

May 17-18, 2023

From: Interim Deputy Commissioner Joe Thiel
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 May 2023 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.

Montana State University Bozeman

Request to establish a Master of Engineering- Manufacturing Engineering Option

This plan requests an additional option for a Masters in Engineering. This option will prepare students from multiple disciplines to enter the workforce in an advanced manufacturing position. Most notably, topics include automation, quality, efficiency, and management systems, thus enabling integration of complicated manufacturing systems.

This program has been informed and encouraged by industry from across Montana. It was recognized by those employers with heavy manufacturing volume that MSU graduates are deficient in direct experience and knowledge related to the manufacturing environment. Employers recognize that additional training prior to employment, such as that in a Masters of Engineering in Manufacturing Engineering, would produce a more productive employee at the time of hire. Additionally, the creation of this option would allow for graduates to earn higher salaries and would provide current employees additional pathways for professional development.

New investments and additional resources, outside of faculty, are not needed to begin this new option. ME will continue to partner with industry to provide innovative ways to meet lab needs and manufacturing systems. As the program and student numbers grow, M&IE department will request additional faculty support from the provost's office. First request for faculty support will be initiated when the graduate student number reaches 12 and additional request for faculty and equipment support will be submitted when the total student number reaches 24.

M&IE will be collaborating with other engineering departments within NACOE to share courses. Opportunities exist for collaborations with Montana Tech – Mechanical Engineering for course-sharing and research collaboration, and MSU- Northern precision agriculture.

Request to plan a Certificate of Applied Science in Public Safety Officer Basic Training

Gallatin College, in cooperation with the Montana Law Enforcement Academy (MLEA) and the Montana Public Safety Officer Standards and Training Council (POST) proposes the development of a Certificate of Applied Science in Public Safety Officer Basic Training.

Currently, the sole mechanism in Montana for public safety officer certification is through attending the Montana Law Enforcement Academy (MLEA). Demand for student space at the MLEA currently outpaces capacity. The proposed CAS degree, designed to be completed in one semester, would help address the need for trained officers in Montana communities. The credits earned as part of the CAS apply to additional two and four-year degrees at higher education institutions in Montana.

Montana POST reports that there is a 12% turnover in Montana law enforcement agencies which creates 305 openings per year across the state. There are 175 agencies across the state, with 2,546 active law enforcement officers in Montana. that hire for this occupation. The average pay range for this occupation is \$20.00- \$29.50 per hour, depending on location.

Instructional faculty and administrative support for the proposed program would equal 1.8 FTE. Which is estimated to be \$110,000 annually. No additional classroom space would be required as existing space on the MSU campus would be utilized. Equipment for this program will need to be purchased and maintained. This proposal is budgeting \$10,000 for start up equipment expenses and \$5,000 annually for maintenance and replacement.

Montana State University Northern

Request for plan a Bachelor of Science in Automotive Service Management

The industry partners note that with the vast changes occurring within the automotive field there is now demand for automotive technicians with broader skills including business, communication, and management providing a need for a bachelor's degree option in Automotive Service Management. This new program would build upon the Automotive degree and would provide automotive technicians with broader skills including business, communication, and management.

This new program would not require any additional faculty, staff, facilities, or curricula. Coursework will be a combination of automotive courses with business-focused courses within the B.S. Business Program.

This new degree provides opportunities to collaborate with the Business Program within the College of Technical Sciences at MSU-Northern. Other than MSUN, City College, Helena College, Highlands College and Miles Community College have certificates and/or Associates in Automotive Technology programs. Students in these programs can currently transfer into the existing MSUN Automotive Technology Bachelors degree and could transfer into this proposed Bachelors degree.

Montana University System
REQUEST TO PLAN – OCHE ANALYSIS

ITEM 206-2002-R0523

ITEM NAME: Master of Engineering – Manufacturing Engineering Option**OCHE ANALYSIS**

Labor market outlook	Bureau of Labor Statistics projects a 10% increase in position openings from 2021-2031, with approximately 300,000 position openings.			
Related programs / centers / institutes	While a Masters of Engineering is offered at Montana Technological University, a M.Eng with a Manufacturing Option is not offered elsewhere.			
Budget Impact	x	LOW <ul style="list-style-type: none"> • Only incidental costs 	MEDIUM	HIGH <ul style="list-style-type: none"> • substantial commitment of resources relative to institutional budget
	<p>Needed resources for this option include the development of additional courses and assignment of faculty. The program is heavily leveraged by existing courses within ME, MET, and IMSE. Additional revisions of existing facilities would be required to house manufacturing hardware and systems that would add-to and complement the current undergraduate laboratories.</p> <p>As the program and student numbers grow, M&IE department will request additional faculty support from the provost's office. First request for faculty support will be initiated when the graduate student number reaches 12 and additional request for faculty and equipment support will be submitted when the total student number reaches 24.</p>			
CAO discussion and follow-up				
ARSA/BOR comment and direction for Level II proposal				

Montana University System
REQUEST TO PLAN – OCHE ANALYSIS

ITEM 206-2003-R0523

ITEM NAME: Certificate of Applied Science in Public Safety Officer Basic Training**OCHE ANALYSIS**

Labor market outlook	While according to ONet job growth in this field is not projected to grow substantially, with only a single unit available to train and educate public safety officers, demand is outpacing capacity. Montana POST reports that there is a 12% turnover in Montana law enforcement agencies which creates 305 openings per year across the state. There are 175 agencies across the state, with 2,546 active law enforcement officers in Montana. that hire for this occupation. The average pay range for this occupation is \$20.00- \$29.50 per hour, depending on location.			
Related programs / centers / institutes	Currently the only option for public safety officer training is through attending the Montana Law Enforcement Academy (MLEA)			
Budget Impact	LOW • Only incidental costs	x	MEDIUM	HIGH • substantial commitment of resources relative to institutional budget
Budget Impact	Instructional faculty and administrative support for the proposed program would equal 1.8 FTE. Which is estimated to be \$110,000 annually. No additional classroom space would be required as existing space on the MSU campus would be utilized. Equipment for this program will need to be purchased and maintained. This proposal is budgeting \$10,000 for start up equipment expenses and \$5,000 annually for maintenance and replacement.			
CAO discussion and follow-up				
ARSA/BOR comment and direction for Level II proposal				

Montana University System
REQUEST TO PLAN – OCHE ANALYSIS

ITEM 206-2801-R0523

ITEM NAME: Bachelor of Science in Automotive Service Management**OCHE ANALYSIS**

Labor market outlook	This program was proposed and supported by the Automotive Advisory Board. Automotive Service technicians hold strong wages and job placement in Montana. By adding a business component to the degree, students should continue to experience strong wages and positive job placement.			
Related programs / centers / institutes	N/A			
Budget Impact	x	LOW • Only incidental costs	MEDIUM	HIGH • substantial commitment of resources relative to institutional budget
	This program does not require any additional faculty, staff, facilities or curricula. This program will combine coursework from automotive courses with business-focused courses within the BS Business Program.			
CAO discussion and follow-up				
ARSA/BOR comment and direction for Level II proposal				