications of additions to this program or supporting courses in departments which contribute to the new program of studies.
The only course required in the program that is taught by another department is PHYS 233 General Physics. This course is required in several other programs and is therefore taught at least once per year.

h. Explain how the recommendation to submit this proposal to the Board of Regents was made: Include information about process followed, faculty involvement, employer or community input, market demand for graduates, employment prospects and starting salaries, as well as other justifications.

During the 2005-6 academic year a thorough program review was conducted, including an external reviewer who was brought to campus. The external reviewer met with faculty, administrators and students. One recommendation to come out of this review was to consider the implementation of a mathematics program for non-teachers.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-2012+R0507** | **Date of Meeting:** | **May 30– June 1, 2007** |
| **Institution:** | **Montana State University – Bozeman** | | |
| **Program Title:** | **Termination of Agricultural Operations Technology Major and Rename "Division of Agricultural Education/Agricultural Operations Technology" to the "Division of Agricultural Education"** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☒ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☐ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☒ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☒ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

☐ **C. Temporary Certificate or A.A.S. degree programs:** Certificate or Associate of Applied Science Degree Programs may be submitted as Level I proposals, with memo and backup documentation, when they are offered in cooperation with and/or at the request of private or

public sector partners and the decision point to offer the program is not consistent with the regular Board of Regents program approval process. Level I approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the normal program approval process as Level II Proposals.

| **Item No.: 135-2012+R0507** | **Institution: Montana State University-Bozeman** |
|---|---|

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

**Specify Request:**

Montana State University – Bozeman seeks approval from the Montana Board of Regents to terminate the Agricultural Operations Technology major. With the phase-out of the AOT curriculum, we further seek permission to formally change the name of the division from the "Division of Agricultural Education/Agricultural Operations Technology" to the "Division of Agricultural Education".

See attached termination checklist.

The Division of Agricultural Education/Agricultural Operations Technology (AgEd/AOT) seeks permission to phase out of the Agricultural Operations Technology (AOT) curriculum over the next few years, beginning immediately. As a result, the Division will go from offering two major degrees (one in Agricultural Education and one in Agricultural Operations Technology) to offering only the single degree in Agricultural Education.

Program Termination checklist:
Phase 1

1. Dr. Blair Stringam, the only faculty member of the Division of Agricultural Education/Agricultural Operations Technology (AgEd/AOT) dedicated solely to instructing AOT classes, abruptly resigned his faculty position at Montana State University in the middle of August, 2006. Approximately 29 students enrolled in the AOT curriculum were directly impacted by this resignation and an additional 50 or so students in the Ag Ed curriculum were indirectly impacted. Dr. Stringam's Fall 2006 and Spring 2007classes have been instructed by a combination of adjunct faculty and the two regular AgEd faculty (Drs. Marty Frick and Carl Igo) on an overload basis. This is not a sustainable approach or a quality approach.

   In early September 2006 the Associate Dean instructed the MSU Registrar's office to close the AOT curriculum to all new majors until its future could be decided. The message was also relayed to the Director of Admission at that time.

   Dr. Stringam's resignation precipitated an opportunity for College of Agriculture administration and faculty to evaluate the future of the AOT curriculum, which had long suffered from a chronic shortage of equipment, space, funding, and faculty. During the evaluation process the Associate Dean for Academic Programs in the College of Agriculture requested that all AOT students meet with him at noon on 24 October 2006 in 325 Leon Johnson Hall, for an update on the evaluation process. Of the approximately 29 students involved in the program, about 22 were present at the meeting, at which time the Associate Dean outlined the situation and the difficulties it had created and suggested that students reflect upon their ultimate career goal and change their major IF feasible. No student was asked to leave the AOT curriculum. Since the College of Agriculture is committed to matriculation of students enrolled in a major, the point was clarified that if students chose to remain in the AOT curriculum the College would commit to offering the required courses. However, in the event that suitable instructors could not be found for some courses, said students should understand that they may be forced to substitute similar courses or that some required courses may be waived. A letter reiterating what transpired at the meeting of the 24$^{th}$ was dated 25 October 2006 and sent to the address of record of all AOT students. Several concerned parents talked to the Dean and the Associate Dean about their concerns, which have been addressed.

   In January, 2007 AOT students were again reminded of the situation and were issued individually their own revised DA-1 (a schedule of courses used internally in the College of Agriculture) that indicated, in red, courses they still needed to take and the suggested semester in which they should take them to facilitate their graduating on time and to reduce the number of semesters in which ad hoc instructors for the AOT courses must be found. They were informed by memo dated 24 January 2007 that they must see their advisor, who will explain the process and asked to co-sign with their advisor a form indicating that they understood the situation and the process involved in seeing them through to graduation. Of the 29 or so students who were asked to make appointments and review the issue with their advisors, approximately 5 did not respond and 2 met with the advisor, but refused to sign the form.
   Following a lengthy evaluation of the AOT curriculum, and in light of its chronic difficulties, the Dean and Associate Dean, with the consent and approval of the Ag Ed faculty, decided to seek permission to begin phasing out the curriculum and to terminate it as soon as the last AOT major

graduates or transfers out of the curriculum. Students were asked to attend a meeting at 4 pm on 7 March, 2007 in Cheever Hall, at which time the Associate Dean, the Dean, and the Ag Ed faculty presented the case and announced the plan to seek permission to phase out of AOT. Again, it was reiterated to the students that whoever wishes to graduate in the AOT curriculum will be allowed to do so. It is the intention of the College of Agriculture to make the Stringam position an Ag Ed position, thus increasing the number of faculty in the viable Ag Ed program from 2 to 3.

With the phase-out of the AOT curriculum the name of the division will formally change from the "Division of Agricultural Education/Agricultural Operations Technology" to the "Division of Agricultural Education".

2. Because of the resignation of the sole faculty member in the AOT curriculum there are no AOT faculty to notify of the impending change.

3. This was completed January to March, 2007. See item #1 above.

4. Faculty Council was notified of the AOT phase-out by memo 9 April 2007.

5. Montana State University has no faculty union.

6. The AOT curriculum has no public advisory committee.

7. This memo serves as Notice of Intent.

Phase II

8. The Division of Agricultural Education/Agricultural Operations Technology has informed Admissions and Enrollment Services about the proposed phase out of the AOT curriculum by memo 9 April 2007. That office will communicate the phase out to feeder schools and high schools when the decision is finalized. The Division and the College of Agriculture will be updating their websites to reflect the phase-out decision.

9. Following formal acceptance of this proposal, new catalog copy will be submitted for immediate publication in the on-line catalog and for print publication in the 2008-2010 catalog. Students have been notified that they can continue with their present AOT enrollment through completion of their program (See item #1 above)

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-2013+R0507** | **Date of Meeting:** | **May 30 – June 1, 2007** |
| **Institution:** | **Montana State University – Bozeman** | | |
| **Program Title:** | **Change the name of the Minor in Natural Resources and Rangeland Ecology** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☒ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

☐ **C. Temporary Certificate or A.A.S. degree programs:** Certificate or Associate of Applied Science Degree Programs may be submitted as Level I proposals, with memo and backup documentation, when they are offered in cooperation with and/or at the request of private or public sector partners and the decision point to offer the program is not consistent with the regular

Board of Regents program approval process. Level I approval for programs under this provision will be limited to two years. Continuation of a program beyond the two years will require the normal program approval process as Level II Proposals.

| Item No.: 135-2013+R0507 | Institution: Montana State University - Bozeman |
|---|---|

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

**Specify Request:**

Montana State University – Bozeman seeks approval from the Montana Board of Regents to change the title of its minor in Range Science to Natural Resources and Rangeland Ecology. The BOR approved a change in title to the major in Range Science to Natural Resources and Rangeland Ecology at its March, 2006 meeting; this request is intended to align the name of the associated minor.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-2851+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **Montana State University-Great Falls COT** | | |
| **Program Title:** | **EMT - Intermediate 99 Certificate of Applied Science** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☒ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☒ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-2851+R507 | Institution: Montana State University-Great Falls COT |
|---|---|

**Specify Request:**

MSU-Great Falls College of Technology requests approval from the Montana Board of Regents and the Montana University System to Re-title the College's Certificate in EMT-Paramedic to a Certificate of Applied Science in EMT-Intermediate 99.

In addition, the College requests that the notification of intent to terminate the Certificate in EMT-Paramedic submitted at the March 2007 Board of Regents meeting be withdrawn. Justification for this request and proposed program curriculum are included in the following.

MSU-Great Falls College of Technology requests approval from the Montana Board of Regents and the Montana University System to Re-title the College's Certificate in EMT-Paramedic to a Certificate of Applied Science in EMT-Intermediate 99.

In addition, the College requests that the notification of intent to terminate the Certificate in EMT-Paramedic submitted at the March 2007 Board of Regents meeting be withdrawn. This notification was submitted due to the program's non-compliance with BOR Policy 301.12, as well as its history of having few students seeking the credential, and fewer still completing. Upon review of the program, followed by conversations between Faculty and the Chief Academic Officer, it was decided that a better option would be to modify the curriculum to align with the first year of EMT-Paramedic Associate of Applied Science program coursework which begins with EMT Basic Certification and culminating in the Intermediate 99 Certification. This has been a natural stepping-out point for students and aligns well with the purpose of a Certificate of Applied Science.

Below is the proposed curriculum for the change in this program.

**EMT-Intermediat 99**
**Certificate of Applied Science**

**Fall Semester**

| Course No. | Title | Credits |
|---|---|---|
| AH 140 | Pharmacology | 2 |
| AH 145 | Introduction to Medical Terms | 1 |
| ENGL 119 | Intro to College Writing ** | 4 |
| COMM 135 | Interpersonal Communication | 3 |
| EMT 137 | EMT-Basic | 6 |
| | | Subtotal 16 |

**Spring Semester**

| Course No. | Title | Credits |
|---|---|---|
| MATH 161 | Algebra s/Science App ** | 3 |
| EMS 140 | Intermediate I* | 4 |
| EMS 155 | Intermediate II* | 3 |
| EMS 217 | Intermediate III* | 4 |
| EMS 222 | Intermediate I Clinical* | 1 |
| EMS 227 | Intermediate II Clinical* | 2 |
| | | Subtotal 17 |

**Total Program Credits – 33~**

+ A grade of "C" or above required for graduation | * Indicates prerequisites needed | ** Placement in course(s) is determined by admissions assessment

~Many students need preliminary Math, English, and/or Computer courses before enrolling in the program required courses. These courses may increase the total number of program credits. Students should review their Math and English placement scores as well as high school transcripts with an advisor before planning out their full program schedule.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-2852+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **Montana State University-Great Falls COT** | | |
| **Program Title:** | **Office Administration And Technology Associate Of Applied Science** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☒ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☒ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☒ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-2852+R507 | Institution: Montana State University-Great Falls COT |
|---|---|

**Specify Request:**

MSU-Great Falls College of Technology requests approval from the Montana Board of Regents and the Montana University System to Re-title the College's Associate of Applied Science Degree in Office Technology to Office Administration and Technology.

In addition, the College hereby provides notice of intent to terminate the three options of Executive/Administrative, Medical Administrative, and Attorney's Administrative Assistant falling under the umbrella of the Office Technology program. Justification for this request is provided in the following.

**Office Administration and Technology Associate of Applied Science**

MSU-Great Falls College of Technology requests approval from the Montana Board of Regents and the Montana University System to Re-title the College's Associate of Applied Science Degree in Office Technology to Office Administration and Technology.

In addition, the College hereby provides notice of intent to terminate the three other options of Executive/Administrative Assistant, Medical Administrative Assistant, and Attorney's Administrative Assistant falling under the umbrella of the Office Technology program. Following publication of this notice, the College will provide documentation to the Office of the Commissioner of Higher Education that the activities in the Program Termination Checklist have been completed.

Initiated by the College's Program Review Committee, the recommendation for this proposal has been advanced for a few primary reasons. First, as separate programs none had adequate graduation numbers to meet Board of Regents policy standards. Second, all three programs utilized the same core of classes, with the only deviation being in terms of specific elective courses that allowed a focus in one of the three areas (Executive, Medical or Legal). Finally, looking at the completion rates it was also considered that students and advisors would be better served through a single program schedule and outline.

The result is a combined program curriculum, with a common core of foundational Office Administration and Technology coursework, augmented by specialty elective course areas students may select from to focus the degree to their anticipated occupation or interests.

Below is a summary of the proposed Office Administration and Technology AAS program.

**Fall Semester 1**

| Course No. | Title | Credits |
|---|---|---|
| MATH 104 | Business Math | 4+ |
| CIT 110 | Introduction to Computers | 3+ |
| ENGL 121 | Composition I | 3+ |
| OO 179 | Records Management | 3+ |
| ***Executive or Legal Specialty*** | | |
| OO 180 | Legal Studies I | 3 + |
| ***Medical Specialty*** | | |
| AH 185 | Basic Med Terms | 3 + |
| | | **Subtotal 16** |

**Spring Semester 1**

| Course No. | Title | Credits |
|---|---|---|
| OO 108* | Advanced Keyboarding | 3+ |
| OO 266* | Microsoft Word | 3+ |
| OO 260* | Machine Transcription | 3+ |
| BUS 106 | Introduction to Business | 3+ |
| ***Executive Specialty*** | | |
| CIT 205 | Database Management | 3+ |
| ***Legal Specialty*** | | |
| OO 181 | Legal Studies II | 3+ |
| ***Medical Specialty*** | | |
| BIO 127 | A&P I Nonclinical | 4+ |
| | | **Subtotal 15/16** |

**Summer Semester 1**

| Course No. | Title | Credits |
|---|---|---|
| ***Medical Specialty Only*** | | |
| OO 111 | Fundamentals of Insurance | 4+ |
| | | **Subtotal 4** |

**Fall Semester 2**

| Course No. | Title | Credits |
|---|---|---|
| ENGL 124 | Business and Prof Communications | 3+ |
| ACCT 101 | Accounting Procedures I | 3+ |
| CIT 140 | Presentation Fundamentals | 1+ |
| CIT 120 | Internet Essentials | 2+ |
| COMM 135 | Interpersonal Communications | 3+ |
| ***Executive or Legal Specialty*** | | |
| BUS 255 | Legal Environment | 3+ |
| ***Medical Specialty*** | | |
| HI 237 | CPT Coding | 3+ |
| | | **Subtotal 17** |

**Spring Semester 2**

| Course No. | Title | Credits |
|---|---|---|
| OO 295* | Administrative Office Proc | 3+ |
| OO 220 | Resumes | 1+ |
| OO 221 | Interviewing for Jobs | 1+ |
| CIT 220 | Electronic Spreadsheets | 3+ |
| OO 173* | Computer Calculators | 1+ |
| ***Executive Specialty*** | | |
| OO 265 | WordPerfect | 3+ |
| CIT 280 | Desktop Publishing | 3+ |
| ***Legal Specialty*** | | |
| OO 287 | Legal Transcription | 3+ |
| OO 265 | WordPerfect | 3+ |
| ***Medical Specialty*** | | |
| AH 201 | Medical Science | 3+ |
| OO 255 | Medical Transcription | 3+ |
| | | **Subtotal 15** |

**Total Program Credits ~**

| | |
|---|---|
| Executive Specialty | **61** |
| Legal Specialty | **61** |
| Medical Specialty | **66** |

+a grade of “C” or above is required for graduation

~Many students need preliminary Math, English, and/or Computer courses before enrolling in the program required courses. These courses may increase the total number of program credits. Students should review their Math and English placement scores as well as high school transcripts with an advisor before planning out their full program schedule.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-2853+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **Montana State University-Great Falls COT** | | |
| **Program Title:** | **Office Support Certificate Of Applied Science** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☒ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☒ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☒ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-2853+R507 | Institution: Montana State University-Great Falls COT |
|---|---|

**Specify Request:**

MSU-Great Falls College of Technology hereby provides notice of intent to terminate three options of General Office Assistant, Legal Receptionist, and Medical Receptionist falling under the umbrella of the Office Support program and modifying the curriculum into one program leading to a Certificate of Applied Science in Office Support. Following publication of this notice, the College will provide documentation to the Office of the Commissioner of Higher Education that the activities in the Program Termination Checklist have been completed.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-2854+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **Montana State University-Great Falls COT** | | |
| **Program Title:** | **Network Infrastructure Certificate Of Applied Science** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☒ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☒ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-2854+R0507 | Institution: Montana State University-Great Falls COT |
|---|---|

**Specify Request:**

MSU-Great Falls College of Technology requests approval from the Montana Board of Regents and the Montana University System to Re-title the College's Certificate in Network Technology to a Certificate of Applied Science in Network Infrastructure.

In addition, the College requests that the notification of intent to terminate the Certificate in Network Technology submitted at the March 2007 Board of Regents meeting be withdrawn. Justification for this request and proposed program curriculum are included in the following.

**ITEM 135-2854-R0507**
**attachment**

**Network Infrastructure Certificate of Applied Science**

MSU-Great Falls College of Technology requests approval from the Montana Board of Regents and the Montana University System to Re-title the College's Certificate in Network Technology to a Certificate of Applied Science in Network Infrastructure.

In addition, the College requests that the notification of intent to terminate the Certificate in Network Technology submitted at the March 2007 Board of Regents meeting be withdrawn. Justification for this request and proposed program curriculum are included in the following.

The existing Network Technology program does not comply with Board of Regent Policy 301.12 by not having the appropriate ratio of general education to technical coursework. The program is also in non-compliance with Northwest Commission on Colleges and Universities standards in related to the required general education components. Finally, after program review, the College has determined the configuration of the existing program's coursework does not align well with the intent of a certificate program. Therefore the following modifications to the program and subsequent name change are being proposed. These changes have been approved by the College's curriculum committee.

**Required General Education Courses**

| Course # | Course Title | Credits |
|---|---|---|
| ENGL 121**+ | Composition I | 3 |
| COM 135**+ | Interpersonal Communication | 3 |
| MATH 108**+ | Algebra for College Students **OR** | |
| MATH 130**+ | Pre-calculus Algebra **OR** | |
| MATH 150 **+ | Math for Liberal Arts **OR** | |
| MATH 181**+ | Calculus | 3/4 |

**Required Technical Core Courses**

| Course # | Course Title | Credits |
|---|---|---|
| CIT 111+ | Introduction to Computers | 3 |
| CIT 125**+ | Fund of Voice and Data Cabling | 3 |
| CIT 126*+ | Networking Fundamentals | 3 |
| CIT 176*+ | Routers and Routing Basics | 3 |
| CIT 226*+ | Switching Basics & Int. Routing | 3 |
| CIT 276*+ | Introduction to WAN Technologies | 3 |
| CIT 272*+ | PC Troubleshooting/Maintenance | 3 |

**Total Program Credits 30-31**

**Program Outcomes:**

Upon the completion of the Networking Infrastructure Certificate students should be prepared to:

- Demonstrate an entry level understanding of network infrastructure cabling.
- Install and basically configure network routers and switches.
- Pass the Cisco Certified Network Associate industry standard certification exam with at least an 80%.
- Pass the CompTIA A+ industry standard certification exam battery with at least an 80%.
- Obtain and keep an entry level computer networking professional position in the workforce.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-201+R0507** | **Date of Meeting:** | **May 30- June 1, 2007** |
| **Institution:** | **Dawson Community College** | | |
| **Program Title:** | **Agricultural Power And Machinery** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A.** **Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-201+R0507 | Institution: Dawson Community College |
|---|---|

**Specify Request:**

Dawson Community College requests a Level I name change for the AAS in Agricultural Power and Machinery to an AAS in Agricultural Mechanics and Machinery.

The goals and objectives of the program remain the same as approved by the Board of Regents under Policy 301.12. The name change has been requested to more accurately reflect the focus of the program as recommended by the program advisory committee, the vocational technical division, and the academic affairs committee of the college.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-202+R0507** | **Date of Meeting:** | **May 30- June 1, 2007** |
| **Institution:** | **Dawson Community College** | | |
| **Program Title:** | **Agricultural Power And Machinery** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A.** **Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-202+R0507 | Institution: Dawson Community College |
|---|---|

**Specify Request:**

Dawson Community College requests a Level I name change for the Certificate in Agricultural Power and Machinery to a Certificate in Agricultural Mechanics and Machinery.

The goals and objectives of the program remain the same as approved by the Board of Regents under Policy 301.12. The name change has been requested to more accurately reflect the focus of the program as recommended by the program advisory committee, the vocational technical division, and the academic affairs committee of the college.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

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|---|---|---|---|
| **Item No.:** | **135-203+R0507** | **Date of Meeting:** | **May 30- June 1, 2007** |
| **Institution:** | **Dawson Community College** | | |
| **Program Title:** | **Office Technology Office Assistant** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-203+R0507 | Institution: Dawson Community College |
|---|---|

**Specify Request:**

Dawson Community College requests a Level I name change for the Certificate in Office Technology Office Assistant to a Certificate in Business Technology Office Assistant.

The goals and objectives of the program remain the same as approved by the Board of Regents under Policy 301.12. The name change has been requested to coincide with industry standards and has been recommended by the program advisory committee, the vocational technical division, and the academic affairs committee of the college.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

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|---|---|---|---|
| **Item No.:** | **135-204+R0507** | **Date of Meeting:** | **May 30- June 1, 2007** |
| **Institution:** | **Dawson Community College** | | |
| **Program Title:** | **Office Technology Administrative Assistant** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A.** **Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-204+R0507 | Institution: Dawson Community College |
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**Specify Request:**

Dawson Community College requests a Level I name change for the AAS in Office Technology Administrative Assistant to an AAS in Business Technology Administrative Assistant.

The goals and objectives of the program remain the same as approved by the Board of Regents under Policy 301.12. The name change has been requested to coincide with industry standards and has been recommended by the program advisory committee, the vocational technical division, and the academic affairs committee of the college.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

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|---|---|---|---|
| **Item No.:** | **135-205+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **Dawson Community College** | | |
| **Program Title:** | **Law Enforcement** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-205+R507 | Institution: Dawson Community College |
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**Specify Request:**

Dawson Community College requests Level I name change for the AAS in Law Enforcement Criminal Justice Option to an AAS in Criminal Justice.

The goals and objectives of the program options remain the same as approved by the Board of Regents under Policy 301.12. The name change has been requested to coincide with professional standards and has been recommended by the program advisory committee, the vocational technical division and the academic affairs committee of the college.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-206+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **Dawson Community College** | | |
| **Program Title:** | **Law Enforcement** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-206+R507 | Institution: Dawson Community College |
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**Specify Request:**

Dawson Community College requests Level I name change for the AAS in Law Enforcement Peace Officer Option to an AAS in Criminal Justice Peace Officer Option.

The goals and objectives of the program options remain the same as approved by the Board of Regents under Policy 301.12. The name change has been requested to coincide with professional standards and has been recommended by the program advisory committee, the vocational technical division and the academic affairs committee of the college.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-207+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **Dawson Community College** | | |
| **Program Title:** | **Law Enforcement** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A. Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

| Item No.: 135-207+R507 | Institution: Dawson Community College |
|---|---|

**Specify Request:**

Dawson Community College requests Level I name change for the AAS in Law Enforcement Private Security Option to an AAS in Criminal Justice Private Security Option.

The goals and objectives of the program options remain the same as approved by the Board of Regents under Policy 301.12. The name change has been requested to coincide with professional standards and has been recommended by the program advisory committee, the vocational technical division and the academic affairs committee of the college.

# M O N T A N A  B O A R D  O F  R E G E N T S

## LEVEL I REQUEST FORM

| | | | |
|---|---|---|---|
| **Item No.:** | **135-301+R0507** | **Date of Meeting:** | **May 30 - June 1, 2007** |
| **Institution:** | **Flathead Valley Community College** | | |
| **Program Title:** | **Jewelry And Metalsmithing AAS Degree** | | |

Level I proposals are those that may be approved by the Commissioner of Higher Education or the Commissioner's designee. The approval of such proposals will be conveyed to the Board of Regents at the next regular meeting of the board. The institution must file the request with the Office of the Commissioner of Higher Education by means of a memo to the Deputy Commissioner.

☐ **A.** **Level I action requested (check all that apply):** Level I proposals include campus initiatives typically characterized by (a) minimal costs; (b) clear adherence to approved campus mission; and (c) the absence of significant programmatic impact on other institutions within the Montana University System and Community Colleges.

- ☒ 1. Re-titling existing majors, minors, options and certificates; (e.g. from B.S. in Mechanized Agriculture to B.S. in Agricultural Operations Technology);
- ☐ 2. Eliminating existing majors, minors, options and certificates via a Program Termination Checklist;
- ☐ 3. Adding new minors or certificates where there is a major;
- ☐ 4. Adding new minors or certificates where there is an option in a major;
- ☐ 5. Departmental mergers and name changes;
- ☐ 6. Program revisions; and
- ☐ 7. Distance delivery of previously authorized degree programs.

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

- ☐ 1. Options within an existing major or degree;
- ☐ 2. Eliminating organizational units within larger institutions such as departments, divisions and colleges or schools *with the exception of the five Colleges of Technology where changes require Board action;*
- ☐ 3. Consolidating existing programs and/or degrees.

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

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

campuses receive program information well in advance of submission.

| Item No.: 135-301+R507 | Institution: Flathead Valley Community College |
|---|---|

**Specify Request:**

Flathead Valley Community College requests that the title of Jewelry and Metalsmithing AAS be changed to Goldsmithing and Jewelry Arts AAS.