

About the Bulletin

The **Undergraduate & Graduate Bulletins** contain information about academic programs and student services offered by North Dakota State University. It also contains general University and undergraduate and graduate academic policies and degree requirements. This bulletin (or catalog) is published online only. The bulletin is intended to complement other university information including specific materials supplied by schools, colleges, departments, and programs.

- The information in the Undergraduate Bulletin (<http://bulletin.ndsu.edu/past-bulletin-archive/2018-19/undergraduate>) applies to all undergraduate and professional students at the university. Some academic policies also apply to graduate students. Additional information for graduate students is available in the Graduate Bulletin (<http://bulletin.ndsu.edu/past-bulletin-archive/2018-19/graduate>). Information in the individual college sections applies to students enrolled in those specific degree programs of study.
- The academic policies and information contained within this bulletin are effective for the **2018-2019 academic year**, beginning on August 20, 2018 and ending on August 2, 2019.
- The undergraduate curricula within the bulletin are effective for students who entered NDSU or who declared a program of study during the **2018-2019 academic year**. Continuing and returning students follow the curriculum in place at the time their program of study was officially declared with the University.
- Questions about undergraduate academic policies and curriculum guides may be directed to the Office of Registration and Records. Questions about graduate programs and policies can be directed to the Graduate College.
- It is important for students to be familiar with all the information that applies to them, including policies and procedures related to registration, academic progress and degree requirements. Students are strongly encouraged, and may be required by the department to consult their advisers at least once each semester to ensure they are completing requirements applicable to their degree and major programs.
- All new, current and returning students should become well acquainted with the regulations regarding student academic (<https://www.ndsu.edu/fileadmin/policy/335.pdf>) and behavioral (<https://www.ndsu.edu/fileadmin/policy/601.pdf>) codes of conduct.
- Information about the Family Educational Rights and Privacy Act of 1974 (<https://www.ndsu.edu/registrar/records/ferpa>), as amended, is available online or in the Office of Registration and Records.

State Board of Higher Education Policy - Section 450

In accordance with State Board of Higher Education policy, Section 450: Institutional Reports, Catalogs, Bulletins (<http://www.ndus.edu/makers/procedures/sbhe/default.asp?PID=107&SID=5>): "Institutions shall publish electronic and/or hard copies of catalogs and bulletins for the purpose of furnishing prospective students and other interested persons with information about the institutions. Announcements contained in such printed or electronic material are subject to change without notice, and may not be regarded in the nature of binding obligations on the institutions and the State."

Reservation of Rights

Every effort has been made to provide accurate and current information; however, the right is reserved to change any of the rules and regulations of the university at any time, including those relating to admission, instruction, and graduation. The right to withdraw curricula and specific courses, change or discontinue programs, alter course content, change the calendar, and to impose or increase tuition and fees similarly is reserved. In some cases, requirements for programs and prerequisites for courses offered are effective even if they are not listed in this bulletin. All such changes are effective at such times as the proper authorities determine, and may apply not only to prospective students but also to those who already are enrolled in the university.

Non-discrimination Policy

North Dakota State University does not discriminate on the basis of age, color, disability, expression/identity, gender, genetic information, marital status, national origin, public assistance status, race, religion, sex, sexual orientation, or status as a U.S. veteran. Direct inquiries to the Office of the Vice Provost and Title IX Coordinator (<https://www.ndsu.edu/equity>), Old Main 201, (701) 231-7708.

Message from the President

North Dakota State University is a truly amazing place, a model for others in higher education to emulate. Our proud university is a shining example of a successful student-focused, land-grant, research institution—and that means NDSU commands a powerful niche.

The rest of the country and the world are noticing our accomplishments.

NDSU is listed at 86 among 393 public universities based on NDSU's research expenditures reported to the National Science Foundation. In addition, NDSU is listed in the National Science Foundation's top 100 in several areas, including: agricultural sciences, social sciences, chemistry, and psychology.

NDSU has nearly 14,400 students in our undergraduate and graduate programs. We have more than 2,000 graduate and professional students. NDSU student-athletes compete and succeed in the ranks of NCAA Division I.

The level of interest in the university has risen dramatically among students, the public and colleagues around the globe. This institution has evolved and progressed—we have increased our productivity, visibility and contributions to a greater number of constituencies.

We have a strong sense of community and campus pride at NDSU. We are dedicated to the land-grant mission of quality education, leading research and outstanding service. NDSU clearly makes a difference in the lives of students and the vitality of our community, state, region and nation.

The future of the great state of North Dakota is at a point of awakening—and our imagination is the only limit to the future. We at NDSU are poised to help make that future a reality.

I urge you to use this catalog to explore the many educational opportunities offered by our university. Join us as NDSU moves forward. The best is yet to come.

Dean L. Bresciani
President

Administration

- **Dean L. Bresciani, Ph.D., President**
 - Christopher S. Wilson, J.D., Chief of Staff
 - Matthew Larsen, Director of Athletics
 - Larry Kotchman, State Forester
- **Beth Ingram, Ph.D., Provost**
 - Kenneth Grafton, Ph.D., Dean of the College of Agriculture, Food Systems, and Natural Resources
 - David Bertolini, Ph.D., Dean of the College of Arts, Humanities and Social Sciences
 - Scott Beaulier, Ph.D., Dean of the College of Business
 - Michael R. Kessler, Ph.D., Dean of the College of Engineering
 - Margaret Fitzgerald, Ph.D., Dean of the College of Human Development and Education
 - Charles D. Peterson, Pharm.D., Dean of the College of Health Professions
 - Scott Wood, Ph.D., Dean of the College of Science and Mathematics
 - Claudia Tomany, Ph.D., Dean of the College of Graduate and Interdisciplinary Studies
 - Joe Mocnik, Ph.D., Dean of Libraries
- **Kenneth F. Grafton, Ph.D., Vice President for Agricultural Affairs**, Director of the N.D. Agricultural Experiment Station
- **Bruce A. Bollinger, Vice President for Finance and Administration**
- **Marc Wallman, Vice President for Information Technology**
- **Kelly A. Rusch, Ph.D., P.E., Vice President for Research and Creative Activity**
- **Laura McDaniel, M.S., Associate Vice President for University Relations**

Accreditation

NDSU is accredited as an institution by the North Central Association of Colleges and Schools. Inquiries may be directed to the Higher Learning Commission (<https://www.hlcommission.org>), 230 South LaSalle St., Suite 7-500, Chicago, IL 60604-1411. In addition, many programs are accredited or approved by their respective professional organizations and agencies.

Accrediting Agency Degrees and Programs

The following programs of study are accredited as listed below and in the college sections of this bulletin:

- Accreditation Commission for Programs in Hospitality Administration: Hospitality and Tourism Management (Bachelor of Arts and Bachelor of Science)
- Accreditation Council for Pharmacy Education (ACPE): Pharmacy Doctorate
- Accrediting Council for Education in Nutrition and Dietetics: Dietitian Education Program (Bachelor of Science); Didactic Program in Dietetics (Bachelor of Arts and Bachelor of Science)
- American Council for Construction Education: Construction Management
- American Society of Health-System Pharmacists: Pharmacy (Doctor of Pharmacy)¹
- American Veterinary Medical Association Committee on Veterinary Technician Education and Activities (AVMA): Veterinary Technology (Bachelor of Science)
- Association to Advance Collegiate Schools of Business: Business (Bachelor Science and Master of Business Administration)
- Certified Financial Planner Board of Standards: Family Financial Planning (Master of Science and Graduate Certificate)
- Commission on Accreditation for Respiratory Care: Respiratory Care (Bachelor of Science)
- Commission on Accreditation of Allied Health Education Programs: Exercise Science (Bachelor of Arts and Bachelor of Science)

- Commission on Accreditation of Athletic Training Education (CAATE): Athletic Training (Master of Athletic Training)
- Commission on Collegiate Nursing Education (CCNE): Bachelor of Science in Nursing; Master of Science in Nursing; Doctor of Nursing Practice
- Council for Interior Design Accreditation: Interior Design (Bachelor of Arts and Bachelor of Science)
- Council on Education for Public Health (CEPH): Public Health (Master of Science)
- Engineering Accreditation Commission of ABET, <http://www.abet.org>: Bachelor of Science degrees in: Agricultural and Biosystems Engineering, Civil Engineering, Computer Engineering, Construction Engineering, Electrical Engineering, Industrial Engineering and Management, Manufacturing Engineering, Mechanical Engineering
- Institute of Food Technologists: Food Science (Bachelor of Science)
- Joint Review Committee for Education in Radiologic Technology: Radiologic Sciences (Bachelor of Science)²
- Landscape Architecture Accreditation Board: Bachelor of Landscape Architecture
- National Accrediting Agency for Clinical Laboratory Science: Medical Laboratory Science (Bachelor of Science)³
- National Architectural Accrediting Board: Bachelor of Science in Architecture and Master of Architecture
- National Association for the Education of Young Children: Center for Child Development
- National Association of Schools of Art and Design: Visual Arts (Bachelor of Fine Arts, Bachelor of Arts and Bachelor of Science) and Interior Design (Bachelor of Arts and Bachelor of Science)
- National Association of Schools of Music: Music (Bachelor of Arts, Bachelor of Science, Bachelor of Music, Master of Music, Master of Music in Music Education, Doctor of Musical Arts)
- National Association of Schools of Theatre: Theatre (Bachelor of Fine Arts, Bachelor of Arts and Bachelor of Science)
- National Council for Accreditation of Teacher Education (NCATE): Teacher Education (Bachelor of Arts, Bachelor of Science, Master of Education and Master of Science); Education Administration (Master of Education and Master of Science); Counselor Education (Master of Education and Master of Science)
- National Council for Accreditation of Counseling and Related: School and Clinical Mental Health (Master of Education and Master of Science); Counselor Education and Supervision (Doctor of Philosophy)

¹ NDSU affiliates with 5 ASHP accredited programs that hold primary responsibility for accreditation.

² NDSU affiliates with 10 JRCERT accredited hospital-based programs that hold primary responsibility for accreditation.

³ NDSU affiliates with 6 NAACLS accredited hospital-based programs that hold primary responsibility for accreditation.

Officers of Agencies Associated with the University

- Lynette Flage, Director, Center for Community Vitality (<https://www.ag.ndsu.edu/ccv>)
- John Glover, President and CEO, NDSU Foundation and Alumni Association (<http://www.ndsualumni.com>)
- Paul Kelter, Ph.D., Director, Office of Teaching and Learning (<https://www.ndsu.edu/otl>)
- Larry Kotchman, State Forester, North Dakota Forest Service (<https://www.ag.ndsu.edu/ndfs>)
- Mark Weber, M.S., Director, Northern Crops Institute (<http://www.northern-crops.com>)
- Chuck Hoge, Executive Director, Research Technology Park (<https://www.ndsuresearchpark.com>)
- Kenneth Bertsch, B.S., Commissioner, State Seed Department (<http://www.nd.gov/seed>)
- Timothy Flakoll, M.S., Provost, Tri-College University (<https://www.tri-college.org>)
- Denver Tolliver, Ph.D., Director, Upper Great Plains Transportation Institute (<http://www.ugpti.org>)

State Board of Higher Education

Created by constitutional amendment in 1939, the State Board of Higher Education (<https://www.ndus.edu/board>) is the governing body of North Dakota State University and all other state supported institutions of higher education in North Dakota. The nine-member State Board of Higher Education is the policy-setting body for the North Dakota University System and consists of seven citizen members who serve four-year terms and who are appointed by the governor, one student who is also appointed by the governor for a one-year term, and one faculty member who is selected by the Council of College Faculties. The board's chief executive officer is the chancellor of the North Dakota University System, with offices in the state capitol in Bismarck. More information regarding the State Board of Higher Education, including members, can be found on the website.

NDSU Overview

Mission

With energy and momentum, North Dakota State University addresses the needs and aspirations of people in a changing world by building on our land-grant foundation.

Vision

We envision a vibrant university that will be globally identified as a contemporary metropolitan land-grant institution.

Core Values

NDSU is guided by the following key values and principles:

Land-grant

- We reflect and serve geographically and culturally diverse populations.
- We share institutional success across the university.
- We anticipate and welcome growth and service that will occur in ways yet to be conceived.
- We embrace our unique complexities as a land-grant university on the Northern Great Plains.
- We remain committed to serving people globally.

People

- We derive strength and vitality from each other and from the diverse communities we serve.
- We envision an academic and social environment that is conducive to intellectual and personal development by promoting the safety and welfare of all members of the university community.
- We promote excellence through individuals participating in decisions and value cooperation for the common good.

Scholarship

- We are an engaged university and acknowledge and pursue scholarship of all forms, including discovery, teaching, integration, and application.
- We uphold the rights and responsibilities of academic freedom.

Teaching and Learning

- We provide a superior teaching and learning environment within and outside of the traditional classroom.
- We promote and value liberal, graduate, and professional education in a collegial environment where divergent ideas can be shared.
- We foster an environment that promotes life-long learning with individually-defined goals.

Ethics

- We maintain our integrity through principled action and ethical decision-making.

Culture

- We will be the land-grant university that we want to be by welcoming and respecting differences in people and ideas.
- We support the goals of the North Dakota University System and value collaboration with colleges and universities around the world.
- We foster accessibility to our programs and services.

Accountability

- We have a special relationship with, and are accountable to, the people of North Dakota.
- We actively strive to contribute to our region's economic prosperity and to improve the quality of life.

A Vibrant Educational and Research Environment

NDSU is a highly regarded and often recognized student-focused, land-grant, research institution. With a land-grant mission to provide quality education, leading-edge research and excellent service, NDSU is acknowledged as a national leader among its peers, and seen by many as a model for success.

NDSU is listed at 86 among 393 public universities based on NDSU's research expenditures reported to the National Science Foundation. In addition, NDSU is listed in the National Science Foundation's top 100 in several areas, including: agricultural sciences, social sciences, chemistry, and psychology.

NDSU has enjoyed consistent growth with nearly 14,400 students in its undergraduate and graduate programs. Annual research expenditures at the university surpass \$150 million.

NDSU plays a significant role in the local economy and serves a region that comprises the entire state of North Dakota and 18 counties in western Minnesota within a 100 mile radius of Fargo. According to an economic impact survey conducted by EMSI in 2016, NDSU adds to the local economy annually through its operations, research, students and visitors an estimated \$366.9 million. The workforce skills acquired by past and present students who are employed in the regional service area contributes an additional \$560.4 million each year. NDSU's total economic impact to the region is roughly \$927.3 million annually.

In addition, NDSU's 55 acre Research and Technology Park is an award-winning example of success. It is a place where university researchers and private industry combine talents to develop and commercialize new technologies, methods and systems. The Research Park, founded in 1999, is host to nationally known companies John Deere Electronic Solutions, Bobcat, and Appareo. The Park has a 50,000 square foot Incubator building that

accelerates the success of startup companies. Successful Incubator graduates include Appareo, Intelligent InSites, Pedigree Technologies and Myriad Mobile.

NDSU President Dean L. Bresciani describes the university as a place where students can succeed academically and personally through learning, involvement, service and leadership. "NDSU is unique nationally in that it is a land-grant, research-based and student-focused university," he said. "That combination provides what few others institutions do, and our students are realizing the benefits."

A Historical Perspective of NDSU

A Bit of History

North Dakota had been a state less than a year when Governor John Miller signed a bill on March 8, 1890, designating a square mile of land adjoining Fargo as the site of the new campus and demonstration farm under the name North Dakota Agricultural College and Agricultural Experiment Station.

With President Horace E. Stockbridge and five faculty members, the university opened for its first collegiate year on September 8, 1891. A total of 30 students were listed in the 1891 Prospectus as being "matriculated in the Special Course."

Through its proud history, the campus has gained a strong reputation for outstanding education, research and service. An engaged university, NDSU is recognized as a leader among its peers. Acknowledged nationally, NDSU is among 108 institutions listed in the "Research University/Very High Research" category by the Carnegie Commission on Higher Education.

The Land-Grant Heritage

Honoring the commitment of the Morrill Act of 1862, the land-grant universities were established to provide studies that were a blend of technical and academic subjects. Known as a "people's college," NDSU was part of the bold experiment to provide access to a college education for the common person.

NDSU, the state's first land-grant institution, is well positioned to prepare graduates for the global marketplace and technologically oriented economy. Through a statewide network of centers and electronic technology, NDSU provides a growing capability for delivering education, cultural activities and information to schools and homes throughout North Dakota. NDSU is a publicly supported comprehensive land-grant institution, with a strong agriculture and applied science tradition.

The College of Graduate and Interdisciplinary Studies

Graduate students were first accepted in 1895, and a formal announcement of graduate studies has been carried in the bulletins since 1902.

The Graduate College was formalized July 1, 1954, by approval of the North Dakota Board of Higher Education. Graduate studies were administered by a Graduate Council from November 1949 to June 1954, and before that by a Graduate Committee.

The first Master of Science degree was awarded in 1899. Since then, graduate students have been in regular attendance and have participated in the scholarly activity of the campus. The number of degrees awarded increased noticeably after 1920 and again after 1950 in reflection of general trends in higher education in the United States.

In 1959, the North Dakota Board of Higher Education first authorized certain departments to offer the Doctor of Philosophy degree. The first Ph.D. degrees were awarded in 1963.

NDSU Today

NDSU has experienced a remarkable period of growth and expanded academic opportunities, and it is recognized as a national model of the contemporary land-grant institution. NDSU has nearly 14,400 students in its undergraduate and graduate programs, and its research expenditures surpass \$150 million annually.

NDSU is listed at 86 among 393 public universities based on NDSU's research expenditures reported to the National Science Foundation. In addition, NDSU is listed in the National Science Foundation's top 100 in several areas, including: agricultural sciences, social sciences, chemistry, and psychology.

An institution committed to progress, NDSU continues to advance in all areas because of the energy and dedication of faculty, staff, students, alumni, and friends.

NDSU Today

Academic Programs

NDSU offers more than 100 undergraduate and approximately 135 graduate degree programs of study in nine academic colleges. Degrees are awarded at the doctoral, master's, professional, and baccalaureate levels. Various undergraduate minors and certificate programs at the undergraduate and graduate levels also are available. Programs offered at the time of this publication are listed in the Programs of Study (<http://bulletin.ndsu.edu/past-bulletin-archive/2018-19/programs-study>) section of this bulletin or may be viewed online at www.ndsu.edu/majors.

The Faculty

As of Fall 2015, NDSU has 836 ranked faculty, lecturers, and program administrators, as well as 152 part-time academic staff within Academic Affairs. Because of the nature of a land-grant university, many faculty hold joint appointments with affiliated research organizations on the campus.

Divisions

- Office of the Provost (<https://www.ndsu.edu/provost>)
- Division of Agricultural Affairs (<https://www.ndsu.edu/vpag>)
- Division of Finance and Administration (<https://www.ndsu.edu/vpfa>)
- Division of Information Technology (<https://www.ndsu.edu/vpit>)
- Division of Research and Creative Activity (<https://www.ndsu.edu/research>)
- Division of University Relations (<https://www.ndsu.edu/vpur>)

The Campus

The NDSU campus in Fargo includes more than 94 buildings on approximately 44 square blocks or 261 acres. Statewide, NDSU is located on 19,869.39 acres of North Dakota land, which includes the main Agricultural Experiment Station in Fargo and seven research centers throughout the state. With NDSU's campus growth into downtown Fargo, that area has been transformed structurally, strategically and socially with its presence there, invigorating both the university and the downtown community.

The Fargo-Moorhead Community

The home of NDSU, Fargo is a bustling metropolitan area that is often listed as one of the best places to live in the country. Fargo is quietly earning a reputation as a perfect place to make a home. Nestled in the rich farmlands of the Red River Valley, the Fargo-Moorhead community has many qualities that contribute to this reputation, including a highly respected educational system; advanced medical technology; a progressive business community; numerous cultural and arts opportunities; clean air and water; and good-hearted, friendly people.

Fargo-Moorhead is among the largest metropolitan centers between Minneapolis and Seattle. More than 235,000 people make their home in Cass and Clay Counties. One of the reasons people choose NDSU as a place to get a good education is that the F-M community provides students access to part-time jobs, internships, parks and other recreational facilities, entertainment, and cultural amenities.

Continuing Education

Continuing Education is an outreach unit of the university that makes the resources of the institution available in a variety of ways, including distance-based education. Courses, locations, and delivery systems are planned in response to requests and identified needs.

Continuing Education activities fall into three main categories: on- and off-campus credit courses, non-credit activities, and learning opportunities mediated via technology. Admission to NDSU is required to enroll in Continuing Education courses, which are numbered 2000 or above. Individuals interested in enrolling in degree eligible credit activities must complete application procedures through the Graduate School.

University Resources

- Alumni Association (<https://www.ndsualumni.com>)
- Centers and Institutes (https://www.ndsu.edu/research/research_related_units/centers_and_institutes)
- Extension Service (<http://www.ag.ndsu.edu/extension>)
- Facilities Management (<https://www.ndsu.edu/facilities>)
- Information Technology Services (<https://www.ndsu.edu/its>)
- Institutional Research and Analysis (<https://www.ndsu.edu/oira>)
- NDSU Libraries (<http://www.ndsu.edu/library>)
- NDSU Research and Technology Park (<http://www.ndsuresearchpark.com>)
- Research Extension Centers (<http://www.ag.ndsu.edu/research/research-extension-centers>)

NDSU Policy Manual

NDSU, the North Dakota University System, and the State Board of Higher Education have numerous policies and procedures that apply to students, faculty, and staff. The NDSU Policy Manual (<https://www.ndsu.edu/policy>) is available online and includes, among others, the following policies that pertain to students:

- Anti-Harassment Policy (<https://www.ndsu.edu/fileadmin/policy/163.pdf>)
- Campus Security (https://www.ndsu.edu/police_safety/police/annualecurityreport)
- Email Policy (<https://www.ndsu.edu/fileadmin/policy/609.pdf>)
- Equal Opportunity and Non Discrimination Policy (<https://www.ndsu.edu/fileadmin/policy/100.pdf>)

- Privacy of Student Records (<https://www.ndsu.edu/registrar/records/ferpa>)
- Sexual and Gender-Based Harassment, Sexual Misconduct, and Title IX Policy (<https://www.ndsu.edu/fileadmin/policy/162.pdf>)
- Sexual Misconduct and Title IX Compliance (<https://www.ndsu.edu/fileadmin/policy/603.pdf>)
- Use of Alcohol and Other Drugs (<https://www.ndsu.edu/fileadmin/policy/155.pdf>)