

Montana University System
PROGRAM REVIEW

Institution: **Montana State University**

Program Years: **2016-17**

List of the programs reviewed:

- Department of Earth Sciences
 - B.S. in Earth Sciences
 - M.S. in Earth Sciences
 - Ph.D. in Earth Sciences

- Department of History and Philosophy
 - B.A. in History
 - M.A. in History
 - Ph.D. in History
 - B.A. in Philosophy
 - B.A. in Religious Studies

- Biotechnology (multidisciplinary program)
 - B.S. in Biotechnology

- Genetics (multidisciplinary program)
 - Minor in Genetics

- Gallatin College – Workforce Department
 - A.A.S. in Aviation
 - A.A.S. in Culinary Arts
 - A.A.S. in Design Drafting Technology
 - A.A.S. in Interior Design
 - A.A.S. in Photonics and Laser Technology
 - Certificates
 - C.A.S. in Bookkeeping
 - C.A.S. in CNC Machine Technology
 - C.A.S. in Health Information Coding
 - C.A.S. in Medical Assistant
 - C.A.S. in Network Technology
 - C.A.S. in Welding Technology

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

See decisions by department/program below.

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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 by department/program below

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 - B.S. in Earth Sciences
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Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:

The Department of Earth Sciences offers strong undergraduate programs that are experiencing growth in the numbers of students enrolled and graduating. The graduate program is well subscribed and has a strong record of student completion. These programs will be maintained.

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.

Department of Earth Sciences
Enrollments 2008-2015 (Fall Semester)

Program	2008	2009	2010	2011	2012	2013	2014	2015
Undergraduate	188	200	211	231	241	231	248	245
Graduate	56	52	53	52	64	54	59	44

Source: MSU Office of Planning and Analysis, OCHE Data Warehouse

Degrees Awarded AY10-AY16

Program	AY10	AY11	AY12	AY13	AY14	AY15	AY16
B.S. Earth Sciences	29	32	41	48	48	50	46
M.S. Earth Sciences	5	11	6	8	10	16	13
Ph.D Earth Sciences	1	2	3	3	0	8	2
Totals	35	45	50	59	58	74	61

Source: MSU Office of Planning and Analysis, OCHE Data Warehouse

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Highlights from the Program Review as summarized by the Dean of the College of Letters and Sciences:

External Reviewers: Professor Lisa Harrington, Department of Geography, Kansas State University; Professor Mary R. Reid, School of Earth Sciences and Environmental Sustainability, Northern Arizona University

Internal Reviewer: Professor Jay Rotella, Department of Ecology, MSU

The Earth Sciences department plays a significant role in undergraduate and graduate education and in research and engagement at Montana State University (MSU). The department has a significant undergraduate major (5th largest out of fifteen departments in the College of Letters & Science in FY 2016) and offers masters and doctoral degrees at the graduate level. In addition to its teaching mission Earth Sciences has a research active faculty at all ranks most of whom have secured external funding and produced important publications in leading scholarly outlets in recent years.

Concerns noted in the reviewers' report included: the relatively small number of tenure track faculty; the fact that two of the undergraduate degree options – Snow Science and Paleontology – are only one tenure track faculty member deep; the need to make faculty hires in the area of Geographic Information Systems (GIS); the lack of a faculty workload policy that recognizes research contributions and graduate supervision; making sure that the department is credited for all major grants secured by faculty members; the level of GTA stipends; a mismatch between the undergraduate course catalog and courses actually offered by the department on a regular basis; office and research space with faculty being spread over five different buildings on campus, and the high turnover of departmental staff in recent years.

In terms of recommendations the reviewers provide a number of constructive proposals, most of which I find entirely appropriate. One of their most important recommendations is "visioning" or "branding" the department and I find their suggestion of "Mountain System Science" as the department's niche or focus very compelling, as it fits well with current faculty research interests across the unit and capitalizes on MSU's Bozeman location. Another major suggestion from the reviewers is that the department review and streamline its undergraduate Geology curriculum. I think this is absolutely necessary and should be done in light of the overall "vision" of the department, available faculty resources, the research and teaching strengths of the department, and the university goal of facilitating the graduation of majors in four years.

The graduate program has the potential to grow. At the undergraduate level the program can continue to expand although there is a strong need for revision and streamlining of the undergraduate curriculum on the Geology side (the most popular of the department's undergraduate options). The department's overall levels of research funding and high quality publications will increase as the department has been able to hire new faculty.

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Institution:

Montana State University

Program Years:

2016-17

List of the programs reviewed:

- Department of History and Philosophy
 - B.A. in History
 - B.A. in Philosophy
 - B.A. in Religious Studies
 - M.A. in History
 - Ph.D. in History

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

The History and Philosophy degree programs are strong, well enrolled particularly during this period of decreasing Humanities majors and will be continued. T

Based on the program review and goals set for enrollments and graduates in Religious Studies, the Department of History and Philosophy along with the College of Letters and Science have made the decision that the Religious Studies major will be terminated. That process is being initiated and a teach out plan developed for students currently enrolled in the major.

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.

Department of History and Philosophy Enrollments 2009-2015 (Fall semester)

	2009	2010	2011	2012	2013	2014	2015
Majors - Undergraduate							
History	199	230	196	184	161	154	149
Philosophy	30	31	33	33	40	30	28
Religious Studies	0	0	0	5	9	9	12
Total Majors	229	261	229	222	210	193	189
Minors - Undergraduate							
History	3	2	3	4	20	21	18
Philosophy	2	1	2	2	12	14	17

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Total Minors	5	3	5	6	32	35	35
Graduate Students							
History	30	24	25	24	26	31	25

Department of History and Philosophy Degrees Awarded AY09-AY15

Graduates	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
BA History	50	48	57	51	71	38	52
BA Philosophy	15	8	12	10	9	18	11
BA Religious Studies	0	0	0	1	7	3	0
MA History	7	12	4	3	6	4	9
PHD History	0	0	0	2	3	0	1

Highlights from the Program Review

The department offers several critical high enrolling lower division classes in each of its three disciplines as part of CORE 2.0, and each discipline currently offers an undergraduate major. History also offers both MA and PhD degrees at the graduate level and the department is the current home of the BA, MA, and PhD degrees in American Studies.

In addition to its teaching mission the department has a highly research active faculty at all ranks that has produced an increasing number of books and articles in leading scholarly outlets over recent years. The state of the History, Philosophy and Religion department is healthy. The department has an excellent instructional faculty, has developed new and promising areas of research and instruction, and the caliber of the department's research output continues to rise.

The history programs are strong at all levels and the Ph.D. program is small but has graduated 6 students since it awarded the first Ph.D. in 2012. The undergraduate history program has continued to produce graduates at a stable pace despite facing decreasing enrollments (a national trend in history departments).

The Philosophy major continues to graduate students and despite being a small major on campus, the courses have strong enrollments and attract students from a variety of other majors. Philosophy graduated 18 students in 2014 and 11 in 2015.

Religious Studies was approved by the MUS Board of Regents as a stand-alone major in 2013. The proposal approved by the Regents has a "sunset" provision stating that MSU would phase out the program if "there were fewer than 25 majors by fall 2017." Since the introduction of the major total enrollment has risen from 5 in fall 2013 to 12 students in fall 2016. Only 11 students have graduated with the degree since 2013. Based on these data and national trends indicating declining enrollments in the humanities, the Department of History and Philosophy in the College of Letters and Science have made the decision that the Religious Studies major

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will be terminated. That process is being initiated and a teach out plan developed for students currently enrolled in the major.

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Institution : **Montana State University**

Program Years: **2016-17**

List of the programs reviewed:

- Biotechnology (multidisciplinary program)
 - B.S. in Biotechnology
-

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

The Biotechnology program will continue but will be restructured in order to facilitate better recruiting and advising of students.

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.

Biotechnology Degree Program

Majors	2009	2010	2011	2012	2013	2014	2015
	39	46	43	44	54	52	42

Biotechnology Major

Graduates	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
BS Biotechnology	12	11	7	15	6	13	14

The biotechnology degree program has been offered as an interdisciplinary degree program with four options in Animal Systems, Microbial Systems, Plant Systems or a General Biotechnology option where they could start the program but needed to declare one of the three options by their junior year. In 2014 two existing departments merged to become the Department of Microbiology and Immunology (MBI). So now two of the three options for the Biotechnology degree reside in the same department with the other option residing in Plant Sciences and Plant Pathology (PSPP). The two departments have decided that the Biotechnology degree program should be restructured current with each relevant department (MBI and PSPP) retaining a biotechnology option within its own major. This change will make it easier to recruit, advise and retain students in these options and make use of the already existing administrative structures in the two departments to support each option.

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Institution: Montana State University

Program Years: 2016-17

List of the programs reviewed:

- Genetics (multidisciplinary program)
 - Minor in Genetics
-

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

The program has quadrupled enrollment since Fall 2012 and is now seeing those students graduating. The minor will be maintained with a continued focus on recruitment.

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.

Genetics Minor	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Enrollment (Fall)	1	1	4	12	37	36	48
Graduates with Genetics Minor	1	1	1	1	6	4	7

The Genetics minor has been able to grow the number of students enrolled and the numbers of minor degrees awarded since its review in 2013. It now has greater than 40 students enrolled and has increased the number of students being awarded the minor from 1 to 5 or over in the last three years.

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Institution: **Montana State University**

Program Years: **2016-17**

List of the programs reviewed:

- Gallatin College – Workforce Department
 - A.A.S. in Aviation
 - A.A.S. in Design Drafting Technology
 - A.A.S. in Interior Design
 - Certificates
 - C.A.S. in Bookkeeping,
 - Professional Certificate in Business Management
 - C.A.S. in CNC Machine Technology
 - C.A.S. in Health Information Coding
 - C.A.S. in Medical Assistant
 - C.A.S. in Welding Technology
-

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

The workforce development degree and certificate programs are all doing very well and will be continued with an emphasis on building capacity for the increasing numbers of students in the 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.

**Gallatin College Workforce Department
Enrollments for 2010-2015 (since inception of programs)**

	2010	2011	2012	2013	2014	2015
Associates						
Aviation	28	46	53	62	66	67
Design Drafting	18	35	33	46	38	35
Interior Design	43	48	35	23	32	42
Certificates						
Bookkeeping And Business Management		14	22	25	37	50
CNC Machine Tech					11	20
Health Information Coding And Medical Associate		17	14	19	25	23
Welding	20	24	21	25	26	31

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Gallatin College Workforce Department
Degrees or Certificates Awarded 2010-2015 (Since Inception of Programs)

	AY11	AY12	AY13	AY14	AY15	AY16
Associates						
Aviation	0	7	6	14	14	9
Design Drafting	1	10	3	12	14	5
Interior Design	7	14	14	6	4	8
Certificates						
Bookkeeping And Business Management		4	3	14	18	18
CNC Machine Tech					9	10
Health Information Coding And Medical Associate			14	9	26	26
Welding	13	16	14	16	14	12