Montana University System

PROGRAM REVIEW

Institution: **Montana Technological University**

Program Years: **2013-2019**

List of the programs reviewed:

- B.A.S. in General Studies
- B.S., A.A.S., Certificate in Healthcare Informatics
- Graduate Certificate in Healthcare Informatics
- B.S. in Electrical Engineering
- B.S. in Mathematical Sciences
- B.S. in Statistics
- M.S. in electrical Engineering
- M.S. in Project and Engineering Management
- M.S. in Technical Communications

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

- Place the B.A.S. in General Studies in moratorium during FY 2021
- Placed Healthcare Informatics programs (B.S., A.A.S., Certificate) in moratorium in April 2019
- Continued Graduate Certificate in Healthcare Informatics in a cohort model for greater efficiency
- Placed B.S. in Statistics in moratorium in April 2019
- Redesign the M.S. in Technical Communications
- Continue all other programs

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

See rationale in individual program review documents attached.

Montana University System

PROGRAM REVIEW

Institution: **Montana Technological University**

Program Years: **2019-2020**

List of the programs reviewed:

- General Studies (BAS)

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

The BAS in General Studies provides a path for a student completing an AAS degree to obtain the BAS in General Studies by:

o transferring in maximum of 60 credits of work completed at the AAS level;

o completing a 31 credit General Education Core; and

o passing 29 credits of upper division electives.

Based upon enrollment data and degrees awarded since 2013-2014, the recommendation is to eliminate the degree option.

The institution will place the General Studies (BAS) in moratorium during FY21.

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

	240102 BAS General Studies	
	Fall Enrollment	Number of Degrees
2013-2014	6	2
2014-2015	1	1
2015-2016	0	
2016-2017	1	
2017-2018	2	
2018-2019	0	
2019-2020	0	

Montana University System

PROGRAM REVIEW

Institution: **Montana Technological University**

Program Years: **2019-2020**

List of the programs reviewed:

- Health Care Informatics (BS)
- Health Care Informatics (AAS)

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

April 2019 Level I-Notification of placing the Health Care Informatics Programs (B.S., G.C., A.A.S., C.) in moratorium Item #183-1501-LI0419

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

	Number of Degrees	
	512706 AAS Health Care Informatics	512706 BS Health Care Informatics
2013-2014	5	2
2014-2015	2	4
2015-2016	1	9
2016-2017	1	11
2017-2018	0	10
2018-2019	1	2
2019-2020	0	3

	Fall Enrollment	
	512706 AAS Health Care Informatics	512706 BS Health Care Informatics
2013-2014	2	30
2014-2015	1	42
2015-2016		36
2016-2017		29
2017-2018		23
2018-2019		17
2019-2020		12

Montana University System
PROGRAM REVIEW

Institution: **Montana Technological University**

Program Years: **2019-2020**

List of the programs reviewed:

- Graduate Certificate in Health Care Informatics

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

Continue the program in a "cohort mode."

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

	Graduate Certificate Health Care Informatics	
	Fall Enrollment	Number of Degrees
2013-2014	1	1
2014-2015	5	2
2015-2016	5	3
2016-2017	1	0
2017-2018	2	1
2018-2019*	2	0
2019-2020*	1	1

* No new students admitted subsequent to December 2018.

The Graduate Certificate in Health-Care Informatics (HCI) is a 15-credit program totally available by distance, and it can be completed in 1 year. Most of its students have been working professionals in the health-care sector. Because enrollment had been very low In recent years, the Program Prioritization process, completed in December 2018, recommended transitioning it to a cohort model for greater efficiency and effectiveness. No students have been admitted since that decision. In the cohort model, at least 8 students would be admitted together and all enroll in the same courses, completing it over 10 to 16 months. Cohorts might start every year or two, depending on the needs of the health-care industry. To serve these students and their employers—especially those in Montana, it is likely that courses will be offered on an alternative schedule (such as one-at-a-time on an accelerated 2-month cycle or weekend schedule, rather than having students take concurrent courses over the traditional academic semester).

The COVID-19 pandemic has dramatically elevated the importance and urgency of the knowledge and skills provided by the HCI Graduate Certificate, and recruitment of the first cohort is in progress.

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PROGRAM REVIEW

Institution: **Montana Technological University**

Program Years: **2019-2020**

List of the programs reviewed:

- Electrical Engineering (BS)

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

The BSEE program should be continued.

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

	141001 BS Electrical Engineering	
	Fall Enrollment	Number of Degrees
2013-2014	79	17
2014-2015	60	14
2015-2016	58	15
2016-2017	65	12
2017-2018	63	14
2018-2019	65	18
2019-2020	66	12

The BSEE is an excellent program at Tech and fits Tech's special focus designation. It has sustained enrollment. The program is accredited by the Accreditation Board for Engineering and Technology (ABET) which is the highest accreditation standard available. The program is strongly connected to industry; this includes recently receiving a $1.5 million donation to build a new teaching/research lab. Job placement is excellent with most graduates taking employment with high-quality engineering companies. Faculty are highly qualified and research active; this includes being one of the most successful externally granting departments at Tech.

Institution: **Montana Technological University**

Program Years: **2019-2020**

List of the programs reviewed:

- Mathematical Sciences (BS)

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

"The Mathematical Sciences (BS) should be continued.

Mathematical Sciences (BS) is an excellent program at Tech and fits Tech's special focus designation and the cornerstone for all sciences. The faculty are exceptional, well connected and collaborate well with other majors. Students in math are consistently nominated for the prestigious Rhodes and Goldwater Scholarships.

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

	270101 BS Mathematical Sciences	
	Fall Enrollment	Number of Degrees
2013-2014	14	4
2014-2015	11	2
2015-2016	13	3
2016-2017	10	3
2017-2018	11	2
2018-2019	17	5
2019-2020	14	3

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PROGRAM REVIEW

Institution: **Montana Technological University**

Program Years: **2019-2020**

List of the programs reviewed:

- Statistics (BS)

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

April 2019 Level I- Notification of placing the B.S. in Statistics in moratorium Item #183-1503-LI0419

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

	270501 BS Statistics	
	Fall Enrollment	Number of Degrees
2013-2014	0	3
2014-2015	1	2
2015-2016	2	2
2016-2017	3	2
2017-2018	0	1
2018-2019	1	
2019-2020	1	

Montana University System
PROGRAM REVIEW

Institution: **Montana Technological University**

Program Years: **2019-2020**

List of the programs reviewed:

- Electrical Engineering (MS)

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

Continue the program

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

	141001 MS Electrical Engineering	
	Fall Enrollment	Number of Degrees
2013-2014	2	
2014-2015	3	
2015-2016	6	2
2016-2017	6	3
2017-2018	6	2
2018-2019	8	2
2019-2020	7	2

Although the Master of Science degree in electrical engineering (MSEE) has low-enrollment, it is very strongly connected with Montana Tech's mission supporting the natural resources and energy sectors. The vast majority of the MSEE students complete a M.S. thesis, contributing to the success of important government- or industry-funded research projects. The Electrical Engineering Department is among the most successful at Montana Tech, in terms of obtaining sponsored research funding. For example, in FY 2020, the department submitted 8 proposals requesting nearly $1.1 million. To date, it has received 6 awards totaling over $800 thousand. The MSEE program and its students are vital to this research. The graduates either proceed into industry positions or into Ph.D. programs. The research is important to the electric power industry and to Montana.

Montana University System

PROGRAM REVIEW

Institution: **Montana Technological University**

Program Years: **2019-2020**

List of the programs reviewed:

- Masters of Project and Engineering Management

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

Continue the program.

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

	149999 M Project Engr & Management	
	Fall Enrollment	Number of Degrees
2013-2014	8	6
2014-2015	10	1
2015-2016	6	2
2016-2017	10	3
2017-2018	11	4
2018-2019	8	5
2019-2020	5	4

The Master of Project and Engineering Management (MPEM) primarily serves employed engineers seeking professional advancement. Its curriculum is entirely available on line. Enrollment in the has been uneven, but recruiting has been negligible. It aligns with Montana Tech mission and is both complementary to and synergistic with Montana Tech's other master's degree programs. Some of the courses are included in the new Master of Engineering (M.Eng.) program, which has several options, with two of the MPEM courses being required for all M.Eng. students and others being electives. Moreover, several Interdisciplinary Master's degree students select one to three MPEM courses to be part of their curricula, and their options would be impoverished, were the program to be terminated.

Montana University System

PROGRAM REVIEW

Institution: **Montana Technological University**

Program Years: **2019-2020**

List of the programs reviewed:

- Technical Communications (MS)
  - March 2017 Level I Proposal, Notification of the establishment of a MS in Technical Communication, Online Option Item # 175-1501-LI0517

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

Without formally placing the program in moratorium, no new students have been admitted since December 2018, at the conclusion of the Program Prioritization process. A multidisciplinary group of faculty members is reviewing and updating the curriculum, with the goal of reactivating the communications MS to have improved synergies with the other graduate programs.

Rationale or justification for the decision based on the program review process established at the campus. Include graduation numbers and student majors for each of the last seven (7) years for every program under review.

	231303 MS Tech Communication	
	Fall Enrollment	Number of Degrees
2013-2014	8	4
2014-2015	6	1
2015-2016	7	2
2016-2017	8	3
2017-2018	11	3
2018-2019*	11	6
2019-2020*	5	4

* No students admitted since fall 2018

The MS program in Technical Communication (MSTC) had the fifth-highest enrollment among graduate programs at Montana Tech in December 2018, when the Program Prioritization process recommended to "Convene a multidisciplinary faculty team from across SME and CLSPS departments for an S&E-focused communications MS located in the Grad School with strong synergies with the I.M.S. and science/engineering M.S. and Ph.D. programs." While this process is underway, no new students have been admitted, and of the 11 students enrolled at that time, ten have graduated, while one continues in Fall 2020. The reconfigured communications MS is expected to prepare communications professionals skilled in advanced science and engineering communications, to provide vital complementary skills and coursework for students in the Tech's other graduate programs (including the Interdisciplinary MS), and to serve graduate-education needs in Southwest Montana.