Faculty Senate Minutes
2/12/2021
Virtual Meeting via Zoom

Zoom: Charie Faught (Chair), Peter Lucon (Vice-Chair), Atish Mitra (Secretary), Karen Wesenberg, Rita Freebourn, John Ray, Miriam Young, Linda Granger, Tamara Harp, Bret Robertson, Phil Curtiss, Matt Donnelly, Katherine Zodrow, Chris Gammon, Courtney Young, Abhishek Choudhury, Sue Schrader, Dan Autenrieth, Jackie Timmer, Ron White, Ulana Holtz, Bev Hartline, Dan Trudnowski, Pat Munday, Henry Gonshak, Mary Maclaughlin, Scott Risser, & Katelyn Alley

Quorum@ 1:00pm

I. Welcome and Minutes (https://www.mtech.edu/facultystaff/facultysenate/minutes/index.html)

Approvals for January 29, 2021 Meeting Minutes - @ Next Meeting

Motion to modify agenda "to move the proposed resolution from discussion item to action item", and seconded. Motion **PASSED.**

Action Items

II. CRC Items

a. January 25th items will be placed in Outlook Calendar (see attachments)

Motion to approve, and seconded. Motion **PASSED.**

III. Conflict of Interest Process Change (see attached form)

VC Bev Hartline: Two changes were proposed to COI form – (1) language removed about approval by dean/ director /department head /supervisor, (2) language added about any family or financial relationship with an entity that is or could become a vendor.
Senators expressed concern about the extent to which hypothetical future conflicts of interest to be reported. Response: Hypothetical future conflicts do not have to be reported, and just being a customer of an organization is not to be considered a conflict of interest.

Motion to approve, and seconded. Motion **PASSED.**

VC Bev Hartline was thanked for her contributions to Montana Tech.

IV. Language regarding Land Acknowledgement (see attached e-mail, with update)

Chair: A faculty member proposed the senate considers this resolution. If we so desire, we would forward this to administration.
Discussions: This language is now becoming " standard " in higher education.

Motion, and seconded: Motion **PASSED**. To be forwarded to the administration.

V. **(Item moved from discussion to action – see above)** Resolution Submitted to Faculty Senate (see below)

Motion to accept the resolution.

Discussion: This is about conflicting issues of "first amendment rights vs academic freedom", and the issue is even more complicated due to upcoming laws allowing guns on campus. Students should have reasonable expectation of freedom without fear of gender issues, political issues etc. A certain incoming (see attached resolution) lists as their guiding principles certain specifics (such as western values, capitalism as only way of life, Christian values, etc). Moreover, they have a "faculty watch list" which singles out "liberal faculty". While this group's rights need to be upheld, there is concern this will make faculty hesitant to express so called "liberal" views in fear of retribution. The resolution attempts to remind all the campus organizations - existing and future - of existing codes of conduct on campus, and to reinforce them. Question: if it is existing policy, why do we need a resolution? Response: approving this puts the full gravitas of the senate on this, and also sends a message to all that the campus takes the existing rules seriously. Comments: There is no objection to clubs with specific agenda, but faculty objects to threatening language such as "professor watch lists". In the past a professor who made arguably "liberal" views were subject to harassment and even death threats. Multiple faculty expressed concerns about the particular group under discussion. Senator: Is there a vetting procedure by ASMT? ASMT vice president (Katelyn Alley): any incoming club has to be approved, and has to have a faculty advisor. Executive team vote needs to pass with a 2/3 majority. Senator: The resolution should not be phrased as if targeting conservative groups only. All groups should have rights of expression – but in a non-threatening manner.

Motion seconded. Motion **PASSED.** Will be sent to administration.

Informational Items

VI. None at this time

Discussion Items

VII. Teaching and Learning Center
No discussion

VIII. Faculty/Staff Satisfaction Survey

No discussion

IX. Activities and priorities for the upcoming year

a. Faculty and Staff Recognition- roundtable
   Sue Schrader and Charie Faught recognized.
b. Strategic Planning
   No discussion
c. Fall semester planning
   No discussion
d. Review of FS Standards as Compared to MTFA Standards for Instruction, Research and Scholarly Activity, and Service
   No discussion

X. Other Items
None

Adjourned @ 2:02pm

Next meeting on Monday the 22nd of February.

Dear Charie,

Thank you for the invitation to appear before Faculty Senate this Friday. I will attempt to be present but have another meeting at the same time and may not be able to sneak out.

Just in case I am absent, below please find additional information for consideration by the Senate. I've cc'd my Senator as well as Professor Ray in the hopes that they will help shepherd this concept or offer suggestions for revisions before appearing before the body.

Here's my suggestion:

A Resolution, as follows

~Whereas the Faculty of Montana Tech wish to respectfully acknowledge and honor the Native Americans who lived in the areas now served by Montana Technological University prior to European arrival,

~Whereas Land Acknowledgements have become a common practice to promote organizational learning and advance constructive relationships between Native Americans and Institutions of Higher Learning nationwide,

~Whereas the Draft of the Strategic Plan described by Chancellor Cook in his February "State of Tech Remarks" included values and goals of vibrancy amongst the student culture, diversity/inclusion, and programs of distinction,

~Resolved: The Faculty Senate of Montana Technological University formally recommends that an appropriate Land Acknowledgment process resulting in an Acknowledgement Statement be incorporated into Montana Technological University's Strategic Plan.

Additional Information: For any Senators unfamiliar with Land Acknowledgements, some relevant sources appear below.

Sample Statements: https://landacknowledgment.colostate.edu/ (Colorado State), https://www.northwestern.edu/native-american-and-indigenous-peoples/about/Land%20Acknowledgement.html (Northwestern), https://ias.umn.edu/about/ias-land-acknowledgement (U. Minn IAS).

IAS Land Acknowledgement | Institute for Advanced Study

The University of Minnesota Twin Cities is located on traditional, ancestral, and contemporary lands of Indigenous people. The University resides on Dakota land ceded in the Treaties of 1837 and 1851.

ias.umn.edu

Select Background: https://nativegov.org/a-guide-to-indigenous-land-acknowledgment/, https://www.canr.msu.edu/nai/about/land-acknowledgements,

A guide to Indigenous land acknowledgment - Native Governance Center

Native Governance Center co-hosted an Indigenous land acknowledgment event with the Lower Phalen Creek Project on Indigenous Peoples' Day 2019 (October 14). The event featured the following talented panelists: Dr. Kate Beane (Flandreau Santee Dakota and Muskogee Creek), Mary Lyons (Leech Lake Band of Ojibwe), Rose Whipple (Isanti Dakota and Ho-Chunk), Rhiana Yazzie (Diné), and Cantemaza ...

nativegov.org

Guide to Land Acknowledgements - Native American Institute

A land acknowledgement is an optional statement, often given at the beginning of organized events, celebrations and activities, or published in printed materials. A shortened land acknowledgement can also be used for email signatures. The purpose of a land acknowledgement is to recognize, respect and affirm the ongoing relationship between Indigenous people and the land.

www.canr.msu.edu

Land Acknowledgement: Native American and Indigenous Initiatives - Northwestern University

Northwestern is a community of learners situated within a network of historical and contemporary relationships with Native American tribes, communities, parents, students, and alumni. It is also in close proximity to an urban Native American community in Chicago and near several tribes in the Midwest. The Northwestern campus sits on the traditional homelands of the people of the Council of ...

www.northwestern.edu

Land Acknowledgment | Colorado State University

CSU's land acknowledgment is a statement crafted by a variety of Indigenous faculty and staff, as well as other officials at CSU. The statement recognizes the long history of Native peoples and nations that lived and stewarded the land where the university now resides.

landacknowledgment.colostate.edu

I hope to make it and understanding if I am not able. I also appreciate any thoughts or suggestions from the cc'd Senator-Colleagues.

Kindly,

gts

Dr. Glen T. Southergill

Pronouns: He/Him/His
Associate Professor of Writing
Montana Tech
gsouthergill@mtech.edu

From: Southergill, Glen <GSouthergill@mtech.edu>
Sent: Thursday, January 21, 2021 7:48 PM
To: Ray, John <JRay@mtech.edu>; Haynes, Matthew <mhaynes1@mtech.edu>
Cc: Faught, Charie <CFaught@mtech.edu>
Subject: Faculty Senate Recommendation: Land Acknowledgments

Greetings, esteemed colleagues

I write to encourage Faculty Senate to draft a recommendation for adding lines for a land acknowledgment in Montana Tech's standardized auto signatures and for possible inclusion in syllabi. Although I trust the Senate to understand the rationale for why these actions matter and consider what sort of language may work best, a simple sample appears below. Please let me know if I can help draft language for the Faculty Senate to discuss.

Thank you for your consideration of my request.

Many Indigenous peoples, including the Niimiipuu (Nez Perce), Piikani (Blackfeet), Seliš (Salish), and Agai-deka (Shoshone) have traditional claims to the lands upon which Montana Tech physically sits. Indigenous histories and perspectives are acknowledged and respected by the Faculty, Staff, and Administration of Montana Technological University.

Dr. Glen T. Southergill

Pronouns: He/Him/His
Associate Professor of Writing
Montana Tech
gsouthergill@mtech.edu

The following is the resolution on free speech, right of assembly, academic freedom, and a safe working environment that I would like discussed and acted upon at the next meeting of the Montana Tech Faculty Senate.

Given that there is great interest in this issue both on and off campus, please distribute widely to the entire campus community so that we may receive their input. Please also indicate how they may participate and provide input in the meeting.

I will handle other needed notification.

Dr. John W. Ray

Resolution Submitted to Faculty Senate

Whereas, Academic Freedom is the life blood of institutions of higher learning, and

Whereas, threats, intimidation and violence directed toward faculty, staff and students threatens academic freedom, undermines the purpose of an institution of higher learning, thwarts the development of knowledge and the pursuit of research and creates an atmosphere hostile to intellectual pursuits, and

Whereas, being members of the university community imposes on all—students, staff and faculty—the duty and obligation to show respect for others, to defend intellectual honesty, conduct disagreements civilly, and to defend free speech and,

Whereas, academic freedom is protected, cherished and nourished on the Montana Tech campus, and

Whereas, students, faculty and staff retain all of their rights to free speech and the right to form political organizations, and

Whereas, the free and peaceful expression of ideas is necessary for a healthy campus environment where knowledge is advanced through healthy discussion and disagreement, and

Whereas any attempt to limit academic freedom, freedom of speech and/or freedom of assembly contradicts our goals as a university and obstructs our educational mission.

Therefore, be it resolved, that we call upon all student, faculty and staff clubs and organizations at Montana Tech and the Montana Tech administration to make sure that said clubs and organizations respect and nurture academic freedom, freedom of expression free

from threats of intimidation or violence and the right to form organizations again free of the aforementioned threats of intimidation and violence.

Be it resolved further, that we call upon all student, faculty and staff clubs and organizations to agree to abide by and actually abide by all Montana Code laws and regulations, Montana University System Board of Regents policy and all policies in place at Montana Tech that stipulate acceptable activity by recognized groups on campus which policies include but are not limited to the Student Handbook, the Faculty/Staff Handbook, Free Expression and Academic Freedom Policy and the ASMT By-laws pertaining to clubs.

Background pertaining to the Resolution

Academic freedom to investigate, explore, discuss, and debate controversial ideas is fundamental to an institution of higher learning. Without free discussion and debate, a university cannot fulfill its mission to educate, in all meanings of the word. To function properly, this open discussion and debate must be conducted in an atmosphere free from threats, intimidation, and violence. Achieving a balance between the right to free speech and the right to a safe academic environment is not easy or simple.

Recently, on the Montana Tech campus, a group called Turning Point USA has sought formal recognition. Several faculty and students have expressed concern about this group and its association with right wing positions that are problematic to the practice of academic freedom and civil discourse. For example, several faculties in my department are concerned with the publication by the Turning Point USA of a Professor Watch List that seeks to identify liberal professors who supposedly proselytize their liberal philosophy to their classes. In some cases, it appears the criteria for inclusion on the list is espousing a topic or examining a position of which the group disapproves. The list has been associated with threats and intimidation of the faculty listed. Given the polarized political environment we have, it is possible in the future that left leaning groups might also seek recognition. While clearly supporting the right of free speech and the right to form political organizations, Montana Tech must also ensure a safe working environment as well as an environment that supports and nurtures academic freedom.

There is no intimation or suggestion that Turning Point USA has directly caused these problems as an organization. However, given the divided and tense nature of political discourse at present, every effort must be made to ensure that discourse is conducted civilly, free from threats of violence or intimidation. Given that guns may soon be allowed on campus, the urgency of maintaining civil discourse free from threats and intimidation is particularly acute.

The purpose of this resolution is not to judge any group or to limit the legitimate free speech rights of any group. The purpose is to ensure that freedom of discussion and debate is protected from threats of violence and intimidation so as to flourish. This resolution calls upon the Tech administration to strongly enforce current rules and regulations regarding speech on campus that will help ensure that debate decorum and civility is respected.

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

M.S. Geological Engineering, plus adjustments to M.S. Geoscience

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Final changes are made by the registrar after faculty senate approval and BOR approval, as needed.
See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

Submission Requirements: All Submissions (checked by CRC):

- ☐ Electronic Copy (with the exception of signatures- no handwritten items)
- ☐ Completed CRC Form, with all Signatures and Attachments based on level of request (see below)
- ☐ Naming Convention as determined by CRC

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:

1. *Faculty Approvals (directly to CRC, then Faculty Senate):*
   - ☐ Establish a new course for the catalog (please contact the Registrar of MUS CCN information) Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Curriculum Worksheet
     - ☐ Pre-requisite or co-requisite
   - ☐ Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor. Required Documents:
     - ☐ **Documents as listed under establishing a new course (as applicable)**
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   - ☐ Placing a postsecondary educational program into moratorium: Required Documents:
     - ☐ Program Termination and Moratorium Form
     - ☐ Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:

- ☐ Academic Proposal Request Form

☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
- ☐ Academic Proposal Request Form

☐ Other (for those that are considered in this level but otherwise not listed):

_____

- ☐ Academic Proposal Request Form

3. OCHE Approvals Level I *(must be approved by the VCAA and Chancellor prior to CRC submission)*: Level I items are those requests for which the Board of Regents has fully designated approval authority to the institution or Commissioner of Higher Education. These requests are to be submitted for notification to or approval by Commissioner as Level I proposals. Level I proposals may be submitted to OCHE at any time by the flagship campuses or community colleges and will be processed on a rolling monthly schedule. The approval of such proposals will be conveyed to the Board of Regents at the next meeting of the board. Level I proposals include campus initiatives typically characterized by minimal costs, clear adherence to approved campus mission, and the absence of significant programmatic impact on other institutions within the MUS and community colleges. BOR Forms can be found using the following link: https://mus.edu/che/arsa/Forms/AcademicForms.html

☐ Re-titling an existing postsecondary educational program. Required Documents:
- ☐ Academic Proposal Request Form

☐ Terminating an existing postsecondary educational program.
- ☐ Academic Proposal Request Form
- ☐ Program Termination and Moratorium Form

☐ Consolidating existing postsecondary educational programs
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a new minor where there is a major or an option in a major
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Revising a postsecondary educational program
- ☐ Curriculum Proposal Form
- ☐ Academic Proposal Request Form

☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Other (for those that are considered in this level but otherwise not listed):

_____

☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level II proposals require initial approval and comment by the Board of Regents through a Request to Plan prior to final review and approval by the Office of the Commissioner of Higher Education. These proposals entail more substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination or personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other MUS institutions and community colleges.

- ✓ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum or Center/Institute Proposal
  - ☐ Completed Request to Plan, except when eliminating or consolidating
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

M.S. Geological Engineering, plus adjustments to M.S. Geoscience

Date ___January 15, 2021_____

Dept. ___Geological Engineering___ **College** _____Graduate School____

Program M.S. Geosciences & M.S. Geological Engineering **CRC Representative _Glenn Shaw__**

Description of Request: Separate the "engineering" options currently housed in the M.S. Geoscience into a M.S. Geological Engineering degree, plus change name of M.S. Geoscience option in Geophysical Engineering to option in Geophysics. Add a Geotechnical Engineering option under the new M.S. Geological Engineering. Minor catalog wording changes for several options.

Current Course or Program Information:
The current Master of Science (M.S.) program in Geoscience contains options in Engineering Geology, Geochemistry, Geology, Geological Engineering, Geophysical Engineering, Hydrogeology, and Hydrogeological Engineering. The "engineering" options have different criteria for acceptance and completion of the programs than the "science" options.

Number (Assigned By CRC): _____

Proposed Change

Course #	Name	Credits	Pre-req.
	(see attachments for catalog changes for Proposed Curricula)		
	This should include what will appear in the catalog, exactly. New course require course outcomes listed in this area.		

List of supporting documentation attached (See Level of Request for Requirements):

- ✓ Academic Proposal Request Form
- ✓ Curriculum Proposal Form

Assessment Leading to Request

For the separation of the engineering options into a new M.S. Geological Engineering:
Individuals with master's degrees in Geological Engineering and related fields are in high demand in the private and government sectors. The existing structure in which the engineering options are housed within an umbrella M.S. geoscience degree creates confusion regarding the engineering content of the students' programs, and is a barrier to professional registration. Students and employers are interested in having the word engineering in the degree title (and on the transcript and diploma) for the students who complete either of the engineering options. The separation of the options into two distinct degrees is aligned with the different criteria for acceptance into the degree programs, and completion of degree program requirements.

For the name change of the "Geophysical Engineering" option to the "Geophysics" option:
Recently, the B.S. Geophysical Engineering has been discontinued, and the geophysics faculty have agreed that an option named "Geophysics" will better serve prospective students and potential employers than an option in "Geophysical Engineering."

Anticipated Impacts to "Other" Programs
None.

Impact on Library: Prof. Larry Smith has consulted with Scott Juskiewicz (11/14/20) at the Montana Tech library to ensure needed materials and media are available.at the Montana Tech library to ensure needed materials and media are available. No additional materials and media are needed.

Date to take effect: ___June 1, 2021_____

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

M.S. Geological Engineering, plus adjustments to M.S. Geoscience

APPROVALS

Department Head Approval _____
Date 1/21/21

Department Head Approval Curtis Link / Geop
Date 1/21/21

Department Head Approval Katie Hailer
Date 1/21/21

Dean Approval Berg K Hart
Date 1/20/21

Graduate Council Approval Berg K Hart
Date 1/21/21

CRC Approval Theresa Stack
Date 1/29/2021

Faculty Senate Approval _____
Date _____

VCAA Approval (see below) _____
Date _____

Chancellor Approval (see below) _____
Date _____

The proposed curricula for the options in the new Master of Science in Geological Engineering differ from the existing curricula for options in the Master of Science in Geoscience in terms of admission criteria and program requirements (courses and external examinations).

M.S. GEOSCIENCE CATALOG DESCRIPTION (to be slightly adjusted)
Field of Study

Geoscience is a multi-disciplinary field emphasizing the chemistry, physics, geology, hydrology, fate and contaminant transport, and economics of the earth and its naturally occurring mineral resources. ~~Seven~~ Five degree options are available in the Geosciences curriculum~~, including three options with an engineering focus~~.

Degree Program: M.S. in Geoscience with options in

- Engineering Geology
- Geochemistry
- ~~Geological Engineering~~
- Geology
- ~~Geophysical Engineering~~ Geophysics
- Hydrogeology
- ~~Hydrogeological Engineering~~

PROPOSED M.S. GEOLOGICAL ENGINEERING CATALOG DESCRIPTION
Field of Study

Geological Engineering is a multi-disciplinary field that emphasizes geologic hazards and characterization and understanding of the engineering behavior of rock, soil, and water. Generally, this requires knowledge and use of engineering, chemistry, physics, geology, and hydrology. Fate and contaminant transport and economics of the earth and its naturally occurring mineral resources can also be important. The degree can be taken with no specialized option, or with options in geotechnical engineering or hydrogeological engineering.

Degree Program: M.S. in Geological Engineering with options in

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- Geotechnical Engineering
- Hydrogeological Engineering

Appendix A1 – Existing Curriculum: MS Geoscience, Engineering Geology Option (no changes proposed)

The proposed option in Engineering Geology for the Master of Science in Geoscience requires that the admitted student have a degree in geology or a related field, math through calculus II, and two semesters of college physics. A course in statics is also required, with mechanics of materials recommended.

The Geological Engineering Department, which is hosting the proposed option, has excellent facilities and equipment for laboratory and field investigations. Opportunities for applied research projects are plentiful.

Admission Requirements:	B.S. in Geology or related field. Math through Calculus II. Two semesters of college physics. A course in statics.
Options:	Thesis (30 credits), Publishable Paper (30 credits), or Non-Thesis (36 credits)
Seminar Requirements (2 credits):	TC 5150 Graduate Writing Seminar or equivalent (1 cr) ENGR 5940
Coursework Requirements *(20 credits for thesis or publishable paper)* *(31 credits for non-thesis)*	*Core Courses* (9 to 15 credits): GeoE 440 Geological Engineering (statics is a prerequisite) GeoE 541 Advanced Engineering Geology GeoE 542 Slope Stability Analysis & Design **Students who have not previously taken courses in hydrogeology and/or structural geology will be required to take them at Montana Tech as part of the Engineering Geology option.* *GeoE 403 Structural Geology for Engineers *GeoE 420 Hydrogeology for Engineers *Electives* (5 to 22 credits): 400 and 500-level Geo and GeoE courses or others approved by the student's graduate committee. *No more than half of the minimum course credits can be at the 400 level*
Thesis (8 credits) *OR* *Non-Thesis Project (3 credits)*	GEOE 599W Thesis Research Students who select the non-thesis option are required to take GEOE 590W Graduate Research or Design Project (3 cr) as part of their coursework.

Examinations:

The final examination for thesis and publishable paper-option students will consist of an oral presentation and defense of the thesis, or publishable paper. Questions may be asked on any topic related to the thesis/paper or coursework taken as part of the graduate program. The presentation will be open to all interested parties, but the defense following the presentation will be open only to the student's graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any coursework undertaken as part of the graduate program.

Appendix A2 – Existing Curriculum: MS Geoscience, Geochemistry Option (minor wording adjustments proposed)

Geochemistry is an interdisciplinary field of study in which the science of chemistry is used to solve earth science problems. Areas of study include the full spectrum of topics from geobiochemistry, to water/rock/microbe interactions, thermodynamics of natural systems, coevolution of geochemistry and life, thermodynamics of minerals, and migration of pollutant species in soil and water. The geochemistry option is centered in the Chemistry and Geochemistry Department. Students acquire strong fundamental and practical knowledge in chemistry and environmental geochemistry and can choose thesis topics ranging among a large variety of geochemical/environmental topics.

Admission requirements:	B.S. in chemistry, geology, biology or other science or engineering field. A reasonable number of courses in chemistry and geology with a C grade or better which include:
Prerequisite geology and chemistry courses:	CHMY 373 Physical Chemistry (Thermodynamics & Kinetics) CHMY 311 Analytical Chemistry (Quantitative Analysis) GEO 101 Physical Geology GEO 204 Mineralogy-Petrology GEO 209 Introduction to Field Geology
Core Courses	CHMY 540 Environmental Chemistry CHMY 550 Geochemical Modeling GEOE 520 Advanced Hydrogeology
Option:	Thesis, Publishable Paper or Non-Thesis
Seminar Requirements:	TC 5150 - Graduate Writing Seminar CHMY 594 - Graduate Geochemistry Seminar One more seminar, can be ENGR 5940 Graduate Engineering Seminar, NRSM 594 Restoration Seminar or other

Appendix A3 – Existing Curriculum: MS Geoscience, Geology Option (minor wording adjustments proposed)

A Master of Science in Geoscience with an "Option in Geology" allows specialization in any field of Applied Geology. For example, recent graduate students in this option have investigated ore and energy resource exploration, water-rock interaction and abandoned mine drainage, and the bio-geochemistry of natural wetlands near abandoned mines.

Admission Requirements:	B.S. or B.A. in Geology or Geophysics. Course prerequisites would include physical geology, mineralogy, petrology, sedimentology, & introduction to field geology,
Option:	Thesis, Publishable Paper, or Non-Thesis
Seminar Requirements:	T.C. 5150 - Graduate Writing Seminar or equivalent; ENGR 5940 - Graduate Seminar (1)

Placement:
All recent MS graduates in Geology have found jobs in their chosen field. Employment opportunities for geologists with an M.S. degree are diverse and include State and Federal government agencies (e.g., Montana Bureau of Mines and Geology, USDA Forest Service, US Bureau of Land Management), resource extraction industries (mining, petroleum), and private consulting companies.

Proposed name change to "Geophysics Option"

Graduate students, both thesis and non-thesis, are encouraged to begin participation in a variety of research and field exploration projects early in their graduate program. Major equipment includes a 24 bit 144 channel seismograph, a time domain EM system, a ground penetrating radar system, gravimeters, magnetometers, gamma-ray spectrometer, horizontal loop EM systems, resistivity, IP, and controlled source AMT system. Extensive use is made of the department's computing facilities including PC and LINUX workstations. Software packages include ProMax, Hampson-Russell, VISTA Kingdom Suite, Petrel and MATLAB among many others.

Recent research includes projects on reservoir characterization, and tectonic studies in Montana, geophysical studies of rock glaciers, CO_2 sequestration monitoring and detection technology, ground water studies and processing and interpretation of ground penetrating radar data and remote sensing data.

Admission requirements:	B.S. in geophysics, geology, physics, mathematics, or related engineering area.
Core Courses	9 credits from the following: GEOP 446 Applied Linear Systems GEOP 450 Inversion GEOP 508 Seismic Processing GEOP 509 Gravity & Magnetic Prospecting GEOP 510 Electrical Prospecting GEOP 525 Advanced Remote Sensing GEOP 527 Petrophysics GEOP 595 Advanced Topics in Geophysics
Option:	Thesis, Publishable Paper, or Non-Thesis
Seminar Requirements:	T.C. 5150 - Graduate Writing Seminar or equivalent ENGR 5940 Engineering Seminar

Appendix A5 – Existing Curriculum: MS Geoscience, Hydrogeology Option (minor wording adjustments proposed)

Graduate students in Hydrogeology will study the occurrence, movement, and chemistry of groundwater. Typical thesis investigations are related to environmental or supply problems associated with mining or agricultural activities, and frequently involve research participation with the Montana Bureau of Mines and Geology.

Admission Requirements:	B.S. in Geology, Geophysics, Chemistry, or Physics. Course prerequisites would include physical geology, mineralogy, petrology, sedimentology, & introduction to field geology, Thesis, Publishable Paper, or Non-Thesis
Options:	
Core Requirements:	*(8 credits)* GEOE 422 - Groundwater Flow Modeling GEOE 429 - Field Hydrogeology And one of the following: GEOE 520 - Advanced Hydrogeology or GEOE 528 – Contaminant Transport
Seminar Requirements:	T.C. 5150 - Graduate Writing Seminar or equivalent ENGR 5940 - Graduate Seminar (1)

Examinations:
The final examination for thesis-option students will consist of an oral presentation and defense of the thesis. Questions may be asked on any topic related to the thesis or course work taken as part of the graduate program. The presentation will be open to all interested parties, but the defense will be open only to the graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any course work undertaken as part of the graduate program.

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

M.S. Geological Engineering, plus adjustments to M.S. Geoscience

Appendix A6 – Proposed Curriculum: MS Geological Engineering (No Option)

Note: this proposed curriculum formalizes admission and program requirements that have been in place for over a decade.

The proposed Master of Science in Geological Engineering requires that the admitted student have a degree in geological engineering or a related field. Math through differential equations and a course in mechanics of materials are required, along with a set of classes that demonstrate breadth in fundamentals of engineering.

The Geological Engineering Department, which is hosting the proposed option, has excellent facilities and equipment for laboratory, field, and numerical investigations. Opportunities for applied research projects are plentiful.

Admission Requirements:	B.S. in Geological Engineering or related field. Physical Geology, Mineralogy/Petrology, Field Geology Math through Differential Equations. A course in mechanics of materials (statics is a prerequisite). Demonstrated breadth in fundamentals of engineering (at least 3 of the following: fluid mechanics, dynamics thermodynamics, engineering economics, surveying)
Options:	Thesis (30 credits), Publishable Paper (30 credits), or Non-Thesis (36 credits)
Seminar Requirements (2 credits):	TC 5150 Graduate Writing Seminar or equivalent (1 cr) ENGR 5940 Engineering Seminar (1 cr)
Coursework Requirements *(20 credits for thesis or publishable paper)* *(31 credits for non-thesis)*	*Core Courses* (6 to 12 credits): GeoE 440 Geological Engineering (statics is a prerequisite) GeoE 542 Slope Stability Analysis & Design **Students who have not previously taken courses in hydrogeology and/or structural geology will be required to take them at Montana Tech as part of their graduate program in Geological Engineering.* *GeoE 403 Structural Geology for Engineers *GeoE 420 Hydrogeology for Engineers *Electives* (8 to 25 credits): 400 and 500-level GeoE courses or others approved by the student's graduate committee. *No more than half of the minimum course credits can be at the 400 level*
Thesis (8 credits) *OR* *Non-Thesis Project (3 credits)*	GEOE 599W Thesis Research Students who select the non-thesis option are required to take GEOE 590W Graduate Research or Design Project (3 cr) as part of their coursework.

Examinations:

The final examination for thesis and publishable paper-option students will consist of an oral presentation and defense of the thesis, or publishable paper. Questions may be asked on any topic related to the thesis/paper or coursework taken as part of the graduate program. The presentation will be open to all interested parties, but the defense following the presentation will be open only to the student's graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any coursework undertaken as part of the graduate program.

Students who have not taken the Fundamentals of Engineering Examination will be required to do so.

Appendix A7 – Proposed Curriculum: MS Geological Engineering, Geotechnical Option

Graduate students in the Geotechnical option will focus on the engineering characterization and behavior of soils.

Admission Requirements:	B.S. in Geological or Civil Engineering or related field. Physical Geology, Mineralogy/Petrology, Field Geology Math through Differential Equations. A course in mechanics of materials (statics is a prerequisite). Demonstrated breadth in fundamentals of engineering (at least 3 of the following: fluid mechanics, dynamics thermodynamics, engineering economics, surveying)
Options:	Thesis (30 credits), Publishable Paper (30 credits), or Non-Thesis (36 credits)
Seminar Requirements (2 credits):	TC 5150 Graduate Writing Seminar or equivalent (1 cr) ENGR 5940 Engineering Seminar (1 cr)
Coursework Requirements *(20 credits for thesis or publishable paper)* *(31 credits for non-thesis)*	*Core Courses* (9 to 16 credits): GeoE 440 Geological Engineering (statics is a prerequisite) GeoE 542 Slope Stability Analysis & Design GeoE 548 Geotechnical Modeling **Students who have not previously taken courses in soil mechanics (with lab) or hydrogeology will be required to take them at Montana Tech as part of their graduate program in Geological Engineering.* *ECiv 486 Soil Mechanics & Foundation Engineering *ECiv 487 Soil Mechanics Lab *GeoE 420 Hydrogeology for Engineers *Electives* (4 to 22 credits): 400 and 500-level GeoE courses or others approved by the student's graduate committee. *No more than half of the minimum course credits can be at the 400 level*
Thesis (8 credits) *OR* *Non-Thesis Project (3 credits)*	GEOE 599W Thesis Research Students who select the non-thesis option are required to take GEOE 590W Graduate Research or Design Project (3 cr) as part of their coursework.

Examinations:

The final examination for thesis and publishable paper-option students will consist of an oral presentation and defense of the thesis, or publishable paper. Questions may be asked on any topic related to the thesis/paper or coursework taken as part of the graduate program. The presentation will be open to all interested parties, but the defense following the presentation will be open only to the student's graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any coursework undertaken as part of the graduate program.

Students who have not taken the Fundamentals of Engineering Examination will be required to do so.

Appendix A8 – Proposed Curriculum: MS Geological Engineering, Hydrogeological Engineering Option

Graduate students in the Hydrogeological Engineering option will study the occurrence, movement, and chemistry of groundwater with additional engineering emphasis. Typical thesis investigations are related to environmental or supply problems associated with mining or agricultural activities, and frequently involve research participation with the Montana Bureau of Mines and Geology.

Admission Requirements: B.S. in Geological Engineering or a related engineering field, or a science field with adequate engineering make up courses that allows students to take the FE and eventually PE examination.

Admission Requirements:	B.S. in Geology, Geophysics, Chemistry, or Physics.
Options:	Thesis, Publishable Paper, or Non-Thesis
Core Requirements:	*(11 credits)* GEOE 422 - Groundwater Flow Modeling GEOE 429 - Field Hydrogeology GEOE 440 - Geological Engineering And one of the following: GEOE 520 - Advanced Hydrogeology or GEOE 528 – Contaminant Transport *Students in this option are exempt from the following required courses in the geological engineering program:* GEOE 542 Slope Stability Analysis & Design
Seminar Requirements:	T.C. 5150 - Graduate Writing Seminar or equivalent ENGR 5940 - Graduate Seminar (1)

Examinations:
The final examination for thesis-option students will consist of an oral presentation and defense of the thesis. Questions may be asked on any topic related to the thesis or course work taken as part of the graduate program. The presentation will be open to all interested parties, but the defense will be open only to the graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any course work undertaken as part of the graduate program.

Students who have not taken the Fundamentals of Engineering Examination will be required to do so.

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

M.S. Geological Engineering, plus adjustments to M.S. Geoscience

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Final changes are made by the registrar after faculty senate approval and BOR approval, as needed.
See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

Submission Requirements: All Submissions (checked by CRC):

- ☐ Electronic Copy (with the exception of signatures- no handwritten items)
- ☐ Completed CRC Form, with all Signatures and Attachments based on level of request (see below)
- ☐ Naming Convention as determined by CRC

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:

1. *Faculty Approvals (directly to CRC, then Faculty Senate):*
   - ☐ Establish a new course for the catalog (please contact the Registrar of MUS CCN information) Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Curriculum Worksheet
     - ☐ Pre-requisite or co-requisite
   - ☐ Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor. Required Documents:
     - ☐ **Documents as listed under establishing a new course (as applicable)**
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   - ☐ Placing a postsecondary educational program into moratorium: Required Documents:
     - ☐ Program Termination and Moratorium Form
     - ☐ Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:

- ☐ Academic Proposal Request Form

☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
- ☐ Academic Proposal Request Form

☐ Other (for those that are considered in this level but otherwise not listed):

_____

- ☐ Academic Proposal Request Form

3. OCHE Approvals Level I *(must be approved by the VCAA and Chancellor prior to CRC submission)*: Level I items are those requests for which the Board of Regents has fully designated approval authority to the institution or Commissioner of Higher Education. These requests are to be submitted for notification to or approval by Commissioner as Level I proposals. Level I proposals may be submitted to OCHE at any time by the flagship campuses or community colleges and will be processed on a rolling monthly schedule. The approval of such proposals will be conveyed to the Board of Regents at the next meeting of the board. Level I proposals include campus initiatives typically characterized by minimal costs, clear adherence to approved campus mission, and the absence of significant programmatic impact on other institutions within the MUS and community colleges. BOR Forms can be found using the following link: https://mus.edu/che/arsa/Forms/AcademicForms.html

☐ Re-titling an existing postsecondary educational program. Required Documents:
- ☐ Academic Proposal Request Form

☐ Terminating an existing postsecondary educational program.
- ☐ Academic Proposal Request Form
- ☐ Program Termination and Moratorium Form

☐ Consolidating existing postsecondary educational programs
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a new minor where there is a major or an option in a major
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Revising a postsecondary educational program
- ☐ Curriculum Proposal Form
- ☐ Academic Proposal Request Form

☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Other (for those that are considered in this level but otherwise not listed):

_____

☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level II proposals require initial approval and comment by the Board of Regents through a Request to Plan prior to final review and approval by the Office of the Commissioner of Higher Education. These proposals entail more substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination or personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other MUS institutions and community colleges.

- ✓ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum or Center/Institute Proposal
  - ☐ Completed Request to Plan, except when eliminating or consolidating
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

M.S. Geological Engineering, plus adjustments to M.S. Geoscience

Date ___January 15, 2021_____

Dept. ___Geological Engineering___ **College** _____Graduate School____

Program M.S. Geosciences & M.S. Geological Engineering **CRC Representative _Glenn Shaw__**

Description of Request: Separate the "engineering" options currently housed in the M.S. Geoscience into a M.S. Geological Engineering degree, plus change name of M.S. Geoscience option in Geophysical Engineering to option in Geophysics. Add a Geotechnical Engineering option under the new M.S. Geological Engineering. Minor catalog wording changes for several options.

Current Course or Program Information:
The current Master of Science (M.S.) program in Geoscience contains options in Engineering Geology, Geochemistry, Geology, Geological Engineering, Geophysical Engineering, Hydrogeology, and Hydrogeological Engineering. The "engineering" options have different criteria for acceptance and completion of the programs than the "science" options.

Number (Assigned By CRC): _____

Proposed Change

Course #	Name	Credits	Pre-req.
	(see attachments for catalog changes for Proposed Curricula)		
	This should include what will appear in the catalog, exactly. New course require course outcomes listed in this area.		

List of supporting documentation attached (See Level of Request for Requirements):

- ✓ Academic Proposal Request Form
- ✓ Curriculum Proposal Form

Assessment Leading to Request

For the separation of the engineering options into a new M.S. Geological Engineering:
Individuals with master's degrees in Geological Engineering and related fields are in high demand in the private and government sectors. The existing structure in which the engineering options are housed within an umbrella M.S. geoscience degree creates confusion regarding the engineering content of the students' programs, and is a barrier to professional registration. Students and employers are interested in having the word engineering in the degree title (and on the transcript and diploma) for the students who complete either of the engineering options. The separation of the options into two distinct degrees is aligned with the different criteria for acceptance into the degree programs, and completion of degree program requirements.

For the name change of the "Geophysical Engineering" option to the "Geophysics" option:
Recently, the B.S. Geophysical Engineering has been discontinued, and the geophysics faculty have agreed that an option named "Geophysics" will better serve prospective students and potential employers than an option in "Geophysical Engineering."

Anticipated Impacts to "Other" Programs
None.

Impact on Library: Prof. Larry Smith has consulted with Scott Juskiewicz (11/14/20) at the Montana Tech library to ensure needed materials and media are available.at the Montana Tech library to ensure needed materials and media are available. No additional materials and media are needed.

Date to take effect: ___June 1, 2021_____

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

M.S. Geological Engineering, plus adjustments to M.S. Geoscience

APPROVALS

Department Head Approval _____
Date 1/21/21

Department Head Approval Curtis Link / Geop
Date 1/21/21

Department Head Approval Katie Hailer
Date 1/21/21

Dean Approval Berg K Hart
Date 1/20/21

Graduate Council Approval Berg K Hart
Date 1/21/21

CRC Approval Theresa Stack
Date 1/29/2021

Faculty Senate Approval _____
Date _____

VCAA Approval (see below) _____
Date _____

Chancellor Approval (see below) _____
Date _____

The proposed curricula for the options in the new Master of Science in Geological Engineering differ from the existing curricula for options in the Master of Science in Geoscience in terms of admission criteria and program requirements (courses and external examinations).

M.S. GEOSCIENCE CATALOG DESCRIPTION (to be slightly adjusted)
Field of Study

Geoscience is a multi-disciplinary field emphasizing the chemistry, physics, geology, hydrology, fate and contaminant transport, and economics of the earth and its naturally occurring mineral resources. ~~Seven~~ Five degree options are available in the Geosciences curriculum~~, including three options with an engineering focus~~.

Degree Program: M.S. in Geoscience with options in

- Engineering Geology
- Geochemistry
- ~~Geological Engineering~~
- Geology
- ~~Geophysical Engineering~~ Geophysics
- Hydrogeology
- ~~Hydrogeological Engineering~~

PROPOSED M.S. GEOLOGICAL ENGINEERING CATALOG DESCRIPTION
Field of Study

Geological Engineering is a multi-disciplinary field that emphasizes geologic hazards and characterization and understanding of the engineering behavior of rock, soil, and water. Generally, this requires knowledge and use of engineering, chemistry, physics, geology, and hydrology. Fate and contaminant transport and economics of the earth and its naturally occurring mineral resources can also be important. The degree can be taken with no specialized option, or with options in geotechnical engineering or hydrogeological engineering.

Degree Program: M.S. in Geological Engineering with options in

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- Geotechnical Engineering
- Hydrogeological Engineering

Appendix A1 – Existing Curriculum: MS Geoscience, Engineering Geology Option (no changes proposed)

The proposed option in Engineering Geology for the Master of Science in Geoscience requires that the admitted student have a degree in geology or a related field, math through calculus II, and two semesters of college physics. A course in statics is also required, with mechanics of materials recommended.

The Geological Engineering Department, which is hosting the proposed option, has excellent facilities and equipment for laboratory and field investigations. Opportunities for applied research projects are plentiful.

Admission Requirements:	B.S. in Geology or related field. Math through Calculus II. Two semesters of college physics. A course in statics.
Options:	Thesis (30 credits), Publishable Paper (30 credits), or Non-Thesis (36 credits)
Seminar Requirements (2 credits):	TC 5150 Graduate Writing Seminar or equivalent (1 cr) ENGR 5940
Coursework Requirements *(20 credits for thesis or publishable paper)* *(31 credits for non-thesis)*	*Core Courses* (9 to 15 credits): GeoE 440 Geological Engineering (statics is a prerequisite) GeoE 541 Advanced Engineering Geology GeoE 542 Slope Stability Analysis & Design **Students who have not previously taken courses in hydrogeology and/or structural geology will be required to take them at Montana Tech as part of the Engineering Geology option.* *GeoE 403 Structural Geology for Engineers *GeoE 420 Hydrogeology for Engineers *Electives* (5 to 22 credits): 400 and 500-level Geo and GeoE courses or others approved by the student's graduate committee. *No more than half of the minimum course credits can be at the 400 level*
Thesis (8 credits) *OR* *Non-Thesis Project (3 credits)*	GEOE 599W Thesis Research Students who select the non-thesis option are required to take GEOE 590W Graduate Research or Design Project (3 cr) as part of their coursework.

Examinations:

The final examination for thesis and publishable paper-option students will consist of an oral presentation and defense of the thesis, or publishable paper. Questions may be asked on any topic related to the thesis/paper or coursework taken as part of the graduate program. The presentation will be open to all interested parties, but the defense following the presentation will be open only to the student's graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any coursework undertaken as part of the graduate program.

Appendix A2 – Existing Curriculum: MS Geoscience, Geochemistry Option (minor wording adjustments proposed)

Geochemistry is an interdisciplinary field of study in which the science of chemistry is used to solve earth science problems. Areas of study include the full spectrum of topics from geobiochemistry, to water/rock/microbe interactions, thermodynamics of natural systems, coevolution of geochemistry and life, thermodynamics of minerals, and migration of pollutant species in soil and water. The geochemistry option is centered in the Chemistry and Geochemistry Department. Students acquire strong fundamental and practical knowledge in chemistry and environmental geochemistry and can choose thesis topics ranging among a large variety of geochemical/environmental topics.

Admission requirements:	B.S. in chemistry, geology, biology or other science or engineering field. A reasonable number of courses in chemistry and geology with a C grade or better which include:
Prerequisite geology and chemistry courses:	CHMY 373 Physical Chemistry (Thermodynamics & Kinetics) CHMY 311 Analytical Chemistry (Quantitative Analysis) GEO 101 Physical Geology GEO 204 Mineralogy-Petrology GEO 209 Introduction to Field Geology
Core Courses	CHMY 540 Environmental Chemistry CHMY 550 Geochemical Modeling GEOE 520 Advanced Hydrogeology
Option:	Thesis, Publishable Paper or Non-Thesis
Seminar Requirements:	TC 5150 - Graduate Writing Seminar CHMY 594 - Graduate Geochemistry Seminar One more seminar, can be ENGR 5940 Graduate Engineering Seminar, NRSM 594 Restoration Seminar or other

Appendix A3 – Existing Curriculum: MS Geoscience, Geology Option (minor wording adjustments proposed)

A Master of Science in Geoscience with an "Option in Geology" allows specialization in any field of Applied Geology. For example, recent graduate students in this option have investigated ore and energy resource exploration, water-rock interaction and abandoned mine drainage, and the bio-geochemistry of natural wetlands near abandoned mines.

Admission Requirements:	B.S. or B.A. in Geology or Geophysics. Course prerequisites would include physical geology, mineralogy, petrology, sedimentology, & introduction to field geology,
Option:	Thesis, Publishable Paper, or Non-Thesis
Seminar Requirements:	T.C. 5150 - Graduate Writing Seminar or equivalent; ENGR 5940 - Graduate Seminar (1)

Placement:
All recent MS graduates in Geology have found jobs in their chosen field. Employment opportunities for geologists with an M.S. degree are diverse and include State and Federal government agencies (e.g., Montana Bureau of Mines and Geology, USDA Forest Service, US Bureau of Land Management), resource extraction industries (mining, petroleum), and private consulting companies.

Proposed name change to "Geophysics Option"

Graduate students, both thesis and non-thesis, are encouraged to begin participation in a variety of research and field exploration projects early in their graduate program. Major equipment includes a 24 bit 144 channel seismograph, a time domain EM system, a ground penetrating radar system, gravimeters, magnetometers, gamma-ray spectrometer, horizontal loop EM systems, resistivity, IP, and controlled source AMT system. Extensive use is made of the department's computing facilities including PC and LINUX workstations. Software packages include ProMax, Hampson-Russell, VISTA Kingdom Suite, Petrel and MATLAB among many others.

Recent research includes projects on reservoir characterization, and tectonic studies in Montana, geophysical studies of rock glaciers, CO_2 sequestration monitoring and detection technology, ground water studies and processing and interpretation of ground penetrating radar data and remote sensing data.

Admission requirements:	B.S. in geophysics, geology, physics, mathematics, or related engineering area.
Core Courses	9 credits from the following: GEOP 446 Applied Linear Systems GEOP 450 Inversion GEOP 508 Seismic Processing GEOP 509 Gravity & Magnetic Prospecting GEOP 510 Electrical Prospecting GEOP 525 Advanced Remote Sensing GEOP 527 Petrophysics GEOP 595 Advanced Topics in Geophysics
Option:	Thesis, Publishable Paper, or Non-Thesis
Seminar Requirements:	T.C. 5150 - Graduate Writing Seminar or equivalent ENGR 5940 Engineering Seminar

Appendix A5 – Existing Curriculum: MS Geoscience, Hydrogeology Option (minor wording adjustments proposed)

Graduate students in Hydrogeology will study the occurrence, movement, and chemistry of groundwater. Typical thesis investigations are related to environmental or supply problems associated with mining or agricultural activities, and frequently involve research participation with the Montana Bureau of Mines and Geology.

Admission Requirements:	B.S. in Geology, Geophysics, Chemistry, or Physics. Course prerequisites would include physical geology, mineralogy, petrology, sedimentology, & introduction to field geology, Thesis, Publishable Paper, or Non-Thesis
Options:	
Core Requirements:	*(8 credits)* GEOE 422 - Groundwater Flow Modeling GEOE 429 - Field Hydrogeology And one of the following: GEOE 520 - Advanced Hydrogeology or GEOE 528 – Contaminant Transport
Seminar Requirements:	T.C. 5150 - Graduate Writing Seminar or equivalent ENGR 5940 - Graduate Seminar (1)

Examinations:
The final examination for thesis-option students will consist of an oral presentation and defense of the thesis. Questions may be asked on any topic related to the thesis or course work taken as part of the graduate program. The presentation will be open to all interested parties, but the defense will be open only to the graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any course work undertaken as part of the graduate program.

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

M.S. Geological Engineering, plus adjustments to M.S. Geoscience

Appendix A6 – Proposed Curriculum: MS Geological Engineering (No Option)

Note: this proposed curriculum formalizes admission and program requirements that have been in place for over a decade.

The proposed Master of Science in Geological Engineering requires that the admitted student have a degree in geological engineering or a related field. Math through differential equations and a course in mechanics of materials are required, along with a set of classes that demonstrate breadth in fundamentals of engineering.

The Geological Engineering Department, which is hosting the proposed option, has excellent facilities and equipment for laboratory, field, and numerical investigations. Opportunities for applied research projects are plentiful.

Admission Requirements:	B.S. in Geological Engineering or related field. Physical Geology, Mineralogy/Petrology, Field Geology Math through Differential Equations. A course in mechanics of materials (statics is a prerequisite). Demonstrated breadth in fundamentals of engineering (at least 3 of the following: fluid mechanics, dynamics thermodynamics, engineering economics, surveying)
Options:	Thesis (30 credits), Publishable Paper (30 credits), or Non-Thesis (36 credits)
Seminar Requirements (2 credits):	TC 5150 Graduate Writing Seminar or equivalent (1 cr) ENGR 5940 Engineering Seminar (1 cr)
Coursework Requirements *(20 credits for thesis or publishable paper)* *(31 credits for non-thesis)*	*Core Courses* (6 to 12 credits): GeoE 440 Geological Engineering (statics is a prerequisite) GeoE 542 Slope Stability Analysis & Design **Students who have not previously taken courses in hydrogeology and/or structural geology will be required to take them at Montana Tech as part of their graduate program in Geological Engineering.* *GeoE 403 Structural Geology for Engineers *GeoE 420 Hydrogeology for Engineers *Electives* (8 to 25 credits): 400 and 500-level GeoE courses or others approved by the student's graduate committee. *No more than half of the minimum course credits can be at the 400 level*
Thesis (8 credits) *OR* *Non-Thesis Project (3 credits)*	GEOE 599W Thesis Research Students who select the non-thesis option are required to take GEOE 590W Graduate Research or Design Project (3 cr) as part of their coursework.

Examinations:

The final examination for thesis and publishable paper-option students will consist of an oral presentation and defense of the thesis, or publishable paper. Questions may be asked on any topic related to the thesis/paper or coursework taken as part of the graduate program. The presentation will be open to all interested parties, but the defense following the presentation will be open only to the student's graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any coursework undertaken as part of the graduate program.

Students who have not taken the Fundamentals of Engineering Examination will be required to do so.

Appendix A7 – Proposed Curriculum: MS Geological Engineering, Geotechnical Option

Graduate students in the Geotechnical option will focus on the engineering characterization and behavior of soils.

Admission Requirements:	B.S. in Geological or Civil Engineering or related field. Physical Geology, Mineralogy/Petrology, Field Geology Math through Differential Equations. A course in mechanics of materials (statics is a prerequisite). Demonstrated breadth in fundamentals of engineering (at least 3 of the following: fluid mechanics, dynamics thermodynamics, engineering economics, surveying)
Options:	Thesis (30 credits), Publishable Paper (30 credits), or Non-Thesis (36 credits)
Seminar Requirements (2 credits):	TC 5150 Graduate Writing Seminar or equivalent (1 cr) ENGR 5940 Engineering Seminar (1 cr)
Coursework Requirements *(20 credits for thesis or publishable paper)* *(31 credits for non-thesis)*	*Core Courses* (9 to 16 credits): GeoE 440 Geological Engineering (statics is a prerequisite) GeoE 542 Slope Stability Analysis & Design GeoE 548 Geotechnical Modeling **Students who have not previously taken courses in soil mechanics (with lab) or hydrogeology will be required to take them at Montana Tech as part of their graduate program in Geological Engineering.* *ECiv 486 Soil Mechanics & Foundation Engineering *ECiv 487 Soil Mechanics Lab *GeoE 420 Hydrogeology for Engineers *Electives* (4 to 22 credits): 400 and 500-level GeoE courses or others approved by the student's graduate committee. *No more than half of the minimum course credits can be at the 400 level*
Thesis (8 credits) *OR* *Non-Thesis Project (3 credits)*	GEOE 599W Thesis Research Students who select the non-thesis option are required to take GEOE 590W Graduate Research or Design Project (3 cr) as part of their coursework.

Examinations:

The final examination for thesis and publishable paper-option students will consist of an oral presentation and defense of the thesis, or publishable paper. Questions may be asked on any topic related to the thesis/paper or coursework taken as part of the graduate program. The presentation will be open to all interested parties, but the defense following the presentation will be open only to the student's graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any coursework undertaken as part of the graduate program.

Students who have not taken the Fundamentals of Engineering Examination will be required to do so.

Appendix A8 – Proposed Curriculum: MS Geological Engineering, Hydrogeological Engineering Option

Graduate students in the Hydrogeological Engineering option will study the occurrence, movement, and chemistry of groundwater with additional engineering emphasis. Typical thesis investigations are related to environmental or supply problems associated with mining or agricultural activities, and frequently involve research participation with the Montana Bureau of Mines and Geology.

Admission Requirements: B.S. in Geological Engineering or a related engineering field, or a science field with adequate engineering make up courses that allows students to take the FE and eventually PE examination.

Admission Requirements:	B.S. in Geology, Geophysics, Chemistry, or Physics.
Options:	Thesis, Publishable Paper, or Non-Thesis
Core Requirements:	*(11 credits)* GEOE 422 - Groundwater Flow Modeling GEOE 429 - Field Hydrogeology GEOE 440 - Geological Engineering And one of the following: GEOE 520 - Advanced Hydrogeology or GEOE 528 – Contaminant Transport *Students in this option are exempt from the following required courses in the geological engineering program:* GEOE 542 Slope Stability Analysis & Design
Seminar Requirements:	T.C. 5150 - Graduate Writing Seminar or equivalent ENGR 5940 - Graduate Seminar (1)

Examinations:
The final examination for thesis-option students will consist of an oral presentation and defense of the thesis. Questions may be asked on any topic related to the thesis or course work taken as part of the graduate program. The presentation will be open to all interested parties, but the defense will be open only to the graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any course work undertaken as part of the graduate program.

Students who have not taken the Fundamentals of Engineering Examination will be required to do so.

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1. **Overview of the request and resulting changes.** Provide a one-paragraph description of the proposed program. Will this program be related or tied to other programs on campus? Describe any changes to existing program(s) that this program will replace or modify. *[100 words]*

The successful master's degree in Geoscience has seven options: four in science (geochemistry, geology, engineering geology, and hydrogeology) and three in engineering (geological engineering, geophysical engineering, and hydrogeological engineering). This proposal would separate the options into two master's degrees: the science options would remain in the Geoscience M.S., while the engineering options would move to a new M.S. in Geological Engineering. A new option in geotechnical engineering would be added to the engineering degree. The option in geophysical engineering would be renamed geophysics and remain in the Geoscience M.S.

2. **Relation to institutional strategic goals.** Describe the nature and purpose of the new program in the context of the institution's mission and core themes. *[200 words]*

The proposed M.S. in Geological Engineering directly fits Montana Tech's mission by providing exemplary graduate-level engineering education that blends theory with practice to prepare graduates equipped to meet the changing needs of society. This discipline contributes especially strongly to the responsible development and use of natural resources and protection from natural hazards. The curriculum exists and is successful, typically enrolling on the order of one third of the students in the Geoscience M.S. This proposal also improves alignment between the degree curriculum and the degree name for students in the engineering options, and it facilitates professional registration for geological engineering graduates.

The proposed new geotechnical engineering option fills an important niche between geological engineering and civil engineering. Changing the name of the geophysical engineering option to the geophysics option aligns with Montana Tech's decision to eliminate the ABET-accredited B.S. program in geophysical engineering and reflects its strong existing science focus. Typically engineering graduate degree programs build on an ABET-accredited undergraduate program, and Montana Tech terminated this degree during program prioritization.

3. **Process leading to submission.** Briefly detail the planning, development, and approval process of the program at the institution. *[100 words]*

Individuals with a M.S. in Geological Engineering and related fields are in high demand, and they are well positioned for professional registration and employment as engineers. Faculty have been discussing and considering separating the geological engineering options into a separate degree for several years. The program proposal was developed by the Geological Engineering Department, which offers all the engineering options, reviewed and coordinated by other faculty and departments involved with the Geoscience M.S., approved by the department, the School of Mines and Engineering, the Graduate Council, Curriculum Review Committee, and Faculty Senate.

4. **Program description.** Please include a complete listing of the proposed new curriculum in Appendix A of this document.

The Geoscience M.S. program offers a thesis track, non-thesis track, and publishable-paper track for seven options: engineering geology, geochemistry, geological engineering, geology, geophysical engineering, hydrogeology, and hydrogeological engineering . The thesis and publishable-paper tracks

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give students deep research experience on a particular topic, and the degree requires 30 credits. The non-thesis option requires 36 credits, including a project that is much smaller than a thesis or publishable paper. The Geoscience M.S. tracks and requirements will not be changed, and the new Geological Engineering M.S. will have the same *tracks and requirements* as the Geoscience M.S. program, but with different specific curricular requirements, reflecting the engineering character.

a. List the program requirements using the following table.

Existing and Continuing MS Geoscience Degree Options	Credits Thesis Track	Credits Nonthesis Track
Credits in required courses offered by the department offering the program	9 to 15	9 to 15
Credits in required courses offered by other departments	2	2
Credits of M.S. Thesis (8 credits) or Project (3 credits)	8	3
Credits of relevant technical advanced electives	5 to 11	16 to 22
Total credits required to complete the program	30	36

Proposed MS Geological Engineering Degree and Proposed Options	Credits Thesis Track	Credits Nonthesis Track
Credits in required courses offered by the department offering the program	6 to 16	6 to 16
Credits in required courses offered by other departments	2	2
Credits of M.S. Thesis (8 credits) or Project (3 credits)	8	3
Credits of relevant technical advanced electives	4 to 14	15 to 25
Total credits required to complete the program	30	36

b. List the program learning outcomes for the proposed program. Use learner-centered statements that indicate what students will know, be able to do, and/or value or appreciate as a result of completing the program.

The learning outcomes for the M.S. Geoscience options will not be changed. Students completing the program will:

1. Acquire up-to-date, advanced knowledge, skills, and understanding of geoscience concepts to meet the changing needs of society;
2. Blend theory with practice to understand, interpret, analyze, design, model, problem solve, and apply geoscience concepts and principles;
3. Be able to communicate technical and scientifically complex material about geoscience orally, in writing, and using various media for a broad range of audiences; and
4. Demonstrate understanding of ethical principles applicable to geoscience as a discipline and profession through in-depth discussion of historical and recent case studies relevant to the option.

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Students completing the proposed M.S. Geological Engineering program will:

1. Acquire up-to-date, advanced knowledge, skills, and understanding of geological engineering concepts to meet the changing needs of society;
2. Blend theory with practice to understand, interpret, analyze, design, model, problem solve, and apply engineering concepts and principles to address geological concerns such as natural hazards and groundwater characterization;
3. Be able to communicate technical and scientifically complex material about geological engineering orally, in writing, and using various media for a broad range of audiences; and
4. Demonstrate understanding of ethical principles applicable to geological engineering as a discipline and profession through in-depth discussion of historical and recent case studies.

5. **Need for the program.** To what specific student, regional, and statewide needs is the institution responding to with the proposed program? How will the proposed program meet those needs? Consider workforce, student, economic, societal, and transfer needs in your response as appropriate. *[250 words]*

Student interest and the continuing need for both geoscientists and geological engineers with deep knowledge and skills by employers in Montana and throughout western North America have shown that these specialties are in high demand, especially in the private and government sectors. Management, development, and sustainability of Montana's distinctive geological resources, natural hazards, hydrogeology, and infrastructure needs require geological engineers with specialized and advanced knowledge in geological, hydrogeological, and geotechnical engineering. Registration programs for Professional Engineers are active in Montana and all western states, as well as in other regions of the country. Yet no graduate-level geological engineering degrees are offered in Montana. Students completing the engineering options in Montana Tech's Geoscience M.S. are disadvantaged in seeking employment and professional registration as engineers, because of the name of their degree, despite the fact that their preparation and qualifications are as rigorous as for engineering graduate degrees available elsewhere. The employer need for these specialties in Southwest Montana is expected to increase more rapidly than national averages, due to the Consent Decrees for the final decades-long clean-up of the Butte and Anaconda Superfund sites.

The proposed separation of the M.S. Geoscience "engineering" options into a M.S. Geological Engineering degree, with the addition of an option in Geotechnical Engineering, will serve these students and their future employers much better than the existing program. The new degree title will accurately reflect the engineering-focused coursework and research projects undertaken by the students in the "engineering" options.

6. **Similar programs.** Use the table below to identify and describe the relationship between any similar programs within the Montana University System.

Institution Name	Degree	Program Title
None		No graduate degrees in geological engineering specialties in Montana.

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a. If the proposed program substantially duplicates another program offered in the Montana University System, provide a rationale as to why any resulting duplication is a net benefit to the state and its citizens. *[200 words]*

Montana offers no other graduate degrees in geological engineering. Montana Tech has a strong B.S. degree in geological engineering, providing an excellent foundation for this master's degree. The proposed separation of the M.S. Geoscience options, with the science options staying in the Geoscience M.S. and the engineering options moving to the proposed Geological Engineering M.S. will serve students and their employers better. The proposed addition of the geotechnical-engineering option supports the construction and related employment sector. Renaming the geophysical engineering option to geophysics and continuing it in the M.S. Geoscience will keep geophysics available at the graduate level in Montana, serving student and employer demand in this field. This specialty provides key data and interpretation supporting resource exploration and development as well as geological mapping, hazard identification, and earthquake studies.

b. Describe any efforts that were made to collaborate with similar programs at other institutions. If no efforts were made, please explain why. *[200 words]*

Collaborations in geoscience and engineering research are numerous between and among Montana Tech, the University of Montana-Missoula, and Montana State University-Bozeman, as well as with the Montana Bureau of Mines and Geology. No efforts were made to collaborate on this curriculum, because no other campus offers a M.S. degree or degree option in Geological Engineering, Hydrogeological Engineering, Geotechnical Engineering, or Geophysics. The course-sharing options discussed for the Ph.D. programs in earth and geoscience fields will be applicable to the entire M.S. in Geoscience and the proposed M.S. in Geological Engineering. We contacted the Graduate Schools at those institutions, and they either supported the concept of separating the engineering options from the Geoscience M.S. and appropriately renaming them or were neutral.

7. **Implementation of the program.** When will the program be first offered? If implementation will occur in phases, please describe the phased implementation plans. *[100 words]*

The M.S. Geological Engineering program will be first offered in the 2021-22 academic year. The Table below INCLUDES current students in the engineering options.

a. Complete the following table indicating the projected enrollments in and graduates from the proposed program.

Fall Headcount Enrollment					Graduates				
AY21-22	AY22-23	AY23-24	AY24-25	AY25-26	AY22-23	AY23-24	AY24-25	AY25-26	AY26-27
4	6	8	8	8	4	5	6	7	8

b. Describe the methodology and sources for determining the enrollment and graduation projections above. *[200 words]*

These projections of enrollment in the proposed M.S. Geological Engineering are based on recent and current Geoscience M.S. students pursing the geological engineering and hydrogeological engineering options, expressions of interest of prospective students, mentoring capacity of faculty advisors, and employers, faculty sabbatical eligibility, a time-to-degree in the range of 2 to 2.5 years for full-time students, and some part-time enrollment of local engineers, seeking professional advancement. Some of these students would have currently or previously enrolled in the engineering options in the Geoscience M.S. The total number of graduate students in both M.S. programs together is expected to increase a small amount (perhaps 10%) due to the M.S. Geological Engineering program being more accurately named and, therefore, more attractive to prospective students.

The lower enrollment during AY21/22 reflects faculty sabbaticals, but numbers should quickly increase higher.

c. What is the initial capacity for the program?

The initial capacity of the option is eight students, and it could increase to the range of a dozen over a several years, depending on research activity and grant funding.

8. **Program assessment.** How will success of the program be determined? What action would result if this definition of success is not met? *[150 words]*

The new M.S. program will be assessed per Montana Tech's Graduate School Assessment Plan. It will be assessed along with the Geoscience M.S. and other graduate programs. Key metrics used in graduate program assessment include applications, enrollment, graduates, placements, and impact. Impact includes grant revenues, peer-reviewed publications, student and faculty awards, and fiscal soundness. The Graduate School follows a 2-year assessment cycle. In year 1 of the cycle, the Graduate School and the faculty consider the assessment metrics and use them to guide actions and decisions. In year 2, a formal program review document is prepared and reviewed by faculty, administration, and the department's Industry Advisory Board. When performance falls short, action plans will be developed and implemented. A major assessment of the program will be conducted at the end of the third 2-year cycle to determine whether enrollment, completions, and impact are on track.

a. Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program. When will assessment activities occur and at what frequency? *[150 words]*

The assessment data for this option will be collected annually in late spring along with the data for other options and graduate programs. It will be reviewed by the faculty, who will determine any modifications or corrective actions needed to enable students to achieve the learning outcomes, if they are falling short. Every two years a formal assessment report of all graduate programs, including the Geoscience M.S. program, will be prepared by the Graduate School. This report will be reviewed by faculty, deans, provost, other stakeholders, and Montana Tech's Assessment Committee. The overall goal is to ensure that the option (a) is enabling students to meet learning outcomes, (b) is on a sustainable trajectory, and (c) is attracting high quality students and producing high quality graduates to meet the workforce demand.

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b. What direct and indirect measures will be used to assess student learning? *[100 words]*

Direct measures of student learning include performance in coursework; the thesis, publishable paper, or master's project and its defense; placement rates; conference presentations; and the performance of graduates on professional registration exams. Indirect measures include the judgment of graduate committees and the department's Industry Advisory Board, instrumentation proficiency, participation in special experiences (such as software skills, professional development, professional society membership, field experiences, and conference attendance).

c. How will you ensure that the assessment findings will be used to ensure the quality of the program? *[100 words]*

The assessment findings will be reviewed by faculty, department head, Graduate Council, deans, Administration, and Industrial Advisory Board. The deans will hold faculty accountable for using the findings to ensure the quality of the program. The Graduate School's biannual assessment report will be reviewed and evaluated by Montana Tech's Assessment Committee, which will determine whether it and actions taken or proposed are acceptably ensuring the quality of the program.

d. Where appropriate, describe applicable specialized accreditation and explain why you do or do not plan to seek accreditation. *[100 words]*

Specialized accreditation is not applicable to the Geological Engineering M.S. program or any of its options.

9. Physical resources.

a. Describe the existing facilities, equipment, space, laboratory instruments, computer(s), or other physical equipment available to support the successful implementation of the program. What will be the impact on existing programs of increased use of physical resources by the proposed program? How will the increased use be accommodated? *[200 words]*

Existing facilities, space, laboratory instruments, computers that support the Geoscience M.S., the Earth Science & Engineering Ph.D., the Geological Engineering and Geophysics bachelor's degrees, the Montana Bureau of Mines and Geology, and the other natural-resource focused degrees and research programs are more than adequate and sufficiently available to support the successful implementation of this new degree. The projected enrollment increase is not expected to exceed capacity.

b. List needed facilities, equipment, space, laboratory instruments, etc., that must be obtained to support the proposed program. (Enter the costs of those physical resources into the budget sheet.) How will the need for these additional resources be met? *[150 words]*

None.

10. Personnel resources.

a. Describe the existing instructional, support, and administrative resources available to support the successful implementation of the program. What will be the impact on existing programs of increased

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use of existing personnel resources by the proposed program? How will quality and productivity of existing programs be maintained? *[200 words]*

All courses are available through the existing Geoscience M.S. program. Courses offered for other natural-resources-focused M.S. programs, Civil, Mining and/or Environmental Engineering B.S. and M.S. programs, the Ecological Restoration M.S. program, and the Earth Science & Engineering Ph.D. may be attractive electives for some of the students. The addition of the geological engineering M.S. degree may expand the student peer group in some courses, enriching the educational experience for all.

b. Identify new personnel that must be hired to support the proposed program. (Enter the costs of those personnel resources into the budget sheet.) What are the anticipated sources or plans to secure the needed qualified faculty and staff? *[150 words]*

None.

11. Other resources.

a. Are the available library and information resources adequate for the proposed program? If not, how will adequate resources be obtained? *[100 words]*

Library and information resources are adequate to excellent, due to Montana Tech's and the Montana Bureau of Mines and Geology's considerable level of activity and research strengths in the geosciences and geological and environmental engineering.

b. Do existing student services have the capacity to accommodate the proposed program? What are the implications of the new program on services for the rest of the student body? *[150 words]*

The net increase in a small number of graduate students has negligible implications for student services, which recently served 3,000 students and are now serving fewer than 2,400.

12. Revenues and expenditures. Describe the implications of the new program on the financial situation of the institution. *[100 words]*

The addition of a new M.S. has negligible budgetary implications because it is essentially a reorganization of an existing M.S. While we can tally the tuition revenue from the projected student enrollment, the marginal differences in expenses are less clear, because no new faculty or facilities are needed, and these students will take courses that are already in the teaching rotation and therefore already budgeted. At the same time, it would be misleading to show the tuition revenues against zero expenses, which would make the program appear to be net revenue producing.

a. Please complete the following table of budget projections using the corresponding information from the fiscal analysis form for the first three years of operation of the new program.

	Year 1	Year 2	Year 3
Revenues			
Expenses			
Net Income/Deficit (revenues-expenses)			

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b. Describe any expenses anticipated with the implementation of the new program. How will these expenses be met? *[200 words]*

No new expenses are anticipated with the implementation of the new program.

i. If funding is to come from the reallocation of existing state appropriated funds, please indicate the sources of the reallocation. What impact will the reallocation of funds in support of the program have on other programs? *[150 words]*

N/A

ii. If an increase in base funding is required to fund the program, indicate the amount of additional base funding and the fiscal year when the institution plans to include the base funding in the department's budget.

N/A

iii. If the funding is to come from one-time sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when that funding ends? *[150 words]*

N/A

iv. Describe the federal grant, other grant(s), special fee arrangements, or contract(s) that will be valid to fund the program. What does the institution propose to do with the program upon termination of those funds? *[150 words]*

N/A

13. Student fees. If the proposed program intends to impose new course, class, lab, or program fees, please list the type and amount of the fee.

No new student fees will be imposed. Students in this option will be subject to the same fees as other students in the graduate engineering master's degree programs.

14. Complete the fiscal analysis form.

N/A.

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Signature/Date

College or School Dean:

Chief Academic Officer:

Chief Executive Officer:

Flagship Provost*:

Flagship President*:

*Not applicable to the Community Colleges.

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Appendix A1 – Proposed Curriculum: MS Geological Engineering (No Option)

The Master of Science in Geological Engineering requires that the admitted student have a degree in geological engineering or a related field. Math through differential equations and a course in mechanics of materials are required, along with a set of classes that demonstrate breadth in fundamentals of engineering.

The Geological Engineering Department, which hosts the proposed option, has excellent facilities and equipment for laboratory, field, and numerical investigations. Opportunities for research projects are plentiful.

Admission Requirements:	B.S. in Geological Engineering or related field. Physical Geology, Mineralogy/Petrology, Field Geology Math through Differential Equations. A course in mechanics of materials (statics is a prerequisite). Demonstrated breadth in fundamentals of engineering (at least 3 of the following: fluid mechanics, dynamics thermodynamics, engineering economics, surveying)
Options:	Thesis (30 credits), Publishable Paper (30 credits), or Non-Thesis (36 credits)
Seminar Requirements (2 credits):	TC 5150 Graduate Writing Seminar or equivalent (1 cr) ENGR 5940 Engineering Seminar (1 cr)
Coursework Requirements *(20 credits for thesis or publishable paper)* *(31 credits for non-thesis)* **Students who have not previously taken courses in hydrogeology and/or structural geology will be required to take them at Montana Tech as part of their graduate program in Geological Engineering.* *No more than half of the minimum course credits can be at the 400 level.*	*Core Courses* (6 to 12 credits): GeoE 440 Geological Engineering (statics is a prerequisite) GeoE 542 Slope Stability Analysis & Design *GeoE 403 Structural Geology for Engineers *GeoE 420 Hydrogeology for Engineers *Electives* (8 to 25 credits): 400 and 500-level GeoE courses or others approved by the student's graduate committee.
Thesis (8 credits) *OR* *Non-Thesis Project (3 credits*)	GEOE 599W Thesis Research Students who select the non-thesis option are required to take GEOE 590W Graduate Research or Design Project (3 cr) as part of their coursework.

Examinations:

The final examination for thesis and publishable paper-option students will consist of an oral presentation and defense of the thesis, or publishable paper. Questions may be asked on any topic related to the thesis/paper or coursework taken as part of the graduate program. The presentation will be open to all interested parties, but the defense following the presentation will be open only to the student's graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any coursework undertaken as part of the graduate program.

Students who have not taken the Fundamentals of Engineering Examination will be required to do so.

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Appendix A2 – Proposed Curriculum: MS Geological Engineering, Geotechnical Option

Graduate students in the Geotechnical option will focus on engineering characterization and behavior of soils.

Admission Requirements:	B.S. in Geological or Civil Engineering or related field. Physical Geology, Mineralogy/Petrology, Field Geology Math through Differential Equations. A course in mechanics of materials (statics is a prerequisite). Demonstrated breadth in fundamentals of engineering (at least 3 of the following: fluid mechanics, dynamics thermodynamics, engineering economics, surveying)
Options:	Thesis (30 credits), Publishable Paper (30 credits), or Non-Thesis (36 credits)
Seminar Requirements (2 credits):	TC 5150 Graduate Writing Seminar or equivalent (1 cr) ENGR 5940 Engineering Seminar (1 cr)
Coursework Requirements *(20 credits for thesis or publishable paper)* *(31 credits for non-thesis)* **Students who have not previously taken courses in soil mechanics (with lab) or hydrogeology will be required to take them at Montana Tech as part of their graduate program in Geological Engineering.* *No more than half of the minimum course credits can be at the 400 level.*	*Core Courses* (9 to 16 credits): GeoE 440 Geological Engineering (statics is a prerequisite) GeoE 542 Slope Stability Analysis & Design?? GeoE 548 Geotechnical Modeling *ECiv 486 Soil Mechanics & Foundation Engineering *ECiv 487 Soil Mechanics Lab (or equivalent) *GeoE 420 Hydrogeology for Engineers *Electives* (4 to 22 credits): 400 and 500-level GeoE courses or others approved by the student's graduate committee.
Thesis (8 credits) *OR* *Non-Thesis Project (3 credits*)	GEOE 599W Thesis Research Students who select the non-thesis option are required to take GEOE 590W Graduate Research or Design Project (3 cr) as part of their coursework.

Examinations:

The final examination for thesis and publishable paper-option students will consist of an oral presentation and defense of the thesis, or publishable paper. Questions may be asked on any topic related to the thesis/paper or coursework taken as part of the graduate program. The presentation will be open to all interested parties, but the defense following the presentation will be open only to the student's graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any coursework undertaken as part of the graduate program.

Students who have not taken the Fundamentals of Engineering Examination will be required to do so.

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Appendix A3 – Proposed Curriculum: MS Geological Engineering, Hydrogeological Engineering Option

Graduate students in the Hydrogeological Engineering option will study the occurrence, movement, and chemistry of groundwater with additional engineering emphasis. Typical thesis investigations are related to environmental or supply problems associated with mining or agricultural activities, and frequently involve research participation with the Montana Bureau of Mines and Geology.

Admission Requirements: B.S. in Geological Engineering or a related engineering field, or a science field with adequate engineering make up courses that allows students to take the FE and eventually PE examination.

Admission Requirements:	B.S. in Geology, Geophysics, Chemistry, or Physics.
Options:	Thesis, Publishable Paper, or Non-Thesis
Core Requirements:	*(11 credits)* GEOE 422 - Groundwater Flow Modeling GEOE 429 - Field Hydrogeology GEOE 440 - Geological Engineering And one of the following: GEOE 520 - Advanced Hydrogeology or GEOE 528 – Contaminant Transport *Students in this option are exempt from the following required courses in the geological engineering program:* GEOE 542 Slope Stability Analysis & Design
Seminar Requirements:	T.C. 5150 - Graduate Writing Seminar or equivalent ENGR 5940 - Graduate Seminar (1)

Examinations:
The final examination for thesis-option students will consist of an oral presentation and defense of the thesis. Questions may be asked on any topic related to the thesis or course work taken as part of the graduate program. The presentation will be open to all interested parties, but the defense will be open only to the graduate committee.

The final examination for non-thesis option students will consist of a written and/or oral examination formulated by the student's graduate committee. The oral examination will draw questions from the written examination plus any course work undertaken as part of the graduate program.

Students who have not taken the Fundamentals of Engineering Examination will be required to do so.

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Appendix A4 – Summary of Requirements for M.S. Geological Engineering all options

	Geological Engineering Options		
	N/A	**Geotechnical Engineering**	**Hydrogeological Engineering**
Core Courses: 6 to 16 credits	GEOE 440 Geolog. Engineering GEOE 542 Slope Stability Analysis *GEOE 403 Structural Geol for Engrs *GEOE 420 Hydrogeology for Engrs	GEOE 440 Geological Engineering GEOE 542 Slope Stability Analysis GEOE 548 Geotechnical Modeling *ECIV 486 Soil Mech & Foundation Engrg *ECIV 487 Soil Mech Lab *GEOE 420 Hydrogeol for Engrs	GEOE 422 Groundwater modeling GEOE 429 Field Hydrogeology GEOE 440 Geological Engineering GEOE 520-Advanced Hydrogeol OR GEOE 528 Contaminant Transport
Relevant advanced technical electives: 4 to 14 credits for thesis track. 15 to 25 credits for non-thesis track.	4xx, 5xx courses in Geological Engineering, Civil Engineering, Hydrogeological Engineering, Environmental Engineering, Mining Engineering, Others, as approved by committee	4xx, 5xx courses in Geology, Geophysics, Geological Engineering, Civil Engineering, Hydrogeology, Environmental Engineering, Mining Engineering, Restoration, Others, as approved by committee	4xx, 5xx courses in Geology, Geophysics, Geological Engineering, Civil Engineering, Hydrogeology, Environmental Engineering, Mining Engineering, Restoration, Others, as approved by committee
Seminars (2 cr)	TC 5150 Grad Writing Engr 5940 Grad SME seminar	TC 5150 Grad Writing Engr 5940 Grad SME seminar	TC 5150 Grad Writing Engr 5940 Grad SME seminar
Thesis (8 cr) or Project (3 cr)	599W Thesis 8 cr or 590W Project 3 cr	599W Thesis 8 cr or 590W Project 3 cr	599W Thesis 8 cr or 590W Project 3 cr
TOTAL CREDITS	30 (thesis) 36 (Non-Thesis)	30 (thesis) 36 (Non-Thesis)	30 (thesis) 36 (Non-Thesis)
Admissions Requirements	Bachelor's in Geological or Related Engineering field. Coursework in physical geology, mineralogy and petrology, field geology, Math through differential equations, mechanics of materials, demonstrated breadth in engineering fundamentals (at least three of fluid mechanics, dynamics, thermodynamics, engineering econ, surveying)	Bachelor's in Geological or Civil Engineering or Related engineering field. Coursework in physical geology, mineralogy & petrology, field geology, math through differential equations, mechanics of materials, demonstrated breadth in engineering fundamentals (at least three of fluid mechanics, dynamics, thermodynamics, engineering econ, surveying)	Bachelor's in Geological or Related Engineering Field or in geology, physics, hydrology, or other science field with adequate engineering foundation courses. Coursework in physical geology, mineralogy & petrology, field geology, math through differential equations, mechanics of materials, demonstrated breadth in engineering fundamentals (at least three of fluid mechanics, dynamics, thermodynamics, engineering econ, surveying)
Notes for Each Option:	Some students may opt for no option in hydrogeological or geotechnical engineering. In that case, they would satisfy more core requirements reflective of a broader geological engineering degree	These students would satisfy a geological engineering degree with a special focus on geotechnical engineering	These students would satisfy a geological engineering degree with a special focus on hydrogeological engineering
Notes for All Options	* If not taken previously		
	4xx courses must be less than half of required course credits		
	Thesis track can be satisfied with publishable paper.		
	Final examination for thesis options consists of an oral presentation and thesis defense		
	Final examination for non-thesis options consists of written and/or oral examination formulated by the graduate committee, including a presentation of the master's project.		
	Students are not allowed to retake a course taken as an undergraduate for graduate credit. If this situation applies to core courses, the student with faculty committee will select some substitute 4xx/5xx courses for the core.		
	Engineering Options require students to have passed the Fundamentals of Engineering (FE) exam prior to admission or during the program.		

Montana Board of Regents

CURRICULUM PROPOSAL FORM

Appendix A5 – Summary of Requirements for M.S. Geoscience All Options

	Geoscience M.S. Options				
	Engineering Geology	**Geochemistry**	**Geology**	**Geophysics**	**Hydrogeology**
Core Courses: 6 to 15 credits	GEOE440-Geological Engrg GEOE541 Adv. Engrg Geology GEOE542 Slope Stability Anal. *GEOE403 Struct Geo for Engr *GEOE420 Hydrogeol for Engr	CHMY 540 Environ. Chem. CHMY 5597 Geochem Modelling GEOE 520 Adv Hydrogeology OR GEOE 420 Hydrogeology for Engineers GEOE 533 Hydro-geochemistry	Courses would depend on student's research focus area (e.g. metallic ore deposits, structural geology, petroleum geology)	At least 9 credits from the following: GEOP 446 Applied Linear Systems GEOP 450 Inversion GEOP 508 Seismic Prospecting GEOP 509 Gravity & Magnetic Prospect. GEOP 510 Electrical Prospecting GEOP 525 Advanced Remote Sensing GEOP 527 Petrophysics GEOP 595 Advanced Topics in Geophys.	GEOE 422 Groundwater modeling GEOE 429 Field Hydrogeology GEOE 520-Advanced Hydrogeol OR GEOE 528 Contaminant Transport
Relevant advanced technical electives: 5 to 14 credits for Thesis track. 16 to 25 credits for non-thesis track.	4xx, 5xx courses in Geology, Geophysics, Geological Engineering, Civil Engineering, Hydrogeology, Environmental Engineering, Mining Engineering, Restoration, Others, as approved by committee	4xx, 5xx courses in Chemistry, Geology, Geophysics, Geological Engineering, Hydrogeology, Environmental Engineering, Restoration, Others, as approved by committee	4xx, 5xx courses in Chemistry, Geology, Geophysics, Geological Engineering, Civil Engineering, Hydrogeology, Environmental Engineering, Mining Engineering, Restoration, Others, as approved by committee	4xx, 5xx courses in Geology, Geophysics, Geological Engineering, Civil Engineering, Hydrogeology, Environmental Engineering, Petroleum Engineering, Restoration, Others, as approved by committee	4xx, 5xx courses in Chemistry, Geology, Geophysics, Geological Engineering, Civil Engineering, Hydrogeology, Environmental Engineering, Mining Engineering, Restoration, Others, as approved by committee
Seminars (2 or 3 cr)	TC 5150 Grad Writing Engr 5940 Grad SME seminar	TC5150 Writing CHMY 594 Geochemistry Additional Technical Seminar	TC 5150 Grad Writing Engr 5940 Grad SME seminar	TC 5150 Grad Writing Engr 5940 Grad SME seminar	TC 5150 Grad Writing Engr 5940 Grad SME seminar
Thesis (8 cr) or Project (3 cr)	599W Thesis 8 cr or 590W Project 3 cr	599W Thesis 8 cr or 590W Project 3 cr	599W Thesis 8 cr or 590W Project 3 cr	599W Thesis 8 cr or 590W Project 3 cr	599W Thesis 8 cr or 590W Project 3 cr
TOTAL CREDITS	30 (thesis) 36 (Non-Thesis)	30 (thesis) 36 (Non-Thesis)	30 (thesis) 36 (Non-Thesis)	30 (thesis) 36 (Non-Thesis)	30 (thesis) 36 (Non-Thesis)
Admissions Requirements	Bachelor's in Chemistry or Geology or other science/engineering field. Several courses in geology and chemistry. Math through Calculus II. A course in statics.	Bachelor's in chemistry, biology, or geology or other science/engineering field, with introductory courses in physical geology, mineralogy-petrology, and field geology, and upper-division courses in: physical and analytical chemistry. Math through Calculus II.	Bachelor's in geology, geophysics, or related science or engineering field. Coursework in physical geology, mineralogy, petrology, sedimentology, and introduction to field geology. Math through Calculus I.	Bachelor's in geophysics, geology, physics, mathematics, or related engineering field. Prerequisite coursework depends on student's focus areas (electrical, seismic, potentials, or remote sensing). Math through Differential Equations.	Bachelor's in geology, geophysics, chemistry, physics, environmental science, or related engineering field. Coursework in physical geology, mineralogy, petrology, sedimentology, and introduction to field geology. Math through Calculus I.
Notes for Each Option:	Students in this major will be geologists with no engineering degree, but their focus is in geologic hazards.	Students in this option will have a geoscience degree where they use chemistry as a tool to answer geological questions	Students in this field have a focus on ore deposits, structural geology, or petroleum geology	Students in this option would have a well-rounded Geoscience background, but their focus would teach them geophysics tools and theory on seismic, electrical, gravity & magnetics and remote sensing to solve geological problems	Students in this option would have a well-rounded Geoscience background, but their focus would allow them to solve hydrogeologic problems within the geoscience field
Notes for All Options	* If not taken previously				
	4xx courses must be less than half of required course credits				
	Thesis track can be satisfied with publishable paper.				
	Final examination for thesis options consists of an oral presentation and thesis defense				
	Final examination for non-thesis options consists of written and/or oral examination formulated by the graduate committee, including a presentation of the master's project.				
	Students are not allowed to retake a course taken as an undergraduate for graduate credit. If this situation applies to core courses, the student with faculty committee will select some substitute 4xx/5xx courses for the core.				
	Engineering Options require students to have passed the Fundamentals of Engineering (FE) exam prior to admission or during the program.				

Montana University System
REQUEST TO PLAN FORM

ITEM 190-1501-R0920 **Meeting Date**

Item Name

Program/Center/Institute Title: **M.S. Geological Engineering** Planned 6-digit CIP code: **14.39.01**

Campus, School/Department: **Montana Technological University** Expected Final Submission Date: **March 2021**

Contact Name/Info: **Mary MacLaughlin mmaclaughlin@mtech.edu, 406-496-4655**

This form is meant to increase communication, collaboration, and problem-solving opportunities throughout the MUS in the program/center/institute development process. The completed form should not be more than 2-3 pages. For more information regarding the program/center/institute approval process, please visit http://mus.edu/che/arsa/academicproposals.asp.

1) **Provide a description of the program/center/institute.**

The M.S. degree in Geoscience has seven options: four in geoscience (engineering geology, geochemistry, geology, and hydrogeology) and three in engineering (geological engineering, geophysical engineering, and hydrogeological engineering). This request consists of separating the seven options into two M.S. degrees, changing the name of one option, and adding an additional option. The four geoscience options would remain in the Geoscience M.S. and would be joined by an option in geophysics (renamed from geophysical engineering). The geological engineering option would be elevated to the proposed new M.S. in Geological Engineering, which would include options in hydrogeological engineering (existing) and geotechnical engineering (new).

2) **Describe the need for the program/center/institute. Specifically, how the program/center/institute meets current student, state, and workforce demands. (Please cite sources).**

Master's-level expertise in geological engineering, geotechnical engineering, and hydrogeological engineering are in high demand in the private and government sectors. Students and employers are interested in having the word engineering in the degree title on the transcript and diploma for the students who complete an engineering option. Yet no geological engineering master's degree programs are currently available in Montana. Montana Tech's existing degree structure, in which the engineering options are housed within an umbrella M.S. Geoscience degree, creates confusion regarding the engineering content of the programs, and the degree name is a barrier to professional registration for graduates. Moreover, prospective students seeking an M.S. program in geological, geotechnical, or hydrogeological engineering are unlikely to consider Montana Tech's Geoscience M.S. because of the degree name, unless they obtained their bachelor's degrees at Montana Tech and know the strengths of the curriculum. Adding a specific geotechnical option within the MS in Geological Engineering will help prospective students find this area of emphasis. This addition also creates parallelism between the proposed MS in Geological Engineering and three options within Montana Tech's coursework-only Master of Engineering degree (geological engineering, geotechnical engineering, and hydrogeological engineering).

3) **Describe any significant new resources (financial, staff, facility, new curricula) needed to launch and sustain the program/center/institute.**

None. The curricula, courses, library, faculty, and research infrastructure are in place. The proposal is to separate the engineering options in the Geoscience M.S. and offer them under the degree named M.S. in Geological

Montana University System
REQUEST TO PLAN FORM

Engineering. In addition, a geotechnical track within the geological engineering option would be elevated to a degree option. The geophysical engineering option would be renamed as geophysics and kept in the Geoscience M.S.

4) **Describe any efforts or opportunities you have identified for collaboration either within the institution or between MUS institutions (i.e. articulation, course-sharing, research collaboration).**

Collaborations in geoscience and engineering research are numerous between and among Montana Tech departments, the University of Montana-Missoula, Montana State University-Bozeman, and the Montana Bureau of Mines and Geology, and these collaborations will continue. Including the word "engineering" in the degree title for the engineering options is likely to enhance collaboration opportunities with engineering departments at MSU-Bozeman and beyond. There are no other geological engineering master's degree programs in Montana or specific options in geotechnical engineering, geophysics, or hydrogeological engineering. No new courses are required, and existing course sharing and research collaborations are expected to continue.

5) **Describe how the program/center/institute fits with the institutional mission, strategic plan, existing institutional program array, and academic priorities as described in the most recent Academic Priorities and Planning Statement.**

The proposed M.S. in Geological Engineering directly fits Montana Tech's mission by providing exemplary graduate-level engineering education that blends theory with practice to prepare graduates equipped to meet the changing needs of society and especially to contribute to the responsible development and use of natural resources. The curriculum exists and is successful. The engineering options typically enroll and graduate about one third of the students in the Geoscience M.S. This proposal also would improve alignment between the degree curriculum with the degree name for students in the engineering options of the geoscience program, and it would facilitate professional registration for geological engineering graduates.

Signature/Date	
Chief Academic Officer:	8/4/2020
Chief Research Officer*:	
Chief Executive Officer:	8/4/2020
Flagship Provost:**	
Flagship President:**	

*Center/Institute Proposal only
**Not applicable to the Community Colleges.

Montana University System
REQUEST TO PLAN – OCHE ANALYSIS

ITEM 190-1501-R0920

ITEM NAME: M.S. Geological Engineering & amend M.S. Geosciences option titles

OCHE ANALYSIS

Labor market outlook

This proposal does not anticipate developing a wholly new degree program. Rather, it separates existing options in the existing M.S. in Geosciences into separate degrees (M.S. in Geosciences, with options in engineering geology, geochemistry, geology, hydrogeology, and geophysics; M.S. in Geological Engineering with options in hydrogeological engineering and geotechnical engineering). These changes are meant to ensure students degree names correctly reflect their training and expertise.

Occupational demand in Montana, all levels of education			
	Annual Openings	Growth 2018-28	Median Wage
Mining and Geological Engineers	10	-3%	$92,250
Geoscientists	30	+16%	$85,780

Source: O*NET

Related programs / centers / institutes

No other campus in the Montana University System offers a specific graduate degree options in geological engineering, geophysics, or geotechnical engineering. Montana State University offers an M.S. in Earth Sciences with concentrations in Geology and Geography. MSU's M.S. in Civil Engineering could also allow students to accumulate some similar coursework, though in a less focused manner. The University of Montana offers an M.S. in Geosciences.

MUS Geosciences / Earth Science M.S. graduates 2017-2019			
	2019	**2018**	**2017**
Montana Technological University	11	12	15
Montana State University	6	9	13
The University of Montana	7	8	4
TOTAL	24	29	32

Source: MUS Student Data Warehouse

Budget Impact

X	**LOW** • **Only incidental costs**		**MEDIUM**	**HIGH** • **substantial commitment of resources relative to institutional budget**

CAO discussion and follow-up

OCHE requested that Tech, in their final proposal, describe the curriculum of each reconfigured option. Given the number of options across these two degrees, it is important the proposed curriculum provides a distinct enough experience to merit the different option names.

ARSA/BOR comment and direction for Level II proposal

Hartline, Beverly

From: Hartline, Beverly
Sent: Thursday, January 21, 2021 12:37 PM
To: Cassidy, Carleen
Subject: RE: Curriculum proposal fiscal analysis form for splitting off the engineering options in Geoscience into a Geological Engineering M.S.

Thank you, Carleen!

BEVERLY HARTLINE, PH.D.
VC Research & Grad School

OFFICE PHONE (406) 496-4456

From: Cassidy, Carleen <CCassidy@mtech.edu>
Sent: Thursday, January 21, 2021 10:42 AM
To: Hartline, Beverly <BHartline@mtech.edu>
Subject: RE: Curriculum proposal fiscal analysis form for splitting off the engineering options in Geoscience into a Geological Engineering M.S.

Hi Bev,

I have reviewed the information and am in agreement there will be no additional costs with splitting off the engineering option in geoscience. This proposal to split the engineering and the science options in the Geoscience M.S program already have the programs, courses, faculty, infrastructure in place thus requiring no additional costs.

Thank you,
Carleen

CARLEEN CASSIDY
Director of Finance and Budget

406.496.4252 | ccassidy@mtech.edu

MONTANA
TECHNOLOGICAL UNIVERSITY

MontanaTech *Curriculum Change Request Form Dated 6 September 2019*

Date 15/October 2020
Dept. Biology
Program: Organismal

College CLSP
CRC Representative – Joel? Me?

Description of Request: Curriculum adjustment for Organismal track of Biology

Current Course or Program Information: See: attached.

Proposed Change

Course # Name	Credits	Pre-req.
See: attached		

This should include what will appear in the catalog, exactly. New course require course outcomes listed in this area.

List of supporting documentation attached:

1. ~~**Example: Syllabus**~~
2. **Example: Curriculum worksheet**

Assessment Leading to Request

The Biology degree is divided into two main tracks: (1) Cell and Molecular, and (2) Organismal. Traditionally, these two tracks divide on in areas such as advanced chemistry and cellular/molecular biology classes. We would like to offer a greater level of diversity for the Organismal Track and rename the track to reflect these changes.

1) Students in the organismal track often go into Restoration Ecology or a similar field. Many of the advanced Chemistry, Math, and Anatomy classes are less relevant to the ecology-based profession and act as a hindrance to student success.
2) Curriculum changes would allow for additional ecology-based classes and better academic training
3) Similar programs at U of M and MSU do not require the aforementioned advanced classes, but *do* offer a greater diversity of ecology-based classes. On occasion, the Montana Tech students who struggle with the advanced Chem/Math classes transfer to these other programs.

These changes will better prepare our students for their profession of choice and help our program to be more competitive with similar programs throughout the state.

A proposed name change to the track would reflect the changes in the curriculum: Organismal and Ecological Studies. This is not a degree name change so it does not have to pass the Board of Regents and does not mimic the names of similar MUS programs.

Anticipated Impacts to "Other" Programs

This will shift the student load in some of the chemistry students by approximately 6-8 students/ year. This estimate is based on current enrollment.

Impact on Library: Stella Capoccia has consulted with Scott Juskiewicz 27/October 2020 at the Montana Tech library to ensure needed materials and media are available. (Or No consultation is required since changes are only in the course number, course name, or course pre-requisites.)

No changes needed.

Date to take effect: 01/01/2020

MontanaTech *Curriculum Change Request Form Dated 6 September 2019*

APPROVALS

Department Head Approval _____ **Date** 10/26/20

Dean Approval _____ **Date** 12/28/20

Graduate Council Approval _____ Date _____

CRC Approval _____ Date _____

Faculty Senate Approval _____ Date _____

VCAA Approval (see below) _____ Date _____

Chancellor Approval (see below) _____ Date _____

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:
Faculty Approvals (directly to CRC, then Faculty Senate):

- ☐ **Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor**

Campus Approvals (must be approved by the VCAA prior to CRC submission):

- ☐ Placing a postsecondary educational program into moratorium
- ☐ Withdrawing a postsecondary educational program from moratorium
- ☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more
- ☐ Establishing a B.A.S./A.A./A.S. area of study
- ☐ Offering an existing postsecondary educational program via distance or online delivery
- ☐ Other:

OCHE Approvals *(must be approved by the VCAA and Chancellor prior to CRC submission)*:

- ☐ Re-titling an existing postsecondary educational program
- ☐ Terminating an existing postsecondary educational program
- ☐ Consolidating existing postsecondary educational programs
- ☐ Establishing a new minor where there is a major or an option in a major
- ☐ Revising a postsecondary educational program
- ☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
- ☐ Other:

Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:

- ☐ Establishing a new postsecondary educational program
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
- ☐ Re-titling an academic, administrative, or research unit
- ☐ Other:

	Biology Department				Biology Department				Notes
	Organismal Track				Organismal and Ecological Studies Track				
Pre-req	Pre-req			Pre-req	Pre-req			Pre-req	credits
n Fall S			Freshman Fall Semester				Freshman Fall Semester		Notes
BIOB	BIOB	170	Prinicples of biodiversity & lab	4	BIOB	170	Prinicples of biodiversity & lab	4	
BIOB	BIOB	194	Freshman Seminar	1	BIOB	194	Freshman Seminar	1	
CHMY	CHMY	141	College Chemistry I	3	CHMY	121/122	Introduction to Chemistry & Lab OR	4	New with Credits combined
CHMY	CHMY	142	College Chemistry Lab I	1	CHMY	141/142	College Chemistry I & Lab		
WRIT	WRIT	101	College Writing	3	WRIT	101	College Writing	3	
M	M	171	Calculus I	3	M	171	Precalculus or Calc	3	New - was calc -could also be subbed for Cal.
			TOTAL	15			TOTAL	15	
Spring			Freshman Spring Semester				Freshman Spring Semester		
BIOB	BIOB	160	Principle of Living Systems	3	BIOB	160/161	Principle of Living Systems & lab	4	
BIOB	BIOB	161	Principles of Living Systems Lab	1			Principles of Living Systems Lab	1	
CHMY	CHMY	143	College Chemisty II	3	CHMY	123	Intro to Organic & Biochem OR	3	New - Was Chem 2
CHMY	CHMY	144	College Chemistry Lab II	1	CHMY	210	Survey of Organic		New
COMX	COMX	111	Intro to public speaking OR	3	COMX	111	Intro to public speaking OR	3	
COMX	COMX	230	Presenting Tech Info		COMX	230	Presenting Tech Info		
XXXX	XXXX		Humanities Elective (#1)	3	XXXX		Humanities Elective (#1)	3	
			TOTAL	14			TOTAL	14	
re Fall			Sophomore Fall Semester				Sophomore Fall Semester		
STAT	STAT	131	Intro. To Bio-Stats OR	3	STAT	131	Intro. To Bio-Stats OR	3	
STAT	STAT	216	Intro to Stats		STAT	216	Intro to Stats		
BIOH	BIOH	301/302	Anatomy & Physiology I & lab	4	BIOH	301/302	Anatomy & Physiology I & lab	4	
CHMY	XXXX		Social Science Elective (#1)	3	XXXX		Social Science Elective (#1)	3	
CHMY					NRSM	494	Restoration Seminar (1)	1	New
CAPP	CAPP	156	MS Excel **OR**	3	CAPP	156	MS Excel **OR**	3	
CAPP	CAPP	158	MS Access		CAPP	158	MS Access		
BIOB	BIOB	294	Sophomore Seminar	1	BIOB	294	Sophomore Seminar	1	
			TOTAL	14			TOTAL	15	
e Sprin			Sophomore Spring Semester				Sophomore Spring Semester		
BIOH	BIOH	311/312	Anatomy & Physiology II & lab	4	BIOX		Biology Elective	3	
BIOM	BIOM	260/261	General Microbiology&lab	4	BIOM	260/261	General Microbiology&lab	4	
XXXX					NRSM	494	Restoration Seminar (2)	1	New
CHMY	BIOE	305/306	Nat. hist of Vert w lab	4	BIOE	305/306	Nat. hist of Vert w lab	4	
CHMY	CHMY	210	Survey of Organic Chemistry	3	BIOE	185	Envirnmental and Ecological Issues	3	New- was a bio-elective -
			TOTAL	15			TOTAL	15	
Fall Se			Junior Fall Semester				Junior Fall Semester		
BIOB	BIOB	3946	Junior Seminar	1	BIOB	3946	Junior Seminar	1	
BIOM	BIOX		Biology Elective	3	NRSM	435	Restoration 1 OR 2 (Spring semesters	3	New - A & P II deleted
STAT	STAT	441	Experimental Design **OR**	3	STAT	441	Experimental Design **OR**	3	
STAT	STAT	435	Stats Computing *		STAT	435	Stats Computing *		
PHSX	PHSX	121	Fundamentals of Physics I	4	PHSX	121	Fundamentals of Physics I	4	
BIOX	BIOO	320	Botany and lab**	4	BIOO	320	Botany and lab**	4	
			TOTAL	15			TOTAL	15	
pring S			Junior Spring Semester				Junior Spring Semester		
BIOB	BIOO	380	Zoology and lab***	4	BIOO	380	Zoology and lab***	4	
BIOX	BIOB	375/376	General Genetics and lab	4	BIOB	375/376	General Genetics	3	Reduced by 1 credit
PHSX	PHSX	123	Fundamentals of Physics II	4	PHSX	123	Fundamentals of Physics II	4	
WRIT	WRIT	322	Advanced business Writing OR	3	WRIT	322	Advanced business Writing OR	3	
WRIT	WRIT	321	Advanced Technical Writing****		WRIT	321	Advanced Technical Writing****		
			TOTAL	15			TOTAL	14	
Fall Se			Senior Fall Semester				Senior Fall Semester		
BCH	BIOE	455	Plant Ecology and lab**	4	BIOE	455	Plant Ecology and lab**	4	
BIOB	BIOB	420	Evolution	3	BIOB	420	Evolution	3	
BIOB	BIOX		Biology/Track Elective	3	BIOX		Biology/Track Elective	3	
BIOB				3				3	
XXXX	XXXX		Humanities Elective (#2)		XXXX		Humanities Elective (#2)		
BIOX	BIOX		Biology Elective	3	BIOX		Biology Elective	3	
			TOTAL	16			TOTAL	16	
pring S			Senior Spring Semester				Senior Spring Semester		
BIOB	BIOB	494	Senior Seminar	1	BIOB	494	Senior Seminar	1	
BIOB	BIOB	499	Senior Thesis	3	BIOB	499	Senior Thesis	3	
BIOB	BIOE	314	Animal Ecology and lab***	4	BIOE	314	Animal Ecology and lab***	4	
BIOX	BIOX		Biology Elective	3	BIOX		Biology Elective	3	
XXXX	BIOX		Biology Elective	2	BIOX		Biology Elective	2	
XXXX	XXXX		Social Science Elective (#2)	3	XXXX		Social Science Elective (#2)	3	
			TOTAL	16			TOTAL	16	

* Experimental design is and linear regression are taught in spring. and linear regression are taught in spring.

** Botany and Plant Ecology are only taught in fall in opposite years (botany odd year, plant ecology even).
so you may need to switch the order in which they are taken.

*** Zoology and Animal ecology are only tauht in spring 120 **Total credits for the new track** 120
so you may need to switch the order in which they are taken.

****** you may also take WRIT 325 writing in the sciences but this is only** **Extra chem classes, genetics lab, etc. can be used as a bio-elective**
cell and molecular track has 15 bio elective credits, organismal 14
students planning on medical school should take Sociology and Intro to psychology as their SS electives.

MontanaTech *Curriculum Change Request Form Dated 6 September 2019*

Date 15/October 2020
Dept. Biology
Program: Organismal

College CLSP
CRC Representative – Joel? Me?

Description of Request: Curriculum adjustment for Organismal track of Biology

Current Course or Program Information: See: attached.

Proposed Change

Course # Name	Credits	Pre-req.
See: Freshman Seminar to First-Year Seminar		
This should include what will appear in the catalog, exactly. New course require course outcomes listed in this area.		

List of supporting documentation attached:

1. **None needed**

Assessment Leading to Request

In order to stay current with the current gender terminology, the Department of Biology would like to change the name of the first-year seminar course from **Freshman Seminar to First-Year Seminar.**

No changes to the course numbering, content, or curriculum.

Anticipated Impacts to "Other" Programs

None

Impact on Library:

None

Date to take effect: 01/01/2020

MontanaTech *Curriculum Change Request Form Dated 6 September 2019*

APPROVALS

Department Head Approval A. Kuenzi Date 10/26/20

Dean Approval [signature] Date 12/28/20

Graduate Council Approval _____ Date _____

CRC Approval 1/29/2021 Theresa Stack Date _____

Faculty Senate Approval _____ Date _____

VCAA Approval (see below) _____ Date _____

Chancellor Approval (see below) _____ Date _____

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:

Faculty Approvals (directly to CRC, then Faculty Senate):

- ☐ **Other: Name change only**

Campus Approvals (must be approved by the VCAA prior to CRC submission):

- ☐ Placing a postsecondary educational program into moratorium
- ☐ Withdrawing a postsecondary educational program from moratorium
- ☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more
- ☐ Establishing a B.A.S./A.A./A.S. area of study
- ☐ Offering an existing postsecondary educational program via distance or online delivery
- ☐ Other:

OCHE Approvals *(must be approved by the VCAA and Chancellor prior to CRC submission)*:

- ☐ Re-titling an existing postsecondary educational program
- ☐ Terminating an existing postsecondary educational program
- ☐ Consolidating existing postsecondary educational programs
- ☐ Establishing a new minor where there is a major or an option in a major
- ☐ Revising a postsecondary educational program
- ☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
- ☐ Other:

Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:

- ☐ Establishing a new postsecondary educational program
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
- ☐ Re-titling an academic, administrative, or research unit
- ☐ Other:

MontanaTech *Curriculum Change Request Form Dated 6 September 2019*

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Meetings are Thu, by COB Monday, forward the completed form along with supporting information to the CRC chair after approval from the department chair, dean, and graduate council if necessary. Please email a word file and remember to check the request level found on the signature page. The signature page can be a PDF or bring the original with signatures to the meeting and state in the email that you are doing so.

New courses require course outcomes. Please contact the registrar before submitting a CRC request for a new course to evaluate the use of the common course numbering system. If numbers are pending, it is acceptable to use the XX notation (i.e. OSH 2XX).

Final changes are made by the registrar after senate approval.

Guidance can be found: https://www.umt.edu/provost/faculty/curriculum/default.php.

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Final changes are made by the registrar after faculty senate approval and BOR approval, as needed.
See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

Submission Requirements: All Submissions (checked by CRC):

- ☐ Electronic Copy (with the exception of signatures- no handwritten items)
- ☐ Completed CRC Form, with all Signatures and Attachments based on level of request (see below)
- ☐ Naming Convention as determined by CRC

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:

1. *Faculty Approvals (directly to CRC, then Faculty Senate):*
   - ☐ Establish a new course for the catalog (please contact the Registrar of MUS CCN information) Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Curriculum Worksheet
     - ☐ Pre-requisite or co-requisite

   X Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor. Required Documents:
     - ☐ **Documents as listed under establishing a new course (as applicable)**
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   - ☐ Placing a postsecondary educational program into moratorium: Required Documents:
     - ☐ Program Termination and Moratorium Form
     - ☐ Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:
     - ☐ Academic Proposal Request Form

- ☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more. Required Documents:
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
  - ☐ Academic Proposal Request Form
- ☐ Other (for those that are considered in this level but otherwise not listed):

  _____
  - ☐ Academic Proposal Request Form

3. OCHE Approvals Level I *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level I items are those requests for which the Board of Regents has fully designated approval authority to the institution or Commissioner of Higher Education. These requests are to be submitted for notification to or approval by Commissioner as Level I proposals. Level I proposals may be submitted to OCHE at any time by the flagship campuses or community colleges and will be processed on a rolling monthly schedule. The approval of such proposals will be conveyed to the Board of Regents at the next meeting of the board. Level I proposals include campus initiatives typically characterized by minimal costs, clear adherence to approved campus mission, and the absence of significant programmatic impact on other institutions within the MUS and community colleges. BOR Forms can be found using the following link:
https://mus.edu/che/arsa/Forms/AcademicForms.html

- ☐ Re-titling an existing postsecondary educational program. Required Documents:
  - ☐ Academic Proposal Request Form
- ☐ Terminating an existing postsecondary educational program.
  - ☐ Academic Proposal Request Form
  - ☐ Program Termination and Moratorium Form
- ☐ Consolidating existing postsecondary educational programs
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Establishing a new minor where there is a major or an option in a major
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Revising a postsecondary educational program
  - ☐ Curriculum Proposal Form
  - ☐ Academic Proposal Request Form
- ☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**

- ☐ Other (for those that are considered in this level but otherwise not listed):

  _____

- ☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level II proposals require initial approval and comment by the Board of Regents through a Request to Plan prior to final review and approval by the Office of the Commissioner of Higher Education. These proposals entail more substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination or personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other MUS institutions and community colleges.

- ☐ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum or Center/Institute Proposal
  - ☐ Completed Request to Plan, except when eliminating or consolidating
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Date: November 5, 2020
Dept. Trades and Technical
College: Highlands College
Program: Precision Machining
CRC Representative: Tony Patrick
Description of Request: Remove DDSN 135 Solidworks from the Precision Machining Catalog. DDSN 135 Solidworks has been discontinued at Highlands College. This will lower our total credits by 3.

Current Course or Program Information: Precision Machining AAS degree change.

Number (Assigned By CRC): _____

Proposed Change

Course #	Name	Credits	Pre-req.
Delete the following courses:			
DDSN 135	Solidworks	3	

List of supporting documentation attached (See Level of Request for Requirements):

Not Applicable

Assessment Leading to Request

The discontinuing of the Drafting Program, which DDSN 135 Solidworks was part of.

Anticipated Impacts to "Other" Programs

None

Impact on Library: None_____ has consulted with _____ at the Montana Tech library to ensure needed materials and media are available. (Or No consultation is required since changes are only in the course number, course name, or course pre-requisites.)

Date to take effect: Fall 2021

APPROVALS

Department Head Approval Anton Patrick
Date 11-5-20

Dean Approval Karen VanDamme
Date 11-9-20

Graduate Council Approval
Date _____

- Theresa Stack

CRC Approval
Date 1/29/2021

Faculty Senate Approval
Date _____

VCAA Approval (see below)
Date _____

Chancellor Approval (see below)
Date _____

Precision Machining
Associate of Applied Science Degree

old form

Fall Entry Only

Course Number	Course Title	Credits	CRN#
FIRST SEMESTER			
MCH 268	Introduction to CNC Milling	3	74930
MCH 120	Blueprint Reading & Interpretation for Machining	3	74931
MCH 160	Machine Shop I	3	74933
MCH 245	Shop Practices	3	74934
MCH 129	Machine Quality Control & Precision Measurement	3	74935
M 105	Contemporary Math	3	74897
	Credits (Fall)	**18**	
SECOND SEMESTER			
MCH 260	Machine Shop II	3	35585
MCH 235	CNC Milling II	3	33587
MCH 130	Machine Shop Essentials	3	
MCH 231	CNC Turning Operations Level I	3	35587
MCH 230	Tooling & Fixtures Used in CNC	3	74936
WRIT 100	Composing Mindfully: Writing Fundamentals	3	35746
COMM 110	Interpersonal Communications	3	35459
	Credits (Spring)	**21**	
THIRD SEMESTER			
MCH 265	Advanced Machining & Manufacturing	4	75814
MCH 240	Metallurgy	3	75813
MCH 236	CNC Milling Programming	3	75811
MCH 220	Geometric Dimensioning & Tolerancing	3	75812
DDSN 135	Solidworks	3	75804
CAPP 131	Basic MS Office	3	72492
	Credits (Fall)	**19**	
FOURTH SEMESTER			
MCH 227	Swiss CNC and Mill-Turn Sytem	3	
MCH 232	CNC Turning Programming	3	
MCH 291	Special Project	4	34014
ACTG 101	Accounting ProceduresI	3	
WRIT 101	College Writing I	3	34297
	Credits (Spring)	**16**	
	TOTAL CREDITS	**74**	

New Form

Precision Machining
Associate of Applied Science Degree

Fall Entry Only

Course Number	Course Title	Credits	CRN#
	FIRST SEMESTER		
MCH 268	Introduction to CNC Milling	3	74930
MCH 120	Blueprint Reading & Interpretation for Machining	3	74931
MCH 160	Machine Shop I	3	74933
MCH 245	Shop Practices	3	74934
MCH 129	Machine Quality Control & Precision Measurement	3	74935
M 105	Contemporary Math	3	74897
	Credits (Fall)	**18**	
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WRIT 100	Composing Mindfully: Writing Fundamentals	3	35746
COMM 110	Interpersonal Communications	3	35459
	Credits (Spring)	**21**	
	THIRD SEMESTER		
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MCH 291	Special Project	4	34014
ACTG 101	Accounting Proceduresl	3	
WRIT 101	College Writing I	3	34297
	Credits (Spring)	**16**	
	TOTAL CREDITS	**71**	

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Final changes are made by the registrar after faculty senate approval and BOR approval, as needed.
See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

Submission Requirements: All Submissions (checked by CRC):

- ☐ Electronic Copy (with the exception of signatures- no handwritten items)
- ☐ Completed CRC Form, with all Signatures and Attachments based on level of request (see below)
- ☐ Naming Convention as determined by CRC

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:

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   - ☐ Establish a new course for the catalog (please contact the Registrar of MUS CCN information) Required Documents:
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     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Curriculum Worksheet
     - ☐ Pre-requisite or co-requisite
   - ☐ Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
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     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
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     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   - X Placing a postsecondary educational program into moratorium: Required Documents:
     - X Program Termination and Moratorium Form
     - X Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:
     - ☐ Academic Proposal Request Form

- ☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more. Required Documents:
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
  - ☐ Academic Proposal Request Form
- ☐ Other (for those that are considered in this level but otherwise not listed):

  _____
  - ☐ Academic Proposal Request Form

3. OCHE Approvals Level I *(must be approved by the VCAA and Chancellor prior to CRC submission)*: Level I items are those requests for which the Board of Regents has fully designated approval authority to the institution or Commissioner of Higher Education. These requests are to be submitted for notification to or approval by Commissioner as Level I proposals. Level I proposals may be submitted to OCHE at any time by the flagship campuses or community colleges and will be processed on a rolling monthly schedule. The approval of such proposals will be conveyed to the Board of Regents at the next meeting of the board. Level I proposals include campus initiatives typically characterized by minimal costs, clear adherence to approved campus mission, and the absence of significant programmatic impact on other institutions within the MUS and community colleges. BOR Forms can be found using the following link: https://mus.edu/che/arsa/Forms/AcademicForms.html

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  - ☐ Academic Proposal Request Form
  - ☐ Program Termination and Moratorium Form
- ☐ Consolidating existing postsecondary educational programs
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Establishing a new minor where there is a major or an option in a major
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Revising a postsecondary educational program
  - ☐ Curriculum Proposal Form
  - ☐ Academic Proposal Request Form
- ☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**

- ☐ Other (for those that are considered in this level but otherwise not listed):

  _____

- ☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level II proposals require initial approval and comment by the Board of Regents through a Request to Plan prior to final review and approval by the Office of the Commissioner of Higher Education. These proposals entail more substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination or personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other MUS institutions and community colleges.

- ☐ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum or Center/Institute Proposal
  - ☐ Completed Request to Plan, except when eliminating or consolidating
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Date January 5, 2021
Dept. Business & Industry Department **College** Highlands College
Program: Four options—Human Resources, Health Services, Medical Office Specialist, Administrative Computer Specialist.

CRC Representative Linda Granger

Description of Request: To place all four of the above options in moratorium. Due to the placement into moratorium, we are also requesting that associated coursework be eliminated as shown below and per Janet Friesz, registrar.

Current Course or Program Information: AAS degrees in all four options to be placed in moratorium.

Number (Assigned By CRC): _____
Proposed Change

We would like to eliminate the following coursework from the four options mentioned above.

Course #	Name	Credits
ACTG 101	Accounting Procedures I	3
AMGT 113	Keyboarding & Document Processing	3
BMGT 105	Human Resource Issues	3
ACTG 211	Income Tax Fundamentals	3
CAPP 154	MS Word	3
ACTG 215	Foundations of Gov't & Not for Profit Act.	3
BMGT 250	Employment & Compensation Strategies	3
AMGT 145	Records Management	3
AMGT 240	Admin. Support for the Office	1 – 5
BIOH 104	Basic Human Biology	3
AHMS 255	Medical Transcription	2
AHMS 230	Medical Office Routines	2
AHMS 175	Medical Law & Ethics	2

List of Supporting Documentation attached.

Assessment Leading to Request
Low enrollment numbers.

Anticipated Impacts to "Other" Programs
We are hopeful that by placing these options in moratorium that the four-year business degree on the North campus will get an increase in enrollment and still allow students to exit after two years with an AAS in business.

Impact on Library: No consultation is required since changes are only in the course number, course name, or course pre-requisites.

Date to take effect: Spring 2021.

APPROVALS

Department Head Approval Linda Granger

Date January 5, 2021

Dean Approval Karen VanDamme
Date Jan 7, 2021

Graduate Council Approval _____
Date _____

CRC Approval Theresa Stack
Date 1/29/2021

Faculty Senate Approval _____
Date _____

VCAA Approval (see below) _____
Date 1/7/2021

Chancellor Approval (see below) _____
Date _____

Montana University System

PROGRAM TERMINATION/MORATORIUM FORM

Please complete the following questionnaire prior to submission of a program for termination or placement into moratorium. Please add additional comments beneath each question where applicable.

Program Title: Business Technology—Two options

1. Medical Office Specialist
2. Administrative Computer Specialist

Program is being ___X___ **Placed into moratorium** _____ **Terminated**

1. **Are there currently students enrolled in the program? (If yes, please answer questions a - c below.)** **Y:** ____ **N:** X

   a.) **Have all students currently enrolled in the program been met with and informed of the impending termination/moratorium?** **Y:** X **N:** ____

   b.) **What is the expected graduation date of all students from the program?** **Spring 2021**

   c.) **Have course offerings been planned to allow for students in the program to complete the degree in a reasonable fashion?** **Y:** X **N:** ____

2. **Will any faculty layoffs or changes in working conditions occur because of the termination/moratorium? (If yes, please answer questions a - b below.)** **Y:** X **N:** ____

   a.) **Have the faculty affected by the program termination/moratorium been notified?** **Y:** X **N:** ____

Montana University System
PROGRAM TERMINATION/MORATORIUM FORM

b.) **Please describe any layoffs that will occur including the date expected**? No layoffs are expected although changes have been made to remaining faculty members credit load and other duties have been assigned per administration.

3. **The following parties, where applicable, have been notified of the impending program termination/moratorium. (Please mark X for completed, NA for not applicable):**

a.) **Internal Curriculum Committees**	**Pending**
b.) **Faculty Senate**	**Pending**
c.) **Program Public Advisory Committee**	**Pending**
d.) **Articulation Partners**	**Yes**

4. **Has there been any negative feedback received from students, faculty, or other constituents regarding the impending termination/moratorium? (If yes, please explain below.)** **Y:** ____ **N:** **X**

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

SUBMISSION MONTH/YEAR
Spring 2021

ITEM XXX-XXXXX

ITEM TITLE

Institution: Highlands College CIP Code: **520401**

Program/Center/Institute Title: Business Technology—Two Options: Medical Office Specialist and Administrative Comp. Specialist

Includes (please specify below): Face-to-face Offering: X Online Offering: X Blended Offering: X

Options: N/A

Proposal Summary [360 words maximum]

What: The moratorium of both options within the business technology department.

Why: Low enrollment numbers.

Resources: N/A

ATTACHMENTS
Attachments

Please mark the appropriate type of request and submit with any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit http://mus.edu/che/arsa/academicproposals.asp.

____ **A. Level I:**

Campus Approvals

X **1a. Placing a postsecondary educational program into moratorium** (Program Termination and Moratorium Form)

____ **1b. Withdrawing a postsecondary educational program from moratorium**

____ **2. Establishing, re-titling, terminating or revising a campus certificate of 29 credits or less**

____ **3. Establishing a B.A.S./A.A./A.S. area of study**

____ **4. Offering an existing postsecondary educational program via distance or online delivery**

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

OCHE Approvals

5. **Re-titling an existing postsecondary educational program**

6. **Terminating an existing postsecondary educational program** (Program Termination and Moratorium Form)

7. **Consolidating existing postsecondary educational programs** (Curriculum Proposal Form)

8. **Establishing a new minor where there is a major or an option in a major** (Curriculum Proposal Form)

9. **Revising a postsecondary educational program** (Curriculum Proposal Form)

10. **Establishing a temporary C.A.S. or A.A.S. degree program** *Approval limited to 2 years*

B. Level II:

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Request to Plan Form)

2. **Permanent authorization for a temporary C.A.S. or A.A.S degree program** (Curriculum Proposal and Completed Request to Plan Form)

3. **Exceeding the 120-credit maximum for baccalaureate degrees** *Exception to policy 301.11*

4. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and completed Request to Plan, except when eliminating or consolidating)

5. **Re-titling an academic, administrative, or research unit**

Montana University System

PROGRAM TERMINATION/MORATORIUM FORM

Please complete the following questionnaire prior to submission of a program for termination or placement into moratorium. Please add additional comments beneath each question where applicable.

Program Title: Accounting Technology—Two options

1. Human Resource Option
2. Health Services Option

Program is being ___X___ **Placed into moratorium** _____ **Terminated**

1. **Are there currently students enrolled in the program? (If yes, please answer questions a - c below.)** **Y: X N: ____**

   a.) **Have all students currently enrolled in the program been met with and informed of the impending termination/moratorium?** **Y: X N: ____**

   b.) **What is the expected graduation date of all students from the program?** **Spring 2021**

   c.) **Have course offerings been planned to allow for students in the program to complete the degree in a reasonable fashion?** **Y: X N: ____**

2. **Will any faculty layoffs or changes in working conditions occur because of the termination/moratorium? (If yes, please answer questions a - b below.)** **Y: X N: ____**

   a.) **Have the faculty affected by the program termination/moratorium been notified?** **Y: ____ N: X**

Montana University System
PROGRAM TERMINATION/MORATORIUM FORM

b.) **Please describe any layoffs that will occur including the date expected**? No layoffs as faculty member passed away.

3. **The following parties, where applicable, have been notified of the impending program termination/moratorium. (Please mark X for completed, NA for not applicable):**

a.) **Internal Curriculum Committees** — **Pending**

b.) **Faculty Senate** — **Pending**

c.) **Program Public Advisory Committee** — **Pending**

d.) **Articulation Partners** — **Yes**

4. **Has there been any negative feedback received from students, faculty, or other constituents regarding the impending termination/moratorium? (If yes, please explain below.)** **Y:** ____ **N:** **X**

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

SUBMISSION MONTH/YEAR

ITEM XXX-XXXXX

ITEM TITLE

Institution: Highlands College CIP Code: **520302**

Program/Center/Institute Title: Accounting Technology—Two Options—Human Resource Option and Health Services Option

Includes (please specify below): Face-to-face Offering: X Online Offering: X Blended Offering: X

Options:

Proposal Summary [360 words maximum]

What: The moratorium of both options within the accounting technology program.

Why: Low enrollment numbers and loss of instructor.

Resources:

ATTACHMENTS

Attachments

Please mark the appropriate type of request and submit with any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit http://mus.edu/che/arsa/academicproposals.asp.

____ **A. Level I:**

Campus Approvals

X **1a. Placing a postsecondary educational program into moratorium** (Program Termination and Moratorium Form)

____ **1b. Withdrawing a postsecondary educational program from moratorium**

____ **2. Establishing, re-titling, terminating or revising a campus certificate of 29 credits or less**

____ **3. Establishing a B.A.S./A.A./A.S. area of study**

____ **4. Offering an existing postsecondary educational program via distance or online delivery**

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

OCHE Approvals

5. **Re-titling an existing postsecondary educational program**

6. **Terminating an existing postsecondary educational program** (Program Termination and Moratorium Form)

7. **Consolidating existing postsecondary educational programs** (Curriculum Proposal Form)

8. **Establishing a new minor where there is a major or an option in a major** (Curriculum Proposal Form)

9. **Revising a postsecondary educational program** (Curriculum Proposal Form)

10. **Establishing a temporary C.A.S. or A.A.S. degree program** *Approval limited to 2 years*

B. Level II:

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Request to Plan Form)

2. **Permanent authorization for a temporary C.A.S. or A.A.S degree program** (Curriculum Proposal and Completed Request to Plan Form)

3. **Exceeding the 120-credit maximum for baccalaureate degrees** *Exception to policy 301.11*

4. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and completed Request to Plan, except when eliminating or consolidating)

5. **Re-titling an academic, administrative, or research unit**

Gen Ed

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Final changes are made by the registrar after faculty senate approval and BOR approval, as needed.
See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

Submission Requirements: All Submissions (checked by CRC):

- ☐ Electronic Copy (with the exception of signatures- no handwritten items)
- ☐ Completed CRC Form, with all Signatures and Attachments based on level of request (see below)
- ☐ Naming Convention as determined by CRC

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:

1. *Faculty Approvals (directly to CRC, then Faculty Senate):*
   - ☐ Establish a new course for the catalog (please contact the Registrar of MUS CCN information) Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Curriculum Worksheet
     - ☐ Pre-requisite or co-requisite
   - ☐ Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor. Required Documents:
     - ☐ **Documents as listed under establishing a new course (as applicable)**
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   - ☐ Placing a postsecondary educational program into moratorium: Required Documents:
     - ☐ Program Termination and Moratorium Form
     - ☐ Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:

- ☐ Academic Proposal Request Form

☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
- ☐ Academic Proposal Request Form

☐ Other (for those that are considered in this level but otherwise not listed):

_____

- ☐ Academic Proposal Request Form

3. OCHE Approvals Level I *(must be approved by the VCAA and Chancellor prior to CRC submission)*: Level I items are those requests for which the Board of Regents has fully designated approval authority to the institution or Commissioner of Higher Education. These requests are to be submitted for notification to or approval by Commissioner as Level I proposals. Level I proposals may be submitted to OCHE at any time by the flagship campuses or community colleges and will be processed on a rolling monthly schedule. The approval of such proposals will be conveyed to the Board of Regents at the next meeting of the board. Level I proposals include campus initiatives typically characterized by minimal costs, clear adherence to approved campus mission, and the absence of significant programmatic impact on other institutions within the MUS and community colleges. BOR Forms can be found using the following link: https://mus.edu/che/arsa/Forms/AcademicForms.html

☐ Re-titling an existing postsecondary educational program. Required Documents:
- ☐ Academic Proposal Request Form

X Terminating an existing postsecondary educational program.
- X Academic Proposal Request Form
- X Program Termination and Moratorium Form

☐ Consolidating existing postsecondary educational programs
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a new minor where there is a major or an option in a major
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Revising a postsecondary educational program
- ☐ Curriculum Proposal Form
- ☐ Academic Proposal Request Form

☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Other (for those that are considered in this level but otherwise not listed):

_____

☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level II proposals require initial approval and comment by the Board of Regents through a Request to Plan prior to final review and approval by the Office of the Commissioner of Higher Education. These proposals entail more substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination or personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other MUS institutions and community colleges.

- ☐ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum or Center/Institute Proposal
  - ☐ Completed Request to Plan, except when eliminating or consolidating
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- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Date January 5, 2021
Dept. Gen. Ed. **College** Highlands College

Program: General Education Department

CRC Representative Linda Granger

Description of Request: To terminate the general education department at Highlands College.

Current Course or Program Information: Program/department elimination.

Number (Assigned By CRC): _____
Proposed Change

Course #	Name	Credits	Pre-req.

N/A

This should include what will appear in the catalog, exactly. New course require course outcomes listed in this area.

List of supporting documentation attached (See Level of Request for Requirements): N/A

Assessment Leading to Request
Low enrollment numbers and faculty layoffs.

Anticipated Impacts to "Other" Programs
N/A

Impact on Library: No consultation is required since changes are only in the course number, course name, or course pre-requisites.

Date to take effect: Spring 2021.

APPROVALS

Department Head Approval Linda Granger

Date January 5, 2021

Dean Approval Karen VanDaveer
Date Jan. 7, 2021

Graduate Council Approval _____
Date _____

CRC Approval Theresa Stack
Date 1/29/2021

Faculty Senate Approval _____
Date _____

VCAA Approval (see below) _____
Date 1/7/2021

Chancellor Approval (see below) _____
Date _____

Montana University System

PROGRAM TERMINATION/MORATORIUM FORM

Please complete the following questionnaire prior to submission of a program for termination or placement into moratorium. Please add additional comments beneath each question where applicable.

Program Title: General Education Department—Highlands College

Program is being ____ **Placed into moratorium** __X__ **Terminated**

1. **Are there currently students enrolled in the program? (If yes, please answer questions a - c below.)** **Y:** _____ **N:** __X__

   a.) **Have all students currently enrolled in the program been met with and informed of the impending termination/moratorium?** **Y:** __N/A__ **N:** _____

   b.) **What is the expected graduation date of all students from the program?** **N/A**

   c.) **Have course offerings been planned to allow for students in the program to complete the degree in a reasonable fashion?** **Y:** __N/A__ **N:** _____

2. **Will any faculty layoffs or <u>changes</u> in working conditions occur because of the termination/moratorium? (If yes, please answer questions a - b below.)** **Y:** __X__ **N:** _____

   a.) **Have the faculty affected by the program termination/moratorium been notified?** **Y:** __X__ **N:** _____

   b.) **Please describe any layoffs that will occur including the date expected**? Two layoffs will occur.

Montana University System
PROGRAM TERMINATION/MORATORIUM FORM

3. **The following parties, where applicable, have been notified of the impending program termination/moratorium. (Please mark X for completed, NA for not applicable):**

   a.) **Internal Curriculum Committees** — Pending

   b.) **Faculty Senate** — Pending

   c.) **Program Public Advisory Committee** — Pending

   d.) **Articulation Partners** — Yes

4. **Has there been any negative feedback received from students, faculty, or other constituents regarding the impending termination/moratorium? (If yes, please explain below.)** Y: ____ N: X

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

SUBMISSION MONTH/YEAR
Spring 2021

ITEM XXX-XXXXX

ITEM TITLE

Institution: Highlands College CIP Code: **None**

Program/Center/Institute Title: General Education Department

Includes (please specify below): Face-to-face Offering: X Online Offering: X Blended Offering: X

Options: N/A

Proposal Summary [360 words maximum]

What: The termination of the general education department at Highlands College.

Why: Duplication of services and low enrollment numbers as well as the layoff of two faculty members.

Resources: N/A

ATTACHMENTS
Attachments

Please mark the appropriate type of request and submit with any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit http://mus.edu/che/arsa/academicproposals.asp.

____ **A. Level I:**

Campus Approvals

____ **1a. Placing a postsecondary educational program into moratorium** (Program Termination and Moratorium Form)

____ **1b. Withdrawing a postsecondary educational program from moratorium**

____ **2. Establishing, re-titling, terminating or revising a campus certificate of 29 credits or less**

____ **3. Establishing a B.A.S./A.A./A.S. area of study**

____ **4. Offering an existing postsecondary educational program via distance or online delivery**

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

OCHE Approvals

_____ **5. Re-titling an existing postsecondary educational program**

X **6. Terminating an existing postsecondary educational program** (Program Termination and Moratorium Form)

_____ **7. Consolidating existing postsecondary educational programs** (Curriculum Proposal Form)

_____ **8. Establishing a new minor where there is a major or an option in a major** (Curriculum Proposal Form)

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_____ **10. Establishing a temporary C.A.S. or A.A.S. degree program** *Approval limited to 2 years*

____ **B. Level II:**

_____ **1. Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Request to Plan Form)

_____ **2. Permanent authorization for a temporary C.A.S. or A.A.S degree program** (Curriculum Proposal and Completed Request to Plan Form)

_____ **3. Exceeding the 120-credit maximum for baccalaureate degrees** *Exception to policy 301.11*

_____ **4. Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and completed Request to Plan, except when eliminating or consolidating)

_____ **5. Re-titling an academic, administrative, or research unit**

Beh ftm

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Final changes are made by the registrar after faculty senate approval and BOR approval, as needed.
See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

Submission Requirements: All Submissions (checked by CRC):

- ☐ Electronic Copy (with the exception of signatures- no handwritten items)
- ☐ Completed CRC Form, with all Signatures and Attachments based on level of request (see below)
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Please indicate the type of request(s) by selecting *all that apply*:

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     - ☐ Curriculum Worksheet
     - ☐ Pre-requisite or co-requisite
   - ☐ Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
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     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
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   - ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor. Required Documents:
     - ☐ **Documents as listed under establishing a new course (as applicable)**
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     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
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☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
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- ☐ **Documents as listed under establishing a new course (see section 1)**

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☐ Re-titling an existing postsecondary educational program. Required Documents:
- ☐ Academic Proposal Request Form

X Terminating an existing postsecondary educational program.
- X Academic Proposal Request Form
- X Program Termination and Moratorium Form

☐ Consolidating existing postsecondary educational programs
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a new minor where there is a major or an option in a major
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Revising a postsecondary educational program
- ☐ Curriculum Proposal Form
- ☐ Academic Proposal Request Form

☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Other (for those that are considered in this level but otherwise not listed):

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☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
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- ☐ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
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  - ☐ Academic Proposal Request Form
  - ☐ Curriculum or Center/Institute Proposal
  - ☐ Completed Request to Plan, except when eliminating or consolidating
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Date January 5, 2021
Dept. Health Department **College** Highlands College
Program: Behavioral Health Certificate

CRC Representative Linda Granger

Description of Request: To terminate the behavioral health certificate and its associated coursework.

Current Course or Program Information: Certificate elimination.

Number (Assigned By CRC): _____
Proposed Change

The following courses are being eliminated due to the termination of the certificate mentioned above:

Course #	Name	Credits
AHHS 210	Mental Health & Addiction	3
AHHS 212	Behavioral Crisis Management	3
CAS 201	Theories of Counseling	3
AHHS 295	Behavioral Lab Practicum	3
PSYX 240	Fundamentals of Abnormal Psychology	3

This should include what will appear in the catalog, exactly. New course require course outcomes listed in this area.

List of supporting documentation attached (See Level of Request for Requirements): N/A

Assessment Leading to Request
Low enrollment numbers and layoff.

Anticipated Impacts to "Other" Programs
N/A

Impact on Library: No consultation is required since changes are only in the course number, course name, or course pre-requisites.

Date to take effect: Spring 2021.

APPROVALS

Department Head Approval Linda Granger

Date January 5, 2021

Dean Approval Karen VanDamme

Date Jan 7, 2021

Graduate Council Approval _____

Date _____

CRC Approval Theresa Stack

Date 1/29/2021

Faculty Senate Approval _____

Date _____

VCAA Approval (see below) 1/7/2021

Date 1/7/2021

Chancellor Approval (see below) _____

Date _____

Montana University System

PROGRAM TERMINATION/MORATORIUM FORM

Please complete the following questionnaire prior to submission of a program for termination or placement into moratorium. Please add additional comments beneath each question where applicable.

Program Title: Behavioral Health Certificate

Program is being ____ **Placed into moratorium** __X__ **Terminated**

1. **Are there currently students enrolled in the program? (If yes, please answer questions a - c below.)** **Y:** __X__ **N:** ____

   a.) **Have all students currently enrolled in the program been met with and informed of the impending termination/moratorium?** **Y:** __X__ **N:** ____

   b.) **What is the expected graduation date of all students from the program?** **Spring 2021**

   c.) **Have course offerings been planned to allow for students in the program to complete the degree in a reasonable fashion?** **Y:** __X__ **N:** ____

2. **Will any faculty layoffs or changes in working conditions occur because of the termination/moratorium? (If yes, please answer questions a - b below.)** **Y:** __X__ **N:** ____

   a.) **Have the faculty affected by the program termination/moratorium been notified?** **Y:** __X__ **N:** ____

   b.) **Please describe any layoffs that will occur including the date expected**? One layoff.

Montana University System
PROGRAM TERMINATION/MORATORIUM FORM

3. **The following parties, where applicable, have been notified of the impending program termination/moratorium. (Please mark X for completed, NA for not applicable):**

   a.) **Internal Curriculum Committees** — Pending

   b.) **Faculty Senate** — Pending

   c.) **Program Public Advisory Committee** — Pending

   d.) **Articulation Partners** — Yes

4. **Has there been any negative feedback received from students, faculty, or other constituents regarding the impending termination/moratorium? (If yes, please explain below.)** Y: ____ N: X

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

SUBMISSION MONTH/YEAR
Spring 2021

ITEM XXX-XXXXX

ITEM TITLE

Institution: Highlands College CIP Code: **513902**

Program/Center/Institute Title: Behavioral Health Certificate

Includes (please specify below): Face-to-face Offering: X Online Offering: X Blended Offering: X

Options: N/A

Proposal Summary [360 words maximum]

What: The termination of the behavioral health certificate.

Why: Low enrollment numbers and layoff.

Resources: N/A

ATTACHMENTS

Attachments

Please mark the appropriate type of request and submit with any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit http://mus.edu/che/arsa/academicproposals.asp.

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____ **1a. Placing a postsecondary educational program into moratorium** (Program Termination and Moratorium Form)

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____ **4. Offering an existing postsecondary educational program via distance or online delivery**

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

OCHE Approvals

_____ **5. Re-titling an existing postsecondary educational program**

X **6. Terminating an existing postsecondary educational program** (Program Termination and Moratorium Form)

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____ **B. Level II:**

_____ **1. Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Request to Plan Form)

_____ **2. Permanent authorization for a temporary C.A.S. or A.A.S degree program** (Curriculum Proposal and Completed Request to Plan Form)

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_____ **5. Re-titling an academic, administrative, or research unit**

MA

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See workflow document
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LEVEL of Request

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     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
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   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   - ☐ Placing a postsecondary educational program into moratorium: Required Documents:
     - ☐ Program Termination and Moratorium Form
     - ☐ Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:

- ☐ Academic Proposal Request Form

☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
- ☐ Academic Proposal Request Form

☐ Other (for those that are considered in this level but otherwise not listed):

_____

- ☐ Academic Proposal Request Form

3. OCHE Approvals Level I *(must be approved by the VCAA and Chancellor prior to CRC submission)*: Level I items are those requests for which the Board of Regents has fully designated approval authority to the institution or Commissioner of Higher Education. These requests are to be submitted for notification to or approval by Commissioner as Level I proposals. Level I proposals may be submitted to OCHE at any time by the flagship campuses or community colleges and will be processed on a rolling monthly schedule. The approval of such proposals will be conveyed to the Board of Regents at the next meeting of the board. Level I proposals include campus initiatives typically characterized by minimal costs, clear adherence to approved campus mission, and the absence of significant programmatic impact on other institutions within the MUS and community colleges. BOR Forms can be found using the following link: https://mus.edu/che/arsa/Forms/AcademicForms.html

☐ Re-titling an existing postsecondary educational program. Required Documents:
- ☐ Academic Proposal Request Form

X Terminating an existing postsecondary educational program.
- X Academic Proposal Request Form
- X Program Termination and Moratorium Form

☐ Consolidating existing postsecondary educational programs
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a new minor where there is a major or an option in a major
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Revising a postsecondary educational program
- ☐ Curriculum Proposal Form
- ☐ Academic Proposal Request Form

☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Other (for those that are considered in this level but otherwise not listed):

_____

☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level II proposals require initial approval and comment by the Board of Regents through a Request to Plan prior to final review and approval by the Office of the Commissioner of Higher Education. These proposals entail more substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination or personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other MUS institutions and community colleges.

- ☐ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum or Center/Institute Proposal
  - ☐ Completed Request to Plan, except when eliminating or consolidating
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Date January 5, 2021
Dept. Two-year health **College** Highlands College

Program: Medical Assistant AAS

CRC Representative Linda Granger

Description of Request: To terminate the medical assistant program at Highlands College along with the associated coursework specific to medical assisting.

Current Course or Program Information: Program/department elimination.

Number (Assigned By CRC): _____

Proposed Change

The following courses should be eliminated within the MA program:

Course #	Name	Credits
AHMA 201	Medical Assisting Clinical Procedures I	Variable – 4 credits required.
AHMA 298A	Medical Assisting Externship I	3
AHMA 203	Medical Assisting Clinical Procedures II	3
AHMA 298B	Medical Assisting Externship II	3
HLTH 0209	Pharmacology	3
HTH 202	Essentials of Diseases & Conditions	2

This should include what will appear in the catalog, exactly. **New course require course outcomes listed in this area.**

List of supporting documentation attached (See Level of Request for Requirements): N/A

Assessment Leading to Request
Low enrollment numbers and faculty layoffs.

Anticipated Impacts to "Other" Programs
N/A

Impact on Library: No consultation is required since changes are only in the course number, course name, or course pre-requisites.

Date to take effect: Spring 2021.

APPROVALS

Department Head Approval Linda Granger

Date January 5, 2021

Dean Approval Lynn VanDamme
Date Jan 7, 2021

Graduate Council Approval _____
Date _____

CRC Approval Theresa Stack
Date 1/29/2021

Faculty Senate Approval _____
Date _____

VCAA Approval (see below) _____
Date 1/7/2021

Chancellor Approval (see below) _____
Date _____

Montana University System

PROGRAM TERMINATION/MORATORIUM FORM

Please complete the following questionnaire prior to submission of a program for termination or placement into moratorium. Please add additional comments beneath each question where applicable.

Program Title: Medical Assistant AAS

Program is being ____ **Placed into moratorium** __X__ **Terminated**

1. **Are there currently students enrolled in the program? (If yes, please answer questions a - c below.)** **Y:** __X__ **N:** ____

   a.) **Have all students currently enrolled in the program been met with and informed of the impending termination/moratorium?** **Y:** __X__ **N:** ____

   b.) **What is the expected graduation date of all students from the program?** **Spring 2021**

   c.) **Have course offerings been planned to allow for students in the program to complete the degree in a reasonable fashion?** **Y:** __X__ **N:** ____

2. **Will any faculty layoffs or changes in working conditions occur because of the termination/moratorium? (If yes, please answer questions a - b below.)** **Y:** __X__ **N:** ____

   a.) **Have the faculty affected by the program termination/moratorium been notified?** **Y:** __X__ **N:** ____

   b.) **Please describe any layoffs that will occur including the date expected**? Two layoffs in program area.

Montana University System

PROGRAM TERMINATION/MORATORIUM FORM

3. **The following parties, where applicable, have been notified of the impending program termination/moratorium. (Please mark X for completed, NA for not applicable):**

   a.) **Internal Curriculum Committees** — Pending

   b.) **Faculty Senate** — Pending

   c.) **Program Public Advisory Committee** — Pending

   d.) **Articulation Partners** — Yes

4. **Has there been any negative feedback received from students, faculty, or other constituents regarding the impending termination/moratorium? (If yes, please explain below.)** Y: ____ N: X

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

SUBMISSION MONTH/YEAR
Spring 2021

ITEM XXX-XXXXX

ITEM TITLE

Institution: Highlands College CIP Code: **510801**

Program/Center/Institute Title: Medical Assistant AAS

Includes (please specify below): Face-to-face Offering: X Online Offering: X Blended Offering: X

Options: N/A

Proposal Summary [360 words maximum]

What: The termination of the medical assistant AAS at Highlands College

Why: Low enrollment numbers.

Resources: N/A

ATTACHMENTS
Attachments

Please mark the appropriate type of request and submit with any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit http://mus.edu/che/arsa/academicproposals.asp.

____ **A. Level I:**

Campus Approvals

____ **1a. Placing a postsecondary educational program into moratorium** (Program Termination and Moratorium Form)

____ **1b. Withdrawing a postsecondary educational program from moratorium**

____ **2. Establishing, re-titling, terminating or revising a campus certificate of 29 credits or less**

____ **3. Establishing a B.A.S./A.A./A.S. area of study**

____ **4. Offering an existing postsecondary educational program via distance or online delivery**

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

OCHE Approvals

_____ **5. Re-titling an existing postsecondary educational program**

__X__ **6. Terminating an existing postsecondary educational program** (Program Termination and Moratorium Form)

_____ **7. Consolidating existing postsecondary educational programs** (Curriculum Proposal Form)

_____ **8. Establishing a new minor where there is a major or an option in a major** (Curriculum Proposal Form)

_____ **9. Revising a postsecondary educational program** (Curriculum Proposal Form)

_____ **10. Establishing a temporary C.A.S. or A.A.S. degree program** *Approval limited to 2 years*

____ **B. Level II:**

_____ **1. Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Request to Plan Form)

_____ **2. Permanent authorization for a temporary C.A.S. or A.A.S degree program** (Curriculum Proposal and Completed Request to Plan Form)

_____ **3. Exceeding the 120-credit maximum for baccalaureate degrees** *Exception to policy 301.11*

_____ **4. Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and completed Request to Plan, except when eliminating or consolidating)

_____ **5. Re-titling an academic, administrative, or research unit**

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Final changes are made by the registrar after faculty senate approval and BOR approval, as needed.
See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

Submission Requirements: All Submissions (checked by CRC):

- ☐ Electronic Copy (with the exception of signatures- no handwritten items)
- ☐ Completed CRC Form, with all Signatures and Attachments based on level of request (see below)
- ☐ Naming Convention as determined by CRC

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:

1. *Faculty Approvals (directly to CRC, then Faculty Senate):*
   - ☐ Establish a new course for the catalog (please contact the Registrar of MUS CCN information) Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Curriculum Worksheet
     - ☐ Pre-requisite or co-requisite
   - X Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor. Required Documents:
     - ☐ **Documents as listed under establishing a new course (as applicable)**
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   - X Placing a postsecondary educational program into moratorium: Required Documents:
     - X Program Termination and Moratorium Form
     - X Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:
     - ☐ Academic Proposal Request Form

- ☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more. Required Documents:
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
  - ☐ Academic Proposal Request Form
- ☐ Other (for those that are considered in this level but otherwise not listed):

  _____
  - ☐ Academic Proposal Request Form

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- ☐ Re-titling an existing postsecondary educational program. Required Documents:
  - ☐ Academic Proposal Request Form
- ☐ Terminating an existing postsecondary educational program.
  - ☐ Academic Proposal Request Form
  - ☐ Program Termination and Moratorium Form
- ☐ Consolidating existing postsecondary educational programs
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Establishing a new minor where there is a major or an option in a major
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Revising a postsecondary educational program
  - ☐ Curriculum Proposal Form
  - ☐ Academic Proposal Request Form
- ☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**

- ☐ Other (for those that are considered in this level but otherwise not listed):

  _____

- ☐ Academic Proposal Request Form

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  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
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  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
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- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
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- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Date January 5, 2021
Dept. Business & Industry Department **College** Highlands College
Program: Drafting Technology (AEC Graphics Technology) AAS

CRC Representative Linda Granger

Description of Request: The drafting technology program was eliminated; however, classes offered within the degree program remain in the course catalog; therefore, we would like these courses to be eliminated from the catalog and the website.

Current Course or Program Information: AAS program in Drafting Technology has previously been terminated but coursework remains.

Number (Assigned By CRC): _____
Proposed Change

The following courses should be removed from the catalog and the website:

Course #	Name	Credits
DDSN 113	Technical Drafting	3
DDSN 116	3D Cad	3
DDSN 137	Inventor	3
DDSN 164	Basic Architectural Drafting	3
DDSN 166	Revit	3
DDSN 265	Architectural Drafting	3
DDSN 299	Capstone	Varies

Note: We will also need to remove the prerequisite of DDSN 113 for DDSN 114.

This should include what will appear in the catalog, exactly. New course require course outcomes listed in this area.

List of supporting documentation attached (See Level of Request for Requirements): N/A

Assessment Leading to Request
Low enrollment numbers.

Anticipated Impacts to "Other" Programs
We are hopeful that by placing these options in moratorium that the four-year business degree on the North campus will get an increase in enrollment and still allow students to exit after two years with an AAS in business.

Impact on Library: No consultation is required since changes are only in the course number, course name, or course pre-requisites.

Date to take effect: Spring 2021.

APPROVALS

Department Head Approval Linda Granger

Date January 5, 2021

Dean Approval Karen VanLaneer
Date Jan. 7, 2021

Graduate Council Approval _____
Date _____

CRC Approval Theresa Stack
Date 1/29/2021

Faculty Senate Approval _____
Date _____

VCAA Approval (see below) _____
Date _____

Chancellor Approval (see below) _____
Date _____

Const.

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

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See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

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     - ☐ Pre-requisite or co-requisite

   X Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
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     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
     - X New Curriculum Worksheet
   - ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor. Required Documents:
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     - ☐ New Curriculum Worksheet, with changes highlighted
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     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   Placing a postsecondary educational program into moratorium: Required Documents:
   Program Termination and Moratorium Form
   Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:
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  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
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  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
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  - ☐ Curriculum Proposal Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
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  - ☐ Academic Proposal Request Form
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  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**

- ☐ Other (for those that are considered in this level but otherwise not listed):

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- ☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level II proposals require initial approval and comment by the Board of Regents through a Request to Plan prior to final review and approval by the Office of the Commissioner of Higher Education. These proposals entail more substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination or personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other MUS institutions and community colleges.

- ☐ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
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  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
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- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
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- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Date January 5, 2021
Dept. Business & Industry Department **College** Highlands College
Program: Construction Technology AAS.

CRC Representative Linda Granger

Description of Request: With a new and approved four-semester AAS Construction Technology program, classes were eliminated and we are requesting that these courses be removed from the catalog and website.

Current Course or Program Information: AAS Construction Technology

Number (Assigned By CRC): _____
Proposed Change

The following courses are no longer a part of the AAS in Construction Technology:

- CSTN 100—Fundamentals of Construction Technology
- CSTN 145—Exterior Finishing, Stair, & Metal Stud Framing
- CSTN 220—Interior Finishing

List of Supporting Documentation attached. Curriculum Sheet (Approved by CRC and Faculty Senate previously).

New course require course outcomes listed in this area.

List of supporting documentation attached (See Level of Request for Requirements): N/A

Assessment Leading to Request
New and improved curriculum with a smoother transition to the BAS in business with a construction management emphasis.

Anticipated Impacts to "Other" Programs
We do not anticipate any impacts to other programs.

Impact on Library: No consultation is required since changes are only in the course number, course name, or course pre-requisites.

Date to take effect: When approved.

APPROVALS

Department Head Approval Linda Granger

Date January 5, 2021

Dean Approval Karen VanDamme

Date Jan 7, 2021

Graduate Council Approval _____

Date _____

CRC Approval Theresa Stack

Date 1/29/2021

Faculty Senate Approval _____

Date _____

VCAA Approval (see below) _____

Date _____

Chancellor Approval (see below) _____

Date _____

CONSTRUCTION TECHNOLOGY AAS CURRICULUM SHEET			
COURSE NO.	**TITLE**	**CREDITS**	**SEMESTER COMPLETED**
	FIRST SEMESTER		
***CSTN 120**	Carpentry Basics & Rough-In Framing	4	
***BGEN 235**	Business Law	3	
WRIT 101 or WRIT 121	College Writing I or Intro. To Technical Writing	3	
M 105 (CAS or AAS Students) or	Contemporary Math	3	
M 121 (BAS Students)	College Algebra	3	
CAPP 156	MS Excel	3	
TOTAL CREDITS		**16**	
	SECOND SEMESTER		
****CSTN 142**	Interior and Exterior Finish Carpentry	4	
****CSTN 160**	Construction Concepts & Building Lab I	3	
****CSTN 250**	Construction Estimating	3	
****CSTN 147**	Blueprint Reading	3	
BGEN 105	Introduction to Business	3	
TOTAL CREDITS		**16**	
A student exiting program after second semester would be awarded a Certificate of Applied Science in Carpentry.			
	THIRD SEMESTER		
ACTG 201	Principles of Financial Accounting	3	
***CSTN 170**	Site Layout	3	
***CSTN 201**	Advanced Concrete Working	3	
***CSTN 161**	Construction Concepts & Building Lab II	3	
***CSTN 271**	Construction Project Management I	3	
TOTAL CREDITS		**15**	
	FOURTH SEMESTER		
****CSTN 260**	Construction Concepts & Building Lab III	3	
****CSTN 281**	Construction Project Management II	3	
****CSTN 251**	Building Methods and Materials	3	
ECNS 201 or ECNS 203	Principles of Microeconomics or Principles of Microeconomics and Macroeconomics	3	
STAT 216	Introduction to Statistics	3	
TOTAL CREDITS		**15**	
	TOTAL CREDITS FOR FOUR SEMESTERS	**62**	

***Fall Only**

****Spring Only**

Part 1

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Final changes are made by the registrar after faculty senate approval and BOR approval, as needed.
See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

Submission Requirements: All Submissions (checked by CRC):

- ☐ Electronic Copy (with the exception of signatures- no handwritten items)
- ☐ Completed CRC Form, with all Signatures and Attachments based on level of request (see below)
- ☐ Naming Convention as determined by CRC

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:

1. *Faculty Approvals (directly to CRC, then Faculty Senate):*
   - ☐ Establish a new course for the catalog (please contact the Registrar of MUS CCN information) Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Curriculum Worksheet
     - ☐ Pre-requisite or co-requisite
   - X Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
     - X Course Number(s)
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor. Required Documents:
     - ☐ **Documents as listed under establishing a new course (as applicable)**
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   - X Placing a postsecondary educational program into moratorium: Required Documents:
     - X Program Termination and Moratorium Form
     - X Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:
     - ☐ Academic Proposal Request Form

- ☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more. Required Documents:
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
  - ☐ Academic Proposal Request Form
- ☐ Other (for those that are considered in this level but otherwise not listed):

  _____
  - ☐ Academic Proposal Request Form

3. OCHE Approvals Level I *(must be approved by the VCAA and Chancellor prior to CRC submission)*: Level I items are those requests for which the Board of Regents has fully designated approval authority to the institution or Commissioner of Higher Education. These requests are to be submitted for notification to or approval by Commissioner as Level I proposals. Level I proposals may be submitted to OCHE at any time by the flagship campuses or community colleges and will be processed on a rolling monthly schedule. The approval of such proposals will be conveyed to the Board of Regents at the next meeting of the board. Level I proposals include campus initiatives typically characterized by minimal costs, clear adherence to approved campus mission, and the absence of significant programmatic impact on other institutions within the MUS and community colleges. BOR Forms can be found using the following link: https://mus.edu/che/arsa/Forms/AcademicForms.html

- ☐ Re-titling an existing postsecondary educational program. Required Documents:
  - ☐ Academic Proposal Request Form
- ☐ Terminating an existing postsecondary educational program.
  - ☐ Academic Proposal Request Form
  - ☐ Program Termination and Moratorium Form
- ☐ Consolidating existing postsecondary educational programs
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Establishing a new minor where there is a major or an option in a major
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Revising a postsecondary educational program
  - ☐ Curriculum Proposal Form
  - ☐ Academic Proposal Request Form
- ☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**

- ☐ Other (for those that are considered in this level but otherwise not listed):

  _____

- ☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level II proposals require initial approval and comment by the Board of Regents through a Request to Plan prior to final review and approval by the Office of the Commissioner of Higher Education. These proposals entail more substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination or personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other MUS institutions and community colleges.

- ☐ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum or Center/Institute Proposal
  - ☐ Completed Request to Plan, except when eliminating or consolidating
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Date January 5, 2021
Dept. Business & Industry Department **College** Highlands College
Programs: Lineman program, Civil Engineering program, Networking program

CRC Representative Linda Granger

Description of Request: To remove the 0 from the beginning of course numbers to be in line with the Board of Regents directive regarding "for credit" coursework and for transferability purposes.

Current Course or Program Information: No other changes than that mentioned above.

Number (Assigned By CRC): _____
Proposed Change

Course # Name	Credits	Pre-req.
LINEMAN PROGRAM:		
Current Course Number	**New Course Number**	**Credits**
LINE 0100—Intro. to the Utility Industry	LINE 100	2
LINE 0110—Math for the Utility Industry	LINE 110	6
LINE 0120—Electrical for the Utility Industry	LINE 120	3
LINE 0130—Safety & Certifications	LINE 130	3
LINE 0140—Pole Yard	LINE 140	16
CIVIL ENGINEERING PROGRAM:		
CET 0210—Soil Materials and Testing	CET 210	2
NETWORKING PROGRAM:		
IT 0250—Interactive Web Pages	IT 250	3

New course requires course outcomes listed in this area.

List of supporting documentation attached (See Level of Request for Requirements):

Not applicable.

Assessment Leading to Request
Board of Regents Directive.

Anticipated Impacts to "Other" Programs
None.

Impact on Library: No consultation is required since changes are only in the course number, course name, or course pre-requisites.

Date to take effect: Upon approval.

APPROVALS

Department Head Approval Linda Granger

Date January 5, 2021

Dean Approval Karen VanDamme

Date Jan 7, 2021

Graduate Council Approval _____

Date _____

CRC Approval Theresa Stack

Date 1/29/2021

Faculty Senate Approval _____

Date _____

VCAA Approval (see below) _____

Date _____

Chancellor Approval (see below) _____

Date _____

Beh ftm

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Protocol: The department requesting a curriculum change holds a discussion at the departmental level, and if agreed upon, the Department Chair, elevates the request to the Dean for approval. All changes to the catalog require CRC approval.

Final changes are made by the registrar after faculty senate approval and BOR approval, as needed.
See workflow document
https://helpx.adobe.com/acrobat/how-to/convert-word-excel-paper-pdf-forms.html?set=acrobat--fundamentals--pdf-forms
Guidance can be found at: https://mus.edu/che/arsa/academicproposals.html

Submission Requirements: All Submissions (checked by CRC):

- ☐ Electronic Copy (with the exception of signatures- no handwritten items)
- ☐ Completed CRC Form, with all Signatures and Attachments based on level of request (see below)
- ☐ Naming Convention as determined by CRC

LEVEL of Request

Please indicate the type of request(s) by selecting *all that apply*:

1. *Faculty Approvals (directly to CRC, then Faculty Senate):*
   - ☐ Establish a new course for the catalog (please contact the Registrar of MUS CCN information) Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Curriculum Worksheet
     - ☐ Pre-requisite or co-requisite
   - ☐ Course Changes: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing. Required Documents:
     - ☐ Course Number
     - ☐ Course Outcomes
     - ☐ Course Description
     - ☐ Syllabus
     - ☐ Pre-requisites or co-requisites
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor. Required Documents:
     - ☐ **Documents as listed under establishing a new course (as applicable)**
     - ☐ Existing Curriculum Worksheet
     - ☐ New Curriculum Worksheet, with changes highlighted
   - ☐ Other (for those that are considered in this level but otherwise not listed):

     _____

2. *Campus Approvals Level I (must be approved by the VCAA prior to CRC submission):*
   - ☐ Placing a postsecondary educational program into moratorium: Required Documents:
     - ☐ Program Termination and Moratorium Form
     - ☐ Academic Proposal Request Form
   - ☐ Withdrawing a postsecondary educational program from moratorium. Required Documents:

- ☐ Academic Proposal Request Form

☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a B.A.S./A.A./A.S. area of study. Required Documents:
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Offering an existing postsecondary educational program via distance or online delivery. Required Documents:
- ☐ Academic Proposal Request Form

☐ Other (for those that are considered in this level but otherwise not listed):

_____

- ☐ Academic Proposal Request Form

3. OCHE Approvals Level I *(must be approved by the VCAA and Chancellor prior to CRC submission)*: Level I items are those requests for which the Board of Regents has fully designated approval authority to the institution or Commissioner of Higher Education. These requests are to be submitted for notification to or approval by Commissioner as Level I proposals. Level I proposals may be submitted to OCHE at any time by the flagship campuses or community colleges and will be processed on a rolling monthly schedule. The approval of such proposals will be conveyed to the Board of Regents at the next meeting of the board. Level I proposals include campus initiatives typically characterized by minimal costs, clear adherence to approved campus mission, and the absence of significant programmatic impact on other institutions within the MUS and community colleges. BOR Forms can be found using the following link: https://mus.edu/che/arsa/Forms/AcademicForms.html

☐ Re-titling an existing postsecondary educational program. Required Documents:
- ☐ Academic Proposal Request Form

X Terminating an existing postsecondary educational program.
- X Academic Proposal Request Form
- X Program Termination and Moratorium Form

☐ Consolidating existing postsecondary educational programs
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Establishing a new minor where there is a major or an option in a major
- ☐ Academic Proposal Request Form
- ☐ Curriculum Proposal Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Revising a postsecondary educational program
- ☐ Curriculum Proposal Form
- ☐ Academic Proposal Request Form

☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
- ☐ Academic Proposal Request Form
- ☐ **Documents as listed under establishing a new course (see section 1)**

☐ Other (for those that are considered in this level but otherwise not listed):

_____

☐ Academic Proposal Request Form

4. Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
Level II proposals require initial approval and comment by the Board of Regents through a Request to Plan prior to final review and approval by the Office of the Commissioner of Higher Education. These proposals entail more substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination or personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other MUS institutions and community colleges.

- ☐ Establishing a new postsecondary educational program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Permanent authorization for a temporary C.A.S. or A.A.S degree program
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum Proposal
  - ☐ Completed Intent to Plan Form
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
  - ☐ Academic Proposal Request Form
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- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
  - ☐ Academic Proposal Request Form
  - ☐ Curriculum or Center/Institute Proposal
  - ☐ Completed Request to Plan, except when eliminating or consolidating
  - ☐ **Documents as listed under establishing a new course (see section 1)**
- ☐ Re-titling an academic, administrative, or research unit Permanent authorization for a temporary C.A.S. or A.A.S degree program
- ☐ Curriculum Proposal
- ☐ Completed Intent to Plan Form

MontanaTech *Curriculum Change Request Form Dated August 15, 2020*

Date January 5, 2021
Dept. Health Department **College** Highlands College
Program: Behavioral Health Certificate

CRC Representative Linda Granger

Description of Request: To terminate the behavioral health certificate and its associated coursework.

Current Course or Program Information: Certificate elimination.

Number (Assigned By CRC): _____
Proposed Change

The following courses are being eliminated due to the termination of the certificate mentioned above:

Course #	Name	Credits
AHHS 210	Mental Health & Addiction	3
AHHS 212	Behavioral Crisis Management	3
CAS 201	Theories of Counseling	3
AHHS 295	Behavioral Lab Practicum	3
PSYX 240	Fundamentals of Abnormal Psychology	3

This should include what will appear in the catalog, exactly. New course require course outcomes listed in this area.

List of supporting documentation attached (See Level of Request for Requirements): N/A

Assessment Leading to Request
Low enrollment numbers and layoff.

Anticipated Impacts to "Other" Programs
N/A

Impact on Library: No consultation is required since changes are only in the course number, course name, or course pre-requisites.

Date to take effect: Spring 2021.

APPROVALS

Department Head Approval Linda Granger

Date January 5, 2021

Dean Approval Karen VanDamme

Date Jan 7, 2021

Graduate Council Approval _____

Date _____

CRC Approval Theresa Stack

Date 1/29/2021

Faculty Senate Approval _____

Date _____

VCAA Approval (see below) 1/7/2021

Date 1/7/2021

Chancellor Approval (see below) _____

Date _____

Montana University System

PROGRAM TERMINATION/MORATORIUM FORM

Please complete the following questionnaire prior to submission of a program for termination or placement into moratorium. Please add additional comments beneath each question where applicable.

Program Title: Behavioral Health Certificate

Program is being ____ **Placed into moratorium** __X__ **Terminated**

1. **Are there currently students enrolled in the program? (If yes, please answer questions a - c below.)** **Y:** __X__ **N:** ____

   a.) **Have all students currently enrolled in the program been met with and informed of the impending termination/moratorium?** **Y:** __X__ **N:** ____

   b.) **What is the expected graduation date of all students from the program?** **Spring 2021**

   c.) **Have course offerings been planned to allow for students in the program to complete the degree in a reasonable fashion?** **Y:** __X__ **N:** ____

2. **Will any faculty layoffs or changes in working conditions occur because of the termination/moratorium? (If yes, please answer questions a - b below.)** **Y:** __X__ **N:** ____

   a.) **Have the faculty affected by the program termination/moratorium been notified?** **Y:** __X__ **N:** ____

   b.) **Please describe any layoffs that will occur including the date expected**? One layoff.

Montana University System
PROGRAM TERMINATION/MORATORIUM FORM

3. **The following parties, where applicable, have been notified of the impending program termination/moratorium. (Please mark X for completed, NA for not applicable):**

   a.) **Internal Curriculum Committees** — Pending

   b.) **Faculty Senate** — Pending

   c.) **Program Public Advisory Committee** — Pending

   d.) **Articulation Partners** — Yes

4. **Has there been any negative feedback received from students, faculty, or other constituents regarding the impending termination/moratorium? (If yes, please explain below.)** Y: ____ N: X

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

SUBMISSION MONTH/YEAR
Spring 2021

ITEM XXX-XXXXX

ITEM TITLE

Institution: Highlands College CIP Code: **513902**

Program/Center/Institute Title: Behavioral Health Certificate

Includes (please specify below): Face-to-face Offering: X Online Offering: X Blended Offering: X

Options: N/A

Proposal Summary [360 words maximum]

What: The termination of the behavioral health certificate.

Why: Low enrollment numbers and layoff.

Resources: N/A

ATTACHMENTS

Attachments

Please mark the appropriate type of request and submit with any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit http://mus.edu/che/arsa/academicproposals.asp.

____ **A. Level I:**

Campus Approvals

____ **1a. Placing a postsecondary educational program into moratorium** (Program Termination and Moratorium Form)

____ **1b. Withdrawing a postsecondary educational program from moratorium**

____ **2. Establishing, re-titling, terminating or revising a campus certificate of 29 credits or less**

____ **3. Establishing a B.A.S./A.A./A.S. area of study**

____ **4. Offering an existing postsecondary educational program via distance or online delivery**

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

OCHE Approvals

_____ **5. Re-titling an existing postsecondary educational program**

X **6. Terminating an existing postsecondary educational program** (Program Termination and Moratorium Form)

_____ **7. Consolidating existing postsecondary educational programs** (Curriculum Proposal Form)

_____ **8. Establishing a new minor where there is a major or an option in a major** (Curriculum Proposal Form)

_____ **9. Revising a postsecondary educational program** (Curriculum Proposal Form)

_____ **10. Establishing a temporary C.A.S. or A.A.S. degree program** *Approval limited to 2 years*

____ **B. Level II:**

_____ **1. Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Request to Plan Form)

_____ **2. Permanent authorization for a temporary C.A.S. or A.A.S degree program** (Curriculum Proposal and Completed Request to Plan Form)

_____ **3. Exceeding the 120-credit maximum for baccalaureate degrees** *Exception to policy 301.11*

_____ **4. Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and completed Request to Plan, except when eliminating or consolidating)

_____ **5. Re-titling an academic, administrative, or research unit**

MONTANA TECHNOLOGICAL UNIVERSITY
Conflict of Interest Disclosure Statement and Certification

Complete the following form and submit it to your academic dean, director or executive officer on or before **September 30th annually. For questions concerning the information required by this form contact the Office of Research.**

Name: _____ Dept: _____

Position: _____ Phone #: _____

Certification

By signing below you are certifying:

1. You have read and understand Montana Tech's "Conflict of Interest and Financial Disclosure" policy, as revised 6/8/2015.

2. You either (check one box below):

   a. : ◯ Have no relationships or financial interests that are or could be perceived to be in conflict with your duties and responsibilities to Montana Tech in sponsored research, in professional activities, or in family relationships (nepotism).

   OR

   b. : ◯ Have potential conflicts of interest as described in the statement below.

Disclosure Statement

I am disclosing the following significant financial interests or relationships (check all applicable interests and relationships), and I attach supporting documentation that identifies the person, business enterprise or entity involved and the nature and amount of the interest and/or relationship:

- ☐ Salary or other payment for services (e.g., consulting fees or honoraria) from any business entity that exceeded $5,000 during the past 12 months.
- ☐ Equity interests (e.g., stocks, stock options, or other ownership interests) in any publicly traded entity valued in excess of $5,000 or greater than 5% ownership, or a combination of stock and income from that entity that exceeds $5,000/year. Any ownership interest in a non-publicly-traded entity (such as a start-up company), regardless of its value.
- ☐ Any relationship with an entity that would be affected by the employee's research, or could be directly affected by a decision the employee participates in at Montana Tech or involving Montana Tech funds.
- ☐ Income from intellectual property rights (e.g., patents, copyrights, and royalties) paid by any source other than Montana Tech.
- ☐ Any travel which is paid for or reimbursed by another organization and which is related to my Institutional Responsibilities; provided however, that the disclosure requirement does not apply to travel that is reimbursed by a Federal, State, or local government agency, or an institution of higher education.
- ☐ Service as an advisor, consultant, or in another capacity with a public or private agency that grants money to Montana Tech or decides policy for grants that could materially affect Montana Tech's eligibility for funds from that agency.
- ☐ Management or consulting position, board membership, or role as agent or representative of or participant in the day-to-day operations of a commercial enterprise active in field(s) related to the employee's Montana Tech responsibilities.
- ☐ Supervision and/or authority to influence the hiring, salary, promotion, retention, or tenure or other employment benefits of an immediate family member or a close business associate or employee of an entity in which the employee or family member has an ownership interest.
- ☐ Any relationship of yours or a family member's with an entity that is or could become a vendor or supplier to Montana Tech.

Further I agree:

- To update this disclosure on an annual basis and any time new reportable significant financial interests are obtained.
- To cooperate in the development of a Conflict Management Plan, if determined necessary by the University.
- Meet privately with the Research Office if applying for or receiving funding from the Public Health System (e.g. NIH) and comply with additional requirements mandated by PHS.
- To comply with any conditions or restrictions imposed by the Montana Tech to manage, reduce, or eliminate actual or potential conflicts of interest or forfeit the award, if applicable.

Signed:_____ Date: _____

Reviewed by Vice Chancellor for Research: _____ Date: _____

Disposition: ☐ No Conflict ☐ See Conflict Management Plan ☐ Other: _____

Montana Tech **PERSONNEL**
POLICIES

Policy: Conflict of Interest and Financial Disclosure
Date Adopted: 12-18-1998
Revised: ~~8-15-2013~~ 1-8/2021
Effective Date: ~~9-01-2013~~
Approved By: ~~Donald M. Blackketter~~ Les P. Cook

I. Introduction

Montana Technological University ~~of the University of Montana~~ [hereafter referred to as "Montana Tech"] actively encourages interactions with both the public and private sectors as an important component of its research, education, and public service activities. Research, educational, and public service activities supported by grants, contracts, or gifts from public and private entities and individuals provide a valuable source of funds, equipment, and topics for Montana Tech activities. Professional interactions, including consulting arrangements, between faculty and governmental entities and private businesses, advance Montana Tech's ability to provide a high-quality research and educational experience for students, and thus enhance their employment opportunities. Montana Tech's licensing of technology, assisting in new business start-ups, and other forms of technology transfer to both public and private entities, are critical to meeting society's needs.

This policy describes Montana Tech's principles for identifying and managing potential conflicts and for eliminating real conflicts of interest. It is accompanied by procedures for reviewing, eliminating, and managing such conflicts.

II. Policy

Montana Tech and its employees are committed to conducting themselves and their activities in accordance with the highest standards of integrity and in compliance with state and federal ethics and conflict-~~-~~of-~~-~~interest laws and regulations and with Montana University System Board of Regents policy. Montana Tech is responsible to ensure that potential conflicts of interest are identified and for managing or eliminating them so that they do not improperly affect Montana Tech, decisions made by Montana Tech, or any Montana Tech research, education, and public service activities. The purpose of this policy is simultaneously to comply with state and federal laws and regulations (including those of the Public Health Service, see http://www.gpo.gov/fdsys/pkg/FR-2011-08-25/pdf/2011-21633.pdf), to ensure the integrity of research and sponsored work, to maintain public trust and confidence, and to protect the University and its faculty, staff, and students. Compliance with this policy is required by all full-time and part-time Montana Tech employees, including students who receive compensation from Montana Tech and students or others who design, conduct, or report research, educational, or public service activities of Montana Tech.

Conflict of Interest. A conflict of interest occurs when there is a potential divergence between the employee's private interests and professional obligations to ~~the~~ Montana Tech, such that an independent observer might reasonably question whether the employee's professional actions or decisions could be influenced by considerations of personal gain (financial or otherwise). Potential conflicts of interest that involve the employee, spouse, domestic partner, and dependent children must be disclosed as if they applied directly to the employee. Examples of conflicts that must be disclosed include the following:

- Salary or other payment for services (e.g., consulting fees or honoraria) from any business entity that exceeded $5,000 during the past 12 months.
- Equity interests (e.g., stocks, stock options, or other ownership interests) in publicly traded entity valued in excess of $5,000 or greater than 5% ownership, or a combination of stock and income from that entity that exceeds $5,000.
- *Any* ownership interest in a non-publicly-traded entity (such as a start-up company), regardless of its value.
- Any relationship with an entity that would be affected by the employee's research, or could be directly affected by a decision the employee participates in at Montana Tech or involving Montana Tech funds.
- Income from intellectual property rights (e.g., patents, copyrights, and royalties) paid by any source other than Montana Tech.
- Any travel which is paid for or reimbursed by another organization and which is related to my Institutional Responsibilities; provided however, that the disclosure requirement does not apply to travel that is reimbursed by a Federal, State, or local government agency, or an institution of higher education.
- Service as an advisor, consultant, or in another capacity with a public or private agency that grants money to Montana Tech or decides policy for grants that could materially affect Montana Tech's eligibility for funds from that agency.
- Management or consulting position, board membership, or role as agent or representative of or participant in the day-to-day operations of a commercial enterprise active in field(s) related to the employee's Montana Tech responsibilities.
- Supervision and/or authority to influence the hiring, salary, promotion, retention, or tenure or other employment benefits of an immediate family member or a close business associate or employee of an entity in which the employee has an ownership interest.
- Any family or financial relationship with an entity that is or could become a vendor or supplier to Montana Tech, provided however that the disclosure requirement does not apply to being solely a customer or client of such entity.

The following interests are not considered conflicts and do not require disclosure:

- Income or travel payments from occasional seminars, workshops, or lectures sponsored by public or non-profit entities.
- Income or travel payments from service on advisory committees or review panels for public or non-profit entities.
- Financial interests arising solely by reason of investment in a business by a mutual fund, pension, or other institutional investment fund over which the employee does not exercise control.
- Salaries, royalties, or other remuneration received from or through Montana Tech.

- Equity interests of less than 5% ownership and a market value below $5,000 (aggregated for the employee and immediate family) in a publicly-traded company.

Certification and Disclosure. All employees must provide a written certification and disclosure of conflicts of interest, potential conflicts of interest, and situations which could be perceived as a potential conflict of interest. The disclosure must be made at least annually, and updated promptly whenever new potential conflicts arise. In this disclosure statement, the employee certifies that he/she has read and understands this policy, and whether or not he/she has any relationships or financial interests described above, or other relationships or interests that could be perceived as being in conflict with his/her professional responsibilities at Montana Tech. If he/she has potential conflicts, these conflicts must be disclosed on the form or in an attached statement. The written disclosure must be reviewed and acknowledged by the ~~employee's supervisor, dean, or director and by the~~ Vice Chancellor for Research.

When a potential conflict of interest is disclosed, the Vice Chancellor for Research determines ~~with the responsible Vice Chancellor~~ whether a conflict exists, ~~and they determine~~ and whether the appropriate action is to waive the conflict, ~~or~~ to manage the conflict~~.~~, or to require the conflict to be eliminated. The Vice Chancellor may consult with the responsible Vice Chancellor or dean to inform this determination. A conflict that is not prohibited by statute or regulation may be waived on the basis of a written determination of the following: that the potential conflict of interest is so remote or so small that there is no probability for bias; that any resolution beyond disclosure would be ineffective or inequitable; or that any bias reasonably expected would be outweighed by the interests of research progress, public health or welfare, or technology transfer. A conflict of interest that cannot be waived must be addressed by taking actions or imposing restrictions that will eliminate, reduce, or manage the conflict of interest. These actions and restrictions are to be described in a written Conflict Management Plan, signed by the employee, the supervisor, and the Vice Chancellor for Research.

Appeals. If an employee believes the conditions or restrictions imposed in the Conflict Management Plan are inappropriate, the employee may appeal or request reconsideration. The employee initiates an appeal by sending a written request to the Vice Chancellor for Research with a copy to his/her supervisor and the Vice Chancellor in his/her reporting chain. Students copy the department chair and dean for their major program. The Vice Chancellor for Research will refer the appeal to a Conflict of Interest Review Committee (CIRC), and will consider the CIRC's recommendation in revising the Conflict Management Plan. If the employee believes there is justification for further review, he/she must follow the standard appeal process in effect for Montana Tech Employees.

Conflict of Interest Review Committees (CIRCs). The Vice Chancellor for Research will determine wither a CIRC should be organized to assist in reviewing the potential for conflicts of interest regarding research and gifts. The Vice Chancellor for Research will organize a CIRC to assist in reviewing an employee's appeal regarding conditions or restrictions imposed in his/her Conflict Management Plan. The Vice Chancellor will consult with the employee's Vice Chancellor and for appeals by faculty members, with the Faculty Senate Chairperson and the member's dean to select and appoint CIRC members. Three-quarters of the CIRC's voting members will be from the applicable department(s) or area(s). Some of the members should be individuals with experience with approved external relationships. The principal objective for the CIRC is to help guard Montana Tech employees and Montana Tech from engaging in activities where the risk to integrity and reputation outweighs the value of the activity to academic and societal goals. Relevant

factors to consider are the nature of the financial or other interest, where and when the relationship commenced, recent changes in the relationship's conditions, the likelihood of a conflict of interest (will the results of the activity likely affect or be affected by the significant financial or other interests), mechanisms to ensure integrity (peer review, other independent research sites, and independent monitors and controls), the importance of the proposed activity, and the availability of alternatives to avoid the conflict of interest.

Compliance. Montana Tech expects employees to comply fully, accurately, honestly, and promptly with all requirements of this policy and with applicable federal and state regulations. Breaches of this policy include, but are not limited to: submitting an intentionally incomplete, erroneous, or misleading Disclosure form, failing to submit a Disclosure form annually or when a new conflict arises, and failing to provide additional information requested, and failing to comply with the conditions specified in a Conflict Management Plan. Violation of this policy may be the basis for discipline, which, if necessary, will be imposed in accordance with applicable campus and Montana University System policies and any applicable collective bargaining agreement. Potential sanctions may include, but are not limited to the following:

- Letter of admonition;
- Ineligibility to submit grant applications;
- Withholding of research approvals or privilege of supervising graduate students;
- Suspension;
- Non-renewal of probationary appointment; and
- Termination.

Recordkeeping and Reporting. The signed disclosures, waivers, and Conflict Management Plans are kept on file by the Research Office, in original paper copy or electronic form for a minimum of three years after they are created, for a minimum of three years after the completion and closure of any sponsored project they involve, or until the resolution of any action by Montana Tech or government agencies related to the records or projects, whichever is longer. All records will be maintained in a manner to protect sensitive and confidential information consistent with state and federal law. The Vice Chancellor for Research will report to external sponsoring agencies as required by the agencies the existence of any conflict of interest found by Montana Tech along with actions taken to manage, reduce, or eliminate the conflict. To the extent required by law or requested by the sponsor, the Vice Chancellor for Research will inform the University of Montana Legal Counsel, the Chancellor, and the affected sponsor whenever Montana Tech is unable to manage or satisfactorily resolve any conflict of interest related to the sponsor's activities at Montana Tech.