Montana University System

2019 PROGRAM REVIEWS

Institution: **Montana State University Bozeman**

Program Years: **2012-2018**

List of the programs reviewed:

- Doctoral Programs
- Native American Studies Programs

SEE INDIVIDUAL REPORTS FOR ACTIONS AND JUSTIFICATION FOLLOWING EACH PROGRAM REVIEW

Institution: **Montana State University - Bozeman**

Program Years: **2013-2017**

List of the programs reviewed:

At the request of the Board of Regents, the Montana State University's (MSU) Office of The Provost launched a prioritization review of MSU's doctoral degree programs in Fall 2017 (the DPP report is included in Appendix A). The Provost communicated to the campus in November 2017 regarding the Doctoral Program Prioritization (DPP) initiative, including the formation of a committee comprised of faculty, department heads, deans and a student to evaluate all MSU Doctoral programs (committee members are listed in Appendix B). The Doctoral Program Prioritization process complemented, but does not replace, the regular program review that each department undergoes every seven years. The programs that were considered include:

- American Studies (PhD in American Studies)
- Animal and Range Sciences (PhD in Animal and Range Sciences)
- Cell Biology and Neuroscience (PhD in Neuroscience; PhD in Biological Sciences)
- Chemical and Biological Engineering (PhD in Chemical Engineering; PhD in Engineering)
- Chemistry and Biochemistry (PhD in Chemistry; PhD in Biochemistry)
- Civil Engineering (PhD in Engineering)
- Computer Science (PhD in Computer Science)
- Earth Sciences (PhD in Earth Sciences)
- Ecology (PhD in Fish and Wildlife Biology; PhD in Ecology and Environmental Sciences; PhD in Biological Sciences)
- Education (PhD in Education; EdD in Education)
- Electrical Engineering (PhD in Electrical Engineering; PhD in Engineering)
- History (PhD in History)
- Land Resources and Environmental Sciences (PhD in Ecology and Environmental Sciences)
- Material Science (PhD in Material Science)
- Mathematical Sciences (PhD in Mathematics; PhD in Statistics)
- Mechanical and Industrial Engineering (PhD in Engineering)
- Microbiology and Immunology (PhD in Immunology and Infectious Diseases; PhD in Microbiology)
- Nursing (Doctorate in Nursing Practice)
- Physics (PhD in Physics)
- Plant Sciences (PhD in Plant Science)
- Psychology (PhD in Psychological Science)

The doctoral program prioritization project was undertaken to strengthen and improve the entire portfolio of doctoral programs offered by MSU. The process was informed by data and by input from the university community and specifically by the doctoral degree-granting departments at MSU. Criteria were established reflecting both qualitative and quantitative metrics. As part of the DPP process, the Department Heads were given the opportunity to provide responses to specific questions, review and provide context to help the DPP committee better understand the data, and provide strengths and weaknesses of their doctoral program(s).

Decision(s) concerning the future of the program(s), based on the program review criteria established at the campus:
Twenty-one departments offering 24 different doctoral programs were examined as part of this institutional-level review process. Two doctoral programs, Materials Science and Psychological Sciences, were excluded in the final classification because of insufficient data due to their nascence.

Classification of the MSU doctoral granting departments into three subgroups based on the criteria described in the MSU Doctoral Program Prioritization Report are shown in Table 1. Most of the metrics used in the prioritization process depended on departmental level data, hence rankings of the department's programs as a group were made. Five department's programs were classified as "highly effective", nine department's programs were classified as "effective", and four department's programs were classified as "needs improvement". The full DPP report is included in Appendix A.

Table 1. Program Classification

Classification	Departments	Doctoral Programs
Highly Effective	Nursing	Doctorate in Nursing Practice
	Chemistry & Biochemistry	PhD in Chemistry PhD in Biochemistry
	Physics	PhD in Physics
	Education	PhD in Education EdD in Education
	Microbiology & Immunology	PhD in Immunology and Infectious Diseases; PhD in Microbiology
Effective	Ecology	PhD in Fish and Wildlife Biology PhD in Ecology and Environmental Sciences* PhD in Biological Sciences**
	Land Resources & Environmental Sciences	PhD in Ecology and Environmental Sciences*
	Computer Science	PhD in Computer Science
	Earth Sciences	PhD in Earth Sciences
	Plant Sciences & Plant Pathology	PhD in Plant Sciences
	Mechanical & Industrial Engineering	PhD in Engineering***
	Chemical & Biological Engineering	PhD in Engineering***
	Electrical & Computer Engineering	PhD in Electrical Engineering PhD in Engineering***
	American Studies	PhD in American Studies
	Mathematics	PhD in Mathematics PhD in Statistics
Need Improvement	History & Philosophy	PhD in History
	Cell Biology & Neuroscience	PhD in Neuroscience PhD in Biological Sciences**
	Animal & Range Sciences	PhD in Animal and Range Sciences
	Civil Engineering	PhD in Engineering***

Notes: *The PhD in Ecology and Environmental Sciences is awarded in two departments; **The PhD in Biological Sciences is awarded in two departments; ***The PhD in Engineering is offered in four departments.

Summarized in the following paragraphs are the decisions made about doctoral programs at MSU, which are based on extensive analyses by the committee enhanced with input from every PhD granting department.

Doctoral programs in the College of Nursing and the Departments of Chemistry and Biochemistry, Physics, Education, and Microbiology and Immunology were classified by the DPP Committee to be "highly effective." **The eight doctoral programs in this grouping will be retained. Subsequent to the DPP process, the department of Microbiology and Immunology received approval to combine their two PhD programs into one PhD in Microbiology and Immunology.** All the programs identified as highly effective were encouraged to continue to work effectively with the Graduate School to maintain and improve the quality and effectiveness of their doctoral program(s). These doctoral programs will be evaluated again when their departments are scheduled for program review.

After thorough review, 11 doctoral programs in 10 departments were classified by the DPP Committee to be "effective." **These 11 doctoral programs will be retained. Simultaneous to the DPP process and in response to student demand for a more specialized degree than the PhD in Engineering, Chemical and Biological Engineering sought approval from the BOR to offer a PhD in Chemical and Biological Engineering. That program has been approved and is now accepting students. This followed the decision of the Department of Electrical and Computer Engineering to reestablish a PhD in Electrical Engineering in 2017.** All of the programs in departments classified as "effective" were encouraged to consider the data provided by the DPP committee and to continue working with the Graduate School to improve the quality of their programs and, where appropriate, seek to grow their doctoral program(s). These doctoral programs will be evaluated again when their departments are scheduled for program review.

After thorough review, the doctoral programs in Animal and Range Sciences, Cell Biology and Neuroscience, Civil Engineering and History were classified by the DPP Committee to "need improvement." T**he decision was made to retain the doctoral programs in these departments pending revisions and the implementation of modifications to strengthen each program.** The narratives provided by most of the department heads acknowledged weaknesses and areas for improvement that were identified by the DPP process and they provided details about changes that are being or will be implemented to address weaknesses. In each case, the DPP recommended that the departments develop a plan for improvement, if such a plan had not been offered in the departmental response to the data.

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.

The following pages provide data and interpretations from the DPP report that established the basis for the decisions made as part of this program review process.

Following are summaries for the four programs that were classified as "need improvement" by the DPP. Committee narratives on each program are included in the DPP report in Appendix A.

History & Philosophy

The PhD program in History received a "needs improvement" rating. It is one of only two humanities doctoral degrees offered at MSU and it ranked near the bottom on several measures used in the prioritization process, which contributed to its relatively low overall numeric score. Over the past five

years, the History program has awarded fewer than 2 doctoral degrees a year and averages the lowest number of new doctoral students of doctoral programs at MSU. The program was also ranked low on the metric that measures the percentage of departmental faculty who serve as chair of a doctoral committee. All of these rankings should be viewed in context. The PhD in History offers programing in three specialty areas, including: the history of science, technology, and society; environmental history; and American history and the history of the American West. Many faculty in the Department of History and Philosophy are not qualified to mentor graduate students in these three specialty areas and consequently not all faculty in the department can contribute equally to the graduate program.

The department has a strong record of attracting students from other MSU master's and doctoral programs to take their graduate courses and so they are able to offer the programming needed for their smaller and specialized doctoral program despite having fewer doctoral students. The dearth of research funding available for Historians compared to STEM fields explains why history was ranked last on the measure of research expenditures. Regardless of the challenging funding landscape in this area, the Department of History's record of scholarly accomplishments is strong and the History program ranked third in the scholarly research index, which was one of the measures of faculty prestige (Academic Analytics places it 79th percentile of universities nationwide). The doctoral program enrollment is modest; however, it is proportional to the size of the department's graduate budget and the small number and size of competitive grants available in the humanities. The program has a growing reputation for outstanding training in the three specialty areas. The DPP committee recommends that history develop strategies and a plan for leveraging their strong reputation in these three areas to grow their PhD program; progress will be monitored and the program reviewed in three years.

Cell Biology & Neuroscience

The PhD program in Cell Biology & Neuroscience (CBN) received a rating of "needs improvement." CBN ranked number five for research expenditures across the past five years; however, the annual average number of doctoral degrees awarded was surprisingly low, at less than one per year over the past 5 years. The CBN doctoral program was also ranked near the bottom on the metric that measures the number of student credit hours offered at the graduate level. The low number of graduate student credit hours and the minimal number of graduate courses offered demonstrates that the program has strayed considerably from the curriculum and program plan that was originally approved by the Board of Regents.

To continue offering this program, it will be necessary for the department to develop a suite of graduate courses to support the laboratory research component of the program and to meet the requirements of the program as it was approved by the BOR and by MSU's regional accreditor, NWCCU. The discrepancy between the high expenditures and the low number of graduate students and doctoral degrees granted was also unique among the doctoral programs reviewed and was highly concerning to the committee. The DPP committee suggested that CBN should re-examine its graduate student capacity. CBN was also asked to develop a plan for the improvement of their PhD programs immediately and they were told that the department's progress would be closely monitored and the program reviewed in three years.

Decisions made about the Department of Cell Biology and Neuroscience subsequent to the DPP process are described in the next section of this report (see section Subsequent Decisions).

Animal & Range Sciences

The PhD program in Animal and Range Sciences (ARS) was given a rating of "needs improvement." It was one of the smallest programs evaluated based on measures of average numbers of doctoral degrees

awarded (less than one) and doctoral students per tenure-track faculty. The department has a relatively large number of tenured and tenure-track faculty; however, some of these faculty are on Extension appointments and are not available to teach graduate courses or chair doctoral committees. In addition, approximately one-half of the tenure-track faculty have less than three years of service at MSU. ARS outlined steps they are already taking to improve their program including having new tenure-track faculty get involved earlier in teaching graduate classes, mentoring doctoral students and chairing doctoral student committees. The department is making necessary adjustments in faculty research and teaching assignments to grow enrollment in their doctoral program in order to meet the demand for graduates in this applied field. ARS presented a plan for improvement; progress should be closely monitored and the program reviewed in three years.

Civil Engineering

The department of Civil Engineering's option in the PhD in Engineering received a rating of "needs improvement." Civil Engineering has a large and successful Master's degree program and does not have a standalone PhD program; rather the College of Engineering has a PhD in Engineering and students who want to pursue a PhD in the field of Civil Engineering may choose to earn a PhD in Engineering with an option in Civil Engineering. At the beginning of the DPP review, a decision was made to include all the engineering programs even the ones that awarded only the generalist doctorate in "Engineering." The consensus was that this would inform the College of Engineering of where demand might be strong enough to support the establishment of more specialized standalone PhD programs (like the PhD in Electrical Engineering, Chemical Engineering and Mechanical Engineering) and help to determine if the general PhD in Engineering was still of use for some departments; for example, Civil Engineering where industry demand and department capacity for a standalone PhD program may not be feasible for several years into the future.

Based on the department's response, contributing factors to their ranking, include: a much stronger job market for students with BS and MS degrees in civil engineering, in comparison to PhD degrees; approximately half of the faculty counted during the DPP review period had high instructional loads with applied research projects that primarily support undergraduate and masters students; several faculty had transitioned to administrative roles or were new, pre-tenure hires; and the department does not have a standalone PhD degree in civil engineering, which makes it less attractive for students seeking future faculty positions in academia.

The department's response also noted that the program's weak rank in the Expenses & Revenue metric was due to the graduate teaching assistant support they provide to undergraduate engineering courses for the entire college and the practice of requiring their PhD students to teach in preparation for academic jobs. The department states that it has strong research expectations for newly hired tenure-track faculty and the department expects that the number of PhD students and degrees awarded will increase as junior faculty develop strong research programs. The department expects that as the junior faculty become established, research expenditures and research profile/prominence of the department will improve to reflect increased scholarly productivity. CE presented a plan for improvement; progress should be closely monitored and the program reviewed in three years.

Subsequent Decisions

Decisions made subsequent to the DPP process about the Department of Cell Biology and Neuroscience and its academic programs:

On May 15, 2019, the Cell Biology and Neuroscience master's and doctoral programs were transferred to the Department of Microbiology and Immunology for administration and management. The faculty of the Department of Cell Biology and Neuroscience were also moved to the Department of Microbiology and Immunology and will work together as colleagues in the Department of Microbiology and Immunology to develop a robust administrative and management structure to improve all of their PhD programs. As an additional benefit, this move will also provide stability and long-term viability to the undergraduate academic programs.

Dr. Mark Jutila, head of the Department of Microbiology and Immunology, is managing and guiding the future direction of the department including integrating the faculty and programming that came from the Department of Cell Biology and Neuroscience. Dr. Jutila is one of the university's most accomplished and highly regarded researchers and holds the distinction of being a Montana University System Regents Professor, the highest distinction granted by the Montana Board of Regents to any faculty member. Among his many accomplishments, Dr. Jutila has been an important contributor to the WWAMI (Washington, Wyoming, Alaska, Montana and Idaho) cooperative medical program with the University of Washington and the WIMU (Washington, Idaho, Montana and Utah) cooperative veterinary medicine program with Washington State University.

The decision to move the academic programs from the Department of Cell Biology and Neuroscience to the Department of Microbiology and Immunology was made by the administration after research on best practices for the delivery of neuroscience programs and extended facilitated discussion between the administration, Faculty Senate leadership and members of the Department of Cell Biology and Neuroscience. Many factors were considered, not the least of which was, the stature and reputation of the Department of Microbiology and Immunology (MBI). At the time of the decision, MBI had 19 tenured and tenure-track faculty as well as nine research scientists and three instructors and a proven track record as one of the university's top departments in research expenditures.

A national study conducted by the Society for Neuroscience published in 2017, indicates that 49% of the approximately 100 responding Neuroscience programs in the country are interdepartmental while only about 12% were housed in a standalone Department of Neuroscience or Neurobiology, a model similar to the one that MSU had been operating. Of the Cell Biology and Neuroscience programs in U.S. doctoral-granting universities, 63% have more than 30 faculty members and 25% of the programs have more than 90 faculty members. The average for AY 2016-2017 was 66 faculty with a median of 58.

Joining the eight tenured faculty members and two instructors in MSU's Department of Cell Biology and Neuroscience with the 19 tenured and tenure-track faculty and over ten research faculty and instructors in the Department of Microbiology and Immunology will provide a stronger foundation for sustainability and future growth for all the academic programs.

These changes are necessary for the academic programs and for the faculty from the Department of Cell Biology and Neuroscience to meet established goals for the graduate programs and improve the

research enterprise. All of these outcomes are in line with the performance expectations and academic quality required of all departments and programs at Montana State University.

The administration asked the department numerous times to address shortcomings in its graduate education programs, research and scholarly productivity, teaching loads and other administrative work that are necessary for a department to function collaboratively in a larger institutional environment and at a level on par with their peers across the university.

Dean of the College of Letters and Science Nic Rae, Associate Dean David Cherry and others devoted more than 100 person-hours working with Cell Biology and Neuroscience faculty to identify and discuss areas of concern within the department, some of which date back more than five years. Faculty Senate leaders have been involved in some of these discussions, which included an outside facilitator for some of the meetings and conversations. These efforts -- the most intense and extended that any administrator at MSU can ever recall -- yielded no progress. Even a suggestion by the administration for the department to meet with a group of faculty peers from across the university was rejected.

The department's resistance to developing any reasonable plan escalated in late 2018 and early 2019 to the point where some faculty in the department used classroom time to lobby students on these administrative and management issues. This was unprofessional and disruptive and caused unnecessary anxiety among some students. The practice of using classroom time to lobby students is unacceptable. It is antithetical to the values of MSU and to the principles and expectations of professional practice that we hold as educators and scholars.

The above events and the following specific concerns led to the decision in May 2019 to move the academic programs and faculty from the Department of Cell Biology and Neuroscience to the Department of Microbiology and Immunology.

Areas of concern:

1. Enrollment in the Cell Biology and Neuroscience graduate program is precipitously low compared to expectations that were established in the proposal and curriculum plan that was approved by the Montana Board of Regents in 2004. Since 2004, the program has graduated only nine PhD students and four master's students. Over the past 10 years, the Cell Biology and Neuroscience program has averaged a total enrollment of 3.8 graduate students per year. This compares to the projection of 15 to 20 students per year that was provided in the approved program proposal in 2004.
2. The low ratio of graduate students per faculty member is unsustainable when considering the low teaching loads of some of the tenured faculty in the department. There are faculty in the department who regularly teach only one course per year, supervise fewer than two graduate students, and receive salaries that are funded by general fund dollars, the combination of state-allocated dollars and student tuition. It is untenable and unsustainable to expect other students and faculty from across the university to continue to subsidize this department, which is effectively what is happening.
3. Significant, unapproved changes have taken place from the original PhD curriculum that was approved by MSU faculty, the Montana Board of Regents, and the Northwest Commission on College and Universities, NWCCU in 2004. The original, approved 2004 curriculum indicated PhD students would be required to complete at least 30 credits of graduate course work and the

remaining 30 credits could be obtained from research/dissertation credits. However, because faculty have not been teaching the required graduate courses on a recurring basis, some students have not been fulfilling the specific 30-credit requirement for graduate courses.

4. Nearly all courses reported on doctoral students' plans of study are undergraduate 400-level courses taught in a co-convened format where both undergraduates and graduates attend the same class; in some cases, these courses are taught by non-tenure track instructors. It appears that only one tenure-track faculty has been regularly teaching 400-level, co-convened courses. There are no 500-level Neuroscience courses being offered in the Department of Cell Biology and Neuroscience that align with the curriculum approved for the doctoral program in 2004, only independent studies and seminars are being offered.
5. The department has averaged 0.51 doctoral students enrolled per year, per faculty and 149 graduate-student credit hours per year taught over the previous five years. For comparison, in the Departments of Physics, Chemistry, and Microbiology and Immunology, about 1,000 graduate-student credit hours are taught per year in each department. There has only been an average of 2.5 students per graduate course offered in the department. This is two to three times lower than most other science departments at MSU. Rather than teaching the required 500- and 600-level courses, faculty in Cell Biology and Neuroscience have instead been offering undergraduate courses as co-convened. This change to the graduate curriculum was never approved and is out of alignment with all the documents that led to the program's approval by the Faculty Senate, the Board of Regents and the NWCCU in 2004.
6. The research expenditures of Cell Biology and Neuroscience faculty on a per-faculty basis are less than half the average per-capita research expenditures of faculty in the Department of Chemistry and Biochemistry, and the Department of Microbiology and Immunology. The scholarly productivity, publications and citations, of the Department of Cell Biology and Neuroscience are below median on a per-capita basis when compared to their peers across the country. This is in comparison to the Department of Microbiology and Immunology that scores in the top 20% of peers across the nation.
7. In addition to the above concerns about the department's graduate program, since 2013, the number of undergraduate degrees awarded in Cell Biology and Neuroscience has decreased by 31%.

With this change, the faculty who have moved from the Department of Cell Biology and Neuroscience have an opportunity, in concert with their colleagues in Microbiology and Immunology, to re-assess the purpose and goals of their graduate program, continue to deliver an undergraduate curriculum and to create new opportunities for collaboration with colleagues in their new department and across campus. I hope these faculty use this as an opportunity of self-assessment to examine and address the university's concerns about graduate education and to work with their new department head and new department faculty colleagues to sustain high-quality, vibrant research in their fields, to strengthen the foundations of the existing graduate programs so they better serve and prepare students and to continue the strong undergraduate educational programs offered to students.

MSU holds all of its departments to the same level of expectation, accountability and excellence. This sometimes results in changes to the administrative structures of units. Change is not easy, but it is necessary to ensure a strong foundation for the long-term success and viability of the university for the benefit of our students.

Appendix A: Doctoral Program Prioritization Report

MSU Doctoral Program Prioritization Report

Prepared by Committee Chair Karlene Hoo and the Doctoral Program Prioritization Committee

January 2019[1]

Introduction

In Fall of 2017, the Montana State University's (MSU) Office of The Provost launched a prioritization review of MSU's doctoral degree programs. This review was in response to the Montana Board of Regents and the Office of the Commissioner of Higher Education who have expressed interest in academic program prioritization reviews. The Provost communicated to the campus in November 2017 regarding the Doctoral Program Prioritization (DPP) initiative, including the formation of a committee to carry out the work. Members of the committee are listed in Appendix B.

Process

The doctoral program prioritization project was undertaken to improve the entire portfolio of doctoral programs offered by MSU. The committee's approach was to develop a relative ranking of doctoral (PhD, EdD, DNP) programs. The process was informed by data and by input from the doctoral degree-granting departments at MSU. Criteria were established reflecting both qualitative and quantitative metrics. For two new programs (Psychology, Materials Science), there were insufficient data to allow ranking.

Ground Rules

The committee members defined a set of ground rules for the process:

- The data for the metrics would be provided by institutional offices; e.g., OPA and the Registrar.
- The categories should be representative of the study and the metrics should be relatively simple and understandable.
- The DPPC would communicate the criteria and metrics to the campus community and solicit feedback.
- The DPPC would allow the programs/departments to respond to their metrics (via questionnaire).
- Narratives about each program would be constructed by the DPPC, informed by the department's responses.

[1] The DPPC completed their work as summarized in the final draft of this report in Fall 2018. Interim Graduate School Dean Ron Larsen edited and formatted the report into this final version in December-January 2019.

Disclaimer

Doctoral education is heterogenous across disciplines and represents only one component of the diverse and multifaceted mission of academic departments. This review focused on doctoral programs alone without consideration of departmental responsibilities; consequently, measures such as cost efficiency are difficult to ascertain when examining only one component of revenue and expenditures. The ranking provided in this report does not reflect the holistic value of any department or unit, but solely the ranking of the doctoral program based upon the criteria chosen by the committee.

Criteria

The DPPC discussed a multitude of features that could be used in the prioritization of doctoral degree programs. These included for example, productivity, quality, demand, behavior, alignment, and impact.[2] However, each of these features was itself a combination of various measures. Ultimately, sixteen individual metrics were chosen and grouped into five categories:

- Degree & Graduate SCH Production
- Selectivity & Program Demand
- Expenses & Revenue
- Efficiency
- Faculty Prestige

The metrics developed for each category are presented below. For each of the sixteen metrics discussed below, unless stated explicitly, the time period used was the last five fiscal[3] years: 2013 through 2017. Data sources are listed in the appendix.

Category 1: Degree & Graduate SCH Production

Degree and graduate SCH production seek to measure program productivity, including graduate courses taught by the unit and graduate degrees awarded. There are four metrics in this category:

1. Doctoral degrees awarded by a unit (5 yr avg).
2. Doctoral students / Tenured/tenure-track faculty in a unit (5 yr avg).
3. Graduate SCH produced (5 yr avg).
    a. SCH: course credits multiplied by course enrollment.
    b. Credits follow T-TT faculty to their home departments or are split across departments if the appointment is split. Includes 4xx level courses.
4. Enrollment in 5xx and 6xx courses (5 yr avg).
    a. Course enrollment includes all enrolled students (doctoral, masters, upper division undergraduates). Thesis (590), dissertation (690), Independent Study (592), and Internship courses (598) are excluded.

Category 2: Selectivity & Demand

Selectivity & Demand seeks to measure the demand for a program and how selective the program is in terms of being able to admit the highest quality students.

[2] Dickeson, RC (2010) *Prioritizing Academic and Programs and Services*, Jossey Bass

[3] Fiscal year: summer, fall, spring

Notes:

- Fiscal years examined are 2014 through 2018.
- Some programs pre-screen applicants, which reduces the utility of these metrics.

There are three metrics in this category:

1. Doctoral applications (5 yr avg).
2. Doctoral students admitted / Doctoral student applications (5 yr avg).
3. New doctoral students (5 yr avg)

Category 3: Expenses & Revenue

Expenses and revenue provide an estimate of the profit/loss measures for each program.

Notes:

- It is not always possible to disaggregate the expenses and revenue of the doctoral program from the expenses and revenue of the overall department or unit. Nevertheless, the metrics in this category are important as they capture the relative scale of activity and program practices.
- The cost of faculty was purposefully excluded. While this is the single largest expense of education, it was impossible to designate what, if any, part of that cost was associated with doctoral education.

There are three metrics in this category:

1. Stipend (State $ only) / Total doctoral students (5 yr avg).
    a. The data exclude stipends for doctoral students on contracts/appointments that are not GTA/GRA/GSA (e.g., professional or classified employees enrolled as doctoral students are excluded).
    b. This metric is viewed as an expense to the institution.
2. Tuition waiver expenditures / Total doctoral students (5 yr avg).
    a. Fiscal years examined are 2014 through 2018.
    b. Other state waivers such as Faculty/Staff tuition waivers, Veteran tuition waivers, Native American tuition waivers, have been included.
    c. This metric is viewed as an expense to the institution.
3. Tuition revenue / Total doctoral students (5 yr avg).
    a. Fiscal years examined are 2014 through 2018.
    b. This includes monies paid directly by the student, scholarship monies distributed to student accounts, grant expenditures to student accounts, and so forth.

Category 4: Efficiency

The efficiency metrics focus on of time to degree and faculty engagement in activities that promote degree attainment.

There are four metrics in this category:

1. Semesters enrolled to degree completion.

    a. The data include summer semesters if a doctoral student was enrolled in the summer. Programs that require the master's degree before admission to a doctoral program are likely to have a lower value.
2. Number of doctoral committees.
    a. Data include only "active"[4] doctoral student committees and committees that have closed over the previous five years. Each committee is assigned to the student's home department.
3. Number of doctoral committees chaired / tenured/tenure-track faculty (5 yr avg).
4. Percent of tenured/tenure-track faculty chairing doctoral committees (5 yr avg).
    a. This metric measures unique chair assignments.
    b. This metric can have a value greater than 100% because the numerator (Unique chairs of doctoral committees) includes individuals who were at one time at MSU, and their replacements. The denominator (Average tenured/tenure-track faculty) will not change if a faculty member departs and is replaced.

Category 5: Prestige

Metrics related to prestige attempt to measure of faculty achievement.

The two metrics are:

1. Research expenditures ($) / tenured/tenure-track faculty (5 yr avg).
    a. The data include expenditures by tenured/tenure-track faculty and research faculty in Centers who have an academic department appointment.
2. SRI index (percentile in the discipline).
    a. A custom peer-group of Land Grant institutions is applied in the calculation of the SRI and the percentiles are calculated based on those peer comparisons.
    b. Because not all land grant peers have all of the same departments as MSU, the number of comparators varies by department.
    c. Additionally, some departments at MSU span multiple disciplines (e.g., Earth Sciences – compares in AA to both departments of Geography and Geology/Earth Science, General). In these cases, where the percentile differed between comparator groups, they were averaged.

Notes on Category 5:

- It is reasonable to measure scholarly and research accomplishments in some standard way both internal to the campus (metric 1) and in comparison to other institutions (metric 2).
- Data available through Academic Analytics (AA) permits a relative measure using the Scholarly Research Index (SRI). The SRI is based on: Total Publications, Total Citations, Total Books, Total Grants, Total Grant Dollars, Total Awards, and Total Conference Proceedings. A department or unit's SRI score is an average of the individual faculty SRI scores. In this manner, the SRI score is a per capita measure that effectively eliminates the issue of faculty size. This score is reported as a percentile ranking among doctoral offering programs in that discipline.

[4] Active status is indicated by no end date in Banner.

Ranking and Classification

The ranking and classification called for a multistep process

1. First, scores for each department were established based on:
    a. Ordinal ranking was applied to each of the sixteen individual metrics
    b. Rankings were averaged within each of the five categories resulting in a category subtotal.
    c. The category subtotals were averaged in order to reach a prioritization score. Equal weighting was applied to each category.
2. Second, each department was provided the opportunity to respond to the data for their doctoral program and indicate what they saw as the strengths and weaknesses of their programs.
3. Third, the committee considered the rankings and the feedback provided by departments and then grouped the doctoral programs into three broad classes (highly effective, effective, needs improvement) based on the final prioritization score.
4. Fourth, summaries for each program were written and included some recommendations for programs based on both the data and the departmental response.

Notes:

- There were two recent programs (Psychology, Materials Science) that were not ranked due to insufficient data.
- Again, these classes are not intended to indicate the value of any department, but offer general guidance to the University and The Graduate School on efforts at program improvement.

Results

Twenty-one programs were examined. Two recently created doctoral programs, Materials Science and Psychology, had insufficient longitudinal data for ranking and classification. Table 1 (split into multiple pages) shows the rankings in each category for each of the nineteen programs ranked programs.

The ultimate classifications of the PhD programs are shown in Table 2. Five programs (26%) were classified as “highly effective”, nine programs (47%) as “effective”, and four programs (21%) as “needs improvement”.

Table 1.a: Category : Degree & Graduate SCH Production, Metrics and Ranking*

	Degree & Graduate SCH Production								
Departments	# Doctoral Degrees Awarded (5 yr Avg)	Rank	# Doctoral Students / T-TT (5 yr Avg)	Rank	Graduate SCH in Dept (5 yr Avg)	Rank	Average Course Enrollment in 5xx-6xx Courses (Avg/yr for past 5 yrs)	Rank	AVG RANK
Nursing	5.2	4	3.67	3	1808	2	10.6	3	3
Chemistry & Biochemistry	10.4	1	4.38	1	958	6	5.8	18	6.5
Physics	5	5	2.89	4	1071	4	8	11	6
Education	9.2	2	4.18	2	3174	1	11.1	2	1.8
Microbiology & Immunology	3.8	6	1.89	6	970	5	7.7	12	7.3
Ecology	2.8	9	1.52	7	614	11	9.3	5	8
Land Resources & Env Sciences	3.8	6	1.07	12	817	7	7.1	13	9.5
Computer Science	2.8	9	2.7	5	644	10	13.8	1	6.3
Earth Sciences	3	8	1.33	10	747	8	8.4	9	8.8
Plant Sci & Plant Pathology	2	14	0.53	16	399	15	8.5	8	13.3
Mechanical & Industrial Eng	2.2	11	0.92	13	735	9	9.7	4	9.3
Chemical & Biological Eng	2.2	11	1.49	8	376	16	6.6	15	12.5
Electrical & Computer Eng	2.2	11	1.14	11	439	14	6.1	16	13
American Studies	1.2	16					5.5	19	17.5
Mathematics	6	3	1.34	9	1540	3	8.7	7	5.5
History & Philosophy	1.8	15	0.58	15	448	13	8.9	6	12.3
Cell Biology & Neuroscience	0.8	18	0.51	17	149	19	2.5	20	18.5
Animal & Range Sciences	0.2	19	0.43	19	236	17	5.9	17	18
Civil Engineering	1	17	0.44	18	611	12	6.7	14	15.3

*Rankings were established by ordering the departments on each metric from lowest to highest and assigning a rank order (from 1-n, n was equal to the number of departments where data were available on that particular metric) where the rank of 1 was the strongest department on that particular metric. The average rank in the right most column indicates the average rank across all the metrics in the table. The PhD in Material Science and the PhD in Psychological Sciences were included in the rank ordering where they had data, but have been hidden in the spreadsheet since they were missing data on most of the metrics.

Table 1.b: Category 2: Selectivity & Program Demand, Metrics and Ranking*

	Selectivity & Program Demand						
Departments	# Doctoral Applications (5 yr Avg)	Rank	# Doctoral Students Admitted / # Doctoral Student Applications (5 yr Avg) inverse ranking	Rank	# New Doctoral Students (5 yr Avg)	Rank	AVG RANK
Nursing	67.2	1	42.8%	9	24.2	1	3.7
Chemistry & Biochemistry	37.2	3	45.0%	10	12.4	3	5.3
Physics	64.2	2	25.6%	4	13	2	2.7
Education	30.6	5	65.9%	17	7.4	4	8.7
Microbiology & Immunology	29.4	6	17.9%	1	3.8	9	5.3
Ecology	7.4	18	51.8%	13	3.2	13	14.7
Land Resources & Env Sciences	7.8	17	85.4%	20	5.2	5	14
Computer Science	17.2	8	37.3%	8	3.6	10	8.7
Earth Sciences	16.4	9	24.3%	3	3	15	9
Plant Sci & Plant Pathology	10.6	14	46.5%	12	4	6	10.7
Mechanical & Industrial Eng	15.8	10	46.0%	11	3.6	10	10.3
Chemical & Biological Eng	11.6	13	53.9%	14	2.2	16	14.3
Electrical & Computer Eng	14.6	11	64.6%	16	4	6	11
American Studies	8.6	16	58.5%	15	2.2	16	15.7
Mathematics	18.8	7	35.1%	7	4	6	6.7
History & Philosophy	9.6	15	29.0%	5	1.4	19	13
Cell Biology & Neuroscience	2	20	70.0%	18	1	21	19.7
Animal & Range Sciences	4.2	19	70.0%	18	1.6	18	18.3
Civil Engineering	14.2	12	34.8%	6	1.2	20	12.7

*Rankings were established by ordering the departments on each metric from lowest to highest and assigning a rank order (from 1-n, n was equal to the number of departments where data were available on that particular metric) where the rank of 1 was the strongest department on that particular metric. The average rank in the right most column indicates the average rank across all the metrics in the table. The PhD in Material Science and the PhD in Psychological Sciences were included in the rank ordering where they had data, but have been hidden in the spreadsheet since they were missing data on most of the metrics.

Table 1.c: Category 3: Expenses & Revenue, Metrics and Rankings*

	Expenses & Revenue						
Departments	Stipend Support (State $) / Avg # Total Doctoral Students (Avg/yr for past 5 yrs) Inverse Ranking	Rank	Tuition Waiver Expenditures / Avg # Total Doctoral Students (Avg/yr for past 5 yrs) Inverse Ranking	Rank	Tuition Revenue / Avg # Total Doctoral Student (5 yr Avg)	Rank	AVG RANK
Nursing	$787	2	$376	1	$5,368	1	**1.3**
Chemistry & Biochemistry	$10,885	16	$1,029	12	$1,059	12	**13.3**
Physics	$11,494	17	$2,226	19	$951	13	**16.3**
Education	$1,258	4	$742	7	$1,162	9	**6.7**
Microbiology & Immunology	$4,800	7	$1,593	18	$1,097	11	**12**
Ecology	$3,109	5	$832	8	$910	15	**9.3**
Land Resources & Env Sciences	$5,612	10	$554	2	$1,483	6	**6**
Computer Science	$5,935	11	$1,029	11	$528	19	**13.7**
Earth Sciences	$6,131	12	$1,114	13	$727	18	**14.3**
Plant Sci & Plant Pathology	$5,030	8	$736	6	$3,102	3	**5.7**
Mechanical & Industrial Eng	$6,928	13	$1,009	9	$3,611	2	**8**
Chemical & Biological Eng	$8,176	15	$1,393	16	$1,176	8	**13**
Electrical & Computer Eng	$5,352	9	$1,183	15	$1,120	10	**11.3**
American Studies	$875	3	$595	5	$872	17	**8.3**
Mathematics	$14,474	21	$1,420	17	$149	20	**19.3**
History & Philosophy	$14,670	19	$2,579	20	$1,319	7	**15.3**
Cell Biology & Neuroscience	$369	1	$565	3	$1,768	5	**3**
Animal & Range Sciences	$3,765	6	$590	4	$1,979	4	**4.7**
Civil Engineering	$13,281	20	$1,012	10	$902	16	**15.3**

*Rankings were established by ordering the departments on each metric from lowest to highest and assigning a rank order (from 1-n, n was equal to the number of departments where data were available on that particular metric) where the rank of 1 was the strongest department on that particular metric. The average rank in the right most column indicates the average rank across all the metrics in the table. The PhD in Material Science and the PhD in Psychological Sciences were included in the rank ordering where they had data, but have been hidden in the spreadsheet since they were missing data on most of the metrics.

Table 1.d: Category 4: Efficiency, Metrics and Rankings

	Efficiency								
Departments	Avg # Semesters to Degree inverse ranking	Rank	# Doctoral Committees (by Student's Department)	Rank	# Doctoral Committees Chaired / T-TT	Rank	% of T-TT Chairing Doctoral Committees	Rank	AVG RANK
Nursing	8.8	2	85	4	5.1	4	119%	3	3.3
Chemistry & Biochemistry	13.2	14	149	2	6.9	2	123%	2	5
Physics	11.9	11	108	3	6.1	3	129%	1	4.5
Education	12	12	178	1	8.4	1	97%	5	4.8
Microbiology & Immunology	15.4	19	67	5	2.1	10	68%	11	11.3
Ecology	10.9	6	38	8	2.9	7	111%	4	6.3
Land Resources & Env Sciences	14.1	16	40	7	1.7	14	79%	9	11.5
Computer Science	11.6	9	38	8	3.7	5	93%	8	7.5
Earth Sciences	14.2	17	35	11	2.0	11	82%	7	11.5
Plant Sci & Plant Pathology	11.4	8	30	14	1.1	15	63%	13	12.5
Mechanical & Industrial Eng	10.1	4	34	12	1.9	13	57%	15	11
Chemical & Biological Eng	11.6	9	36	10	3.0	6	93%	6	7.8
Electrical & Computer Eng	10.5	5	27	15	2.0	12	72%	10	10.5
American Studies	11	7	31	13					10
Mathematics	14.5	18	60	6	2.5	8	66%	12	11
History & Philosophy	13.2	14	17	16	2.3	9	45%	17	14
Cell Biology & Neuroscience	12	12	16	17	1.0	16	49%	16	15.3
Animal & Range Sciences	7	1	13	19	0.9	18	47%	18	14
Civil Engineering	10	3	15	18	1.0	17	60%	14	13

*Rankings were established by ordering the departments on each metric from lowest to highest and assigning a rank order (from 1-n, n was equal to the number of departments where data were available on that particular metric) where the rank of 1 was the strongest department on that particular metric. The average rank in the right most column indicates the average rank across all the metrics in the table. The PhD in Material Science and the PhD in Psychological Sciences were included in the rank ordering where they had data, but have been hidden in the spreadsheet since they were missing data on most of the metrics.

Table 1.e: Category 5: Faculty Prestige, Metrics and Rankings

	Faculty Prestige				
Departments	Research Expenditures ($)/T-TT	Rank	Academic Analytics - Scholarly Research Index: Percentile among Departments	Rank	AVG RANK
Nursing	$98,402	12	40.5	13	12.5
Chemistry & Biochemistry	$487,541	2	75.2	4	3
Physics	$398,541	3	41	11	7
Education	$42,728	18	40.6	12	15
Microbiology & Immunology	$527,314	1	82.3	2	1.5
Ecology	$315,297	4	57.7	5	4.5
Land Resources & Env Sciences	$178,596	8	83.8	1	4.5
Computer Science	$78,149	15	47.6	8	11.5
Earth Sciences	$234,945	6	46.7	9	7.5
Plant Sci & Plant Pathology	$182,401	7	38.1	14	10.5
Mechanical & Industrial Eng	$122,020	11	8.7	19	15
Chemical & Biological Eng	$150,374	10	52.5	6	8
Electrical & Computer Eng	$155,039	9	29.2	15	12
American Studies			50	7	7
Mathematics	$40,038	19	26.3	16	17.5
History & Philosophy	$3,248	20	79	3	11.5
Cell Biology & Neuroscience	$241,893	5	19.7	17	11
Animal & Range Sciences	$87,435	13	19.3	18	15.5
Civil Engineering	$69,541	17	7.3	20	18.5

*Rankings were established by ordering the departments on each metric from lowest to highest and assigning a rank order (from 1-n, n was equal to the number of departments where data were available on that particular metric) where the rank of 1 was the strongest department on that particular metric. The average rank in the right most column indicates the average rank across all the metrics in the table. The PhD in Material Science and the PhD in Psychological Sciences were included in the rank ordering where they had data, but have been hidden in the spreadsheet since they were missing data on most of the metrics.

Table 2. Program Classification and Average Rank Across the Five Categories (Degree & Graduate SCH Production, Selectivity and Program Demand, Expenses and Revenue, Efficiency, and Faculty Prestige)

Classification	Departments	Average Rank Across Five Categories
Highly Effective	Nursing	4.8
	Chemistry & Biochemistry	6.6
	Physics	7.3
	Education	7.4
	Microbiology & Immunology	7.5
Effective	Ecology	8.6
	Land Resources & Env Sciences	9.1
	Computer Science	9.5
	Earth Sciences	10.2
	Plant Sci & Plant Pathology	10.5
	Mechanical & Industrial Eng	10.7
	Chemical & Biological Eng	11.1
	Electrical & Computer Eng	11.6
	American Studies	11.7
	Mathematics	12
Need Improvement	History & Philosophy	13.2
	Cell Biology & Neuroscience	13.5
	Animal & Range Sciences	14.1
	Civil Engineering	15

Programs in the "Need Improvement" category received feedback from the committee as part of the narrative, as follows:

History & Philosophy

The PhD program in History received a needs improvement rating. It is one of only two Humanities doctoral degrees offered at MSU. Not all tenured and tenure-track faculty in the department participate in the History PhD program. The department's response indicates that it has a good record of providing elective courses that attract graduate students from other programs. The program's record of scholarly accomplishments is strong (Academic Analytics places it in the 79th percentile). The doctoral program enrollment is small due to the size of the graduate budget and the small number and size of competitive grants available in the Humanities. History needs to think about how to grow their PhD program; progress should be closely monitored and the program reviewed in three years.

Cell Biology & Neuroscience

The PhD program in Cell Biology & Neuroscience (CBN) received a rating of needs improvement. CBN ranks in the top 5 for research expenditures. However, the number of graduate degrees awarded is in

the bottom 5 of PhD programs. Their low SCH score is indicative of a lab-based graduate program as opposed to a coursework-centric program. However, it would appear there is potential for further graduate course development. The discrepancy between the high expenditures and the low number of graduate students and doctoral production is concerning to the committee. CBN should re-examine its graduate student capacity. CBN should develop a plan for PhD program performance immediately; progress should be closely monitored and the program reviewed in three years.

Animal & Range Sciences

The PhD program in Animal and Range Sciences (ARS) was given a rating of needs improvement. It was one of the smallest programs evaluated during the Doctoral Program Prioritization review period. The department has a large number of tenured and tenure-track faculty; however not all are dedicated to research and approximately one-half have less than three years of service at MSU. Based on the department's response that new tenure-track faculty are participating in the PhD program, this rating is anticipated to change as the program is expanding doctoral enrollment to meet the demand for graduates in this applied field. ARS presented a plan for improvement; progress should be closely monitored and the program reviewed in three years.

Civil Engineering

The PhD program in Civil Engineering received a rating of needs improvement. It had the lowest average total rank. Based on the department's response, contributing factors include the strong job market for the BS and MS degrees, but not PhDs, and the fact that approximately half of the faculty counted during the Doctoral Program Prioritization review period were either not research-focused, had transitioned to administrative roles or were new, pre-tenure hires. The department's response also noted that the program's weak rank in the Expenses & Revenue metric was due to the teaching assistant support they provided to undergraduate engineering courses and their practice of requiring their PhD students to teach in preparation for academic jobs. The department states that it has strong research expectations for the new tenure-track faculty, and anticipates that the number of PhD students should increase. Furthermore, the department expects that as the junior faculty become established, research expenditures and research profile/prominence of the department will improve to reflect increased scholarly productivity. CE presented a plan for improvement; progress should be closely monitored and the program reviewed in three years.

Committee Observations

The DPPC found this study to be informative but also problematic on several fronts. Below are observations by the DPPC.

- The heterogeneity of the doctoral programs is more than the obvious differences between disciplines. For instance, in some programs, the graduate students are engaged in the delivery of the undergraduate courses; a master's degree is a required entry point for some programs; some were heavily course-work centric; some limited their capacity if grant funding was not available or if the workforce potential of the doctoral degree was not attractive.
- Identifying metrics that the DPPC valued to measure the worth of a doctoral program was not a trivial task. Further, there was a realization that data to calculate a metric may not be readily available from institutional sources. Indeed, the communication of the selected metrics to the campus led to an additional measure, employment after degree attainment. While departments valued this metric, the committee opted to rely on centrally available data.
- The metrics once identified and agreed to may not represent all programs well. However, there was ready agreement that no one set of categorical metrics should be weighted more heavily than another.
- Going forward, a more complete picture of the "value" of doctoral education might be informed by including data on the other roles and responsibilities that departments have beyond doctoral education.

Appendix B: Doctoral Program Prioritization Committee

The following individuals, in alphabetical order, served on the Doctoral Program Prioritization Committee (DPPC):

- **Anne Camper**: Professor, Civil Engineering, Associate Dean, College of Engineering
- **Jayne Downey**: Associate Professor, Education
- **Alan Dyer**: Associate Professor, Plant Science & Plant Pathology
- **Tamela Eitle**: Vice Provost, Office of the Provost
- **Ian Godwin**: Associate Director, Office of Planning & Analysis
- **Patrick Hatfield**: Professor and Department Head, Animal & Range Sciences
- **Jeffrey Heys**: Professor and Department Head, Chemical & Biological Engineering
- **Karlene Hoo**: Committee Chair, Dean, Graduate School
- **Yves Idzerda**: Professor and Department Head, Physics
- **Clemente Izurieta**: Associate Professor, Computer Science; Member Faculty Senate
- **Timothy LeCain**: Professor, History & Philosophy
- **Joshua Meyer**: Doctoral student, Education
- **Nicol Rae**: Dean, College of Letters & Science
- **Sarah Shannon**: Dean, College of Nursing
- **Jovanka Voyich-Kane**: Associate Professor, Microbiology & Immunology
- **Robert Walker**: Professor, Chemistry & Biochemistry

DPP Committee members were selected on the basis of their ability to interact with the campus community effectively, established track records in doctoral education, and willingness to represent the campus on this important undertaking. The Provost appointed the Dean of The Graduate School to lead this committee. A graduate student also was a member of this committee. Ms Julia Heard from the Office of the Provost provided logistical support for the committee

Appendix C: Data Sources

OCHE Data Warehouse
- KPIs via Registrar's Office
- EWEBMGR_GRADUATION_INFO table
- OPA Employee Snapshots

Banner
- EWEBMGR_INSTRUCTOR_INFO table
- EWEBMGR_ADMIT_INFO table

Courses database
- EWEBMGR_ENROLLMENT_INFO table
- Departments' instructor reports

OPA
- Axiom query of Banner data extracts
- Activity Insight graduate committees loaded from Banner

Academic Analytics
- AAD 2016 Comparative Database (AAD2016.01.814)
- OSP's "Fiscal Year Expenditures by Colleges and Departments"
- OSP's "Fiscal Year Expenditures by PI" (special report)

Montana University System

PROGRAM REVIEW

Institution: **Montana State University - Bozeman**

Program Years: **AY13-AY19**

List of the programs reviewed:

Native American Studies

- Minor: Native American Studies
- M.A. Native American Studies
- Graduate Certificate in Native American Studies

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

Retain all programs.

The Department of Native American Studies are working with the Graduate School to expand recruitment strategies for their graduate certificate and MA 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.

Department of Native American Studies								
Enrollments (Fall)	Degree/Minor	2013	2014	2015	2016	2017	2018	2019
Minor	Native American Studies	28	32	24	20	18	20	17
Online Graduate Certificate	Native American Studies	9	12	16	17	17	10	7
MA	Native American Studies	16	16	13	20	19	20	16
Total Graduate		25	28	29	37	36	30	23
Minors and Degrees Awarded		AY13	AY14	AY15	AY16	AY17	AY18	AY19
Minor	Native American Studies	9	14	10	8	7	6	7
Online Graduate Certificate	Native American Studies	12	6	12	10	13	9	3
MA	Native American Studies	5	3	8	1	1	1	4
Graduate Total		17	9	20	11	14	10	7

The Department of Native American Studies offers an undergraduate minor, online graduate certificate and a MA in Native American Studies. While the department's degree programs are not large, the department plays an integral role in the University's core curriculum and in offering challenging courses on the history, culture, modern experience and literature of Native American populations to students majoring in other programs. The faculty (three tenured professors) actively pursue interdisciplinary research and creativity in the field of Native American Studies. They work closely with students in the MA program, training them to do research and teach. The online graduate certificate is unique in the United States.

The certificate program has experienced lower enrollments over the past three years due to both the difficulty of retaining faculty in the department and the transition of the program from a self-funded program to a base-funded program. The MA and certificate programs share curriculum and this means that the programs are able to support one another and allows the department to create greater opportunities for students even if enrollments in programs are lower. However, the department is working with the Graduate School to use new recruitment strategies to bolster applications for and enrollment in the NAS graduate programs.

In fall 2018, MSU announced that it had raised private donations and commitments from Associated Students of Montana State University totally $20 million to support construction of the American Indian Hall, which will be the future home to the American Indian Student Center, classrooms, an auditorium, space for tutoring and other student services as well as the Department of Native American Studies.

The Department of Native American Studies is currently engaged in the process of accreditation which serves as their program review. They have undergone over two years of preparation, self-reflection and assessment after a with the World Indigenous Nations Higher Education Consortium (WINHEC) including development of an inter-tribal model of Indigenous Student Well-being, Indigenous Research Standards, and advancement of the Indian Education for All Act in higher education. The WINHEC Accreditation increases MSU's credibility with Indigenous communities while addressing issues of cultural relevancy in Indigenous education & research.

As part of the accreditation process the Department of Native American Studies is engaging tribal communities around the question of "What is the highest education we can offer Indigenous students?" Collectively, the department is examining how they can build an educational space that is' home away from Home'--a protected and nurturing space that supports Native communities' values for their students' education. Once the accreditation visit has happened, MSU and the Department of Native American studies will post the results on their webpages.

Core Values of the Department of Native American Studies at MSU

The Native American Studies Department at MSU services a wide variety of constituencies, including the representatives from many different Indian nations who come here as our students. Because of that it is hard to look to or rely on any one nation's value system. Nevertheless, the Department's longstanding commitment to students, communities, and nations—native and non-native alike—has helped craft our core values and principles as international and pan-tribal, if not universal. They cut across various traditions and are at work in our Department.

Honesty

Honesty in all dealing is a number one principle that the Department operates on.

Generosity

We cooperate with and serve the community and students, gladly sharing knowledge and resources in our possession. Our faculty and staff members help design various courses for the tribal colleges as well as provide other services at request.

Kindness & Openness

We try to treat all who come into contact with the MSU-NAS department with kindness and openness acknowledging all people's (and peoples') backgrounds and needs, and respecting the cultures they consider their own. It is our priority to create an atmosphere of friendliness.

Hard Work

We all work hard to carry out the mission of our department and to achieve its goals in serving students and community and preserving and fostering Native American ways and traditions.

Family

The value of family in Native cultures is tremendous. That is how Native Americans identify themselves – by their family ties. We recognize the importance of family life and strive to become a family for our students as well. It is of central importance for our Native students, who often have complex familial and community (extended family) responsibilities to attend to. As faculty members, we try to be sensitive to that, and strive to be flexible in our expectations of students when unforeseen circumstances arise.

Spirituality

Many Native people place a high value on their connectiveness to "that which is greater than self." These beliefs often form a sense of meaning and purpose, a sense of self and of relationship with "the Supernatural," however the individual or culture defines it. The Department acknowledges these beliefs and itself honors the Creator in its private and public activities.

Humor & Respect

In our dealings with each other and with our students, we find that these two core values are two sides of the same coin, which is part of the commerce of human relationship. The foregoing values all work together to create a mutually respectful and safe working, learning, and teaching environment where no one takes himself or herself too seriously.