

REQUEST TO PLAN ITEMS

March 2021

From: Deputy Commissioner Brock Tessman
To: Board of Regents

Please see below for an executive overview of the Request to Plan items that are being proposed for your review and action at the March 2021 meeting of the Board of Regents. These items have been submitted by the campuses and reviewed by the Chief Academic Officers of the Montana University System and Community Colleges. OCHE staff has reviewed the items and provided a short analysis below relying on information submitted by the campuses. For more information and specific details on each item, please see the supporting documentation included on the Academic, Research, and Student Affairs Committee agenda.

University of Montana – Missoula

Option in Engineering Physics within the Physics B.A.

The proposed Option in Engineering within the Physics B.A. offers students the opportunity to obtain a degree in Physics with some engineering content, both fostering a more interdisciplinary approach to their studies and making them more marketable to companies who employ both physicists and engineers. The proposed option in Engineering builds upon courses already offered through the Pre-Engineering program at UM and does not require new/additional resources.

Post-Baccalaureate Pre-Medical Certificate

The proposed Post-Baccalaureate Pre-Medical Certificate is designed for students who have already completed an undergraduate degree in a non-science or non-health field and would like to attend a healthcare professional school/program for their graduate studies. The program is designed to be completed over the course of 4 consecutive semesters, allowing students to complete their pre-requisite coursework and apply to a healthcare professional program sooner. Healthcare is the largest employment sector in Montana and has one of the highest rates of unfilled positions each year. This new program would prepare students to be eligible for those positions more quickly than through existing channels. The Certificate builds upon existing programming and resources within the College of Health and does not require new/additional resources.

Montana Technological University

Eliminate the Geophysics Department

The proposed elimination of the Geophysics Department is the result of declining enrollment in the program and static industry need. The Geophysics faculty and students will become part of the Geological Engineering Department and have all been consulted. The elimination of the Department will result in a cost-savings for the institution.

Certificate in General Studies

The proposed Certificate in General Studies will provide students the opportunity to earn a credential for completing the MUS Core if they want to complete their general education requirements at Highlands College before transferring to another MUS institution. The program is open to both dual enrollment and undergraduate students at both Highlands College and Montana Tech. Similar credentials are offered by Gallatin College, Great Falls College, Helena College, and Miles Community College. No new/additional resources will be needed as all required courses are already offered.

Helena College University of Montana

C.A.S. in Automotive Technology

The proposed C.A.S. in Automotive Technology creates additional opportunities for students in the Automotive Technology program. The C.A.S. takes the first year of coursework of the A.A.S. and creates a stackable credential for students. This would allow them to enter the workforce more quickly or add on to training in related fields. The proposal was developed in consultation with industry partners and builds upon existing programming and does not require new/additional resources.

Montana State University – Bozeman

Master of Music (M.M.) with an option in Music Education

The proposed M.M. with an option in Music Education is designed for current teachers around the state of Montana. The program is designed to be delivered online so teachers can continue their work while earning the credential. The proposal includes moving the existing Master of Education music option from the Department of Education to the School of Music and changing it to a Master of Music with an option in Music Education. The proposed M.M. would respond to the shortage of music teachers in Montana and offer current music teachers the opportunity to increase their salary. The proposal calls for adding a few additional courses.

Montana State University – Billings

A.A.S. in Diagnostic Medical Sonography

The proposed A.A.S. in Diagnostic Medical Sonography (DMS) is a hybrid/low residency program and is designed for students living in rural areas of Montana. The program would include a one-week program in Billings at the start of the program and then shift to all online instruction for the remainder so students would not need to move to complete the program. The clinical component of the program can be completed in the student's home community. DMS is considered one of the fastest growing allied health fields and fills a great need within the Montana medical community. Start-up costs will include purchasing equipment for the program, which will be funded by student program fees.

Institute for Neurodiversity and Applied Behavior Analysis

The proposed Institute for Neurodiversity and Applied Behavior Analysis will provide an on-campus demonstration site for socially valid applied behavior analysis programs for children and adolescents with social and behavioral challenges. The Institute will serve both the public and MSUB, providing direct services to children and families while functioning as a site for MSUB graduate students to complete their clinical internships and supervision requirements for MSUB's Master of Science in Special Education Adv. Studies ABA degree program. The proposal requires start-up costs but will be funded through billable services in the long-term. The MSUB Foundation has secured three years of start-up funding through the MJ Murdoch Charitable Trust.

ITEM 193-1002-R0321

ITEM NAME: Option in Engineering Physics within the Physics B.A. – University of Montana-Missoula

OCHE ANALYSIS																																																							
Labor market outlook	<p>In 2019, the median wage for physicists in Montana was \$122,850 (BLS). The majority of these individuals will have pursued some form of graduate study (masters or PhD). Occupational projections are not available for physicists in Montana. Nationally the occupation is projected to grow 20.6% by 2028, which is well above the average for all occupations. In 2019, the median wage for mechanical engineers in Montana was \$71,460 (BLS). The number of mechanical engineers in Montana is projected to grow 15% by 2028, which is well above the average for all occupations. The Bureau of labor statistics projects 50 annual job openings in Montana for mechanical engineers.</p>																																																						
Related programs / centers / institutes	<p>Engineering Physics programs focus on the use of physics principles in the analysis and evaluation of engineering problems and other scientific applications. Includes instruction in high- and low-temperature phenomena, computational physics, superconductivity, applied thermodynamics, molecular and particle physics applications, and space science research. No Montana campus currently offers a degree option focusing specifically on Engineering Physics. Montana Tech and Montana State University offer closely related degrees in Mechanical Engineering. Montana State University also offers a B.S. in physics with Professional, Interdisciplinary, and Teaching options.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #add8e6;"> <th colspan="5" style="text-align: left;">Montana Physics Program Graduates, 2016-2019</th> </tr> <tr style="background-color: #add8e6;"> <th style="text-align: left;">Institution</th> <th style="text-align: center;">2019</th> <th style="text-align: center;">2018</th> <th style="text-align: center;">2017</th> <th style="text-align: center;">2016</th> </tr> </thead> <tbody> <tr> <td>Montana State University</td> <td style="text-align: center;">16</td> <td style="text-align: center;">10</td> <td style="text-align: center;">8</td> <td style="text-align: center;">9</td> </tr> <tr> <td>University of Montana</td> <td style="text-align: center;">5</td> <td style="text-align: center;">16</td> <td style="text-align: center;">15</td> <td style="text-align: center;">12</td> </tr> <tr> <td>Carroll College</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">4</td> </tr> <tr> <td>Rocky Mountain College</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">2</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #add8e6;"> <th colspan="5" style="text-align: left;">Montana Mechanical Engineering Program Graduates, 2016-2019</th> </tr> <tr style="background-color: #add8e6;"> <th style="text-align: left;">Institution</th> <th style="text-align: center;">2019</th> <th style="text-align: center;">2018</th> <th style="text-align: center;">2017</th> <th style="text-align: center;">2016</th> </tr> </thead> <tbody> <tr> <td>Montana State University</td> <td style="text-align: center;">162</td> <td style="text-align: center;">138</td> <td style="text-align: center;">155</td> <td style="text-align: center;">130</td> </tr> <tr> <td>Montana Technological University</td> <td style="text-align: center;">59</td> <td style="text-align: center;">52</td> <td style="text-align: center;">24</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table>					Montana Physics Program Graduates, 2016-2019					Institution	2019	2018	2017	2016	Montana State University	16	10	8	9	University of Montana	5	16	15	12	Carroll College	1	1	1	4	Rocky Mountain College	0	0	0	2	Montana Mechanical Engineering Program Graduates, 2016-2019					Institution	2019	2018	2017	2016	Montana State University	162	138	155	130	Montana Technological University	59	52	24	N/A
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Budget Impact	X	<p>LOW</p> <ul style="list-style-type: none"> • Only incidental costs 		MEDIUM		HIGH																																																	
<p>The required engineering coursework is currently offered at UM as a part of their pre-engineering advising track.</p>																																																							
CAO discussion and follow-up	<p>Discussion focused on how to distinguish engineering-related coursework across the university system in order to minimize unnecessary duplication.</p>																																																						
ARSA/BOR comment and direction for Level II proposal	<p>Discussion included conversation about avoiding unnecessary duplication across the system. UM made clear that this proposal does not signal a larger plan to create an engineering program. MSU and Tech both expressed support for this program as an “Option” with the existing Physics major, but were clear that they would have reservations about any UM plans to propose new degree programs in Engineering that may unnecessarily duplicate existing programs on their campuses. UM also acknowledged that the option will not be ABET accredited.</p>																																																						

ITEM 193-1003-R0321

ITEM NAME: Post-Baccalaureate Pre-Medical Certificate – University of Montana-Missoula

OCHE ANALYSIS						
Labor market outlook	The Bureau of Labor statistics projects 20 annual openings for family practice physicians. The occupation is forecast to grow 7% between now and 2028, slightly faster than occupations overall. The 2019 median wage for family practice physicians in Montana was \$208,000.					
Related programs / centers / institutes	Montana State University offers a post-baccalaureate pre-medical certificate established in 2005 with a similar focus.					
Budget Impact	X	LOW • Only incidental costs		MEDIUM		HIGH
	The required coursework is currently offered at the University of Montana.					
CAO discussion and follow-up	Discussion focused on advantages the option provides to students and the modality (largely in-person)					
ARSA/BOR comment and direction for Level II proposal	Regents were supportive of the proposal. MSU expressed support as well.					

ITEM 193-1502-R0321

ITEM NAME: Certificate in General Studies – Montana Technological University

OCHE ANALYSIS						
Labor market outlook	<p>N/A</p> <p>A Certificate in General Studies can help students signal to their transfer institution that they have completed a rigorous general education curriculum and, thus, ensure they do not need to take duplicative general education coursework after transfer. MUS policy requires institutions to accept other campus’s general education curricula as meeting lower division general education requirements. However, it can be difficult for transfer institutions to discern whether a student has completed Gen Ed. This certificate serves as to both recognize students for completing their general education and to provide a clear signal to the transfer institution.</p>					
Related programs / centers / institutes	<p>Gallatin College, Great Falls College, Helena College, and Miles Community College offer similar certificates recognizing completion of a full general education curriculum. Other MUS campuses are exploring whether to add such a certificate.</p>					
Budget Impact	X	LOW <ul style="list-style-type: none"> • Only incidental costs 		MEDIUM		HIGH
<p>General education courses are already offered, so no new resources will be needed.</p>						
CAO discussion and follow-up	<p>CAOs were supportive of the proposal.</p>					
ARSA/BOR comment and direction for Level II proposal	<p>Regents were supportive of the proposal.</p>					

ITEM 193-1901-R0321

ITEM NAME: C.A.S. in Automotive Technology – Helena College University of Montana

OCHE ANALYSIS						
Labor market outlook	The auto services technician field in Montana is projected to grow 3% between now and 2028, which is around the average across all occupations. The median wage for auto service technicians in Montana is \$38,830.					
Related programs / centers / institutes	Several two-year institutions in Montana offer auto related programs. However, it should be noted that this program often serves place bound students and is challenging to offer in a distance or blended modality.					
Budget Impact	X	LOW <ul style="list-style-type: none"> • Only incidental costs 		MEDIUM		HIGH
	The required coursework is currently offered in the associates degree program at Helena College.					
CAO discussion and follow-up	CAOs were supportive of the proposal.					
ARSA/BOR comment and direction for Level II proposal	Regents were supportive of the proposal.					

ITEM 193-2016-R0321

ITEM NAME: Master of Music (M.M.) with an option in Music Education – Montana State University-Bozeman

OCHE ANALYSIS				
Labor market outlook	Music education has been identified as a teacher shortage area in analyses by the Regional Education Laboratory at Education Northwest and by Montana’s recruitment and retention task force. Montana DLI forecasts ~8 openings for music, art, and drama educators per year in Montana. The median wage for these teachers is \$56,000.			
Related programs / centers / institutes	Both the University of Montana and Montana State University offer masters-level programs targeted towards K-12 teachers. At the University of Montana, this program is an M.M. in Music Education (UM also has an M.M. in Music Technology/Composition). MSU’s existing program is an option within the Master of Education (this proposal is a reconfiguration of this existing program).			
Budget Impact	LOW	X	MEDIUM	HIGH
CAO discussion and follow-up	CAOs were supportive of the proposal.			
ARSA/BOR comment and direction for Level II proposal	Regents were supportive of the proposal. UM expressed support for the proposal and suggested conversation/collaboration between UM & MSU faculty as the planning progresses.			

ITEM 193-2701-R0321

ITEM NAME: A.A.S. in Medical Diagnostic Sonography – Montana State University-Billings

OCHE ANALYSIS				
Labor market outlook	The Bureau of Labor statistics forecasts 10 annual openings in Montana for Medical Diagnostic Sonographers. The occupation is forecast to grow 18% between now and 2028, much faster than occupations overall. The median wage for medical sonographers in Montana is \$77,360.			
Related programs / centers / institutes	Missoula College, Great Falls College and Flathead Valley Community College offer related programming in radiography. City College/MSU Billings is the only institution with a program closely focused around ultrasound technology and sonography.			
Budget Impact	<input type="checkbox"/>	LOW	<input checked="" type="checkbox"/>	MEDIUM
	Launching the new program will involve an investment in new faculty FTE as well as substantial new equipment.			
CAO discussion and follow-up	MSUB described the expanding need for sonographers and the benefit to rural students. CAOs were supportive of the proposal.			
ARSA/BOR comment and direction for Level II proposal	Regents were supportive of the proposal.			

ITEM 193-2702-R0321

ITEM NAME: Institute for Neurodiversity and Applied Behavioral Analysis – Montana State University-Billings

OCHE ANALYSIS				
Labor market outlook	N/A			
Related programs / centers / institutes	The University of Montana’s Clinical Psychology Center provides related clinical services to the proposed center, though with a broader focus.			
Budget Impact		LOW		MEDIUM
			HIGH	<ul style="list-style-type: none"> • substantial commitment of resources relative to institutional budget
Budget Impact	The institute will require substantial start-up funds for staff and facilities. The campus indicates that \$593,050 in charitable donations have been received for initial activities, including a program director, half-time medical director, supplies and equipment, and that over time the center will be sustained through billable services starting in year 2.			
CAO discussion and follow-up	The CAOs were supportive of the proposal.			
ARSA/BOR comment and direction for Level II proposal	There was some conversation around the associated costs, opportunities for students, and benefit to the community. The Regents were supportive of the proposal.			