REQUEST TO PLAN MEMORANDUM

DATE: February 17, 2026

TO: Chief Academic Officers, Montana University System

FROM: Joe Thiel, Deputy Commissioner for Academic, Research, and Student Affairs

RE: March 2026 Request to Plan Proposals

The campuses of the Montana University System have proposed new academic programs or changes under the Request to Plan process authorized by the Montana Board of Regents. The proposals are being sent to you for your review and approval. 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 Chief Academic Officer's conference call Wednesday, February 18th. Issues not resolved at that meeting should be submitted in writing to OCHE by noon on Friday, February 20, 2026. If no concerns are received, OCHE will assume that the proposals have your approval.

Requests to Plan

Montana State University Bozeman:

- Request to Plan the Montana Geospatial Insights and Solutions Institute (MT-GIS) Item #223-2014-R0326
- Request for authorization to establish the Applied Quantum (QCORE) Center Item #223-2015-R0326

University of Montana:

- Request to Plan a Rural Practice Juris Doctorate Item #223-1001-R0326
- Request to plan a Masters of Indian Law and Policy Item #223-1002-R0326
- Request to plan the Montana Climate Office (MCO) Item #223-1003-R0326
- Request to plan an Integrated Aquatic and Terrestrial Concentration in the BS in Wildlife Biology Item #223-1004-R0326

Montana Technological University:

- Request for authorization to establish a PhD in Energy Engineering and Science Item #223-1501-R0326
- Request for authorization to establish an MS in Nuclear Energy Item #223-1502-R0326
- Request to plan an AAS Degree Options in Construction Technology Item #223-1505-R0326

Montana Board of Regents

ACADEMIC PROPOSAL REQUEST FORM

March, 2026

ITEM 223-2013-R0326

Request to modify the name of the Center for American Indian and Rural Health Equity

Institution: **Montana State University, Bozeman** CIP Code: _____

Program/Center/Institute Title: **Center for American Indian and Rural Health Equity (CAIRHE)**

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

Options: _____

Proposal Summary [360 words maximum]

What: Request to rename the Center for American Indian and Rural Health Equity (CAIRHE) as the "Center for American Indian and Rural Health Excellence" (CAIRHE).

Why: The Center for American Indian and Rural Health Equity received its first grant from the National Institute of General Medical Sciences (NIGMS) of the National Institutes of Health in September 2014, and it received MUS BOR approval as a research center in 2016. Over the past decade the mission, research, outreach, grant funding, and other accomplishments of CAIRHE and its faculty investigators have broadened to include all aspects of optimum rural health and well-being for the citizens of Montana. CAIRHE is also in its 11th year as a grant recipient in the Centers of Biomedical Research Excellence (COBRE) program at NIGMS. Modifying the CAIRHE name to include "Excellence" represents a closer alignment with not only its major funder but also its work and reputation throughout the state.

Resources:

ATTACHMENTS

Attachments

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

____ **A. Level I:**

Campus Approvals

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

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

Montana Board of Regents
ACADEMIC PROPOSAL REQUEST FORM

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*

B. Level II:

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

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

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

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

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

Montana University System

REQUEST TO PLAN FORM – ACADEMIC, ADMINISTRATIVE OR RESEARCH UNIT

ITEM 223-2014-R0326 **Meeting Date: March 2026**

Item Name

Center/Institute/Unit Title: **Montana Geospatial Insights and Solutions Institute (MT-GIS)**

Campus: **MSU** Expected Final Submission Date: **January 2026**

Contact Name/Info: **Alison Harmon, VP Research & Econ Dev**

1) Provide a brief description of the new center/institute (unit).

Geospatial science and research involve studying people, places, and processes on Earth by integrating geospatial data and information technology. This interdisciplinary field uses Geographic Information Systems (GIS), remote sensing, global positioning systems (GPS), and other technologies to analyze and visualize spatial data. Geospatial science is used to address complex problems in various fields like agriculture, ecology, business, defense, and health.

Geospatial science provides the foundation for understanding the ***Where?*** and ***Why?*** for a range of challenges facing our society's economy, social and health care systems, and the natural environment. Harnessing geospatial technologies can provide solutions and insights into these challenges that will continue to drive innovation and economic development in Montana and beyond[i].

Montana State University (MSU) and the Montana University System (MUS) have demonstrated expertise across disciplines that use geospatial tools and methodologies. However, MSU and MUS lack an institute or center that serves as an intellectual home to integrate disciplines with geospatial computing, analysis, and training/teaching.

The Montana Geospatial Insights and Solutions Institute (MT-GIS Institute) will build upon MSU's Geospatial Core Facility, housed in the Departments of Earth Sciences and Land Resources and Environmental Sciences (LRES), and the Spatial Sciences Center (an informal "center"). The MT-GIS Institute will provide researchers, educators, and decision-makers with the access and support needed to incorporate geospatial data, science, analysis, and technology into their work on campuses and in the workforce. The MT-GIS Institute will also provide avenues for student research and workforce training, providing access to and support for state-of-the-art geospatial education and technology across disciplines.

Specifically, the MT-GIS Institute will provide an intellectual home for:

- Research: Fostering collaboration across disciplines and colleges at MSU, MUS, and beyond.
- Grant support: Supporting researchers in their geospatial endeavors, starting with proposal planning and grant writing support for proposals with a geospatial component.
- Support for tribal communities: Liaise with tribes across the region for access to teaching and technologies, including grant writing for teaching support.
- Equipment, operations, and training hub: Provide access to cutting-edge Unpiloted Aerial Vehicles (UAVs) and sensors, offering flight operators, mission planning, data processing, and storage.

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REQUEST TO PLAN FORM – ACADEMIC, ADMINISTRATIVE OR RESEARCH UNIT

- Education: Function as a hub for basic and applied training for students, faculty, and professionals to support curriculum development across MSU and MUS for relevance in a rapidly evolving field in a non-stationary world. Degree programs and certificates will be offered by appropriate academic departments.

2) Describe the need for the center/institute. Specifically, how the center/institute meets current student, state, and industry research or community engagement needs. (Please cite sources in an addendum to this document)

The geospatial research and business sectors are developing rapidly and are expected to be a $55.75 billion market by 2029, with a projected compound annual growth rate of 11.1% through 2029[ii]. The US Department of Commerce has recently developed a Geospatial Strategic Action Plan that describes "a cohesive and coordinated approach … to successfully maximize the positive impact of geospatial data and services" as its strategic imperative[iii]. This "path to geospatial data and services" will not happen in a vacuum and requires student, state, and workforce demands to be connected. *Students need jobs, employers need an educated workforce, and the state is invested in attracting businesses rooted in science and technology.*

The MT-GIS Institute will create an interdisciplinary intellectual home for faculty to collaborate on the support, integration, and expansion of geospatial research and academic programs for students, faculty, and practitioners across disciplines.

From a research perspective, the MT-GIS Institute will serve as a hub of computational capacity, specialized equipment, and expertise essential for leveraging geospatial approaches in scholarly inquiry. Specialized equipment is costly and commonly requires advanced training for data acquisition, processing, and analysis. Consequently, many researchers are unaware of or unable to fully utilize these resources in their projects. This has spurred numerous collaborations across campus, including but not limited to:

- Drs. Neda Nazemi (Computer Science), Mohammad Khosravi (Civil Engineering), and Faraz Dadgostari (Mechanical & Industrial Engineering) were developing a rockfall susceptibility analysis for risk mitigation on Montana's roads. A critical link they were missing was how to detect and quantify rockfall in pseudo-real time. The Geospatial Core Facility collaborated in the design of a prototype tower-based LiDAR sensor that can detect rockfalls. This single prototype sensor could be further tested and produced for deployment at multiple sites through the infrastructure provided by the MT-GIS Institute.
- Drs. Andrew Hansen, Scott Creel, and Justine Becker (Ecology) are studying the space use and foraging ecology of different animal species. For decades, the standard geospatial data to integrate in these studies has been the normalized-difference vegetation index (NDVI) calculated from Landsat or Sentinel satellites, which indicates vegetation greenness – but greenness does not provide any nuance regarding forage nutrient composition. However, satellite remote sensing has advanced considerably over the past decades, such that now it is possible to estimate protein, carbon, and pigment contents of the vegetation from physical models using Sentinel.
- The Geospatial Core Facility has already started collecting relevant UAV data at the Red Bluff Research Ranch in collaboration with Dr. Dan Atwater (Animal and Range Sciences), work that has spurred increasing interest within ARS. The MT-GIS Institute would provide access to the training, protocols, specialized computer software, data storage, and equipment to expand the mapping vegetation quantity and quality at scale. Having all these resources under one roof would also be advantageous for securing state, federal, and private grants.

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- Drs. Jessica Kansman (Plant Science and Plant Pathology) and Danielle Ulrich (Ecology) study stress and disease in plants. Both collaborate with the SCC and use one of its handheld spectrometers to detect disease and stress responses early, before symptoms are visible to a human observer. In addition, spectral data are being used to classify different stress responses. By identifying the most important wavelengths for disease and stress detection, it is also possible to uncover the physiological changes induced by those stressors. Until now, stress and disease detection with spectroscopy have been conducted mostly by spatial science graduate students. The MT-GIS Institute will offer training also for faculty and students from other departments to expand research and bring in more grant money.
- Dr. Madison Myers (Earth Sciences) works, on mapping of geological units, including the re-mapping of geology of Yellowstone. Geologic mapping is a field-intensive endeavor, such that many areas depicted by geologic maps have never been visited by a geologist but have geologic units inferred from other maps and landscape interpretation, leading to mismatches and inaccurate boundaries. Although spectroscopic techniques are widely used in the field and lab, working with remotely sensed spectral data is a new frontier for many geologists. We continue to train geologists, PIs and students, in spectroscopic techniques, including mapping applications from airborne and satellite spectroscopy which have exciting potential to advance geologic mapping and transfer to applications in mineral exploration – a highly sought after skill on the job market.

From an educational perspective, geospatial courses at MSU attract students from across colleges and disciplines. Keeping the university's geospatial curriculum relevant requires following trends and frequent updates to course materials, which is difficult without a dedicated Institute. Students, faculty, and potential future employers have identified the need for easy access to on-demand resources that provide undergraduate and graduate students across departments with an "entry point" to include geospatial and coding skills in their education. The MT-GIS Institute will address these demands with resources (online and in-person teaching and training) and outreach activities targeted at the campus community and the public. For example, summer workshops offered through the MT-GIS Institute would allow incoming graduate students to hit the ground running when it comes to using geospatial data in their thesis research. Courses in geospatial data processing and analytics also led themselves to online teaching, allowing the MT-GIS Institute to expand its offerings and contribute to workforce development in more remote parts of the State and country.

The MT-GIS Institute will also meet the demands of the State of Montana by providing high-quality education and access to resources for training a highly skilled workforce and attracting top talent, including business and startups, to the state. The MT-GIS Institute will put MSU in an excellent position to expand its connections with current and developing industry partners while providing students, faculty, and practitioners across Montana and beyond with high-quality training that meets current workforce demands. Montana and Bozeman are already hubs for geospatial technology and engineering fields, which are projected to expand with the current Tech Link grant.

Nascent conversation Jason Yager, Executive Director of the Montana Photonics Alliance, and the Geospatial Core Facility represent how the MT-GIS Institute can support this growth. The Montana Photonics Alliance and the Geospatial Core Facility envision developing geospatial training modules for Montana's growing photonics industry. The State of Montana, MSU, and MUS are poised to grow, and the MT-GIS Institute is ready to foster expansion in the geospatial research and business sectors.

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3) Describe how the center/institute fits with the institutional mission, strategic plan, and the existing MUS and institutional portfolios (refer to the most recent institutional Academic Priorities and Planning Statement).

Geospatial computing, analysis, and training directly address the three focal areas of MSU's Institutional Mission and Strategic Plan, which the MT-GIS Institute welcomes to support.

Transformational Learning is expanded by the MT-GIS Institute by broadening access for underrepresented populations, increasing academic success for all students, and expanding high-quality graduate education through innovative curriculum and computational infrastructure across MSU, Montana, and beyond. We envision expanding distance learning capabilities for geospatial technologies and analysis that meets Montanan's needs, as rural areas and most satellite campuses do not consistently provide geospatial curricula.

The Geospatial Core Facility team are certified trainers for FEMA UAS (drone) courses through ASSURE and ASSUREd SAFE (Alliance for System Safety of UAS through Research Excellence), which is the FAA's Center of Excellence. In the summer of 2025, the Geospatial Core Facility taught four different FEMA courses for first responders. Looking forward, the Geospatial Core Facility will have a mobile teaching platform that will facilitate teaching FEMA courses across Montana, the Pacific Northwest, and Alaska.

Scholarship that Improves Lives emerges through the MT-GIS Institute by providing geospatial insights and solutions that help society understand the *Why?* and *Where?* of phenomena across socio-environmental systems. We will cultivate *Scholarship that Improves Lifes* through expanding inter- and transdisciplinary research and teaching, increasing employment opportunities, and enhancing the impact of scholarship across MSU's four grand challenges: Caring for our environment, Promoting wellness in our communities, Food and fuel security, Securing the future of Montana.

For example, TrialWear, a collaboration between Dr. Elizabeth Johnson (Nursing) and the Geospatial Core Facility, focuses on increasing the number of clinical trial participants in rural areas (like Montana) by removing communication barriers between researchers and hospitals.

Through the Geospatial Core Facility, MSU is a core partner in ASSURE, which provides access to FAA-funded research providing opportunities for MSU researchers that only exist at member institutions. Research opportunities through ASSURE could provide funding for PIs and students in Engineering, Computer Science, Physics, MilTech, and Earth Sciences, and other interested groups.

From an agricultural perspective, the Geospatial Core Facility collaborated with Dr. Ricardo Pinto (MSU Extension) at the Northern Agricultural Research Center to detect Wheat Stem Sawfly damage using UAV-based Lidar. The SSC collaborates with Drs. Dan Atwater (Animal and Range Sciences) and Andrew Hansen (Ecology) to map forage quantity and quality in rangelands.

Globally, the Geospatial Core Facility is partnering with the United Nations Educational, Scientific and Cultural Organization (UNESCO) to develop a web-based dashboard to provide river levels and discharge measurements for war-torn Ukraine using state-of-the-science satellite measurements.

Expanding Engagement is part of the core mission of the MT-GIS Institute, which is committed to enhancing and promoting geospatial insights and analysis, both in the academic and applied world, and to integrating academic ideas and research with practice. The MT-GIS Institute's culture of sustained collaboration and continuous improvement will further *Expand Engagement* by growing mutually beneficial partnerships across Montana, including collaborations with

Tribal nations and partners. The Geospatial Core Facility actively collaborates with the Science Math Resource Center on the Geospatial Skills Camp for Montana Youth, funded by the Air Force Office of Scientific Research, while the SSC has started conversations to hold a geospatial summer school at the Blackfeet Nation.

4) **Describe any opportunities for collaboration you have identified or initiated either within the institution or between MUS institutions (i.e., articulation, course-sharing, research collaboration). Include potential contacts and their institutional affiliation.**

We foresee collaborative opportunities within MSU and across the MUS. Geospatial training is essential across the natural and social sciences, engineering and computer sciences. At MSU, we are already engaged in collaborations with Ecology, Nursing, Precision Agriculture, OpTec, Spectrum Labs, and Research Cyberinfrastructure at MSU. Apart from MSU, ongoing collaborations of MT-GIS Institute leadership include Woodwell Climate Research, the Federal Aviation Administration, University of Montana, Mississippi State University, Michigan State University, US Department of Defense, Minnesota State University Mankato, and Syracuse University. Our current geospatial courses are taken by undergraduate and graduate students across fields and fill every semester.

Through the MT-GIS Institute, we are planning to expand these research and education collaborations. For instance, besides training students, the MT-GIS Institute would also provide online and in-person short courses for faculty across the MUS systems, as well as training for practitioners. Most of our course offerings will be intended to be distributed online so that faculty across the MUS system can build upon these materials. This approach would provide the opportunity for a professional program that generates income.

5) **Describe any significant new financial resources (staff and/or facilities) needed to launch and sustain the center/institute. How do you anticipate supporting this new center/institute/unit**

Fiscal sustainability for the MT-GIS Institute will build upon the established foundation developed by the Geospatial Core Facility and will be well-positioned for public and private funding streams through grants, collaborative partnerships, and indirectly through contracts (as designated in the ePCF. Future potential funding streams include the DoD, NSF, EPSCoR, Department of Energy, NASA, and private foundations. Specifically, within one grant cycle of its launch, the MT-GIS Institute will pursue a multi-year National Research Traineeship Program grant.

As the MT-GIS develops, garners external funding, and generates research revenue, we envision needing 1.5 FTE in operations support: 0.5 for administrative and financial management and 1.0 for a postdoctoral fellow. In time, the MT-GIS Institute envisions a Tribal Geospatial Liaison. A centralized office space would benefit the MT-GIS Institute as the opportunity to co-locate becomes available. A climate-controlled storage space on or near campus with a garage/bay door that can be adequately secured for larger pieces of equipment will be important. These resources and physical spaces will be requested at appropriate times; their need will become evident as the MT-GIS Institute becomes established.

Montana University System

REQUEST TO PLAN FORM – ACADEMIC, ADMINISTRATIVE OR RESEARCH UNIT

Signature/Date		
Chief Academic Officer:	DocuSigned by: Robert Mokwa 212A28411AC04BD...	12/15/2025 | 9:50 AM MST
Chief Research Officer:		12/17/2025 | 12:25 PM MST
Chief Executive Officer:	Signed by: Brock Tessman 3B91DBF4C8B1461...	
Flagship Provost*:	DocuSigned by: Robert Mokwa 212A28411AC04BD...	12/15/2025 | 9:50 AM MST
Flagship President*:	Signed by: Brock Tessman 3B91DBF4C8B1461...	12/17/2025 | 12:25 PM MST
*Not applicable to the Community Colleges.		

[i] Pizer, Margaret. 2023. Mapping science: How GIS transformed our views of the world. U.S. National Science Foundation. https://new.nsf.gov/science-matters/mapping-science-how-gis-transformed-our-view-world

[ii] Markets and Markets - Geospatial Analytics Market 2025 Industry Trend and Forecast. Available online: https://www.marketsandmarkets.com/Market-Reports/geospatial-analytics-market-198354497.html (accessed on 7 Jan 2025)

[iii] Department of Commerce Geospatial Strategic Action Plan. Available online: https://www.commerce.gov/sites/default/files/2021-10/US-Dept-of-Commerce-Geospatial-Strategic-Action-Plan.pdf (accessed on 7 Jan 2025)

Montana University System

REQUEST TO PLAN FORM – ACADEMIC, ADMINISTRATIVE OR RESEARCH UNIT

ITEM XXX-2015-R-0326 **Meeting Date: March 2026**

Item Name: Request authorization to establish the Applied Quantum (QCORE) Center

Center/Institute/Unit Title: **Applied Quantum CORE (QCORE)**

Campus: **MSU** Expected Final Submission Date: **March 2026**

Contact Name/Info: **Alison Harmon, VP Research & Econ Development**

This form is meant to increase communication, collaboration, and problem-solving opportunities throughout the MUS in the center/institute development process. The completed form should exceed 2-3 pages. For more information regarding the center/institute approval process, please visit http://mus.edu/che/arsa/academicproposals.asp.

1) **Provide a brief description of the new center/institute (unit).**

Montana State University proposes to establish the Applied Quantum CORE (QCORE) with the primary aim of growing the quantum and enabling technology advancement ecosystem through applied research, technology development, and by training Montanans for leadership in the rapidly emerging industry. It will build on existing MSU research strengths in quantum information processing, quantum materials, and photonics. QCORE will pursue its primary aim in a way aligned with MSU's land-grant mission-- through research and development, student training and mentoring, industry partnerships, and community engagement.

QCORE will serve as a research and innovation center at MSU by providing access to appropriate technical infrastructure that will enable breakthrough technologies that shape the future of quantum innovation. QCORE will create a hub for communication, mentoring, and collaboration, connecting MSU research with the private sector and providing research opportunities for undergraduate and graduate students. Collaborations established within and through QCORE will make MSU more competitive for large, multiple-PI sponsored research projects.

Through current QCORE funding and activities, MSU is one of seven institutions in the world and probably the only university in the nation with both photonic and superconducting quantum computers. Access to these quantum computing systems will be a unique skill development experience for students as well as a technical advantage for researchers and partners. Additionally, QCORE is establishing cryogenic and quantum networking testbeds available to MSU and industry researchers working to develop and mature novel technologies that will support the hardware innovation to mitigate supply chain challenges faced by the quantum industry. QCORE will offer faculty, staff and students opportunities for networking and collaboration with industry and federal agencies, as well as research partners abroad to create and sustain opportunities for device development, test and evaluation, sponsored research (especially from industry), undergraduate and graduate research projects, academic programming, and faculty expansion and recognition.

2) **Describe the need for the center/institute. Specifically, how the center/institute meets current student, state, and industry research or community engagement needs. (Please cite sources in an addendum to this document).**

Quantum computers have the potential to break our current highest level of encryption used for communications and conversely, quantum information systems can provide unbreakable encryption. Therefore U.S. leadership in this field is considered critical to national security[i]. Leadership in this field will be dependent on developing friendly nation and

domestic sources for the quantum supply chain and necessary quantum adjacent technologies including photonics, electronics, cryogenics, vacuum technologies, and materials[ii,iii]. A Quantum Economic Development Consortium (QED-C, formed by the US government under the National Quantum Initiative Act of 2018) report identified "Reliable access to key hardware subcomponents" as their top critical choke point for quantum computer development[iv]. While the Boston Consulting Group has estimated quantum computing could create $450 billion to $850 billion of economic value globally, sustaining a $90 billion to $170 billion market for hardware and software providers by the 2040s[v], a McKinsey study indicates risk of a large talent gap to meet that potential with a need for 350,000 graduates in quantum and quantum related fields[vi]. Creation of the proposed center would help MSU and Montana make a valuable contribution to this national need and help produce more technology-based jobs in the state, much as MSU's OpTeC (Optical Technology Center) has spurred the growth of photonics in the state.

MSU is a world leader in the engineering of rare-earth quantum materials and their extensive use in photonic signal processing for defense applications. Montana photonics companies developing quantum materials and hardware as well as other enabling technology industries such as cryogenics and electronics, will provide key components for this effort while also partnering through QCORE and Spectrum Lab to apply project results to innovate commercial quantum technology and products. MSU offers a unique interdisciplinary team with diverse expertise in quantum and quantum adjacent systems. The Air Force Research Laboratory (AFRL) has recognized MSU's research and technology innovation in the field through multiple grants and recently sponsored research[vii,viii]. The effort also leverages classified research opportunities offered by the recently established Applied Research Laboratory (ARL) at MSU, which is the first TOP SECRET/Q-level laboratory in Montana. This laboratory supports the growing portfolio of classified work at MSU and throughout the region. The nearest similar facility is the Space Dynamics Lab in Utah.

Additionally, QCORE will provide the research coordination and brand development needed to grow faculty and student recruitment, offer timely seminars and briefings, and build and strengthen relationships with external partners. External partners include governments (US and UK and other partner nations), national laboratories, and related industry partners including those that have signed MOUs with QCORE and MSU. Partners exist across a wide swath of MSU research projects and academic areas including quantum and quantum adjacent (photonics, optics and materials) technologies.

3) Describe how the center/institute fits with the institutional mission, strategic plan, and the existing MUS and institutional portfolios (refer to the most recent institutional Academic Priorities and Planning Statement).

QCORE will contribute to several *Choosing Promise* goals:

INTENTIONAL FOCUS 1: Drive Transformational Learning Experiences Creating Outstanding Educational Outcomes for All Students

INTENTIONAL FOCUS 2: Improve Lives and Society through Research, Creativity, and Scholarship

GOAL 2.1: Enhance the significance and impact of scholarship

And Grand Challenge 4: ·Securing the future of Montana: cybersecurity, photonics and optics, defense, governance and public policy

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QCORE research may directly impact the national security challenge mentioned under item 2) above and multiple components of the Plan's fourth Grand Challenge.

QCORE will also help fulfill Montana State University's promise to expand engagement, by providing education, outreach, collaboration and workforce development opportunities to Montana's 12 tribal nations and 7 tribal colleges as well as K-12 education partners, particularly those in Montana's most rural areas.

4) Describe any opportunities for collaboration you have identified or initiated either within the institution or between MUS institutions (i.e. articulation, course-sharing, research collaboration). Include potential contacts and their institutional affiliation.

This center will build research and academic program collaborations between multiple colleges and departments (Physics, Chemistry and Biochemistry, Mathematical Sciences, Computer Science, Electrical and Computer Engineering, Mechanical Engineering, Gallatin College and the Department of Education) as well as existing research centers and projects (such as OpTeC, Spectrum Lab and the MonArk Quantum Foundry). Additional research and education collaboration on national security related activities will be addressed through INSRE, MilTech, TechLink, and the ARL.

5) Describe any significant new financial resources (staff and/or facilities) needed to launch and sustain the center/institute. How do you anticipate supporting this new center/institute/unit

An institute CEO/Executive Director, Director of Strategic Partnerships, Chief Technology Officer, Chief Innovation Officer and Director, QCORE Education & Workforce Development are all positions created and in place through federal grant support. The establishment of computing and networking testbeds and core (user) facilities focused on cryogenics, materials fabrication and characterization, component and device testing and development, are also grant supported. Anticipated MSU institutional support is consistent with its other centers will provide some operational assistance through the newly established Institute for National Security Research (INSRE)[viv] and Education and MilTech. QCORE activities are of interest to multiple federal agencies as well as the private sector so continuing grant, sponsored research and test and evaluation funding is expected.

Signature/Date		
Chief Academic Officer:	DocuSigned by: Robert Mokwa 212A28411AC04BD...	12/15/2025 | 9:50 AM MST
Chief Research Officer:	DocuSigned by: Alison Harmon 8596262C40F2420...	12/15/2025 | 12:54 PM MST
Chief Executive Officer:	Signed by: Brock Tessman 3B91DBE4C8B1461...	12/17/2025 | 12:23 PM MST
Flagship Provost*:	DocuSigned by: Robert Mokwa 212A28411AC04BD...	12/15/2025 | 9:50 AM MST

Montana University System

REQUEST TO PLAN FORM – ACADEMIC, ADMINISTRATIVE OR RESEARCH UNIT

Flagship President*:	Signed by: Brock Tessman 3B91DBF4C8B1461...	12/17/2025 | 12:23 PM MST

*Not applicable to the Community Colleges.

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[i] National Security Memorandum on Promoting United States Leadership in Quantum Computing While Mitigating Risks to Vulnerable Cryptographic Systems, https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/04/national-security-memorandum-on-promoting-united-states-leadership-in-quantum-computing-while-mitigating-risks-to-vulnerable-cryptographic-systems/, 2022.

[ii] Quantum Technology Manufacturing Roadmap, prepared by SRI international for NIST, https://www.sri.com/press/story/quantum-technology-manufacturing-roadmap/ , Oct 2023.

[iii] An Assessment of U.S. – Allied Nations' Industrial Bases in Quantum Technology, Rand Corporation, ISBN: 978-1-9774-1243-0, https://doi.org/10.7249/RRA2055-1 , https://www.rand.org/pubs/research_reports/RRA2055-1.html, 2023.

[iv] Hyperion Research, "Challenges and Opportunities for Securing a Robust US Quantum Computing Supply Chain" Hyperion Research #HR4.0024.04.15. 2022. https://quantumconsortium.org/quantum-computing-supply-chain-issues/

[v] Boston Consulting Group study: https://www.bcg.com/publications/2024/long-term-forecast-for-quantum-computing-still-looks-bright

[vi] McKinsey & Company. "Quantum computing funding remains strong, but talent gap raises concern," June 2022

[vii]https://www.montana.edu/news/23386/montana-state-receives-26-7-million-grant-for-facility-to-test-and-promote-quantum-technology

[viii]https://www.defense.gov/News/Contracts/Contract/Article/4261297/#:~:text=Montana%20State%20University%2C%20Bozeman%2C%20Montana%2C%20was%20awarded%20a%20$31%2C518%2C010%20cost%2Dtype%20contract%20for%20Expand%20Q%2DCORE.

[viv] https://www.montana.edu/news/24156/board-of-regents-approves-new-institute-at-montana-state-to-address-national-security

Montana University System

REQUEST TO PLAN FORM – ACADEMIC PROGRAM

ITEM 223-1001-R0326 **March 2026**

Request to Plan a Rural Practice Juris Doctorate

Program Title: **Rural Practice Online Flex J.D.** Planned 6-digit CIP code: **22.0101**

Campus, School/Department: **Alexander Blewett III School of Law** Expected Final Submission Date: **May 2027**

Contact Name/Info: **Elaine Gagliardi, Elaine.Gagliardi@mso.umt.edu**

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

1) Provide a brief description of the new program.

The Alexander Blewett III School of Law currently offers a 3-year, full-time, in-person Juris Doctor degree. It submits the request to plan to add to the law curriculum a new 4-year, part-time, flex online, rural practice J.D. program ("Rural Practice J.D.") to better meet the legal needs of those who live in rural Montana communities.

Traditional legal education requires full-time, on-campus attendance, making a J.D. unattainable for many qualified, motivated Montanans. The Rural Practice J.D. will deliver a flexible, part-time, place-based J.D. track designed for working students. This innovative model enables students to earn a law degree while continuing to live and work in their home communities. It offers an affordable degree path by lowering the financial barriers of relocation and lost income. It keeps future attorneys embedded in the communities they will ultimately serve. In this way, the Rural Practice J.D. directly serves Montanans by supporting and encouraging the availability, accessibility, and quality of legal services in Montana's rural communities.

Students enrolled in the Rural Practice J.D. will earn a J.D. degree over four years, taking 2 to 3 courses per semester, including summer semesters. Students will complete substantial course work online. Because the practice of law inherently requires well developed legal analysis, oral advocacy and negotiation skills, students will periodically meet for a long weekend of intensive skills training, about three times a semester. These in-person sessions will occur at different MUS facilities throughout Montana. The flex program's design ensures students graduate with critical lawyering skills that can only be honed in an in-person setting, while at the same time allowing students to remain at home to complete out-of-class work and other training adaptable to an online modality.

The Rural Practice J.D. program will require students to complete the same required coursework completed in its full-time, in-person 3-year J.D. program. The Rural Practice J.D. elective courses, however, will focus on those areas of legal practice most needed and utilized by residents of rural areas. Indicative of its name, the Rural Practice J.D. elective courses will be more limited than the in-person J.D. program and tailored to issues frequently addressed by attorneys with a rural practice. The law school has developed clinical field placements with county attorney, public defender, and Montana Legal Services offices. The Rural Practice J.D. will afford similar clinic opportunities in the localities where its students live. By completing course work and clinic requirements in their hometowns, graduates will be more likely to practice in their hometowns.

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The Rural Practice J.D. program will allow students to continue to live in their home communities and maintain their current employment while attending law school. The Rural Practice J.D. benefits students by minimizing overall costs of attendance and need for borrowing. It benefits Montana by encouraging students to remain in their hometowns following graduation. The Rural Practice J.D. aims to increase the availability, accessibility, and quality of legal services to underserved Montana communities.

1.a. How many total credits will be required for the degree? How many credits in the major/minor?

Students in the program would receive a juris doctor (J.D.) degree. The J.D. degree at Blewett School of Law is currently 90 credits. The only difference between the current and the proposed flex program is that the proposed flex program is a part time program with an online modality.

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

The Rural Practice J.D. program meets two very important needs – it provides a more affordable path to a J.D. and it helps fill the need for attorneys in Montana's rural communities.

The recently passed federal budget bill enacts new limitations on federal student loan borrowing. Beginning July 1, 2026, entering law students will be limited in federal loan borrowing to $50,000 per year with a lifetime maximum of $200,000. Cost of attendance when added to resident tuition exceeds the annual federal student loan borrowing limitation. This year resident tuition/fees is $27,412. Cost of attendance, which includes housing, meals, transportation, books, and miscellaneous expenses is an additional $38,949. Of the 269 students currently enrolled, 80 have taken AY 2024-25 federal loans of more than $50,000. Of those 80 students, 30 were Montana residents. Students who must borrow in excess of the new federal loan limits will need to have personal collateral or will need to find someone to co-sign private loans in excess of the federal limit. The interest rates charged by the private market exceed those currently charged on federal loans.

The cost of attendance substantially decreases for students in the part-time Rural Practice J.D. program. Students attending the Rural J.D. program can continue to work and remain in their current living situation. It will be less likely that students in the Rural J.D. will exceed federal borrowing limits. The Rural J.D. program will allow those students who cannot find a co-signer for a private loan, the opportunity to attain a J.D.

Lawyers in Montana cities and towns have indicated it is difficult to fill job openings. Department of Labor Statistics indicate the Montana attorney population is most highly concentrated in the Missoula and Bozeman areas. Other areas have fewer attorneys. A recent ABA report indicates twenty-nine states have more lawyers per capita than Montana. Montana has only 3.18 lawyers per 1,000 people, lower than the national average of 4.0 per 1000, with a concentration of those in the Missoula and Bozeman areas. The Legal Services Corporation Rural Justice Report (2024) recommends "investment in programs to increase the number of lawyers in rural and remote communities." It suggests increasing law student familiarity with rural communities through internships and field trips, among other suggestions. It also suggests the need for monetary incentives such as loan forgiveness. The Rural Practice J.D. program can meet the need for more lawyers in rural parts of Montana by

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encouraging those who already live in rural communities and who are otherwise unable to move to Missoula to instead attain a J.D. through the part-time, online flex program.

3) **Describe how the program fits with the institutional mission, strategic plan, and the existing MUS and institutional portfolios (refer to the most recent institutional Academic Priorities and Planning Statement. https://www.mus.edu/che/arsa/AcademicPlanningAndPriorities/academic-priorities.html).**

The Rural Practice J.D. program addresses the following academic priorities: it makes attaining a legal education more affordable, provides access to different demographic of students, and provides a flex online option to attain a law degree.

4) **Review the MUS academic degree program inventory for similar, adjacent, and/or preparatory programs (https://www.mus.edu/findaprogram/).**

a. **Describe any opportunities for collaboration you have identified or initiated either within the institution or between MUS institutions (i.e. articulation, course-sharing academic programs and creating pathways between degrees). Include potential contacts and their institutional affiliation.**

The Alexander Blewett III School of Law is Montana's law school. There is no other MUS institution that awards a law degree. The Rural Practice J.D. makes attaining a law degree more accessible to Montanans. The Rural Practice J.D. program will work with MUS campuses throughout Montana to meet the demand for legal education and the demand for legal services in rural Montana.

b. **What are current enrollment numbers in similar programs for the last three academic years?**

The Law school's enrollment has increased to more than 90 students per entering class. The law school does not provide a part-time program. Montanans who wish to continue working while at the same time obtaining a law degree have enrolled in out-of-state online programs. There is a growing demand for part-time online flex degrees. An entering class of 30 part-time students each year would eventually allow the program to be self-supporting when it is fully subscribed.

c. **Describe any significant new financial resources (faculty, staff, facilities, and/or curricula) needed to launch and sustain the program.**

The Rural Practice J.D. online flex program would require the addition of dedicated faculty and staff. ABA accreditation requirements mandate that students in the Rural Practice J.D. receive the same faculty and staff support as is provided students in the in-person program. As student numbers increase, faculty and staff must also increase to support the additional students. Student numbers will increase as each new class is admitted. The program would need to admit at least 32 students the first year of the four-year program and increase each year by 30 students until year four when total enrollment would be 120 students. In Year four and thereafter the program would enroll at least 120 students each year.

Faculty and staff would be hired incrementally as the Rural Practice J.D. program grows in number of students. By its fourth year, the Rural Practice J.D. program would enroll 120 students and have 7 full-time faculty, 2 faculty administrators, who would teach part-time, and 4 staff dedicated to its operation. The program would hire adjuncts as appropriate. Based on an entering class of 32 students and an increase of 30 students each year thereafter, in its first

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three years of operation the Rural Practice J.D. would run a deficit. In the fourth year, when the program enrolls at least 120 students, the Rural Practice J.D. would become self-supporting.

Faculty and staff would be hired based on student and course needs. In the first year, the program would be supported by 2 faculty, 1 administrator/faculty, and 2 staff. The second year, it would be supported by 5 faculty, 1 administrator, and 3 staff. The third year it would be supported by 7 faculty, two administrator/faculty, and 4 staff. The program would also use adjuncts as appropriate.

The attached budget projections are based on the following assumptions:

- Students enroll in 10 credits fall and spring semester, with one-half the students enrolled in 5 credits summer semester.
- Tuition is based on AY2027-28 rates and current law program fee, with the summer program fee charged per credit.
- Tuition and expenses remain static over the four years.
- The revenue estimates are based on 100% resident enrollment. It is likely the program will have some nonresident enrollment.

The law school will receive a grant to cover the loss anticipated during the first three years of operation.

Signature/Date
Flagship Provost*: *: **1/21/2026** **Flagship President*:** **1/22/2026**
*Not applicable to the Community Colleges.

Attachment #1 - Draft Fiscal Pro Forma

		Resident	Resident	Resident	Resident
Hourly Rate - FY 2027		$ 346.00	$ 346.00	$ 346.00	$ 346.00
Credits		10	10	10	10
Extrapolation		$ 3,460.00	$ 3,460.00	$ 3,460.00	$ 3,460.00
Program Fee		$ 8,355.00	$ 8,355.00	$ 8,355.00	$ 8,355.00
Total per Semester		$ 11,815.00	$ 11,815.00	$ 11,815.00	$ 11,815.00
Number of Students		32	62	92	120
Annual Tuition Charges		$ 221,440.00	$ 429,040.00	$ 636,640.00	$ 830,400.00
Summer Tuition Charges		$ 55,360.00	$ 107,260.00	$ 159,160.00	$ 207,600.00
Academic Year Program Charges		$ 534,720.00	$ 1,036,020.00	$ 1,537,320.00	$ 2,005,200.00
Summer Program Charges		$ 111,400.00	$ 215,837.50	$ 320,275.00	$ 417,750.00
Gross per Semester		$ 922,920.00	$ 1,788,157.50	$ 2,653,395.00	$ 3,460,950.00
Academic Year Semesters		2.00	2.00	2.00	2.00
Summer Semesters		0.50	0.50	0.50	0.50
Estimated Annual Revenue		$ 922,920.00	$ 1,788,157.50	$ 2,653,395.00	$ 3,460,950.00
Faculty		$ 511,000.00	$ 1,049,000.00	$ 1,392,000.00	$ 1,392,000.00
Staff and Librarians		$ 206,000.00	$ 297,000.00	$ 597,000.00	$ 597,000.00
Operating Costs		$ 175,000.00	$ 175,000.00	$ 225,000.00	$ 250,000.00
Travel		$ 30,000.00	$ 30,000.00	$ 30,000.00	$ 30,000.00
Marketing		$ 250,000.00	$ 250,000.00	$ 200,000.00	$ 175,000.00
		$ 1,172,000.00	$ 1,801,000.00	$ 2,444,000.00	$ 2,444,000.00
Income from Program		$ (249,080.00)	$ (12,842.50)	$ 209,395.00	$ 1,016,950.00
Overhead	20%	$ 184,584.00	$ 357,631.50	$ 530,679.00	$ 692,190.00
Net Income		$ (433,664.00)	$ (370,474.00)	$ (321,284.00)	$ 324,760.00
Cumulative		$ (433,664.00)	$ (804,138.00)	$ (1,125,422.00)	$ (800,662.00)

ANTICIPATED START UP EXPENSES $1,125,422

ASSUMPTIONS: Assumes only resident enrollment. Program may enroll non-resident students at a higher rate of tuition and program fees.

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ITEM 223-1002-R0326 **March 2026**

Request to plan a Masters of Indian Law & Policy

Program Title: **Master of Indian Law & Policy**

Planned 6-digit CIP code: 44.0599

Campus, School/Department: **Alexander Blewett III School of Law, Department of Public Administration & Policy**

Expected Final Submission Date: **May 2027**

Contact Name/Info: **Kekek Stark, kekek.stark@mso.umt.edu. Deb DuMontier, Deb.Dumontier@mso.umt.edu, and Dr. Shannon Vaughan, shannon.vaughan@mso.umt.edu**

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1) Provide a brief description of the new program.

The Alexander Blewett III School of Law's Department of Public Administration & Policy (DPAP) proposes a new Master's Degree in Indian Law & Policy program (MILP) designed for legal practitioners and non-lawyers whose work intersects with tribal, federal, and state governments. The program will serve students such as tribal leaders, agency personnel, educators, nonprofit administrators, natural resource managers, and public policy professionals who require advanced knowledge of Indian Country governance. The MILP provides interdisciplinary training in Federal Indian Law, tribal sovereignty and governance, public administration and budgeting, intergovernmental relations, trust and fiduciary responsibilities, natural resources and water policy, and the ethical and cultural competencies necessary for effective consultation and collaboration.

The program will be offered online and in hybrid formats to ensure accessibility for working professionals and for students in rural and tribal communities. Coursework will be drawn from faculty in the ABIII School of Law, DPAP, the American Indian Governance & Policy Institute, and the Margery Hunter Brown Indian Law Clinic.

The MILP will also include a Certificate in Indian Law & Policy option consisting of twelve credits of foundational coursework. The Certificate offers a focused training option that may be completed independently or applied toward the MILP for students who later pursue the master's degree.

1.a. How many total credits will be required for the degree? How many credits in the major/minor?

It is expected that the degree would include 36 graduate credit hours (GCH), comprised of 18 GCH of core, required courses and 18 GCH of elective coursework.

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

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Montana is home to twelve tribal nations and supports extensive tribal–federal–state intergovernmental activity. Montana's Constitution and State–Tribal Cooperative Agreements Act (MCA 18-11-101 et seq.) further underscore the need for a professional workforce trained in these areas.

Professionals in tribal government, state agencies, federal agencies, and nonprofit organizations regularly navigate legal and policy questions involving sovereignty, jurisdiction, treaty rights, trust responsibilities, and natural resource governance. These individuals would benefit from a sustained level of legal and policy literacy not comprehensively addressed by existing programs within the Montana University System.

Student demand supports the need for a dedicated graduate credential in this area. The University of Montana has seen consistent enrollment of non-lawyer graduate students in existing Indian law and policy-related courses, indicating sustained interest in structured pathways that integrate law and public administration. Nationally, several universities including Arizona State University, the University of Arizona, and the University of New Mexico have established or expanded masters-level programs in Indigenous law, Indian law, or Indigenous governance. To date, a similar program does not exist in the Rocky Mountain West.

While comprehensive enrollment data are not publicly available, these developments reflect broader institutional interest in non-JD and graduate training that addresses Indigenous governance and legal frameworks. Tribes, public agencies, and nonprofit organizations have also expressed the need for accessible online and hybrid programs that allow working professionals to remain in their communities while expanding their skills.

The MILP and Certificate respond directly to these needs while complementing, and not duplicating, existing programs within the MUS system, including the companion proposal for the Master's in Natural Resources Law and Policy.

3) Describe how the program fits with the institutional mission, strategic plan, and the existing MUS and institutional portfolios (refer to the most recent institutional Academic Priorities and Planning Statement. https://www.mus.edu/che/arsa/AcademicPlanningAndPriorities/academic-priorities.html).

The MILP and Certificate align with the University of Montana's mission by advancing education, research, and service related to tribal nations and public governance. The programs build on UM's strengths in Federal Indian Law and tribal governance and contribute to the goals of the Indigenous Strategic Plan by expanding access and strengthening partnerships with tribal communities. They also support Montana's constitutional and statutory commitments to state–tribal relations by preparing professionals to engage effectively in government-to-government contexts.

The interdisciplinary structure of the MILP draws on expertise from the ABIII School of Law, DPAP, the Margery Hunter Brown Indian Law Clinic, and the American Indian Governance & Policy Institute. The MILP elevates areas of institutional excellence and aligns graduate education with Montana's workforce needs. The online and hybrid delivery models support the Academic Programs & Planning Services (APPS) priorities of flexibility, lifelong learning, and access for working adults and mid-career professionals.

Within UM's academic program array, the MILP complements existing offerings by creating a graduate pathway that integrates law, governance, and public administration. The Certificate provides a shorter, stackable credential that broadens access for professionals across multiple sectors. Together, the MILP and Certificate strengthen UM's

statewide service mission and supports the development of a skilled workforce capable of serving Montana's tribal nations and intergovernmental partners.

4) Review the MUS academic degree program inventory for similar, adjacent, and/or preparatory programs (https://www.mus.edu/findaprogram/).

a. **Describe any opportunities for collaboration you have identified or initiated either within the institution or between MUS institutions (i.e. articulation, course-sharing academic programs and creating pathways between degrees). Include potential contacts and their institutional affiliation.**

Montana is home to seven Tribal Colleges and Universities (TCUs), each chartered by its respective Tribal government and located on one of the seven Indian reservations in Montana. These TCUs serve as the primary higher-education institutions for their communities and share a common mission of Tribal self-determination, cultural preservation, and workforce development. Collaboration with Montana's TCUs represents a significant opportunity for academic pathways, enrollment growth, and service to Indian Country.

The proposed Master's in Indian Law & Policy (MILP) and Certificate are well suited for coordinated academic pathways and development with Montana TCUs, particularly for students completing associate or bachelor's degrees in fields such as tribal governance, public administration, natural resources, education, or social sciences. Planned collaboration includes outreach to TCU presidents and academic leadership, who already engage regularly with the Montana University System, to explore transfer pathways, advising coordination, guest lectures, and shared professional development opportunities. These efforts would support place-based access to graduate education while respecting tribal sovereignty and institutional autonomy.

In addition to Montana, collaboration opportunities exist with Tribal Colleges and Universities nationwide. There are thirty-five accredited TCUs operating more than ninety campuses and sites across fifteen states, collectively serving students from more than 250 federally recognized tribes. While TCUs vary in size, focus, and geographic context, they share a core commitment to tribal nation-building and workforce preparation. The online and hybrid design of the MILP and Certificate programs allows for scalable access beyond Montana and positions the program to serve alumni and graduates of TCUs across Indian Country.

Additional coordination is anticipated through collaboration with the Office of Tribal Relations at the U.S. Department of Agriculture, which maintains relationships with TCUs nationwide and regularly facilitates intergovernmental and inter-institutional partnerships. These collaborations are expected to support enrollment potential by creating clear, culturally grounded graduate pathways for TCU graduates and working professionals seeking advanced training in Indian law, governance, and public policy.

b. What are current enrollment numbers in similar programs for the last three academic years?

Upon review of the Montana University System academic degree program inventory, there are no comparable master's-level programs in Indian Law and Policy, Indigenous governance, or related interdisciplinary legal–policy fields currently offered within the system. Because no similar programs exist at this time, comprehensive enrollment comparisons are not available for the past three academic years.

c. Describe any significant new financial resources (faculty, staff, facilities, and/or curricula) needed to launch and sustain the program.

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The MILP and Certificate are designed to rely on existing faculty, course offerings, and institutional infrastructure, thus minimizing new resource needs. Instruction will be provided primarily by current faculty in the ABIII School of Law and DPAP, with opportunities for specialized modules taught by scholars and practitioners already engaged in the Summer Indian Law Program. Most courses required for the MILP exist across the ABIII School of Law, DPAP, and the Native American Studies Program. Limited curriculum development may be needed for a gateway or capstone course through MHBILC or American Indian Governance & Policy Institute.

Administrative support can be managed through existing staff in the ABIII School of Law and DPAP who currently oversee graduate programs. The program may share a graduate assistantship with related units if needed. Online and hybrid delivery will be supported by DPAP and UM Online, which already assists with course development and statewide access. The program is expected to be financially sustainable based on anticipated enrollment from working professionals, tribal government employees, and regional partners.

Signature/Date
Flagship Provost*: **1/21/2026** **Flagship President*:** **1/22/2026**
*Not applicable to the Community Colleges.

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REQUEST TO PLAN FORM – ACADEMIC, ADMINISTRATIVE OR RESEARCH UNIT

ITEM 223-1003-R0236 **March 2026**

Request to plan the Montana Climate Office (MCO)

Center/Institute/Unit Title: **Montana Climate Office (MCO)**

Campus: **University of Montana-Missoula** Expected Final Submission Date: **May 2027**

Contact Name/Info: **Kelsey Jensco, Director, Kelsey.Jencso@mso.umt.edu,**

This form is meant to increase communication, collaboration, and problem-solving opportunities throughout the MUS in the center/institute development process. The completed form should exceed 2-3 pages. For more information regarding the center/institute approval process, please visit http://mus.edu/che/arsa/academicproposals.asp.

1) Provide a brief description of the new center/institute (unit).

The Montana Climate Office (MCO), housed at the University of Montana, serves as the state's official steward of climate information and decision support. Established in 2006 by Governor Brian Schweitzer and added to the Governor's Drought and Water Supply Advisory Committee in 2025 by Governor Gianforte, the MCO provides authoritative, science-based climate, water, and drought information to support Montana's citizens and agencies. The office operates as a trusted bridge between federal climate partners, university research, and state, tribal, and local decision-makers. MCO is officially recognized by the American Association of State Climatologists as Montana's State Climate Office

The MCO's mission is to assimilate, organize, and disseminate climate information from federal, state, and local sources; to provide credible and objective expertise for policy and management decisions; and to assist stakeholders in interpreting and applying climate data to planning, adaptation, and risk management. Its research and services are practical by design and user-driven, focusing on agriculture, water resources, forestry, energy, tourism, and community resilience, while maintaining scientific rigor and political neutrality.

Core MCO activities include development of the Montana Climate Atlas and Climate Data Layers (as part of the State Library Montana Spatial Data Infrastructure), operation of a statewide drought and water-supply early warning system, and leadership of the Montana Mesonet—a dense and expanding network of weather and soil moisture stations providing near–real-time observations across the state. MCO scientists integrate ground-based observations, satellite data, and advanced modeling to monitor drought and to support the Governor's Drought and Water Supply Advisory Committee, the U.S. Drought Monitor, and state and federal response programs.

In addition to research and monitoring, the MCO emphasizes extension, education, and technology transfer. The office works closely with Montana's tribes to stand up climate, drought and water resources information systems, leads Montana's CoCoRaHS network, produces applied climate communications for producers and resource managers, conducts research on stakeholder information needs, and trains students and professionals in climate and water analysis. Through extensive partnerships with state agencies, tribal nations, universities, federal programs, and the private sector, the Montana Climate Office plays a central role in advancing climate resilience, economic stability, and informed decision-making across Montana.

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2) Describe the need for the center/institute. Specifically, how the center/institute meets current student, state, and industry research or community engagement needs. (Please cite sources in an addendum to this document).

The MCO meets a critical and growing need for Montana by functioning as a coordinated institute that integrates research, education, and service to address climate and water-driven risks facing communities and businesses.

https://climate.umt.edu

As Montana's officially designated State Climate Office, the MCO provides trusted, science-based climate, drought, and water information that is relied upon by state agencies, producers, tribes, and local governments for decisions related to agriculture, wildfire preparedness, water management, and hazard mitigation—needs that have intensified with increasing drought, fire and flooding. At the same time, the MCO responds to strong student demand for applied, hands-on training in climate science, hydrology, data analytics, and environmental monitoring. We embed undergraduate and graduate students in real-world research, monitoring networks, and decision-support projects, creating clear pathways into high-demand careers in natural resource management, emergency response, and environmental consulting. These activities directly support Montana's workforce needs by developing climate and water literate professionals with expertise in instrumentation, modeling, big-data analysis, and science-to-decision translation - skills increasingly required by state agencies, private industry, and federal partners. By uniting education, workforce development, and operational climate and water services within a single institute, the MCO fills a statewide gap that cannot be met by individual academic programs.

3) Describe how the center/institute fits with the institutional mission, strategic plan, and the existing MUS and institutional portfolios (refer to the most recent institutional Academic Priorities and Planning Statement).

No significant new financial, staffing, facility, or curricular resources are required to launch or sustain the MCO as a formal institute - it has effectively operated in this capacity for more than a decade. The MCO has been self-funded through competitive grants and contracts while supporting a robust portfolio of research, community outreach, service activities, and undergraduate and graduate education. The MCO has developed the administrative, technical, and research infrastructure necessary to function as an institute, including the addition of dedicated administrative staff in recognition that the scope and scale of our work exceeds what can be supported through shared departmental appointments. Importantly, Investigators from the MCO have an exceptional record of securing external support: it currently manages $19,222,000 in active grants and contracts that are generating $6,669,000 in indirect cost recovery for the University of Montana. MCO consistently leverages federal, state, and private funding to sustain personnel, facilities, monitoring networks, and student training. While the MCO continues to pursue stable, long-term funding consistent with institute-level operations, the proposed designation does not require new resource investments; rather, it formally recognizes and stabilizes an existing, highly productive enterprise that has demonstrated its ability to attract significant external funding and return value to the University and the State of Montana.

4) Describe any opportunities for collaboration you have identified or initiated either within the institution or between MUS institutions (i.e. articulation, course-sharing, research collaboration). Include potential contacts and their institutional affiliation.

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The Montana Climate Office (MCO) is uniquely positioned to advance collaboration both within the University of Montana and across the Montana University System (MUS) through its long-standing role as a service- and research-oriented hub for climate and water science. Within UM, the MCO works closely with multiple departments and centers to support interdisciplinary research, shared graduate and undergraduate training, and applied projects that integrate climate information into management contexts. Across the MUS, the MCO maintains active partnerships with Montana State University, MSU Extension, Agricultural Experiment Stations, and systemwide research units, enabling coordinated research, shared monitoring infrastructure, and co-advised student training in climate, agriculture, water resources, and natural resource management. These relationships create clear opportunities for expanded course-sharing, joint curricula, and experiential learning pathways that leverage complementary strengths across campuses, particularly in applied climate & water services, data analytics, and extension. As Montana's official State Climate Office, the MCO also serves as a neutral convener that links MUS faculty with state and federal agencies, tribes, and private-sector partners, fostering collaborative research proposals, shared workforce development initiatives, and systemwide responses to climate, drought, and hazard challenges that no single campus could address alone.

5) Describe any significant new financial resources (staff and/or facilities) needed to launch and sustain the center/institute. How do you anticipate supporting this new center/institute/unit

The MCO is deeply aligned with the University of Montana's mission, strategic plan, and academic priorities, and functions as a highly visible, mission-driven enterprise that integrates research excellence, student engagement, and public service. UM's mission emphasizes high-quality education, world-class research, and service that fosters inclusive prosperity and strengthens communities. As Montana's official State Climate Office, the MCO operationalizes this mission by generating actionable climate, water, and drought science and translating it into real-world decision support for communities, industries, tribal nations, and state and federal agencies. Through statewide programs such as the Montana Mesonet, drought early-warning systems, and climate assessments, the MCO embodies UM's Design Principles of impact, interdisciplinarity, inquiry, innovation, inclusivity, and internationalization. Its work integrates climatology, hydrology, forestry, agriculture, ecology, data science, social science, and policy—particularly within the W.A. Franke College of Forestry and Conservation—while advancing innovation through new monitoring infrastructure, and data-driven modeling approaches. Partnerships with tribal nations, deployment of monitoring infrastructure on tribal lands, and national engagement through NOAA, NSF, and the American Association of State Climatologists further elevate UM's research profile and public value.

The MCO also directly advances UM's five Priorities for Action and complements the university's existing institutional program array. Student success is supported through experiential learning, paid student employment, internships, and research training embedded in real-world climate and water projects. Excellence in teaching, learning, and research is reinforced through peer-reviewed scholarship, a strong competitive grants portfolio, and shared data infrastructure that supports faculty research and curriculum across departments. The MCO exemplifies "Mission First, People Always" and "Partner with Place" by delivering trusted, objective climate information that supports livelihoods, public safety, and natural-resource stewardship, while working closely with rural communities, agricultural producers, watershed groups, state agencies, and tribal governments. Rather than operating as a standalone unit, the MCO serves as connective tissue across UM programs—amplifying interdisciplinary collaboration, technology transfer, and applied scholarship. Collectively, these roles position the Montana Climate Office as a strategic asset that strengthens UM's academic identity, research enterprise, student experience, and statewide impact.

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Signature/Date
Chief Research Officer:  **1/21/2026** **Flagship Provost*:**  **1/21/2026** **Flagship President*:**  **1/22/2026**
*Not applicable to the Community Colleges.

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REQUEST TO PLAN FORM – ACADEMIC PROGRAM

ITEM 223-1004-R0326 **Meeting Date**

Request to plan an Integrated Aquatic and Terrestrial Concentration in the BS in Wildlife Biology

Program Title:	**BS in Wildlife Biology; Concentration in Integrated Aquatic and Terrestrial**	Planned 6-digit CIP code:	03.0601
Campus, School/Department:	**University of Montana, W.A. Franke College of Forestry and Conservation**	Expected Final Submission Date:	**May 2026**
Contact Name/Info:	**Chad Bishop, chad.bishop@mso.umt.edu**		

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

1) **Provide a brief description of the new program.**

The University of Montana proposes to establish a new Integrated Aquatic/Terrestrial concentration within the existing Bachelor of Science in Wildlife Biology. The concentration combines coursework from the current Terrestrial and Aquatic concentrations, allowing students to integrate training across ecological systems rather than selecting a single pathway. The concentration will appear as a named concentration on student transcripts and is designed to provide flexible, workforce-relevant preparation while maintaining the academic rigor and learning outcomes of the Wildlife Biology B.S.

1.a. How many total credits will be required for the degree? How many credits in the major/minor?

The proposed concentration does not change the total credits required for the Wildlife Biology B.S. (120 credits). The concentration is structured within existing major requirements and uses existing courses. Students will be able to complete the major in 69-74 credits.

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

Student, workforce, and statewide needs increasingly point toward integrated training in wildlife biology that spans both terrestrial and aquatic systems. Employers in federal and state agencies, consulting firms, and non-governmental organizations frequently seek graduates who can work across habitats, apply quantitative and analytical methods, and address complex landscape-level conservation challenges.

At present, students in the Wildlife Biology B.S. must choose between separate Terrestrial or Aquatic concentrations. This structure limits curricular flexibility, contributes to enrollment imbalances between course offerings, and does not always align with the breadth of skills expected in professional practice. Over the past two

years, Wildlife Biology faculty have reviewed peer programs, professional society standards, and federal job classifications, leading to revisions of the existing concentrations and the development of this integrated option.

The Integrated Aquatic/Terrestrial concentration responds directly to Montana's workforce needs by preparing graduates to work across fisheries, forest, rangeland, and watershed contexts while strengthening students' competitiveness for employment and graduate study.

3) Describe how the program fits with the institutional mission, strategic plan, and the existing MUS and institutional portfolios (refer to the most recent institutional Academic Priorities and Planning Statement. https://www.mus.edu/che/arsa/AcademicPlanningAndPriorities/academic-priorities.html).

The proposed concentration aligns with the University of Montana's mission to provide high-quality education that prepares students to contribute to communities and steward natural resources. It fits squarely within UM's existing Wildlife Biology B.S. and does not represent a new degree program or expansion of scope.

Within the Montana University System, the concentration complements existing natural resource and biology programs by offering an integrated pathway within an established degree, rather than duplicating degree-level offerings at other campuses. The proposal strengthens curricular coherence and responsiveness while maintaining alignment with system-level academic priorities.

4) Review the MUS academic degree program inventory for similar, adjacent, and/or preparatory programs (https://www.mus.edu/findaprogram/).

a. Describe any opportunities for collaboration you have identified or initiated either within the institution or between MUS institutions (i.e. articulation, course-sharing academic programs and creating pathways between degrees). Include potential contacts and their institutional affiliation.

The Integrated Aquatic/Terrestrial concentration builds on UM's existing Terrestrial and Aquatic concentrations in Wildlife Biology. No other MUS institution offers a comparable named concentration within a Wildlife Biology degree. Degree-level programs at other institutions emphasize different structures and scopes, and this proposal does not duplicate those offerings.

The University of Montana has an established relationship with colleagues at Montana State University's Fish, Wildlife & Ecology program. This plan has been shared with them to ensure transparency, coordination, of program pathways across the system. As both are well established we do not anticipate any unnecessary duplication.

b. What are current enrollment numbers in similar programs for the last three academic years?

Within UM, enrollment in the Wildlife Biology B.S. has been strong, with disproportionately high enrollment in the Terrestrial concentration and lower enrollment in the Aquatic concentration over the past three academic years. The proposed integrated concentration is expected to balance enrollment across courses while preserving student choice. Here are the duplicated headcounts (fall+spring enrollments) for each of the last 7 years plus unduplicated headcount for Fall 2025.

Montana University System

REQUEST TO PLAN FORM – ACADEMIC PROGRAM

	AY18-19	AY19-20	AY20-21	AY21-22	AY22-23	AY23-24	AY24-25	Fall 2025
Aquatic	**91**	**76**	**67**	**77**	**87**	**110**	**132**	**133**
Terrestrial	**540**	**577**	**525**	**546**	**558**	**525**	**511**	**385**

c. Describe any significant new financial resources (faculty, staff, facilities, and/or curricula) needed to launch and sustain the program.

No new faculty, staff, facilities, or financial resources are required. The concentration is supported entirely by existing courses and faculty. The restructuring of requirements improves instructional efficiency and better aligns course demand with existing capacity.

Signature/Date
Flagship Provost*:
Flagship President*:
*Not applicable to the Community Colleges.

Montana University System

REQUEST TO PLAN FORM – ACADEMIC PROGRAM

ITEM 223-1501-R0326 **Meeting Date March 2026**

Request for authorization to establish a PhD, Energy Engineering and Science

Program Title:	**PhD, Energy Engineering and Science**	Planned 6-digit CIP code:	**14.4801**
Campus, School/Department:	**Montana Technological University, Lance College of Mines and Engineering**	Expected Final Submission Date:	**4/22/2026**
Contact Name/Info:	**Rick LaDouceur, rladouceur@mtech.edu, 406-496-4186**		
	Foued Badrouchi, fbadrouchi@mtech.edu, 406-496-4479		
	Jack Skinner, JSkinner@mtech.edu, 406-496-4460		

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1) Provide a brief description of the new program.

Montana Technological University proposes the creation of a Doctor of Philosophy (PhD) in Energy Engineering and Science program. This modular and interdisciplinary program reflects Montana Tech's longstanding leadership in the energy sector and leverages existing strengths across departments.

The Ph.D. in Energy Engineering and Science will initially offer three specialization options with the responsible departments in the Lance College of Mines and Engineering (LCME) listed in parentheses:

- Power Systems and Technologies (Electrical Engineering)
- Energy Conversion and Application (Mechanical Engineering)
- Petroleum and Subsurface Engineering (Petroleum Engineering)

Each specialization will be administered by the respective department, allowing autonomy in curriculum development, faculty assignments, and admissions decisions. The modular structure ensures flexibility and relevance across diverse energy disciplines while maintaining academic rigor and research excellence.

In both tracks, students will complete a combination of coursework and research/dissertation credits. A qualifying examination will be required after completing initial coursework. This exam will assess students on both shared interdisciplinary core content and their chosen area of specialization. The students will also have a comprehensive examination which is an oral defense of their research proposal once sufficiently developed.

The program aims to prepare highly skilled researchers and professionals equipped to address evolving energy challenges in Montana and beyond.

1.a. How many total credits will be required for the degree? How many credits in the major/minor?

The program will follow the 60-credit framework like the MUS Material Science and Engineering PhD program with 20 core curriculum course credits and 32 total course credits required along with 28 research credits. Up to 24 credits from a master's degree will be accepted.

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

Montana Tech's proposed PhD in Energy Engineering and Science addresses both local and national needs in workforce development, research, and talent retention. The program aligns with Montana Tech's strengths in applied energy engineering and responds to urgent labor market trends.

Nationally, clean energy jobs grew by 4.2% in 2023, adding over 142,000 jobs and outpacing overall job growth (Utility Dive, Reuters, Building Performance Association). In total, over 250,000 energy sector jobs were added that year, with 56% in clean energy fields (S&P Global).

Montana is also seeing major federal investment. The US Department of Energy awarded up to $700 million to the state (via the GRIP program) for power grid reliability and modernization (Montana Free Press, commerce.mt.gov, North Dakota Monitor).

These shifts create a growing need for advanced training and local research capacity in areas like energy systems, power generation, and grid integration. As confirmed by the Montana Energy Office, strategic growth areas include geothermal, storage, carbon mitigation, and energy infrastructure.

Finally, this program meets a clear student demand. Montana Tech's master's programs in Petroleum, General-Mechanical, and Electrical Engineering enroll high-performing students, many of whom express interest in doctoral study but lack a local option. A PhD in Energy Engineering and Science will provide a pathway to retain these students, attract external applicants, and position Montana Tech as a regional hub for advanced energy research and innovation (cleanenergytransition.org).

3) Describe how the program fits with the institutional mission, strategic plan, and the existing MUS and institutional portfolios (refer to the most recent institutional Academic Priorities and Planning Statement. https://www.mus.edu/che/arsa/AcademicPlanningAndPriorities/academic-priorities.html).

The proposed PhD in Energy Engineering and Science program aligns strongly with both MUS priorities and Montana Tech's strategic objectives in the following ways:

- **Expanding Graduate Education Capacity**: MUS is committed to expanding graduate education to fuel economic development and grow the research enterprise—the PhD in Energy Engineering and Science contributes directly to this goal by increasing PhD-level training in a high-demand, STEM-focused field.

- **Workforce & Economic Development**: MUS objectives emphasize developing high-value jobs and aligning academic programs with workforce needs. This program responds by preparing doctoral-level energy professionals to meet local and national workforce demands in energy and infrastructure.

- **Programs of Distinction at Montana Tech**: The institutional strategic plan calls for strengthening interdisciplinary clusters—specifically in energy, technology, natural resources, and workforce—and expanding industry partnerships and endowed expertise. The PhD in Energy Engineering and Science would serve as a flagship Program of Distinction in energy, anchored by cross-departmental collaboration and aligned with Montana Tech's designation as Montana's Special Focus STEM University.

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- **Institutional Mission Alignment**: Montana Tech's mission emphasizes "developing leaders and advancing science, engineering, and technology ... benefiting humanity while meeting the changing needs of society." The PhD in Energy Engineering and Science directly supports this mission by training leaders equipped to address energy challenges via innovation and applied research.

4) **Review the MUS academic degree program inventory for similar, adjacent, and/or preparatory programs (https://www.mus.edu/findaprogram/).**

a. **Describe any opportunities for collaboration you have identified or initiated either within the institution or between MUS institutions (i.e. articulation, course-sharing academic programs and creating pathways between degrees). Include potential contacts and their institutional affiliation.**

Montana Tech is exploring internal collaboration with Environmental Engineering, Mining Engineering, the MBMG, and external partnerships with MSU (geothermal and energy systems) and UM (environmental modeling). These may involve course sharing and joint research.

b. **What are current enrollment numbers in similar programs for the last three academic years?**

Montana Tech currently offers MS degrees in Petroleum, General-Mechanical, and Electrical Engineering, which collectively enroll 13 to 23 students over the last three years. While exact statewide Ph.D. enrollment data in energy-specific fields is limited, no MUS institution currently offers a modular, interdisciplinary PhD program specifically focused on Energy. This proposed program would fill that gap and support students who wish to continue beyond the master's level locally.

c. **Describe any significant new financial resources (faculty, staff, facilities, and/or curricula) needed to launch and sustain the program.**

To support delivery of the proposed curriculum, the program will require modest new instructional personnel capacity beyond existing faculty commitments. Instructional needs include three 3-credit core courses, two seminar courses, and three 3-credit module courses in each of three specialization modules (nine module courses total). At steady state, this instructional load is equivalent to approximately 3.0–4.0 FTE faculty, distributed across participating departments. This includes:

- 1.0–1.5 FTE to support the interdisciplinary core curriculum and seminars, and
- Approximately 1.0 FTE per specialization module (Electrical Engineering, Mechanical Engineering, and Petroleum Engineering) to deliver module-specific coursework and supervise doctoral research.

Initial delivery may rely partially on existing faculty, but new tenure-track or research-active faculty lines will be required to ensure sustainability, research supervision capacity, and timely course offerings as enrollment grows. Additionally, a power electronics module will be needed for the current Power Lab on campus to support instruction and research.

Signature/Date	
Chief Academic Officer:	1/15/26
Chief Executive Officer:	1/15/26

Montana University System

REQUEST TO PLAN FORM – ACADEMIC PROGRAM

ITEM 223-1502-R0326 **Meeting Date: March 2026**

Request for authorization to establish a MS, Nuclear Energy

Program Title:	**MS, Nuclear Energy**	Planned 6-digit CIP code:	**14.2301**
Campus, School/Department:	**Montana Technological University, Lance College of Mines and Engineering**	Expected Final Submission Date:	**4/22/2026**
Contact Name/Info:	**Bob Morris, rmorris4@mtech.edu, 406-496-4847** **Rick LaDouceur, rladouceur@mtech.edu, 406-496-4186** **Jack Skinner, jskinner@mtech.edu, 406-496-4460**		

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1) Provide a brief description of the new program.

Montana Technological University proposes the creation of a Master of Science (MS) in Nuclear Energy program. This focused graduate program builds on Montana Tech's longstanding leadership in the energy sector and leverages existing academic strengths across multiple departments.

The MS in Nuclear Energy will offer coursework in radiation physics, nuclear reactor theory, radiological safety, nuclear materials and fuels, nuclear life-cycle analysis, and nuclear policy. The program will draw on faculty expertise from the mechanical engineering, materials engineering, and occupational health and safety programs, and will partner with Idaho National Laboratory to provide specialized instruction in nuclear reactor theory and policy.

Students will complete a focused curriculum designed to provide the fundamental knowledge and skills needed to enter the nuclear energy workforce in Montana and beyond. By relying on existing institutional strengths and strategic partnerships, the program minimizes the additional investment required by the Montana University System while supporting the development of a nuclear energy workforce.

1.a. How many total credits will be required for the degree? How many credits in the major/minor?

The MS in Nuclear Energy program will have a 30-credit thesis option and a 36-credit non-thesis option. This follows similar MS programs at Montana Tech.

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

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Montana Technological University's proposed MS in Nuclear Energy addresses critical workforce development needs at both the state and national levels. The program aligns with Montana Tech's established strengths in applied energy and engineering education and responds to growing labor market demand for professionals with expertise in nuclear energy, nuclear medicine, defense and security, and nuclear materials.

At the national level, there is strong bipartisan support for expanding nuclear energy as a component of a clean, reliable energy system. Federal policy initiatives and international commitments to significantly increase nuclear generation capacity underscore the need to rebuild a skilled nuclear workforce (5 Ways the U.S. Nuclear Energy Industry Is Evolving in 2024 | Department of Energy). After more than two decades of limited nuclear development in the United States, much of the Nation's technical expertise has been lost, creating an urgent need for new graduate-level education and training to support industry expansion and long-term energy goals.

At the state level, Montana has historically been a net exporter of energy; however, the planned retirement of the Colstrip power plant by 2043 will result in the loss of approximately 1,000 megawatts—roughly 50 percent—of in-state electricity generation. Existing hydroelectric, wind, and solar resources are insufficient to replace this capacity, and Montana lacks adequate natural gas resources to fill the gap. As a result, nuclear energy represents the only viable large-scale, carbon-free generation option capable of maintaining grid reliability. Reflecting this reality, NorthWestern Energy has identified nuclear energy as a preferred future generation resource beginning in 2043 in the ***NorthWestern Energy 2026 Integrated Resource Plan***.

Despite these emerging needs, Montana currently has no in-state nuclear energy workforce development or graduate-level training programs. Establishing an MS in Nuclear Energy at Montana Tech will address this gap by preparing a skilled workforce essential to Montana's future energy security, economic development, and participation in the national resurgence of nuclear energy.

3) Describe how the program fits with the institutional mission, strategic plan, and the existing MUS and institutional portfolios (refer to the most recent institutional Academic Priorities and Planning Statement. https://www.mus.edu/che/arsa/AcademicPlanningAndPriorities/academic-priorities.html).

The proposed MS in Nuclear Energy aligns closely with both Montana University System priorities and Montana Tech's strategic objectives in the following ways:

- **Expanding Graduate Education Capacity:** MUS prioritizes growth in graduate education to drive economic development. The MS in Nuclear Energy advances this goal by providing graduate-level training in a high-demand, STEM-focused field.

- **Workforce & Economic Development:** MUS emphasizes developing high-value careers and aligning academic programs with workforce needs. This program prepares graduate nuclear energy professionals to meet both state and national workforce demands in energy, infrastructure, and technology.

- **Programs of Distinction at Montana Tech:** Montana Tech's strategic plan calls for strengthening interdisciplinary clusters in energy, technology, and natural resources while expanding industry partnerships and endowed expertise. The MS in Nuclear Energy would be the only graduate-level nuclear energy program in

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Montana, establishing a recognized Program of Distinction aligned with Tech's designation as Montana's Special Focus STEM University.

• **Institutional Mission Alignment:** Montana Tech's mission highlights "developing leaders and advancing science, engineering, and technology … benefiting humanity while meeting the changing needs of society." The MS in Nuclear Energy directly supports this mission by preparing leaders equipped to advance nuclear energy capabilities that are critically needed regionally and nationally.

4) **Review the MUS academic degree program inventory for similar, adjacent, and/or preparatory programs (https://www.mus.edu/findaprogram/).**

a. **Describe any opportunities for collaboration you have identified or initiated either within the institution or between MUS institutions (i.e. articulation, course-sharing academic programs and creating pathways between degrees). Include potential contacts and their institutional affiliation.**

Montana Tech is collaborating with Montana State University professor Paul Gannon on nuclear energy curricula development and collaboration opportunities.

b. **What are current enrollment numbers in similar programs for the last three academic years?**

Montana Tech currently offers MS degrees in General Engineering, Electrical Engineering, Materials Science and Engineering, and Industrial Hygiene, which collectively enrolled and average of 128 students over the last three years.

c. **Describe any significant new financial resources (faculty, staff, facilities, and/or curricula) needed to launch and sustain the program.**

The program will require three full time equivalent faculty positions: two at Montana Tech and one INL adjunct/joint appointment instructor.

Signature/Date	
Chief Academic Officer:	1/15/26
Chief Executive Officer:	1/15/26

Montana University System

REQUEST TO PLAN FORM

ITEM 223-1505-R0326 **Meeting Date: March 2026**

Request for authorization to plan AAS Degree Options in Construction Technology

Program/Center/Institute Title: **Construction Technology AAS Degree Options** Planned 6-digit CIP code: **46.0000**

Campus, School/Department: **Montana Technological University/Highlands College** Expected Final Submission Date: **Fall 2026**

Contact Name/Info: **Tammy Burke, Dean Highlands College (tburke1@mtech.edu) 406-496-3714**

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

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

Highlands College currently offers a 2-year AAS degree in Construction Technology Carpentry. The intent of Highlands College is to expand the current construction program to include two additional options for second year tracks. All students would complete the first-year curriculum which provides students with basic building skills; subsequently, options for the second year will be offered in three areas to include Carpentry (home building), (which is the current AAS degree), Commercial Construction or Specialized Restoration Construction.

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

According to the 2025 Montana Labor Day Report, over the last five years, total employment grew in Montana by 11%, adding nearly 60,000 jobs to the U.S. economy (U.S. Census Bureau and Local Area Unemployment Statistics (LAUS), January 2000 through May 2025. Population in 2025 represents MT Census and Economic Information Center (CEIC) projection). In Montana, leisure activities, professional services, **construction, and trade** are the primary drivers of employment growth over the last five years – accounting for 60% of all jobs added since 2020. Last year construction jobs in Montana increased by 480 with a total of 1,480 added jobs in the field of construction; this is also a high wage area with the average wage in the area of construction being $71,226. The predicted job openings from 2024-2034 in the field of construction are 3700 (2025 Montana Labor Day Report). As the population of Montana continues to increase there will be an increased need for homes, commercial buildings and restoration of aging infrastructure. By expanding the construction options of our current program Highlands College can increase growth of this student population while supporting the workforce/industry need in these three areas.

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

This program will require one additional faculty member to support the first-year program and additional adjunct faculty members that will be from industry as these students will be working with and supervised by industry partners on commercial and restoration projects in the community.

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

There have been no collaborative efforts established at this time; however, this model could easily be adopted by other institutions with construction programs. Collaboration and discussion with the Economic Development Council of Butte Silver Bow is already in process as well as collaboration with local industry partners to support these students.

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

As stated in our mission, Montana Technological University provides a transformative student experience by developing leaders and advancing science, engineering, and technology, with **the purpose of benefiting humanity while meeting the changing needs of society.** Highlands College, through this program is committed to serving students by providing accessible and affordable, relevant, hands-on professional education, to support the economic development happening in Butte and the State of Montana. These programs are designed for current workforce demands that will include courses that can be taken through high school dual enrollment opportunities, leading to applied science degrees, with hands-on industry training which supports the Butte and greater Montana communities.

In the coming year, our academic priorities are centered on expanding Montana Tech's reach and impact in **energy** and **workforce development.** As noted in our most recent Academic Priorities and Planning Statement, Highlands College is accelerating its workforce development initiatives with new *Proposals to Plan* including this proposal that extends our successful Construction Technology program.

Signature/Date
Chief Academic Officer: 1/15/26
Chief Research Officer*:
Chief Executive Officer:
Flagship Provost:**
Flagship President:**

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