Broad and rapid expansion of doctoral programs at North Dakota State University has produced a base for the continued development of graduate education. With the onset of a new round of campuswide planning efforts, it is necessary to formulate goals and a strategic direction for graduate education. As a result, a Doctoral Education Planning Task Force was formed to provide recommendations for incorporating the importance of doctoral education into the current university strategic plan.
VISION FOR THE FUTURE

In 2015, North Dakota State University launched a strategic plan to enhance its stature, which in part depends on the quality of NDSU’s faculty, students, staff, research and graduate degree programs. NDSU seeks to be a premier research institution with academic rigor. As a “very high research activity” institution, NDSU is among the top research universities in the United States. Maintaining this status requires NDSU to place a stronger emphasis on doctoral education as part of its research enterprise.

HISTORY OF GRADUATE EDUCATION AT NDSU

Since 1902, graduate studies have been offered, and the Graduate School was formalized on July 1, 1954. In 1959, the North Dakota Board of Higher Education first authorized departments to offer the Doctor of Philosophy degree, and the first five Ph.D. degrees were awarded in 1963. Currently, NDSU offers 51 doctoral degrees, 84 master’s degrees, an education specialist degree and 12 graduate certificate programs.

GRADUATE ENROLLMENT

Currently, our graduate student body consists of 2,138 students, or about 15.5 percent of total student enrollment. Overall graduate student enrollment is made up of 40 percent students from North Dakota and 15 percent from Minnesota. As a global institution, we enroll international students from more than 80 countries.

VISION FOR 2025

NDSU has experienced continued growth in graduate students and programs. To enhance research productivity and stature of NDSU, the graduate student population should equal 20 percent of total enrollment. NDSU’s projected goal of 18,000 students requires a net increase of more than 1,400 graduate students, a majority of which should be doctoral students.

The growth in the number of graduate students also requires a corresponding increase in the number of high-caliber faculty to sustain and enhance the quality of the research enterprise of NDSU. To increase the quality of faculty, the plan (see Appendix 1) includes hiring a number of established professors with tenure, while simultaneously increasing expectations of current faculty. NDSU currently employs 586 tenure-track faculty. To recruit, retain and educate high-quality doctoral students, there needs to be a net increase of 70 tenure-track faculty. In addition, 200 existing tenure-track faculty each need to advise two additional doctoral students.

GRADUATE STUDENT CONTRIBUTION TO MISSION

Graduate education plays a critical role in the workforce strategy of the U.S. and is essential for remaining competitive in a global economy. Graduate degree holders bring increased value to the workforce and to society through their specialized knowledge and problem-solving ability.

- Creating a workforce for a new knowledge-based, global economy
- Conducting ground-breaking research
- Facilitating technology transfer
- Developing innovators and entrepreneurs
- Preparing future college and university faculty
- Developing leaders for business, non-profit and government sectors
- Preparing the K-12 teacher workforce
- Establishing new startups that create jobs
- Strengthening communities through social action
- Promoting public health initiatives
- Enhancing society through arts, humanities and social sciences
PLAN FOR IMPLEMENTATION

EXPANSION OF STUDENT ENROLLMENT

NDSU graduate students receive less support than equivalent students at other institutions. The average stipend for Ph.D. students at NDSU is lower than that at peer institutions by about $5,000 (Oklahoma State University Survey). NDSU graduate students do not receive health benefits. It is essential that NDSU make provisions to provide health insurance. Lack of scholarships and fellowships greatly reduces a program’s ability to attract students. Additionally, quality of the programs is another barrier. These disparities have a severe impact on recruitment and retention of students, in both number and talent level.

The task force recommends seven ways to enhance recruiting and retention on the NDSU campus:

1. Allocate funds to support graduate assistants on a competitive or matching basis to departments and programs that demonstrate their commitment to graduate education.
2. Offer more professional degree programs and recruit more fully sponsored students. Incentivize academic departments/programs by returning a portion of the tuition.
3. Fund scholarships and fellowships to support students and their faculty mentors in pursuing external opportunities. Fund the Graduate Center for Writers and external experts to help students write applications for external fellowships, such as for the National Science Foundation.
4. Identify promising candidates for fellowships and “buy out” part of their assistantship time to allow time to develop a competitive proposal.
5. Fund professional development activities including travel to conferences to recruit, train, and retain graduate students, directly impacting their career placement outcomes.
6. Provide periodic external assessment of programs to facilitate continuous improvement.
7. Cultivate relationships with NDSU Development Foundation to significantly increase funding for graduate studies from current support levels, which are minimal.

RECRUITMENT PLAN

The NDSU College of Graduate and Interdisciplinary Studies created a comprehensive marketing and graduate student recruitment plan. In addition to the strategies mentioned, the Doctoral Education Planning Task Force recommends the following:

• Enhance Web presence
• Fund domestic and international recruitment with increased faculty involvement
• Invest in business development efforts that will capitalize on and coordinate with geographic-specific marketing efforts
• Target current undergraduate students, regional domestic students and international students in countries where NDSU has had success
• Fund marketing and advertising to grow brand awareness
• Strategic media buying
• Targeted direct communication
• Landing pages
• Digital marketing technology
• Post-lead communication plan
QUALITY OF GRADUATE PROGRAMS

Additional attention should be given to regularly reviewing graduate program quality, which may be complicated due to the overlap of multiple factors. Assessment factors might include completion rates, time-to-degree, student placement and publication rates.

RETENTION

NDSU loses 32 percent of degree-seeking graduate students, in part because students need outside employment. Increasing student stipends would have an immediate impact on retention. Over the longer term, more efforts toward graduate student mentoring will have a positive impact on student success. Comprehensive mentoring will also make graduate students more effective as teachers.

Integrating the role of graduate students in the teaching mission of the university provides benefits for students and the university. Implementing these strategies effectively would lead to more presentations and publications of student work, and awards for student achievement, ultimately leading to career placement.
Graduate research and teaching assistants at NDSU are compensated in a range of $12,000-$23,000, with most students paid at the lower range. In comparison, peer institutions pay $5,000 more on average. The current stipend guidelines are based on the minimum wage in North Dakota, which is not adequate. The poverty line in North Dakota is $23,834 for a family of four.

**Budget required to support ~1,000 additional doctoral students in 10 years**

**Assumptions/Strategies:**

- The number of students advised by existing faculty = (two students)*(200 existing faculty)*(two cycles) = 800 students
- Five-year study period for each Ph.D. student
- $25,000/year stipend
- Hiring of 10 renowned full professors, two per biennium at the beginning of the biennium
- Hiring of 60 well-established associate professors, 12 per biennium at the beginning of the biennium
- $250,000/year salary and benefits for full professor
- $150,000/year salary and benefits for associate professor
- Each new full professor takes five students
- Each new associate professor takes two students
- Five-year study period for each Ph.D. student
- $25,000/year stipend
- Hiring of 10 renowned full professors, two per biennium at the beginning of the biennium
- Hiring of 60 well-established associate professors, 12 per biennium at the beginning of the biennium
- $250,000/year salary and benefits for full professor
- $150,000/year salary and benefits for associate professor
- Each new full professor takes five students
- Each new associate professor takes two students

The total number of new doctoral students (in 10 years) = 800 + 60 + 144 + 48 = 1,072

Budget required for stipend support (Note: Students recruited for the last two biennium will not graduate before the 10-year period but the calculated budget is based on stipend support until graduation) = (1,072 students)*(five years)*($25,000/year) = $134,000,000

Budget required for salary and benefits for new full professors = ($250,000/year)*10*2 faculty = $15,000,000

Budget required for salary and benefits for new associate professors = ($150,000/year)*12*10 = $1,800,000

Total budget to support students and new associate and full professors = $134,000,000 + $15,000,000 + $54,000,000 = $203,000,000 (or on average $20,300,000/year)

(*Note, the total financial figure does not include bringing current students to a competitive compensation package. It also does not include health insurance. Health insurance at the current student rate is $2,364 per year.)
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