**Academic Planning Worksheet**

**FY 19**

**Please develop a 3-5 year plan for all degrees/programs within your department using the outline below. Use your Strategic Plan developed in 2015 as a guide in this process. The finished document will replace the former 5 year development worksheets that we updated annually.**

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| --- | --- |
| Name of Program: M.S. Natural Sciences | Date: 17 Sept 2019 |

*For each of the following questions, address: format of offering (online, hybrid, face to face) and campus location of program/degree. Should the current format or location remain the same? Or should it change?*

*Please consider what do/should degrees at NSU in our college look like? Should we simply duplicate program/degree offerings between Tahlequah and BA? If not, what programs/degrees are more suited for the BA campus? For the Tahlequah campus? Workforce issues?*

1. What programs/degrees do we need to sustain and grow?

The M.S. Natural Sciences program offers graduate-level coursework in both face-to-face and ITV format. The program is offered on the Tahlequah and Broken Arrow campuses.

The M.S. Natural Sciences committee will review the format of the thesis and non-thesis options in the M.S. Natural Sciences degree with a goal to identify opportunities to streamline the degree and enhance the program for our students. While our enrollment in the major is increasing, we do not yet possess enough students on both campuses to transition to face-to-face format for all of our courses. We do, however, believe creating non-cross-listed graduate coursework is desirable.

Furthermore, the program should be offered on both campuses. Deleting the program from one campus would remove a substantial number of faculty as potential research advisers, thereby reducing the maximum capacity of the program. In addition, it would eliminate certain fields of science available to students as we do not fully duplicate faculty expertise on both campuses. Finally, we have applicants who will only consider pursuing the degree on either the Broken Arrow or Tahlequah campus. We would not be able to attract as many students if we only offered the program on a single campus.

We initiated the non-thesis route for degree completion in fall 2016 and the B.S. chemistry to M.S. Natural Sciences accelerated degree option in fall 2017. Both routes are in the process of being fully implemented and needs support to continue growing the major.

1. What new programs/degrees do we need to develop?

The M.S. Natural Sciences program will explore an embedded graduate certificate in the M.S. Natural Sciences. The graduate certificate would create a way for students to pursue post-baccalaureate education to enhance their careers or increase their competitiveness for professional schools. These students typically do not want to commit to a full M.S. degree since they are aiming to matriculate in a professional school or receive employment after one year of graduate school (ca. 18 credit hours of graduate education). The graduate certificate could support these students in meeting their career objectives.

1. What programs/degrees need to be deleted?

The M.S. Natural Sciences program committee does not recommend deleting any of the degree options in the M.S. Natural Sciences program.

**Academic Planning Worksheet – Program Goals**

**FY 19**

**Use this page to summarize program goals. Use your Strategic Plan developed in 2015 as a guide in this process. The finished document will replace the former 5 year development worksheets that we updated annually.**

**Program mission statement**

The Master of Science in Natural Sciences program seeks (1) to increase both the depth and breadth of knowledge in the natural sciences for understanding and appreciation of the multidisciplinary nature of science and (2) to provide advanced training and education for expanding current scientific knowledge and skills.

**Program vision statement**

The Master of Science in Natural Sciences program will pursue excellence in graduate-level education and become a top choice for students wishing to pursue graduate studies at the M.S. level in Oklahoma.

**Summarize program goals for the next year.**

(Please include benchmarks, assessments, etc.—how will you determine success?)

*Program-level Recruitment*

The M.S. Natural Sciences program aims to increase recruitment efforts by maintaining a presence at regional undergraduate meetings that are populated by science majors (e.g., Oklahoma Academy of Sciences and Oklahoma Research Day). The program plans to initiate targeted recruitment at NSU for the ADP in chemistry in General Chemistry II (CHEM 1223) and Quantitative Analysis (CHEM 3315).

Assessment: Performance will be determined by successfully attending the undergraduate meetings, disseminating literature, and obtaining contact information for interested students. Literature for the ADP will be passed out to interested students in all CHEM 1223 and CHEM 3315 courses.

*Identification of At-Risk Graduate Students*

We plan to identify graduate students that are at risk of not completing their thesis. All graduate students are required to form a graduate advisory committee. Our current policy is that students are expected to meet with this committee at least annually to go over progress on their degree. We plan to augment the annual meetings with documentation from faculty advisers on student progress on a semester-by-semester basis. Each semester, faculty mentors will be asked whether or not their student is making adequate progress towards his or her degree. Faculty mentors are in the best position to know the student’s progress. In the event a student is not making satisfactory progress, the faculty member will be asked to convene a meeting with the student and his or her advisory committee to chart a plan for student success. Our goal is to shift graduate mentoring into a more proactive model wherein challenges (and their solutions) are identified early.

A second element of our proposed model has the program chair contact each student after they have earned 75% of their required credit hours; this typically falls in the student’s penultimate semester. The goal of the correspondence is to allow students an opportunity to self-identify roadblocks to graduation. In this way, the program chair will also take a more proactive role in student success. The NSU Graduate College has automated systems for program-student correspondence, which we will leverage for this purpose.

Assessment: Performance on this goal is measured by successfully developing and implementing the relevant forms.

**Summarize program goals for the next three years.**

*Embedded Graduate Certificate*

The program committee will explore and, as appropriate, develop an embedded graduate certificate within the M.S. Natural Sciences degree. The program committee will begin the process of reviewing the option and determining the best course of action in spring 2018. Discussion will continue as appropriate in the following semesters. If the program committee decides to pursue a graduate certificate, we plan to construct the program changes during the 2018-19 academic year.

*Increased Enrollment*

The program committee plans to increase enrollment in the program by 5% per year.

*Increased Retention and Graduation Rates*

The program committee plans to increase our graduation rates to an average of 5 degrees conferred per year with a 3% annual increase thereafter.

**Summarize program goals for the next five years.**

The program’s five year goals are:

* Explore accelerated B.S. biology/M.S. Natural Sciences and B.S. physics/M.S. Natural Sciences as appropriate.
* Continue to increase enrollment at 5% per year until we reach the program's capacity.
* Continue to increase graduation rates at an average of 3% per year until we reach program capacity.