

## LEVEL I APPROVAL MEMORANDUM

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Compiled here is the Level I memorandum containing items approved since the November Board of Regents Meeting. This memorandum from October 2017 to January 2018 contains items for which approval authority has been designated by the Board of Regents to the individual institutions or the Commissioner of Higher Education. The items before you have been approved and are now being shared with you for your notification.

- [October 2017 Level I Memorandum](#)
- [December 2017 Level I Memorandum](#)
- [January 2018 Level I Memorandum](#)

## LEVEL I APPROVAL MEMORANDUM

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**DATE:** November 8, 2017

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

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

**RE:** October 2017 Level I Approvals

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Contained within this memorandum are Level I proposals submitted by the institutions of the Montana University System in October 2017. These proposals include items for which approval authority has been designated by the Board of Regents to the individual institutions or the Commissioner of Higher Education. These Level I items are being sent to you for your review. If you have concerns about a particular proposal, you should share those concerns with your colleagues at that institution and try to come to some understanding. If you cannot resolve your concerns, raise them at the Level I Chief Academic Officer's conference call on November 21. Issues not resolved at that meeting should be submitted in writing to OCHE by noon on Friday, November 24. You will be notified of approved proposals by November 28. The Board of Regents will be notified of the approved proposals at the March 2018 meeting of the Board.

### 1. Campus Approvals

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

- Notification of Placement of BS in Rehabilitation and Related Services into Moratorium  
[Item #177-2701-LI1017](#) | [Academic Proposal Request Form](#) | [Program Termination Form](#)

#### **Great Falls College MSU:**

- Notification of Placement of Associate of Science Registered Nurse LPN to RN into Moratorium  
[Item #177-2901-LI1017](#) | [Academic Proposal Request Form](#) | [Program Termination Form](#)

November 2017

**ITEM 177-2701-LI1017**

**Notification of Placement of the BS in Rehabilitation and Related Services into Moratorium**

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**THAT**

The Rehabilitation and Human Services Department at Montana State University Billings hereby notifies the Board of Regents and the Office of the Commissioner of Higher Education of the placement of the bachelor of science in Rehabilitation and Related Services into moratorium.

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**EXPLANATION**

MSU Billings is placing the BS in Rehabilitation and Related Services into moratorium due to a number of factors. Rationale for moratorium:

1. Diminishing numbers of graduates from this program with a trend that indicates this will continue in the future.
  2. Ongoing confusion with advising students about the difference between a B.S. in Psychiatric Rehab and a BS in Rehabilitation and Related Services.
  3. Ongoing confusion by employers in the community who are not sure what the difference is with the current two degrees: B.S. in Psychiatric Rehabilitation and B.S. in Rehabilitation and Related Services Degree
  4. Once the the B.S. in Rehabilitation and Related Services is in moratorium we will advise students who want to work as rehabilitation counselors (disabled population) or mental health counselors, or addiction counselors to major in the Psychiatric Rehabilitation program. The Psychiatric Rehabilitation degree contains most of the courses for this Rehabilitation and Related Services degree and results in employment with the same employers in the community.
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**ATTACHMENTS**

ACADEMIC PROPOSAL REQUEST FORM  
PROGRAM TERMINATION FORM

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 177-2701-LI1017 Submission Month or Meeting: October 2017

Institution: Montana State University  
Billings CIP Code: 51.2399

Program/Center/Institute Title: B.S. in Rehabilitation and Related Services

Includes (please specify below): Online Offering  Options

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

X **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**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What: MSU Billings is hereby notifying the BOR and OCHE of the placement of the B.S. in Rehabilitation and Related Services, into moratorium.**

**Why:**

1. Diminishing numbers of graduates from this program with a trend that indicates this will continue in the future.
2. Ongoing confusion with advising students about the difference between a B.S. in Psychiatric Rehab and a B.S. in Rehabilitation and Related Services.
3. Ongoing confusion by employers in the community who are not sure what the difference is with the current two degrees: B.S. in Psychiatric Rehabilitation and B.S. in Rehabilitation and Related Services Degree
4. Once the the B.S. in Rehabilitation and Related Services is in moratorium we will advise students who want to work as rehabilitation counselors (disabled population) or mental health counselors, or addiction counselors to major in the Psychiatric Rehabilitation program. The Psychiatric Rehabilitation degree contains most of the courses for this Rehabilitation and Related services degree and results in employment with the same employers in the community.

**Resources:** None

**Relationship to similar MUS programs:** None

**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: **BS in Rehabilitation-Related Services**

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? 2020

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:        N:   X  

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

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

**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                          X    

b.) Faculty Senate        X    

c.) Program Public Advisory Committee                          X    

d.) Articulation Partners        NA    

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

October 2017

ITEM 177-2901-LI1017

**Notification of the placement of Associate of Science Registered Nurse LPN to RN into moratorium**

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**THAT**

Great Falls College MSU is notifying the Montana Board of Regents of its intent to place the A.S. in Registered Nurse LPN to RN in moratorium.

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**EXPLANATION**

The statewide curriculum for the ASN – RN and the CAS – PN have now replaced the former AAS- PN and the LPN to RN programs.

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**ATTACHMENTS**

Academic Proposal Request Form  
Program Termination Form



**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 177-2901-LI1017 Submission Month or Meeting: October 2017

Institution: Great Falls College MSU CIP Code: 51.1601

Program/Center/Institute Title: A.S. in Registered Nurse LPN to RN

Includes (please specify below): Online Offering \_\_\_\_\_ Options \_\_\_\_\_

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

x **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**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary** [360 words maximum]

**What** Great Falls College MSU is notifying the Montana Board of Regents of its intent to place the A.S. in Registered Nurse LPN to RN in moratorium.

**Why** The statewide curriculum for the ASN – RN and the CAS – PN have now replaced the former AAS- PN and the LPN to RN programs.

**Resources** None

**Relationship to similar MUS programs**

**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: **A.S. in Registered Nurse LPN to RN**

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  

No students are currently enrolled. The last graduates of the program completed in July 2017.

The statewide curriculum for the ASN – RN and the CAS – PN have now replaced the former AAS- PN and the LPN to RN programs.

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

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

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

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



## LEVEL I APPROVAL MEMORANDUM

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**DATE:** January 10, 2018

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

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

**RE:** December 2017 Level I Approvals

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Contained within this memorandum are Level I proposals submitted by the institutions of the Montana University System in December 2017. These proposals include items for which approval authority has been designated by the Board of Regents to the individual institutions or the Commissioner of Higher Education. These Level I items are being sent to you for your review. If you have concerns about a particular proposal, you should share those concerns with your colleagues at that institution and try to come to some understanding. If you cannot resolve your concerns, raise them at the Level I Chief Academic Officer's conference call on January 16. Issues not resolved at that meeting should be submitted in writing to OCHE by noon on Friday, January 19. You will be notified of approved proposals by January 24. The Board of Regents will be notified of the approved proposals at the March 2018 meeting of the Board.

### 1. Campus Approvals

#### **Flathead Valley Community College**

- Notification of the re-titling and revision of the C.T.S. in Heating, Ventilation and Air-Conditioning  
[Item # 177-301- L1217 | Academic Proposal Request Form](#)
- Notification of the termination of the C.T.S. in Health Occupations  
[Item # 177-302- L1217 | Academic Proposal Request Form | Program Termination Form](#)

#### **Great Falls College Montana State University:**

- Notification of the placement of the C.A.S. Network Infrastructure into moratorium  
[Item # 177-2901- L1217 | Academic Proposal Request Form | Program Termination Form](#)
- Notification of the placement of the C.A.S. Computer Assistant into moratorium  
[Item # 177-2902- L1217 | Academic Proposal Request Form | Program Termination Form](#)
- Notification of the placement of the C.A.S. Computer Server Administration into moratorium  
[Item # 177-2903- L1217 | Academic Proposal Request Form | Program Termination Form](#)

### 2. OCHE Approvals

#### **Montana State University Bozeman:**

- Request for authorization to offer a minor in Global Health, Global and Multicultural Studies option in Liberal Studies, College of Letters & Science  
[Item # 177-2010-L1217 | Academic Proposal Request Form | Curriculum Proposal Form](#)

January 20218

**ITEM 177-301-L11217**

**Notification of the re-titling and revision of the C.T.S. in Heating, Ventilation and Air-Conditioning**

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**THAT**

Flathead Valley Community College is notifying the Montana Board of Regents of its intent to re-title and significantly revise a 28-credit certificate of technical studies in Heating, Ventilation and Air-Conditioning.

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**EXPLANATION**

Local employers have indicated they would like graduates to have more hands-on experience in this currently online program. Additionally, the local Refrigeration Service Engineers Society requested this program align with the Montana Department of Labor and Industry requirement for the educational component of the HVAC apprenticeship program.

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**ATTACHMENTS**

178-301-L10118\_RF

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM **177-301-LI1217** Submission Month or Meeting: **January 2018**

Institution: **Flathead Valley Community College** CIP Code: **47.0201**

Program/Center/Institute Title: **C.T.S. in Heating, Ventilation, and Air-conditioning**

Includes (please specify below): Online Offering \_\_\_\_\_ Options \_\_\_\_\_

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

  x   **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**

  x   **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**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary** [360 words maximum]

FVCC intends to re-title and significantly revise a 28-credit C.T.S. in Heating, Ventilation, and Air Conditioning (HVAC) as a result of community needs and feedback. FVCC has worked closely with the local Refrigeration Service Engineers Society employers as well as the Montana Department of Labor and Industry to increase hands-on experience and to align with the educational component of the state apprenticeship requirements. FVCC is the only MUS institution that offers an HVAC program.



January 2018

ITEM 177-302-LI1217

**Notification of the termination of the C.T.S. in Health Occupations**

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**THAT**

Flathead Valley Community College is notifying the Montana Board of Regents of its intent to terminate a 19-credit certificate of technical studies in Health Occupations.

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**EXPLANATION**

Local employers have indicated that there is no benefit to students in job attainment or compensation level associated with this degree. Furthermore, there have only been two graduates in this program since its inception in 2013.

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**ATTACHMENTS**

177-302-LI1217\_RF  
177-302-LI1217\_Term

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 177-302-LI1217 Submission Month or Meeting: January 2018

Institution: Flathead Valley Community College CIP Code: 51.0000

Program/Center/Institute Title: C.T.S. in Health Occupations

Includes (please specify below): Online Offering \_\_\_\_\_ Options \_\_\_\_\_

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

x **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**

x \_\_\_\_\_ 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**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary** [360 words maximum]

FVCC intends to terminate a 19-credit C.T.S. in Health Occupations. Local employers have indicated that there is no benefit to students in job attainment or compensation level associated with this degree. Furthermore, there have only been two graduates in this program since its inception in 2013.

**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: **C.T.S. in Health Occupations**

Program is being  Placed into moratorium  Terminated

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

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

The program advisor has met with the two enrolled students regarding this change.

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

Spring 2018

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

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

N/A

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



December 2017

ITEM 177-2901-LI1217

**Notification of the placement of the C.A.S. Network Infrastructure into moratorium**

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**THAT**

Great Falls College MSU is notifying the Montana Board of Regents of its intent to place the certificate of applied science in Network Infrastructure into moratorium.

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**EXPLANATION**

Great Falls College MSU wishes to place the C.A.S. in Network Infrastructure into moratorium due to low enrollment and decreased market growth projections.

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**ATTACHMENTS**

Academic Proposal Request Form  
Program Termination Form

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 177-2901-LI1217 Submission Month or Meeting: December 2017

Institution: Great Falls College MSU CIP Code: 11.0901

Program/Center/Institute Title: C.A.S. in Network Infrastructure

Includes (please specify below): Online Offering \_\_\_\_\_ Options \_\_\_\_\_

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

x **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**

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

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What** Great Falls College MSU is notifying the Montana Board of Regents of its intent to place the certificate of applied science in Network Infrastructure into moratorium.

**Why** Great Falls College MSU wishes to place the C.A.S. in Network Infrastructure into moratorium due to low enrollment and decreased market growth projections.

**Resources** NA

**Relationship to similar MUS programs** NA



**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: **C.A.S. in Network Infrastructure**

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:        N:       

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

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

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

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

**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           X          

b.) Faculty Senate           X          

c.) Program Public Advisory Committee           X          

d.) Articulation Partners           NA          

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

December 2017

ITEM 177-2902-LI1217

**Notification of the placement of the C.A.S. Computer Assistant into moratorium**

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**THAT**

Great Falls College MSU is notifying the Montana Board of Regents of its intent to place the certificate of applied science in Computer Assistant into moratorium.

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**EXPLANATION**

Great Falls College MSU wishes to place the C.A.S. in Computer Assistant into moratorium due to low enrollment and decreased market growth projections.

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**ATTACHMENTS**

Academic Proposal Request Form  
Program Termination Form

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 177-2902-LI1217 Submission Month or Meeting: December 2017

Institution: Great Falls College MSU CIP Code: 11.0103

Program/Center/Institute Title: C.A.S. in Computer Assistant

Includes (please specify below): Online Offering \_\_\_\_\_ Options \_\_\_\_\_

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

x **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**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What** Great Falls College MSU is notifying the Montana Board of Regents of its intent to place the certificate of applied science in Computer Assistant into moratorium.

**Why** Great Falls College MSU wishes to place the C.A.S. in Computer Assistant into moratorium due to low enrollment and decreased market growth projections.

**Resources** NA

**Relationship to similar MUS programs** NA

**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: **C.A.S. in Computer Assistant**

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:        N:       

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

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

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

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

**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                          X    

b.) Faculty Senate        X    

c.) Program Public Advisory Committee                          X    

d.) Articulation Partners        NA    

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

December 2017

ITEM 177-2903-LI1217

**Notification of the placement of the C.A.S. Computer Server Administration into moratorium**

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**THAT**

Great Falls College MSU is notifying the Montana Board of Regents of its intent to place the certificate of applied science in Computer Server Administration into moratorium.

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**EXPLANATION**

Great Falls College MSU wishes to place the C.A.S. in Computer Server Administration into moratorium due to low enrollment and decreased market growth projections.

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**ATTACHMENTS**

Academic Proposal Request Form  
Program Termination Form



**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 177-2903-LI1217 Submission Month or Meeting: December 2017

Institution: Great Falls College MSU CIP Code: 11.1001

Program/Center/Institute Title: C.A.S. in Computer Server Administration

Includes (please specify below): Online Offering \_\_\_\_\_ Options \_\_\_\_\_

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

x **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**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary** [360 words maximum]

**What** Great Falls College MSU is notifying the Montana Board of Regents of its intent to place the certificate of applied science in Computer Server Administration into moratorium.

**Why** Great Falls College MSU wishes to place the C.A.S. in Computer Server Administration into moratorium due to low enrollment and decreased market growth projections.

**Resources** NA

**Relationship to similar MUS programs** NA

**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: **C.A.S. in Computer Server Administration**

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:        N:       

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

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

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

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

**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                          X    

b.) Faculty Senate        X    

c.) Program Public Advisory Committee                          X    

d.) Articulation Partners        NA    

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

December, 2017

**ITEM 177-2010-L1217**

**Global Health Minor**

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**THAT**

Request authorization for Montana State University Bozeman to offer a minor in Global Health, Global and Multicultural Studies option in Liberal Studies, College of Letters & Science. The minor in Global Health will allow students to develop an interdisciplinary understanding of health issues in a global context with focus on the biological, cultural or the social environment. Through a broad range of courses, the minor in Global Health will provide a solid foundation in social epidemiological, cultural, environmental, and nutritional determinants of health. Students adding a Global Health Minor to their major will explore the scientific, social, environmental, and cultural challenges facing global health solutions. They will investigate the health implications of globalization, as well as have an engagement experience which is crucial to understanding the determinants of health issues around the world.

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**EXPLANATION**

The Global Health minor is designed to encourage undergraduate students from any discipline to explore major health issues (including both infectious and non-communicable disease) that are endemic to developing countries as well as in underprivileged and underrepresented populations in the United States. Topics of study to choose from will include: the transmission of zoonotic diseases and the pathophysiological mechanisms underlying infectious disease; the impacts of climate change and human-environmental interactions on the spread of diseases; the influence of anthropogenic environmental change on food and medicinal plant systems; dietary transitions and their implications for nutrition and health outcomes; geography, socio-economic status, and health disparity; an appreciation for culturally-appropriate best practices when working with minority cultures, and unique and indigenous care modalities; and a comparative analysis of different national health care systems.

The goal of this new minor is to support training of students who are better equipped to contribute to addressing health disparities in developing countries as well as among disadvantaged populations in the United States. The proposed minor is well aligned with MSU's strategic plan goal of integrating learning, discovery, and engagement through increased collaboration across disciplines, international experiences for students, and engagement with communities internationally.

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**ATTACHMENTS**

Level I Request Form  
Curriculum Proposal Form

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

- 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]*

We propose a minor in Global Health that will allow students to develop an interdisciplinary understanding of health issues and health care in a global context. Through the bundling of a broad range of courses, the minor in Global Health will provide a solid foundation in social, cultural, epidemiological, environmental and nutritional determinants of health. Students adding a Global Health Minor to their major will explore the scientific, social, environmental and cultural challenges facing global health solutions. They will investigate the health implications of globalization, as well as have the option for an engagement experience which is crucial to understanding the determinants of health issues around the world.

- 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]*

Global health is a shared responsibility and requires an equitable, interdisciplinary, and systematic approach including transnational cooperation and collaboration between health care providers, veterinarians, scientists, and local communities. Thus, the Global Health Minor aligns with the institutional mission of educating students, creating knowledge, and serving communities by integrating learning, discovery, and engagement as well as some key goals of MSU's strategic plan, including increased exposure to, and awareness of, diverse cultures and cultural practices in health care.

Learning Goal: MSU prepares students to graduate equipped for careers and further education.

Students in this minor will study the major health issues (including both infectious and non-communicable disease) that are endemic to developing countries as well as in underprivileged and underrepresented populations in the United States. Students who minor in Global Health will be better equipped to contribute to addressing health disparities in developing countries as well as among disadvantaged populations in the United States.

Engagement Goal: Members of the Montana State University community will be leaders, scholars and engaged citizens of their local, national and global communities, working together with community partners to exchange and apply knowledge and resources to improve the human prospect.

Students in this minor will investigate the health implications of globalization, as well as have the opportunity for an engagement experience which is crucial to understanding the determinants of health issues around the world.

Integration Goal: By integrating learning, discovery and engagement, and by working across disciplines, the MSU community will contribute to improving global health for all.

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

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

The BIOH 303 (Introduction to Global Health) class was the first forum to test the potential of this minor and was enthusiastically received by students.

The minor, a collaboration between the departments of Cell Biology and Neuroscience, Microbiology and Immunology, and Modern Languages & Literatures, and to be housed in Liberal Studies/CLS, received input from the College of Nursing, specifically Peter Buerhaus, Associate Deans at the College of Cross-College Research Forum, Associate and Assistant Deans at the Associate Dean’s meeting, Diane Donnelly, director of University Studies, Sheila Nielsen, director of Health Professions Advising, and has gone through the appropriate Faculty Senate channels and the MSU undergraduate curriculum committee.

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

We propose a minor in Global Health that will allow students to develop an interdisciplinary understanding of health issues in a global context with a focus on the biological or the social determinates of health and health care. Through a broad range of courses, the minor in Global Health will provide a solid foundation in social, epidemiological, environmental, and nutritional determinants of health.

Faculty associated with the Global Health Minor come from across MSU from such areas as the Colleges of Letters and Science, Education, Agriculture, Nursing and Engineering. With courses from diverse departments such as Modern Languages and Literatures, Cell Biology and Neuroscience, Microbiology and Immunology, the minor spans the breadth of the global health field.

a. List the program requirements using the following table.

	Credits
Credits in required courses offered by the department offering the program	9-18
Credits in required courses offered by other departments	6-15
Credits in institutional general education curriculum	0
Credits of free electives	0
Total credits required to complete the program	24

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.

- Students will become familiar with major diseases that increase morbidity and mortality, with particular emphasis on diseases in low resource communities regionally and globally.

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CURRICULUM PROPOSAL FORM

- Students will analyze health disparities through cultural and socio-political perspectives to identify restrictions and challenges.
- Students will learn to use specific discipline-based methodologies (from engineering, political science, public health, etc.) to examine issues of health inequity and perceptions of health.
- Students will develop cross-cultural competency as well as awareness of and sensitivity to cultural differences.

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]

The proposed Global Health minor focuses on problems in global health from the standpoint of both clinical disease as well as from a cultural understanding of the associated cultural, socio-economic, and environmental factors. **Global health is a shared responsibility and requires an equitable, interdisciplinary, and systematic approach including transnational cooperation and collaboration between healthcare providers, veterinarians, scientists, and local communities.**

Students in this minor will study the major health issues (including both infectious and non-communicable disease) that are endemic to developing countries as well as in underprivileged and underrepresented populations in the United States. Topics of study to choose from will include: the transmission of zoonotic diseases and the pathophysiological mechanisms underlying infectious disease; the impacts of climate change and human-environmental interactions on the spread of diseases; the influence of anthropogenic environmental change on food and medicinal plant systems; dietary transitions and their implications for nutrition and health outcomes; geography, socio-economic status, and health disparity; an appreciation for culturally-appropriate best practices when working with minority cultures, and unique and indigenous care modalities; and a comparative analysis of different national health care systems.

The goal of this new minor is to support training of students who are better equipped to contribute to addressing health disparities in developing countries as well as among disadvantaged populations in the United States. The minor will be the first exposure to many MSU students to the issues and challenges of Global Health and health care. We expect that some students will find this minor a starting point for a career in Global Health and will lead to students applying to the MSU Master's Degree in Community Health or the UM Master's Degree in Public Health. The proposed minor is well aligned with MSU's strategic plan goal of integrating learning, discovery, and engagement through increased collaboration across disciplines, international experiences for students, and engagement with communities internationally.

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



**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

Institution Name	Degree	Program Title
UM Political Science	minor	Global Public Health Minor

- 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]*.

Our proposed minor is similar to, but does not substantially duplicate, the Global Public Health Minor offered through the Political Science Department at UM. Our minor is unique in that it requires basic proficiency in a foreign language (6 credits of Spanish, or equivalent in another foreign language), and offers the students chance to earn credits with an engagement project related to global health in a local, national, or international environment. In addition, our minor takes advantage of classes already available at MSU and allows students to tailor their minor to focus on the biomedical, cultural, socioeconomic or policy aspects of global health. As this is a proposal for a minor, it is unlikely that our proposed minor will compete with UM, as students are unlikely to choose a school based on a minor. It is more likely that our minor will spark an interest in students and will lead to MSU students considering furthering their education with a Master’s Degree in Public Health at UM.

- 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]*.

We reached out to the UM Public Health Minor prior to proposing our minor and solicited their feedback. We then modified our minor to alleviate their concerns.

**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 implementation of the program would begin in Fall 2018 with BIOH 303, the foundational course for the minor.

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

Fall Headcount Enrollment	Graduates

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

AY__1	AY_19	AY_20	AY__2	AY_22	AY_19	AY__2	AY_22	AY23_	AY24_
8_			1_			1_			
20-25	25-30	30-35	40-45	45-50	10	15	15	20	20

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

Demand for the program has been determined in three ways: 1) initial anecdotal evidence; 2) systematic qualitative research from the BIOH303 course and; 3) informal advising surveys from Cell Biology and Neuroscience, MLL, and Liberal Studies.

- c. What is the initial capacity for the program? The program already exists inasmuch as all the classes, with the exception of BIOH303, are currently offered at MSU. This minor repackages the classes and creates some intentionality on the students to focus on global health. The foundational course, BIOH303, will serve as the catalyst for students in their pursuit of the global health minor. The tenure-track faculty involved in the program are able to support the initial capacity for the program.

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 success of the program will be measured by how well students meet the following program learning outcomes and progress toward completion of the minor. Upon completion of this program:

- Students will develop writing and critical thinking skills related to global health issues.
- Students will become familiar with major diseases that increase morbidity and mortality, with particular emphasis on diseases in low resource communities regionally and globally.
- Students will analyze health disparities through cultural and socio-political perspectives to identify restrictions and challenges.
- Students will learn to use specific discipline-based methodologies (from engineering, political science, public health, etc.) to examine issues of health inequity and perceptions of health.
- Students will develop cross-cultural competency as well as awareness of and sensitivity to cultural differences.

Annually, the Director of Liberal Studies will convene a Global Health faculty committee to meet and assess how well students are meeting program learning outcomes. This assessment will include the following:

- An evaluation of samples of student work from BIOH303 to determine if program learning outcomes 1 and 2 are being achieved;

Montana Board of Regents  
CURRICULUM PROPOSAL FORM

- An evaluation of students' professional papers/theses to determine if learning outcome 3 is being achieved;
- An annual survey of students' experiences in the program, focusing on how well the program is meeting the students' needs, any challenges reported in the content and format of the program.
- A record of how many students seek information and how many students enroll annually;
- A record of percentages of students who complete the minor;
- A record of the timeframes in which students complete the minor.

Success of the program will be determined by an increasing headcount and graduation rate from the minor. If the minor does not meet success, the faculty involved will survey students to understand reasons for lack of enrollment in the minor.

- 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]*

**See above.** The program will be assessed based upon the assessment plan, evaluations from the foundational course and an exit survey upon completion of the minor. We will track the students who declare the minor in Cell Biology and Neuroscience and CLS Advising Center.

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

Direct measures: Assessment plan with student outcomes will be assessed every year.  
Indirect measures: Student conversations, success in other courses, advising conversations.

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

Every year we will review the findings and apply them to the minor in this way ensuring a continual loop of improvement.

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

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CURRICULUM PROPOSAL FORM

**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]

The minor will utilize existing teaching space and facilities currently used by faculty involved in the program.

- 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]

We do not need physical facilities or equipment. The program builds on what we already offer on campus.

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

Students will have access to the faculty advisor in Liberal Studies as well as faculty in Cell Biology and Neuroscience, Modern Languages & Literatures and the professional advisors in the CLS Advising team who are already knowledgeable about the new minor. Because most of our students will already be pursuing curriculum in other departments, we don't foresee any impact on those courses.

- 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]

Dr. Katie Woods, instructor of BIOH303, is the only new personnel who has already twice taught the course. Liberal Studies, in the College of Letters & Science, has budgeted her salary.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

**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]*

Yes.

- 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]*

Yes.

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

The undergraduate students in the minor pay regular tuition and are already enrolling as students at MSU for the health fields. Nevertheless, we have calculated the revenues based on the projected enrollment of 20 students in the minor in Year 1, 25 in Year 2 and 30 in Year 3.

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

	Year 1	Year 2	Year 3
Revenues	20 FTE students: annual tuition + fees= \$137,740	25 FTE students: annual tuition+fees=\$172,175	30 FTE students: annual tuition + fees=\$206,610
Expenditures	\$10,000	\$10,000	\$10,000
Net Revenue (revenues- expenditures)	\$127,740	\$162,175	\$196,610

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

Dr. Katie Woods, the instructor for BIOH303, is the only expense anticipated for the minor and her salary is base funded in Liberal Studies.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

- 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]*

The state appropriated funds that currently support undergraduate teaching will not change.

- 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.
- 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]*
- 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]*

**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.

**14. Complete the budget template below with the following information:**

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program.
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Amounts should reconcile subsequent pages where budget explanations are provided.

Signature/Date

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

**College or School Dean:**



**Chief Academic Officer:**

*Jamela Ertli for Robert Mokwa*

**Chief Executive Officer:**



**Flagship Provost\*:**

*Jamela Ertli for Robert Mokwa*

**Flagship President\*:**



\*Not applicable to the Community Colleges.

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CURRICULUM PROPOSAL FORM

I. PROJECTED STUDENT ENROLLMENT

	FY 18		FY 19		FY 20	
	FTE	Headcount	FTE	Headcount	FTE	Headcount
A. Projected enrollments	20	20	25	25	30	30

II. REVENUE

	FY 2018		FY 2019		FY 2020	
	On-going	One-time	On-going	One-time	On-going	One-time
1. New Appropriated Funding Request						
2. Institution Funds						
3. Federal						
4. New Tuition Revenues from Increased Enrollments						
5. Student Fees						
6. Other (i.e., Gifts)						
<b>Total Revenue</b>	\$0	\$0	\$0	\$0	\$0	\$0

**Ongoing is defined as ongoing operating budget for the program which will become part of the base.**

**One-time is defined as one-time funding in a fiscal year and not part of the base.**

III. EXPENDITURES

	FY 18		FY 19		FY 20	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>A. Personnel Costs</b>						
1. FTE						
2. Faculty	0.1		0.1		0.1	
3. Adjunct Faculty						



**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

4. Graduate/Undergrad Assistants						
5. Research Personnel						
6. Directors/Administrators						
7. Administrative Support Personnel						
8. Fringe Benefits	\$1,891		\$1,891		\$1,891	
9. Other:						
<b>Total Personnel and Costs</b>	<b>\$11,891</b>	<b>\$0</b>	<b>\$11,891</b>	<b>\$0</b>	<b>\$11,891</b>	<b>\$0</b>

	FY _____		FY _____		FY _____	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>B. Operating Expenditures</b>						
1. Travel						
2. Professional Services						
3. Other Services						
4. Communications						
5. Materials and Supplies						
6. Rentals						
7. Materials & Goods for Manufacture & Resale						
8. Miscellaneous						
<b>Total Operating Expenditures</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

	FY _____		FY _____		FY _____	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>C. Capital Outlay</b>						
1. Library Resources						

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

2. Equipment

<b>Total Capital Outlay</b>	\$0	\$0	\$0	\$0	\$0	\$0
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FY \_\_\_\_\_ FY \_\_\_\_\_ FY \_\_\_\_\_

**D. Capital Facilities  
 Construction or Major  
 Renovation**

_____	_____	_____	_____	_____	_____	_____
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**E. Other Costs**

Utilites \_\_\_\_\_

Maintenance & Repairs \_\_\_\_\_

Other \_\_\_\_\_

<b>Total Other Costs</b>	\$0	\$0	\$0	\$0	\$0	\$0
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<b>TOTAL EXPENDITURES:</b>	\$11,891	\$0	\$11,891	\$0	\$11,891	\$0
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<b>Net Income (Deficit)</b>	-\$11,891	\$0	-\$11,891	\$0	-\$11,891	\$0
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\_\_\_\_\_  
 Campus Chief Financial Officer Signature

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

## Appendix A – Proposed New Curriculum

### Required courses (9 credits):

- BIOH 303 – Intro to Global Health (foundation course; pre-req Writing 101)
- SPNS 101 (or equivalent in other language)
- SPNS 250 (Spanish for Healthcare Professionals or equivalent in other language)

### Elective Courses (15 credits):

Students can choose from the menu of classes below. If a student would like a class NOT listed to be approved as one of their electives toward fulfillment of requirements for the Global Health Minor, they should submit a proposal explaining why the course is applicable to the minor. This will be submitted to the Global Health Advisor and will be reviewed by a faculty committee for approval. This is to ensure uniformity in enforcement of electives. Students should also consider the pre-requirements for some of these courses:

#### **Choose 6 credits from Biomedical Elective:**

BIOM 250 Microbiology for Health Sciences: Infectious Diseases

BIOB 100IN Organism Function

BIOB 160 Principles of Living Systems

BIOB 410 Immunology

BIOB 499 Medical Ethics

BIOH 185 Integrated Physiology

BIOH 201 Human Anatomy and Physiology I

BIOH 422 Genes and Cancer

BIOH 445 Intro to Pharmacology

BIOM 400 Medical Microbiology

BIOM 415 Microbial Diversity, Ecology, and Evolution

BIOM 435 Virology

BIOM 441 Eukaryotic Pathogens

CHTH 440 Principles of Epidemiology

KIN 221 Health Anatomy & Physiology

NUTR 221 CS Basic Human Nutrition

#### **Choose 6 credits from Social/Economic Policy Electives:**

AGBE 315 Ag in a Global Context

AGSC 465R Health, Agricultural, Poverty: Concepts and Action Research

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

ANTY 101D Anthropology and the Human Experience  
ANTY 225IS Culture, Language, and Society  
ANTY 327 Medical Anthropology  
CHTH 210 Foundations in Community Health  
ECNS 317 Development Economics  
HTH 455 The Ethics of Care  
NRSG 418 Issues in Health Policy & Health Care Economics  
PSCI 423 The Politics of Developing Countries  
PSCI 436 Politics of Food and Hunger  
PSYX 383 Health Psychology  
SOC1 370 Sociology of Globalization  
SOC1 380 Sociology of Health & Medicine  
SFBS 146 Sustainable Food and Bioenergy Systems  
SFBS 451R Sustainable Food Systems  
SGSC 465R Health, Agriculture, Poverty

**Choose 3 credits from Cultural Electives:**

BIOB or MLL 492 (Guided Undergraduate Engagement/Research Project study abroad)  
CHTH 428 Health Disparities  
GPHY 121D Human Geography  
GPHY 141 World Regional Geography  
HSTR 160D Modern World History  
ICS 491 Healthcare in Cuba  
NASX 105D Intro to Native American Studies  
NASX 415 Native Food Systems  
PHL 255D Philosophy and Culture  
PSCI 230D Introduction to International Relations  
RLST 100D Intro to the Study of Religion  
RLST 110D Religion, Conflict, & Politics

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

SOCI 374 Sociology of Culture

SPNS 350 Latino Cultures in America

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 177-2010-L1217 Submission Month or Meeting: December, 2017

Institution: Montana State University CIP Code: 51.2201

Program/Center/Institute  
Title: Global Health Minor

Includes (please specify below): Online Offering \_\_\_\_\_ Options \_\_\_\_\_

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

**x 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**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What**

Establish a Global Health Minor under the existing Global Studies Degree in Liberal Studies

**Why**

A minor in Global Health allows students to develop an interdisciplinary understanding of health issues in a global context with focus on the biological, cultural, or the social environment. Through a broad range of courses, the minor in Global Health will provide a solid foundation in social epidemiological, environmental, cultural, and nutritional determinants of health. Students adding a Global Health Minor to their major will explore the scientific, social, environmental and cultural challenges facing global health solutions. They will investigate the health implications of globalization, as well as have an engagement experience which is crucial to understanding the determinants of health issues around the world.

Global health is a shared responsibility and requires an equitable, interdisciplinary, and systematic approach including transnational cooperation and collaboration between health care providers, veterinarians, scientists, and local communities. Thus, the Global Health Minor aligns with the institutional mission of educating students, creating knowledge, and serving communities by integrating learning, discovery, and engagement as well as some key goals of MSU's strategic plan.

**Resources**

NTT for BIOH303 (The salary associated with this course is budgeted in Liberal Studies, College of Letters & Science).

**Relationship to similar MUS programs**

There are no minors exactly like our proposed minor within the MUS system. The closest program is the minor in Global Public Health at the University of Montana which "emphasizes a global perspective on issues of public health policy (<http://hs.umt.edu/globalpublichealth/about.php>) and is offered by the Department of Political Science. Our program is not focused on policy nor the natural sciences. Instead, it is organized and managed by the College of Letters and Science interdisciplinary program, Liberal Studies, because the program is focused on investigating problems in global health from the standpoint of both clinical disease and the associated cultural, socio-economic and environmental factors. Another key difference

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

is our emphasis on acquiring a working clinical knowledge of a foreign language, such as Spanish for Health Care Professionals. We also will support students in an engagement project where they will be able to implement their course knowledge (including linguistic training) in a hands-on service learning cultural experience.



## LEVEL I APPROVAL MEMORANDUM

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**DATE:** February 9, 2018

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

**FROM:** John Cech, Deputy Commissioner for Academic, Research, & Student Affairs

**RE:** January 2018 Level I Academic Items

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Contained within this memorandum are Level I proposals submitted by the institutions of the Montana University System in January 2018. These proposals include items for which approval authority has been designated by the Board of Regents to the individual institutions or the Commissioner of Higher Education. These Level I items are being sent to you for your review. If you have concerns about a particular proposal, you should share those concerns with your colleagues at that institution and try to come to some understanding. If you cannot resolve your concerns, raise them at the Level I Chief Academic Officer's conference call on February 28. Issues not resolved at that meeting should be submitted in writing to OCHE by noon on Friday, March 2. You will be notified of approved proposals by Monday, March 5. The Board of Regents will be notified of the approved proposals at the March meeting of the Board.

### 1. Campus Approvals

#### **Great Falls College Montana State University:**

- Notification of the establishment of a hybrid offering of the C.A.S. in Dental Assistant  
[Item #178-2901-LI0118 | Academic Proposal Request Form](#)
- Notification of the establishment of a hybrid offering of the A.A.S. in Paramedic  
[Item #178-2902-LI0118 | Academic Proposal Request Form](#)
- Notification of the establishment of a hybrid offering of the A.A.S. in Surgical Technology  
[Item #178-2903-LI0118 | Academic Proposal Request Form](#)

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

- Notification of establishing a C.T.S. in Behavioral Health  
[Item #178-1500-LI0118 | Academic Proposal Request Form](#)

### 2. OCHE Approvals

#### **Montana State University Bozeman:**

- Request for authorization to establish a Computer Science Teaching Minor  
[Item #178-2011-LI0118 | Curriculum Proposal Form | Academic Proposal Request Form](#)
- Request for authorization to Re-title MSU Counseling Program to Marriage, Family and Couples Counseling Option  
[Item #178-2012-LI0118 | Academic Proposal Request Form](#)

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

- Request for authorization to revise the B.S. in Mathematics by adding an Applied Math option  
[Item #178-1501-LI0118 | Academic Proposal Request Form | Curriculum Proposal Form](#)

January 2018

ITEM 178-2901-LI0118

**Notification of the establishment of a hybrid offering of the C.A.S. in Dental Assistant**

---

**THAT**

Great Falls College MSU is notifying the Montana Board of Regents of its intent to offer the 44 credit certificate of applied science in Dental Assistant in a hybrid format.

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**EXPLANATION**

The proposed hybrid option will be offered in addition to the current face-to-face program and will allow for students outside of the Great Falls area to complete the DA program without the need to relocate. This will help to provide formally educated dental assistants to communities beyond the Great Falls area (ex: Bozeman, Helena, Cut Bank, Kalispell, Missoula, Glendive, Billings, etc.).

---

**ATTACHMENTS**

Academic Proposal Request Form

Montana Board of Regents  
ACADEMIC PROPOSAL REQUEST FORM

ITEM 178-2901-LI0118 Submission Month or Meeting: January 2018

Institution: Great Falls College MSU CIP Code: 51.0601

Program/Center/Institute Title: C.A.S. in Dental Assistant

Includes (please specify below): Online Offering X Options \_\_\_\_\_

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit <http://mus.edu/che/arsa/preparingacademicproposals.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**
- X **4. Offering an existing postsecondary educational program via distance or online delivery**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What** The current face-to-face GFC Dental Assistant program is proposing the addition of a hybrid delivery option to help meet the needs of the dental community of Montana. The curriculum will remain the same for both on-site and hybrid-delivery students, however, the hybrid delivery students will attend classes via video conferencing (ex: WebEx). Lab sessions will be held on-campus approximately every other weekend during Fall and Spring semesters for the hybrid students. Summer clinical externships will be completed at approved clinical sites near each hybrid student's location of residence. All students who successfully complete the program will continue to earn a Certificate of Applied Science.

**Why** The proposed hybrid option will be offered in addition to the current face-to-face program and will allow for students outside of the Great Falls area to complete the DA program without the need to relocate. This will help to provide formally educated dental assistants to communities beyond the Great Falls area (ex: Bozeman, Helena, Cut Bank, Kalispell, Missoula, Glendive, Billings, etc.). In a survey of Montana dentists during the spring of 2016, 96% of dentists indicated that if they had an opening for a dental assistant, they would give preference to a graduate from a CODA accredited program (Montana Dentist Survey Spring 2016.)

**Resources** The addition of 1 adjunct lab instructor will be needed to comply with accreditation standards with program numbers over 12. Financial resources are needed to convert one classroom in the dental area to accommodate the video conferencing class delivery to the hybrid students. Distance students will also be provided a hybrid classroom kit with needed instruments and models. Finally, the program faculty are producing lab demonstration videos. All of these costs are being covered by the funds awarded the DA program through the HealthCARE MT grant.

**Relationship to similar MUS programs** There are currently two dental assistant programs in Montana that are accredited by the Commission on Dental Education (CODA), the GFC program and a program at Salish Kootenai College in Pablo. The SKC program does not have a distance option for their program, nor do they have plans to implement one at this time.

January 2018

ITEM 178-2902-LI0118

**Notification of the establishment of a hybrid offering of the A.A.S. in Paramedic**

---

**THAT**

Great Falls College MSU is notifying the Montana Board of Regents of its intent to offer the 65-67 credit associate of applied science in Paramedic in a hybrid format.

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**EXPLANATION**

The proposed hybrid option will be offered in addition to the current face-to-face program and will allow for students outside of the Great Falls area to complete the Paramedic program without the need to relocate. The students still come to campus for labs and clinical. This reduces the hardship of having to come to Great Falls for class multiple days/week.

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**ATTACHMENTS**

Academic Proposal Request Form

Montana Board of Regents  
ACADEMIC PROPOSAL REQUEST FORM

ITEM 178-2902-LI0118 Submission Month or Meeting: January 2018

Institution: Great Falls College MSU CIP Code: 51.0904

Program/Center/Institute Title: A.A.S. in Paramedic

Includes (please specify below): Online Offering  Options Distance Delivery

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit <http://mus.edu/che/arsa/preparingacademicproposals.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**
- X** **4. Offering an existing postsecondary educational program via distance or online delivery**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What** The current face-to-face GFC MSU Paramedic program is proposing the addition of a hybrid delivery option to help meet the needs of the EMS community of Montana. The curriculum will remain the same for both on-site and hybrid-delivery students, however, the hybrid delivery students will attend classes via video conferencing (ex: WebEx). Lab sessions will be held on-campus. Summer field internships will be completed at approved internship sites near each hybrid student's location of residence. All students who successfully complete the program will continue to earn an Associate of Applied Science.

**Why** The proposed hybrid option will be offered in addition to the current face-to-face program and will allow for students outside of the Great Falls area to complete the Paramedic program without the need to relocate.

**Resources** No additional resources are needed.

**Relationship to similar MUS programs** There are currently three Paramedic programs in Montana, the GFC MSU program, FVCC and City College. The GFC MSU I the only program with a distance option for their program.

January 2018

**ITEM 178-2903-LI0118**

**Notification of the establishment of a hybrid offering of the A.A.S. in Surgical Technology**

---

**THAT**

Great Falls College MSU is notifying the Montana Board of Regents of its intent to offer the 71 credit associate of applied science in Surgical Technology in a hybrid format.

---

**EXPLANATION**

The Great Falls College Surgical Technology Program is proposing the addition of a hybrid option to help meet the needs of the Gallatin County area. The curriculum will remain the same for both on-site and distance delivery students. The change will occur for the distance students. They will attend lecture class via WebEx and lab will be instructed at Gallatin College by a Great Falls College adjunct. Clinical rotations and internships will be completed through Gallatin College. All students will continue to meet the CAAHEP accreditation standards. They will come to Great Falls to take the certification exam with the rest of their cohort. They will graduate as a Great Falls College MSU student with an Associate of Applied Science degree upon completion of the program.

**ATTACHMENTS**

Academic Proposal Request Form



**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 178-2903-LI0118 Submission Month or Meeting: January 2018

Institution: Great Falls College MSU CIP Code: 51.0909

Program/Center/Institute Title: A.A.S. in Surgical Technology

Includes (please specify below): Online Offering  Options Distance Delivery

Please mark the appropriate type of request and submit with an Item Template and any additional materials, including those listed in parentheses following the type of request. For more information pertaining to the types of requests listed below, how to complete an item request, or additional forms please visit <http://mus.edu/che/arsa/preparingacademicproposals.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**
- X 4. **Offering an existing postsecondary educational program via distance or online delivery**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What** The Great Falls College Surgical Technology Program is proposing the addition of a hybrid option to help meet the needs of Gallatin College students. The curriculum will remain the same for both on-site and distance delivery students. The change will occur for the distance students. They will attend lecture class via WebEx and lab will be instructed at Gallatin College by a Great Falls College adjunct. Clinical rotations and internships will be completed through Gallatin College. All students will continue to meet the CAAHEP accreditation standards. They will come to Great Falls to take the certification exam with the rest of their cohort. They will graduate as a Great Falls College MSU student with an Associate of Applied Science degree upon completion of the program.

**Why** Gallatin College has reached out to Great Falls College MSU to extend our Surgical Technology Program to their area. With the recent closing of the Surgical Technology Program in Missoula, there is a need to fill the gap.

**Resources** Additional faculty will be required. Great Falls College MSU has hired an adjunct instructor. The adjunct will be responsible for teaching the lab portions of the program and will be based on the Gallatin College campus.

**Relationship to similar MUS programs** Currently, Missoula College, offers the Surgical Technology Program with the distance delivery piece. The program has been successful with this distance piece. However, due to changes at Missoula College, there is a need to fill the gap.

January 2018

**ITEM 178-1500-LI0118**

**Notification of establishing a C.T.S. in Behavioral Health**

---

**THAT**

Montana Tech is notifying the Montana Board of Regents of its intent to establish a certificate of technical studies in Behavioral Health.

---

**EXPLANATION**

This new certificate will help educate and train dedicated Behavioral Health Technicians to give initial and direct care to individuals coming from a variety of backgrounds. Students will learn to understand the complexities of persons in crisis and meet their needs with empathy and compassion. They will also work as a team to initiate and implement plan of care whether it be in an acute or inpatient setting.

---

**ATTACHMENTS**

Academic Proposal Request Form

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 178-1500-LI0118 Submission Month or Meeting: January 2018

Institution: Montana Tech CIP Code: 51.3902

Program/Center/Institute Title: C.T. S. in Behavioral Health

Includes (please specify below): Online Offering \_\_\_\_\_ Options \_\_\_\_\_

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

x **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**

x \_\_\_\_\_ 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**

**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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What**

The Highlands College (CTS) Certificate of Technical Studies program is designed to train and educate students in one semester and prepare them for Entry Level Employment in the Medical and Mental Health Field. Students will undergo an intense 15 credit load, 90% online via distance technology and interactive education. A physical safety assessment will be conducted toward the end of the semester by an in person MOAB training which will give students an additional certification. Students will take courses in the following subjects; Introduction to Abnormal Psychology, Mental Health and Addiction, Elements of Counseling, Crisis and Behavioral Management, Behavioral Lab Practicum. Upon completion of the program students can directly enter the workforce or use their education as a basis for many areas of study within the Medical and Mental Health Fields.

**Why**

To educate and train dedicated Behavioral Health Technicians to give initial and direct care to individuals coming from a variety of backgrounds. To understand the complexities of persons in crisis and meet their needs with empathy and compassion. Work as a team to initiate and implement plan of care whether it be in an acute or inpatient setting.

**Resources**

2 Adjunct Instructors

**Relationship to similar MUS programs**

None

**January, 2018**

**ITEM 178-2011-LI0118**

**Request for authorization to establish a Computer Science Teaching Minor**

---

**THAT**

Request authorization from the Montana Board of Regents to establish a Computer Science Teaching Minor.

---

**EXPLANATION**

Created in partnership between the College of Education, Health and Human Development and the Gianforte School of Computing, the Computer Science Teaching Minor (CSTM) is intended for undergraduate students interested in preparing to be computer science teachers in Montana.

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**ATTACHMENTS**

Academic Proposal Request Form  
Curriculum Proposal Form

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

- 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 Computer Science Teaching Minor is intended for those undergraduate students interested in preparing to be computer science teachers in Montana, with the necessary licensure for such. Computer science teachers are in demand in this state and beyond. The focus of this program is to prepare teachers with the pedagogical, content, and technological understandings related to computer science education in 5-12 contexts. The minor will address the foundational computer science and computational thinking-relevant content, coupled with the instructional planning, delivery, and assessment strategies, needed to be an effective computer science teacher.

- 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]

This minor will serve several purposes that align with MSU's strategic plan:

*Learning.* The CSTM will result in the training of more teachers prepared to meet the challenges in the rapidly growing field of computer science. Further, skilled teachers with computer science endorsements are needed in Montana and beyond.

*Discovery.* Because the CSTM will bring together researchers from across colleges, new interdisciplinary pedagogical research will be possible as collaborators work to research how best to prepare new teachers to teach CS in unique contexts across Montana.

*Engagement.* Preparing new teachers to teach CS means more CS courses can be taught in schools across Montana, encouraging K-12 interest in and instruction in one of the fastest growing disciplines in STEM.

*Integration.* Engaging in research on pedagogy to develop best practice models will be a component of this work, as will be considerable integration with outreach efforts across the state.

*Access.* Training new teachers to effectively teach CS in K-12 contexts across Montana means that more K-12 students will have an opportunity to be exposed to computer science, building potential career interest in CS strengthening STEM pathways.

*Stewardship.* The CSTM leverages existing courses and opportunities at MSU. No new courses will need to be created, nor will new space or resources be required.

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

Planning for the Computer Science Teaching Minor has been underway since Summer 2016. Department of Education and School of Computing faculty and administrators have met routinely to better understand the need for the program, discuss the role the minor will play in preparing Montana educators to teach Computer Science, and build the cross-college interdisciplinary curriculum. The proposal was then approved by the relevant curriculum committee within each academic unit before being submitted to the Board of Regents as a Level I proposal.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

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

a. List the program requirements using the following table.

	Credits
Credits in required courses offered by the department offering the program	15
Credits in required courses offered by other departments	7
Credits in institutional general education curriculum	0
Credits of free electives	3
Total credits required to complete the program	25

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 adopted Administrative Rules of Montana 10.58.528 Computer Science teaching specific standards, were used as the foundation for the computer science teaching minor intended learning outcomes. Those standards have been adapted to demonstrate what students will know, be able to do, and value or appreciate because of completing the program.

As such, candidates will be able to:

- demonstrate knowledge of computer science content, models, important principles, and concepts
- demonstrate knowledge of algorithm design, analysis, and implementation in a programming language, data structures, and abstract data types
- demonstrate effective design, development, and testing of programs
- demonstrate knowledge of computer systems and networks
- demonstrate an understanding of software engineering
- demonstrate an understanding of the key concepts of computer/information security
- demonstrate an understanding of the role computer science and software engineering plays in the modern world
- demonstrate effective content pedagogical strategies that make the discipline comprehensible to students
- design projects that require students to effectively describe computing artifacts and communicate results using multiple forms of media
- identify problematic concepts and constructs in computer science and appropriate strategies to address them
- promote and model the safe, effective, and ethical use of computer hardware, software, peripherals, and networks and develop digital citizenship



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**CURRICULUM PROPOSAL FORM**

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]*

Computer science has historically been marginalized in K-12 classroom in favor of other STEM disciplines. However, computer science-related careers are projected to grow significantly over the next several decades (United States Bureau of Labor Statistics, 2012). Further, computer science enrollment projections in higher education suggest that the number of graduates will not be sufficient to address industry needs (CSTA, 2015). In response to this growing need, K-12 educators have begun to recognize the critical role computer science plays in driving innovation and supporting the US economy, and considerable efforts are underway to better support interest in computer science. As a result, a considerable shift is afoot across the nation to make computer science a central component of core academic work in K-12 contexts. Computer science teachers are in demand in Montana, yet the state is currently facing a shortage of the mechanisms needed to adequately train educators to teach computer science. Preparing new teachers to teach computer science means more computer science courses can be taught in schools across Montana, encouraging diversity within the field, and support K-12 interest in and instruction in one of the fastest growing disciplines in STEM. Ultimately, this means more opportunities for K-12 learners to be exposed to computer science, strengthening the pathways to a career in computer science.

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
University of Montana	Minor	Computer Science Teaching Minor (in development)

- 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]*

At the time of this proposal, no other computer science teaching minor exists within the MUS. However, through conversations regarding possible collaborative efforts, work is underway at the University of Montana to propose a Computer Science Teaching Minor. In today's world where computer skills are increasingly important both professionally and personally, and the critical nature of having teachers trained to teach computer science, the more universities that can offer a computer science teaching minor, the better.

- 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]*

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**CURRICULUM PROPOSAL FORM**

Several brief correspondences between the University of Montana and Montana State University computer science and teacher education faculty took place in the Fall of 2016. The nature of the correspondences was to update each institution about efforts afoot at both universities to launch (or re-launch) computer science teaching minors.

- 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]*

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

Fall Headcount Enrollment					Graduates				
AY_18__	AY_19__	AY_20__	AY_21__	AY_22__	AY_18__	AY_19__	AY_20__	AY_21__	AY_22__
5	10	15	15	15	0	5	10	15	15

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

These numbers come from conservative estimates based on the interest expressed from current STEM teaching majors. Further, our faculty and staff have anecdotally interacted with MSU students who heard that we are developing a Computer Science teaching major, and many students have expressed considerable interest in the program. In addition, there is a national push to offer more computer science in the nation's K-12 schools (\$4 Billion "Computer Science for All" initiative).

- c. What is the initial capacity for the program?

We have capacity for upwards of 20 students to initially launch the program. However, we anticipate that the Computer Science Teaching Minor will attract at least 5 students by Fall Semester 2018, at least 10 students by Fall Semester 2019 and at least 15 students by Fall Semester 2020.

- 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]*

Success of the program will make of the already well-established MSU Teacher Education Program Performance Assessment System (PAS). The PAS is used to collect and analyze data relevant to all current teaching majors and minors. Data sources are far reaching, and include multiple sources relevant to student performance, as well as stakeholder input. This same system would provide the primary mechanism for measurement of the proposed Computer Science Teaching Minor. If success is not met, data-driven remedial action regarding program curriculum and implementation would be take place, guided by those data collected through the PAS.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

- 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 PAS is an electronic database system composed of a set of assessments maintained by our Assessment Coordinator, and serves as the basis for our annual cycle of continuous improvement by providing sound data for decision-making regarding areas of program development. Over the course of the academic year, the PAS is used to systematically collect, aggregate, and analyze data regarding the qualifications, knowledge, and performance of our Pre-Education Students and Teacher Candidates as well as program outcomes.

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

Data collected for the Teacher Education Program Performance Assessment System (PAS) comprise both knowledge-based assessments, as well as performance based assessments. Specific knowledge-based measures include academic performance in required course work (course grades and scores on Signature Assignments), PRAXIS II scores specific to the content area of the teaching license, and the Teacher Work Sample (TWS). The TWS is a research-focused product all student teachers must complete during both practicum and student teaching, and is an analytical reflection of a five-lesson sequence. Performance based assessments include both a midterm and final Performance Assessment that is aligned to the Danielson Framework for Teaching.

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

Members of the TEP faculty and staff analyze the data from the PAS and prepare a full annual report for stakeholders. The findings are discussed at several venues and used to guide decisions about program improvement. Specific to this proposal, data relevant to the Computer Science Teaching Minor would be collected and analyzed in the same manner the Department of Education collects and analyzes data for all teaching minors.

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

The MSU Teacher Education Program is accredited both by the Council for Accreditation of Educator Preparation (CAEP), the largest teacher educator accreditation organization in the United States, and the Montana Office of Public Instruction. Therefore, the Computer Science Teaching Minor would be subjected to the same rigorous review by both CAEP and OPI. CAEP review would occur seven years after May 3, 2016 when our latest CAEP accreditation status was granted. And the next OPI review of the teacher education program, for which the Compute Science Teaching Minor would be included, will take place in 2022.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

**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]*

Current Department of Education and Gianforte School of Computing facilities, equipment, space, laboratory space, and computers are sufficient for the successful implementation of the Computer Science Teaching Minor. Students who work toward the Computer Science Teaching Minor will already be education majors, and required to complete Education courses like EDU 370 and EDU 397 regardless of their minor in Computer Science. Therefore, the Department of Education's current space and computers, like the Educational Technology learning laboratory in Reid Hall 425, will accommodate the increased need. If there is an increased use of those facilities due to the increase in students enrolled in the Computer Science Teaching Minor, the Gianforte School of Computing and the Department of Education will apply for Equipment Fee Allocation Committee (EFAC) and Computer Fee Allocation Committee (CFAC) funds to support the purchase of the needed teaching resources.

- 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]*

There are no new foreseen facilities, equipment, space, laboratory instruments needed to support the Computer Science Teaching Minor. If the new teaching minor results in a significant number of new student credit hours being taught, additional facilities and equipment might be needed. However, these resources can be acquired using standard mechanisms that Montana State University has in place to respond to growth. Further, the Gianforte School of Computing and the Department of Education will apply for Equipment Fee Allocation Committee (EFAC) and Computer Fee Allocation Committee (CFAC) funds to support the purchase of the needed specific technology-related resources.

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

Current Department of Education and Gianforte School of Computing instructional, support, and administrative resources are sufficient for the successful implementation of the Computer Science Teaching Minor. Further, each of the courses in the minor are already in existence and active, and the courses are going to run regardless. Therefore, adding the several students each year to those courses, already being taught as part of other programs in the Department of Education and Computer Science, suggests that no new personnel resources will be needed. If the new teaching minor results in a significant number of new student credit hours being taught, additional personnel might be needed. However, these personnel can be acquired using standard mechanisms that Montana State University has in place to respond to growth.

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- 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]*

There are minimal new personnel needs to support the Computer Science Teaching Minor. Because students who enroll in the minor will already be from the Department of Education, and the Department of Education courses that are required for the minor are already part of the required coursework for all Education majors, there will be no impact on Education resources. For the Computer Science courses, there is enough capacity for the additional 15 students we might enroll by Year 3 in CSCI 127, CSCI 132, and CSCI 232. For CSCI 107, the extra 15 students would require a roughly .25 GTA and a bigger room would be needed to accommodate the extra 15 students. For the CSCI electives (e.g. CSCI 215), a .5 FTE GTA would be needed. If the new teaching minor does result in significant student growth, additional personnel to handle that growth will be acquired using the standard mechanisms that Montana State University has in place to respond to growth.

**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]*

Yes, the available library and information resources are adequate for the Computer Science Teaching Minor.

- 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]*

Yes, existing student services do have the capacity to accommodate the proposed program. Because the proposed program is a teaching minor, and all students working toward teaching minors must be teaching majors, means all students enrolled in the program will already be Montana State University teacher education students. Therefore, there are little to no implications pm services for the rest of the student body.

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

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

	Year 1	Year 2	Year 3
Revenues	\$0	\$0	\$0
Expenditures	Allocated cost as courses are currently taught	Allocated cost as courses are currently taught	Allocated cost as courses are currently taught
Net Revenue (revenues-expenditures)	\$0	\$0	\$0

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

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

This is a non-revenue generating, non-cost bearing minor. Students are already enrolled as FTE and the courses required for the minor are already in load for CS and Education faculty.

- 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]*  
Courses for the CS Minor are already taught through the CS and Education programs. The proposal does not require a reallocation of funds but increases student credit hours (thus revenue) through current funding allocation.
- 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.  
No additional base funding is required or requested at this time. If the size of the student cohort grows beyond current capacity, additional resources will be sought through standard procedures. This might include requesting additional GTAs.
- 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]*  
This program is not grant funded.
- 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]*  
Not applicable

- 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 course, class, lab, or program fees will be charged for the Computer Science Teaching Minor.

- 14.** Complete the budget template below with the following information:

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program.
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Amounts should reconcile subsequent pages where budget explanations are provided.

As indicated, this is a non-revenue generating, non-cost bearing minor. Students are already enrolled as FTE and the courses required for the minor are already in load for CS and Education faculty.

Signature/Date


Montana Board of Regents  
CURRICULUM PROPOSAL FORM

College or School Dean:  January 8, 2018

Chief Academic Officer:  1/23/18

Chief Executive Officer:

Flagship Provost\*:  1/23/18

Flagship President\*: 

\*Not applicable to the Community Colleges.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

**I. PROJECTED STUDENT ENROLLMENT**

	FY <u>2019</u>		FY <u>2020</u>		FY <u>2021</u>	
	FTE	Headcount	FTE	Headcount	FTE	Headcount
Projected enrollments		5		10		15

**II. REVENUE**

	FY <u>2019</u>		FY <u>2020</u>		FY <u>2021</u>	
	On-going	One-time	On-going	One-time	On-going	One-time
1. New Appropriated Funding Request	0	0	0	0	0	0
2. Institution Funds	0	0	0	0	0	0
3. Federal	0	0	0	0	0	0
4. New Tuition Revenues from Increased Enrollments	0	0	0	0	0	0
5. Student Fees	0	0	0	0	0	0
6. Other (i.e., Gifts)	0	0	0	0	0	0
<b>Total Revenue</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

*Ongoing is defined as ongoing operating budget for the program which will become part of the base.*

*One-time is defined as one-time funding in a fiscal year and not part of the base.*

**III. EXPENDITURES**

	FY <u>2019</u>		FY <u>2020</u>		FY <u>2021</u>	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>A. Personnel Costs</b>						
1. FTE	0	0	0	0	0	0
2. Faculty	0	0	0	0	0	0
3. Adjunct Faculty	0	0	0	0	0	0
4. Graduate/Undergrad Assistants	0	0	0	0	0	0
5. Research Personnel	0	0	0	0	0	0



**Montana Board of Regents  
CURRICULUM PROPOSAL FORM**

6. Directors/Administrators	0	0	0	0	0	0
7. Administrative Support Personnel	0	0	0	0	0	0
8. Fringe Benefits	0	0	0	0	0	0
9. Other: _____	0	0	0	0	0	0
<b>Total Personnel and Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

	FY 2019		FY 2020		FY 2021	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>B. Operating Expenditures</b>						
1. Travel	0	0	0	0	0	0
2. Professional Services	0	0	0	0	0	0
3. Other Services	0	0	0	0	0	0
4. Communications	0	0	0	0	0	0
5. Materials and Supplies	0	0	0	0	0	0
6. Rentals	0	0	0	0	0	0
7. Materials & Goods for Manufacture & Resale	0	0	0	0	0	0
8. Other: _____	0	0	0	0	0	0
<b>Total Operating Expenditures</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

	FY 2019		FY 2020		FY 2021	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>C. Capital Outlay</b>						
1. Library Resources	0	0	0	0	0	0
2. Equipment	0	0	0	0	0	0
<b>Total Capital Outlay</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

	FY 2019	FY 2020	FY 2021
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**Montana Board of Regents  
CURRICULUM PROPOSAL FORM**

**D. Capital Facilities  
Construction or Major  
Renovation**

	On-going	One-time	On-going	One-time	On-going	One-time
	0	0	0	0	0	0

FY 2019

FY 2020

FY 2021

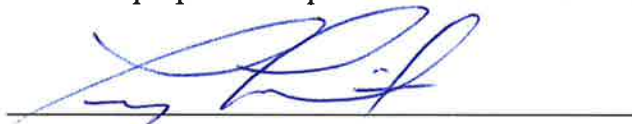
**E. Other Costs**

	On-going	One-time	On-going	One-time	On-going	One-time
1. Utilities	0	0	0	0	0	0
2. Maintenance & Repairs	0	0	0	0	0	0
3. Other: _____	0	0	0	0	0	0
<b>Total Other Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**TOTAL EXPENDITURES:** \$0      \$0      \$0      \$0      \$0      \$0

**Net Income (Deficit)** \$0      \$0      \$0      \$0      \$0      \$0

The signature of the campus Chief Financial Officer signifies that he/she has reviewed and assessed the fiscal soundness of the proposal and provided his/her recommendations to the Chief Academic Officer as necessary.



Campus Chief Financial Officer Signature

Chief Financial Officer comments:

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

## Appendix A – Proposed New Curriculum

We propose that the Computer Science Teaching Minor be fulfilled with the following courses:

- **Computer Science Credits: 18**
  - CSCI 107 - The Joy and Beauty of Computing: 3 credits
  - CSCI 127 - The Joy and Beauty of Data: 4 credits
  - CSCI 132 - Basic Data Structures and Algorithms: 4 credits
  - CSCI 232 - Data Structures and Algorithms: 4 credits
  - One additional relevant CSCI elective (e.g. CSCI 215): 3 credits
  
- **Education Credits: 7**
  - EDU 370 - Integrating Technology: 2 credits
  - EDU 498 - Internship: 2 credits
  - EDU 497 - Methods (5-12 Science) OR EDU 497 - Methods (5-12 Math): 3 credits
  
- **TOTAL = 25 credits**

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 178-2011-LI0118 Submission Month or Meeting: January, 2018

Institution: Montana State University CIP Code: 13.1321

Program/Center/Institute Title: Computer Science Teaching Minor

Includes (please specify below): Online Offering \_\_\_\_\_ Options \_\_\_\_\_

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

x **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**

**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)
- x \_\_\_\_\_ **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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What**

Computer Science Teaching Minor

**Why**

This proposal puts for consideration a new teaching minor in Computer Science. The Computer Science Teaching Minor is intended for those undergraduate students interested in preparing to be computer science teachers in Montana, with the necessary licensure for such. Computer science teachers are in demand in this state and beyond. Because schools are required to hire teachers considered qualified to teach within specific subject areas, preparing new teachers with endorsements is a necessary step toward supporting computer science instruction in 5-12 instruction in Montana. The focus of this program is to prepare teachers with the pedagogical, content, and technological understandings related to computer science education in 5-12 contexts. The minor will address the foundational computer science and computational thinking-relevant content, coupled with the instructional planning, delivery, and assessment strategies, needed to be an effective computer science teacher.

**Resources**

The Department of Education and School of Computing faculty are capable of developing and delivering the Computer Science Teaching Minor. If the new teaching minor results in a significant number of new student credit hours being taught, additional personnel might be needed. However, these personnel can be acquired using standard mechanisms that Montana State University has in place to respond to growth.

**Relationship to similar MUS programs:**

MSU currently offers a Computer Science B.S. degree, a Computer Science minor, and teaching/education majors. A Computer Science B.A. degree has been proposed that if approved, could be offered as early as Fall Semester 2017. The proposed minor would tightly interface with these currently offered majors, and make use of courses already offered as part of their curricula to provide teacher education undergraduate candidates the necessary coursework to obtain a Computer Science endorsement. This teaching license will leave them qualified to teach computer science.

January 2018

**ITEM 178-2012-LI0118**

**Request authorization to Re-title MSU Counseling Program to Marriage, Family and Couples Counseling Option**

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**THAT**

Request approval from the Montana Board of Regents for MSU Counseling Program request to change the title for the Marriage and Family Counseling option: Addition of the word “couples” to the existing title.

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**EXPLANATION**

During the last accreditation team visit by the Council for the Accreditation of Counseling and Related Educational Programs, it was suggested that we make our option title consistent with CACREP standards. Additionally, adding the word “couples” more accurately describes the program option.

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**ATTACHMENTS**

Academic Proposal Form

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 178-2012-LI0118 Submission Month or Meeting: January, 2018

Institution: Montana State University CIP Code: 19.0500

Program/Center/Institute Title: Dept. of Health and Human Development, Counseling MS

Includes (please specify below): Online Offering \_\_\_\_\_ Options Mental Health Counseling and Marriage & Family Counseling

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

x **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**

**OCHE Approvals**

- x \_\_\_\_\_ **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*

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**B. Level II:**

1. **Establishing a new postsecondary educational program** (Curriculum Proposal and Completed Intent to Plan Form)
2. **Exceeding the 120 credit maximum for baccalaureate degrees** *Exception to policy 301.11*
3. **Forming, eliminating or consolidating an academic, administrative, or research unit** (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. **Re-titling an academic, administrative, or research unit**

**Proposal Summary [360 words maximum]**

**What:** The MSU Counseling major is requesting a title change for the Marriage and Family Counseling option- to add the word couples. The new title would be Marriage, Couples, and Family Counseling.

**Why:** During the MSU Counseling program's last accreditation visit (fall of 2015), the accreditation team suggested that we change the title of the marriage and family counseling program to be consistent with our accrediting body – Council for Accreditation of Counseling and Related Educational Programs (CACREP). Therefore, we are requesting a titling change by adding the additional word—couples—to the already existing program. Additionally, we believe that the title more accurately describes the program learning objectives by including the word couples.

**Resources:** No resources are required.

**Relationship to similar MUS programs:** We are the only marriage and family counseling program in the MUS system.



January 2018

**ITEM 178-1501-LI0118**

**Request for authorization to revise the B.S. in Mathematics by adding an Applied Math option**

**THAT**

Montana Tech is requesting authorization from the Montana Board of Regents to add an Applied Mathematics option to our B.S. in Mathematics.

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**EXPLANATION**

Currently the Math department offers two tracks. Option one prepares students that wish to become K-12 mathematics teachers. The other option prepares students that wish to attend graduate school in the mathematical sciences. We propose adding a third option to the existing mathematics major in applied mathematics.

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**ATTACHMENTS**

Academic Proposal Request Form  
Curriculum Proposal Form

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

ITEM 178-1501-LI0118 Submission Month or Meeting: January 2018

Institution: Montana Tech CIP Code: 27.00

Program/Center/Institute Title: B.S. in Mathematics

Includes (please specify below): Online Offering  Options Pure Mathematics, Secondary Education

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

**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*

Montana Board of Regents  
ACADEMIC PROPOSAL REQUEST FORM

**B. Level II:**

1. Establishing a new postsecondary educational program (Curriculum Proposal and Completed Intent to Plan Form)
2. Exceeding the 120 credit maximum for baccalaureate degrees *Exception to policy 301.11*
3. Forming, eliminating or consolidating an academic, administrative, or research unit (Curriculum or Center/Institute Proposal and Completed Intent to Plan Form, except when eliminating or consolidating)
4. Re-titling an academic, administrative, or research unit

**Proposal Summary [360 words maximum]**

**What**

Currently the department offers two tracks. One option prepares students that wish to become K-12 mathematics teachers. The other option prepares students that wish to attend graduate school in the mathematical sciences. We propose adding a third option to the existing mathematics major in applied mathematics.

**Why**

According to the Society for Industrial and Applied Mathematics, “[t]he second-largest group by academic specialty is applied mathematics”<sup>1</sup>. The demand for mathematicians in business and industry is expected to grow 21 percent from 2014 to 2024.<sup>2</sup> The Bureau of Labor Statistics states that “[b]usinesses will need mathematicians to analyze the increasing volume of digital and electronic data”<sup>3</sup>. The high demand for Applied Mathematicians makes it the 12<sup>th</sup> highest paying college majors, ahead of both pure mathematics and statistics.<sup>4</sup>

The report “The Mathematical Sciences in 2025” looked at the current state of the mathematical sciences and made recommendations for changes in the discipline. One such recommendation was to increase the number of mathematicians that “understand the role of the mathematical sciences in the wider world of science, engineering, medicine, defense and business”<sup>5</sup>.

<sup>1</sup> <https://www.siam.org/reports/mii/2012/life.php>

<sup>2</sup> Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2016-17 Edition*, Mathematicians, on the Internet at <http://www.bls.gov/ooh/math/mathematicians.htm> (visited August 24, 2017).

<sup>3</sup> Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2016-17 Edition*, Mathematicians, on the Internet at <http://www.bls.gov/ooh/math/mathematicians.htm> (visited August 24, 2017).

<sup>4</sup> <http://colleges.startclass.com/stories/5231/top-paying-college-majors#14-Applied-Mathematics>

<sup>5</sup> National Research Council. *The Mathematical Sciences in 2025*. Washington, DC: The National Academies Press, 2013. doi:10.17226/15269.

**Montana Board of Regents**  
**ACADEMIC PROPOSAL REQUEST FORM**

**Resources**

This new option will not require any additional courses to be developed or require any additional faculty members.

**Relationship to similar MUS programs**

Both The University of Montana and Montana State University offer applied mathematics options. However, our degree allows students to count a small number of upper level courses from another science or engineering discipline towards the degree. These courses were added to our degree in order to respond to both the recommendation in "The Mathematical Sciences in 2025", the Montana Tech Strategic Plan, and the Montana Tech Mission Statement.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

- 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]*

Currently the department offers a B.S. in Mathematical Sciences with no options. We propose adding a second option to the existing mathematics major. This new option will be in Applied Mathematics. Students will be able to take 12 credits of 300/400 level coursework in another discipline besides mathematics.

- 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 Montana Tech Mission statement describes the university's commitment to "exemplary undergraduate and graduate education ... that blends theory with practice".<sup>1</sup> Applied Mathematics uses theory from both mathematics and other disciplines to solve real world issues. As such, it is an excellent example of a field that inherently blends theory with practice. The Montana Tech Strategic Plan emphasizes the commitment of the university to "[o]ffer courses and programs that enable students to acquire knowledge and skills essential to employment and success in their field and profession".<sup>2</sup> The Applied Mathematics program that we have designed meets this goal. Applied Mathematicians work in many different Industries and in both Business and Government. In order to ensure that our graduates will gain the necessary skills applying mathematical ideas to problems in another discipline, we have included a requirement that students complete four upper level (300 or 400 level) courses in another discipline. This degree is an excellent standalone degree for students interested in working as a mathematician in Business, Industry, or Government. It is also an excellent second major for students majoring in engineering or the sciences.

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

From at least 1984 to 1999, the Department of Mathematical Sciences offered an option in applied mathematics. In 2000, the option in applied mathematics was replaced by an option in statistics. In 2011, statistics became a separate degree program. This left students majoring in Mathematical Sciences with only one option: pure mathematics. The curriculum for the new option was developed by the Department of Mathematical Sciences in the spring of 2016. The curriculum was approved in April of 2016 by the Montana Tech Curriculum Review Committee and by the Faculty Senate. The Intent to Plan proposal was discussed at the CAO call in October of 2017.

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<sup>1</sup> <http://www.mtech.edu/about/>

<sup>2</sup> <http://www.mtech.edu/about/strategic-plan/core-themes.htm>

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

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

a. List the program requirements using the following table.

	Credits
Credits in required courses offered by the department offering the program	
M 171 – Calculus 1 (3 credits)	
M 171 – Calculus 2 (3 credits)	
M 242 – Methods of Proof (3 credits)	
M 273 – Multivariable Calculus (4 credits)	
M 274 – Introduction to Differential Equations (3 credits)	
M 333 – Linear Algebra (3 credits)	
M 351 – Algebraic structures I (3 credits)	
M 426 – Mathematical Modeling (3 credits)	
M 435W – Advanced Calculus I (3 credits)	
4 300/400 level mathematics courses (12 credits)	40
Credits in required courses offered by other departments	
PHYS 234 – Mechanics (3 credits)	
STAT 332 – Statistics for scientists and engineers (3 credits)	
A course in computer programming (3 credits)	
A sequence of science courses including a laboratory course (7-8 credits)	
4 300/400 level courses from another math/science discipline (12 credits)	
First year seminar (1-2 credits)	
Junior or senior seminar (1-2 credits)	30-33
Credits in institutional general education curriculum	
2 social sciences courses (6 credits)	
2 humanities courses (6 credits)	
2 communications courses (6 credits)	18
Credits of free electives	33
Total credits required to complete the program	121-124

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.

- Students should be able to write clear well-organized and logical mathematical arguments.
- Students should have an ability to identify, formulate, and solve mathematical problems using tools from different mathematical areas, including algebra, analysis, and differential equations.
- Students should be able to design mathematical models.
- Students should have a deep understanding of at least one area of specialization within mathematics or its applications.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

- 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]

According to the Society for Industrial and Applied Mathematics, while statisticians make up approximately half of the mathematicians working in business and industry, “[t]he second-largest group by academic specialty is applied mathematics”<sup>3</sup>. The demand for mathematicians in business and industry is expected to grow 21 percent from 2014 to 2024.<sup>4</sup> The Bureau of Labor Statistics states that “[b]usinesses will need mathematicians to analyze the increasing volume of digital and electronic data”<sup>5</sup>. The high demand for Applied Mathematics makes it the 12<sup>th</sup> highest paying college majors, ahead of both pure mathematics and statistics.<sup>6</sup>

The report “The Mathematical Sciences in 2025” looked at the current state of the mathematical sciences and made recommendations for changes in the discipline. One such recommendation was to increase the number of mathematicians that “understand the role of the mathematical sciences in the wider world of science, engineering, medicine, defense and business”.<sup>7</sup> The new Applied Mathematics option will allow students to select an approved sequence of focused courses from at least a science or engineering discipline as part of their applied mathematics degree. This will allow students to gain experience applying mathematics to problems in other disciplines. This experience will be beneficial to students seeking jobs in business, industry, or government.

- 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
University of Montana	B.A.	Applied Mathematics Option
Montana State University	B.S.	Applied Mathematics Option

<sup>3</sup> <https://www.siam.org/reports/mii/2012/life.php>

<sup>4</sup> Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2016-17 Edition*, Mathematicians, on the Internet at <http://www.bls.gov/ooh/math/mathematicians.htm> (visited August 24, 2017).

<sup>5</sup> Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2016-17 Edition*, Mathematicians, on the Internet at <http://www.bls.gov/ooh/math/mathematicians.htm> (visited August 24, 2017).

<sup>6</sup> <http://colleges.startclass.com/stories/5231/top-paying-college-majors#14-Applied-Mathematics>

<sup>7</sup> National Research Council. *The Mathematical Sciences in 2025*. Washington, DC: The National Academies Press, 2013. doi:10.17226/15269.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

- 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]*

The Applied Mathematics option is of interest, in part, because of the appeal as a second major for students with a first major in Engineering and Science degrees. Our current pure mathematics degree is not a good fit for students wanting to double major. The courses required as part of the pure major are often not ones that complement students' other course of study. The applied major is also of interest to students seeking a single major in Mathematics that would like to work at the intersection of mathematics and another field. The Applied Mathematics option has a greater degree of flexibility that will allow students to complete coursework in one or more additional fields. This additional coursework will prepare the mathematics majors to work on mathematical problems that arise from other disciplines.

- 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]*

We are not planning on collaborating with any similar programs at other institutions. Since this program requires no additional courses to be developed, nor any new faculty members to be hired, it was not necessary to collaborate with other Montana institutions. However, where appropriate collaborations present themselves, we would evaluate the potential of these collaborations.

- 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]*

Because the program requires no additional courses to be developed and no additional faculty hires, full implementation of the option can begin in the fall of 2018.

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

Fall Headcount Enrollment					Graduates				
AY_18__	AY_19__	AY_20__	AY_21__	AY_22__	AY_19__	AY_20__	AY_21__	AY_22__	AY_23__
3	5	7	9	10	0	3	3	5	5

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

We have 3 current students seeking a double major in mathematics and another discipline. These students intend to switch to the Applied Option if it is approved. We used these three students to estimate the initial number of students that we will enroll in the program. We then used historical enrollment data to estimate the approximate growth of the program. From 1990-1999 we had an average of 21.5 students enrolled in either the Applied or Pure option. From 2012-2017, we had an average of 11.6 students enrolled in the Pure option. Based on this data, we anticipate that by AY22, we will have approximately 10 students that will be enrolled in our Applied Mathematics option.



**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

In order to estimate the initial number of graduates for the program, we used historical data on graduation in the Applied Option. Between 1990 and 1999, an average of 2.8 students graduated with an Applied Mathematics Option each year. The number of graduates each year ranged from 1-6. We used this average as our estimate for the initial graduation rate of the program. We will also seek to increase this number by a modest amount of two students after two years.

- c. What is the initial capacity for the program?

The initial capacity for the program is approximately 40 students (10 first year, 10 sophomores, 10 juniors, and 10 seniors).

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 success of the program will be determined using the number of graduates in the first five years of the program. Our goal is to have at least 5 graduates in the first 5 years of the program. If we do not meet the goal for the number of graduates, we will work with the recruiting office for two years. If we are not able to increase the number of students enrolling in the applied mathematics option at the end of that two years, we will seek to terminate the program.

- 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 department assess the student outcomes of our current program each year in our annual program review. Data are collected each year from our graduating seniors. This data comes from a variety of sources, including student self-reports, surveys of current students and alumnae, annual graduation survey results compiled by Career Services, standardized exams like the ETS Proficiency Exam, and grades in key courses within the program.

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

The direct measures of student learning will include the ETS Proficiency Exam, grades in select courses within the program, and capstone projects completed. Indirect measures will include course evaluations and surveys of both current students and recent graduates.

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

The department analyzes the findings from the program review each year in order to make needed revisions to our program. We are seeking to create an Applied Option in response to data from one of our program reviews. The survey of both alumnae and students conducted in 2015 revealed the need for an option that provided specific preparation needed for a career in business, industry, or government.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

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

Mathematics programs do not have a separate or specialized accrediting body. Therefore, we will not seek a specialized accreditation for our program.

**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]*

The Mathematical Sciences department has eight offices. These offices are the only spaces that are used exclusively by the department. Since the new option does not require the creation of any new courses, an increase the frequency of needed course offerings, or an increase in staffing we do not anticipate any additional facilities, equipment, space, laboratory instruments, etc. that will be needed to support the program.

- 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]*

Since the new option does not require the creation of any new courses or increase the frequency of needed course offerings, we do not anticipate any additional facilities, equipment, space, laboratory instruments, etc. that will be needed to support the program.

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

Currently, the Department of Mathematical Sciences includes 8 full-time faculty members. Three faculty members are instructors and teach primarily the service courses (e.g. college algebra, Calculus) offered by the department. The remaining five faculty members are research active faculty. These faculty teach a mix of service courses and courses for the existing mathematics major. The upper level courses that will count towards the degree had an average enrollment of 9 students from the fall semester of 2011 until the spring semester of 2017. The additional 10 students each year will be accommodated into the existing courses without any need to increase the number of sections or the frequency with which these sections are offered.

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

- 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]*

Since the new option does not require the creation of any new courses or increase the frequency of needed course offerings, we do not anticipate any additional personnel will be needed to support the program.

**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]*

Since the new option will not require the creation of new courses, there should be no need for additional library or information resources.

- 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]*

Since the courses already exist and are just being arranged to provide another career avenue for students there will be no change in our student services capacity to accommodate the student body.

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

This will only enhance the financial situation since we are not adding any additional courses. It will allow students to either major in the program or obtain a second major which allows us to increase credit hour production.

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

	Year 1	Year 2	Year 3
Revenues	\$21,418	\$37,057	\$54,116
Expenditures	-0-	-0-	-0-
Net Revenue (revenues-expenditures)	\$21,418	\$37,057	\$54,116

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

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

Since the courses already exist there will be no additional expense.

- 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 additional student fees will be imposed.

- 14. Complete the budget template below with the following information:**

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program.
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Amounts should reconcile subsequent pages where budget explanations are provided.

Montana Board of Regents  
CURRICULUM PROPOSAL FORM

Signature/Date

College or School Dean:

*Doug Lee 1/10/18*

Chief Academic Officer:

*Douglas M. Abbott 1/10/18*

Chief Executive Officer:

*Ronald M. Blackletter 1/10/18*

Flagship Provost\*: N/A

Flagship President\*: N/A

\*Not applicable to the Community Colleges.

**Montana Board of Regents  
CURRICULUM PROPOSAL FORM**

**I. PROJECTED STUDENT ENROLLMENT**

	FY <u>18</u>		FY <u>19</u>		FY <u>20</u>	
	FTE	Headcount	FTE	Headcount	FTE	Headcount
Projected enrollments	<u>3</u>	<u>3</u>	<u>5</u>	<u>5</u>	<u>7</u>	<u>7</u>

**II. REVENUE**

	FY <u>18</u>		FY <u>19</u>		FY <u>20</u>	
	On-going	One-time	On-going	One-time	On-going	One-time
1. New Appropriated Funding Request	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
2. Institution Funds	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
3. Federal	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
4. New Tuition Revenues from Increased Enrollments	<u>16,305</u>	<u>0</u>	<u>28,535</u>	<u>0</u>	<u>41,946</u>	<u>0</u>
5. Student Fees	<u>5,113</u>	<u>0</u>	<u>8,522</u>	<u>0</u>	<u>12,170</u>	<u>0</u>
6. Other (i.e., Gifts)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>Total Revenue</b>	<u><b>\$21,418</b></u>	<u><b>\$0</b></u>	<u><b>\$37,057</b></u>	<u><b>\$0</b></u>	<u><b>\$54,116</b></u>	<u><b>\$0</b></u>

*Ongoing is defined as ongoing operating budget for the program which will become part of the base.*

*One-time is defined as one-time funding in a fiscal year and not part of the base.*

**III. EXPENDITURES N/A**

	FY _____		FY _____		FY _____	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>A. Personnel Costs</b>						
1. FTE						
2. Faculty						
3. Adjunct Faculty						
4. Graduate/Undergrad Assistants						
5. Research Personnel						

**Montana Board of Regents**  
**CURRICULUM PROPOSAL FORM**

6. Directors/Administrators	_____	_____	_____	_____	_____	_____
7. Administrative Support Personnel	_____	_____	_____	_____	_____	_____
8. Fringe Benefits	_____	_____	_____	_____	_____	_____
9. Other: _____	_____	_____	_____	_____	_____	_____
<b>Total Personnel and Costs</b>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>

	FY _____		FY _____		FY _____	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>B. Operating Expenditures</b>						
<b>N/A</b>						
1. Travel	_____	_____	_____	_____	_____	_____
2. Professional Services	_____	_____	_____	_____	_____	_____
3. Other Services	_____	_____	_____	_____	_____	_____
4. Communications	_____	_____	_____	_____	_____	_____
5. Materials and Supplies	_____	_____	_____	_____	_____	_____
6. Rentals	_____	_____	_____	_____	_____	_____
7. Materials & Goods for Manufacture & Resale	_____	_____	_____	_____	_____	_____
8. Other: _____	_____	_____	_____	_____	_____	_____
<b>Total Operating Expenditures</b>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>

	FY _____		FY _____		FY _____	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>C. Capital Outlay</b>						
<b>N/A</b>						
1. Library Resources	_____	_____	_____	_____	_____	_____
2. Equipment	_____	_____	_____	_____	_____	_____
<b>Total Capital Outlay</b>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>	<u><u>\$0</u></u>

**Montana Board of Regents  
CURRICULUM PROPOSAL FORM**

	FY _____		FY _____		FY _____	
	On-going	One-time	On-going	One-time	On-going	One-time
<b>D. Capital Facilities Construction or Major Renovation</b>	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____
<b>E. Other Costs N/A</b>						
1. Utilities	_____	_____	_____	_____	_____	_____
2. Maintenance & Repairs	_____	_____	_____	_____	_____	_____
3. Other: _____	_____	_____	_____	_____	_____	_____
<b>Total Other Costs</b>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>TOTAL EXPENDITURES:</b>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>Net Income (Deficit)</b>	<u>\$21,418</u>	<u>\$0</u>	<u>\$37,057</u>	<u>\$0</u>	<u>\$54,116</u>	<u>\$0</u>

The signature of the campus Chief Financial Officer signifies that he/she has reviewed and assessed the fiscal soundness of the proposal and provided his/her recommendations to the Chief Academic Officer as necessary.

 1/16/18  
 \_\_\_\_\_  
 Campus Chief Financial Officer Signature

Chief Financial Officer comments:

**Appendix A – Proposed New Curriculum**