RESEARCH RESOURCES AT NDSU

Information for faculty, staff and students involved in research

TIPS FOR GETTING STARTED WITH RESEARCH AT NDSU

- Set up a meeting with staff members of the Research Development Office (ndsuresearchdev@nds.edu) to familiarize them with your research interests and enlist their help with your current and future proposal plans.

- Learn to use Pivot, by Proquest (http://pivot.cos.com). This database has the capability to provide you with customized funding searches and grant email alerts. Each faculty member should also create a Pivot expertise profile. If a profile already exists, check the profile for accuracy and make updates annually.

- Review the NDSU Research and Sponsored Activity Handbook to learn about services, procedures and policies regarding research activities (www.ndsu.edu/research/researchandsponsoredactivityhandbook/).

- Print a Proposal Transmittal Form (PTF) with instructions about the process needed to obtain university approval before submission of a grant proposal (www.ndsu.edu/fileadmin/research/documents/SPA/forms/Proposal_Transmittal_Form.doc).

- Contact Sponsored Programs Administration staff for electronic submission accounts and assistance with grant proposal budget issues, such as salaries and fringe benefits, indirect costs and sub-awards (www.ndsu.edu/research/sponsored_programs_admin/budget_development).

- Watch for weekly “RCA Update” emails each Monday during the academic year for important information and announcements regarding research on campus and across the nation (www.ndsu.edu/research/newsroom/research_update/nds/research_update_archive).

- Allow plenty of time to prepare a grant proposal. Ideally, begin months ahead of the deadline so you have adequate time to consider ideas, discuss with administrators and colleagues, coordinate arrangements—such as for technology needs or compliance requirements—and refine your proposal writing and budget (www.ndsu.edu/research/sponsored_programs_admin/proposal_prep).

GRANT AND RESEARCH SUPPORT ACTIVITY

- The Office of Research and Creative Activity (RCA) provides services and support to enable and encourage research on campus (www.ndsu.edu/research).
  - Research Development organizes seminars and workshops to encourage research and grant activity and helps with proposal development by request (www.ndsu.edu/research/research_development).
  - Sponsored Programs Administration assists with budget development, provides final approval and electronic submission of proposals and administers post-award nonfinancial grant processes (www.ndsu.edu/research/sponsored_programs_admin).
  - Research Integrity supports IRB, IACUC and IBC operations; oversees export control and financial conflicts of interest reviews; provides veterinary animal care and consultation; and subject matter expertise on promoting research integrity and compliance with federal regulations (www.ndsu.edu/research/integrity_compliance).
  - Technology Transfer provides guidance for faculty, staff and students engaged in research that could generate intellectual property such as patents, trademarks, copyrights and plant variety protection. To protect your intellectual property, it is critical to keep results confidential until a patent application or other IP protection has been filed (www.ndsu.edu/research/tech_transfer).
  - Business Development fosters relationships with business, industry and private foundations and facilitates NDSU partnerships and collaborations (www.ndsu.edu/research/business_industry).

- The Office of Grant and Contract Accounting, a unit of NDSU Finance and Administration, provides post-award grant and contract financial services to faculty and administrative staff engaged with sponsored programs (www.ndsu.edu/grants).

- Pivot, by ProQuest provides customized funding searches and sends email alerts for grants in your specific areas of interest. NDSU faculty and researchers have free access to Pivot through an NDSU subscription (pivot.cos.com/funding_main). For assistance, contact ndsu.researchdev@nds.edu.

- Internal funding opportunities at NDSU (www.ndsu.edu/research/research_development/funding_opportunities)

- Proposal development resources is a one-stop webpage maintained by Research Development to provide templates for grant proposal preparation, resources for grant project development and links to agency-specific tips and information (www.ndsu.edu/research/research_development/proposaldevelopmentresources/).

- Roles and Responsibilities Matrix for Sponsored Research (www.ndsu.edu/fileadmin/research/documents/SPA/forms/roles_and_responsibilities_matrix.pdf)
INFORMATION TECHNOLOGY AND RESEARCH COMPUTING

- Information Technology Services include:
  - Access to research and education networks (www.ndsu.edu/its/research_education_networks/)
  - Data Management (www.ndsu.edu/research_data)
  - Data Storage Use this storage overview matrix to determine the best place for your data storage needs (www.ndsu.edu/fileadmin/www.its.ndsu.edu/AdvAppsI2/PDFs/2015_Got_Storage_handout.pdf).
  - ECI Server Hosting (www.ndsu.edu/eci/sla)
  - IT Security (www.ndsu.edu/its/security/it_security)
  - Statistical Consulting Service is available to all faculty, staff and students at every stage of the research process, usually at no charge (www.ndsu.edu/its/instructional_services/statistical_consulting).
  - Technology Learning and Media Center (www.ndsu.edu/its/training/tlmc)
  - Video Conferencing (www.ndsu.edu/its/computer_labs_classrooms/videoconferencing)
  - Web Hosting options are available NDSU’s Pubweb service provides options to host basic and enhanced web sites if you wish to build and maintain your own website. If you require authoring support, NDSU CMS may be a better hosting option (www.ndsu.edu/its/training/tlmc/web_sites).

- Center for Computationally Assisted Science and Technology (CCAST) provides high-performance computing (HPC) including onsite hardware, software and filesystems for researchers and their private and public sector partners, as well as help in utilizing leadership-class national HPC resources. Since HPC applications can be found in almost any field, from science and engineering to business, agriculture and arts, CCAST computing systems are a shared resource designed to accommodate everyone’s computation needs (www.ccast.ndsu.edu).

- National research computing networks are accessible to NDSU researchers, which allow for connections with more than 300 member institutions through high-capacity global research and education networks via Internet2. (www.ndsu.edu/its/research_education_networks/). Also, CCAST serves as an “on ramp” to national advanced computing environments such as the Open Science Grid (OSG) and Extreme Science and Engineering Discovery Environment (XSEDE).

SHARED-USE INSTRUMENTATION AND LABORATORY FACILITIES

- Research equipment database allows searches by using keywords or equipment classification, or by colleges and departments. This site was created for businesses, university researchers, students and others interested in specialized equipment and capabilities available at NDSU (researchtoolbox.ndsuresearchpark.com/).

- Institutional core facilities provide state-of-the-art instrumentation and expertise available to NDSU researchers (www.ndsu.edu/research/core_facilities/).

- RCA Research Operations is dedicated to providing access to an extensive set of NDSU tools located in the NDSU Research and Technology Park. These resources are available using a recharge/service center model (www.ndsu.edu/research/core_facilities/rca_service_center/).

  Equipment sets are functionally organized in these focus areas:
  - Materials Research Laboratory (Synthesis and Processing)
  - Materials Characterization and Analysis Laboratory
  - Microfabrication Laboratory
  - Device Packaging Laboratory
  - Device Testing Laboratory
  - Reliability and Failure Analysis Laboratory

- Class 100 and Class 10,000 cleanrooms encompass a total area of 12,000 square feet under filtration and installed equipment worth approximately $10 million.

- Electron Microscopy Center provides scanning electron microscopy, transmission electron microscopy, micro computed X-ray tomography, and imaging services for teaching, research, and industry (www.ndsu.edu/em_lab/).

- Unmanned aerial vehicles (UAV), commonly referred to as drones, provide a significant opportunity for many areas of NDSU research. Guidance and support for the use of UAVs is available (www.ndsu.edu/research/unmanned_aerial_vehicles).
NETWORKS

- North Dakota Agricultural Experiment Station (NDAES) consists of seven Research Extension Centers placed strategically throughout the state and the Main Station in Fargo. The NDAES works to develop techniques and technologies to enhance the production and use of food, feed, fiber and fuel from crop and livestock enterprises (www.ag.ndsu.edu/research).

- NDSU Extension Service provides North Dakota people with research-based information they need to succeed in today’s increasingly complex world and be prepared for the future. Offices serve all 53 North Dakota counties and Fort Berthold (www.ag.ndsu.edu/extension).

- Established Program to Stimulate Competitive Research (ND EPSCoR) is funded through federal-state-private partnerships. It offers programs to increase the competitiveness of North Dakota for merit-based grants and contracts in support of science and technology research from federal funding agencies (www.ndepscor.ndus.edu).

- North Dakota INBRE is funded through the National Institutes of Health. Its goal is to build biomedical research capacity by serving research universities, baccalaureate institutions and tribal colleges within the state (ndinbre.org/aboutinbre.html).

- National Ecological Observation Network (NEON) is funded through the National Science Foundation, with the goal to advance the ability of scientists to examine and understand interactions between life and the environment at the scale of an entire continent. NDSU hosts the Northern Plains domain, one of 20 NEON ecoclimatic domains representing the U.S. (www.neonscience.org/science-design/field-sites).

- Great Plains Cooperative Ecological Studies Unit (GPCESU) NDSU is among 16 universities belonging to the GPCESU in partnership with eight federal agencies. The aim is to improve the scientific basis for managing ecosystems in the region through interactive technical assistance, research and education among the partner institutions and agencies (www.cesu.psu.edu/unit_portals/GRPL_portal.htm and www.cesu.psu.edu). The NDSU contact is Rod Lym, rod.lym@ndsu.edu.

SOCIAL SCIENCE RESEARCH

- Center for Social Research has expertise in a wide range of applied research applications, including survey research, program evaluation, needs assessment, social indicator projects and economic impact assessments (www.ndsu.edu/csr).

- Group Decision Center has 30 networked laptop computers equipped with software that offers an easy way to improve team collaboration in virtual discussion. The technology, along with a skilled facilitator, assist in activities such as focus groups, strategic planning, problem solving, decision making, brainstorming, assessment and evaluation, and consensus building (www.ndsu.edu/gdc).

- Online survey needs can be met by using Qualtrics, software with extensive features for survey creation, distribution, and analysis (www.ndsu.edu/gdc/?page_id=546).

- NDSU Press exists to stimulate, coordinate and publish interdisciplinary regional scholarship. Scholarly and literary book-length manuscripts with a regional focus are considered (www.ndsu.edu/ahss/ndirs).

PROFESSIONAL DEVELOPMENT

- Gear-Up-for-Grants seminars and workshops are organized by the Office of Research and Creative Activity, and cover topics related to research and grants. They are open to faculty, postdocs, students and staff involved in research (www.ndsu.edu/research/research_development/seminars_and_workshops).

- Research compliance training is offered by staff representing the compliance areas – IACUC, IBC, IRB and Export Controls. The units assist in maintaining research integrity at NDSU (www.ndsu.edu/research/integrity_compliance).

- Collaborative Institutional Training Initiative (CITI) is an online portal for training in topics related to research integrity and compliance. Topics include programs on Responsible Conduct of Research, Human Subjects Research, Animal Care and Use, Biosafety, Export Controls and Conflict of Interest (www.citiprogram.org). CITI records from previous institutions can be transferred to NDSU.

- Department grant administrators is an informal campus group organized by the Sponsored Programs Administration office. Any NDSU staff member involved in administration of grants or who works with faculty members who have received grants is welcome to be a member. An email listser is maintained by the SPA Office to announce meetings and provide useful information. Contact ndsu.research@ndsu.edu to get on the list.
GENERAL INFORMATION

• **Centers and institutes** The Office of Research and Creative Activity maintains a web listing of NDSU centers and institutes with links to contact information. The units are involved in instruction, research or service beyond the immediate campus community ([www.ndsu.edu/research/research_related_units/centers_and_institutes](http://www.ndsu.edu/research/research_related_units/centers_and_institutes)).

• **Center for Writers** provides one-on-one writing consultations, workshops and classes to assist graduate students and faculty become more successful writers ([www.ndsu.edu/cfw](http://www.ndsu.edu/cfw)).

• **Environmental Health and Safety** assists with maintaining compliance with federal, state and local regulations associated with environmental, chemical and radiological issues ([www.ndsu.edu/police_safety/environmental_health_and_safety](http://www.ndsu.edu/police_safety/environmental_health_and_safety)).

• **Institutional Research and Analysis** is a centralized data source and monitors NDSU as an institution, collecting data and conducting research regarding students, organizations, institutional resources and performance, and finances ([www.ndsu.edu/oira](http://www.ndsu.edu/oira)).

• **Library research support** is available in several areas:
  - Services for faculty and staff: [library.ndsu.edu/services/services-for-faculty-and-staff](http://library.ndsu.edu/services/services-for-faculty-and-staff)
  - Subject librarians: [library.ndsu.edu/directory/subject-librarians](http://library.ndsu.edu/directory/subject-librarians)
  - Tutorials: [library.ndsu.edu/tutorials](http://library.ndsu.edu/tutorials)
  - Institutional repository: [library.ndsu.edu/ir/](http://library.ndsu.edu/ir/)
  - 3D printing: [library.ndsu.edu/3Dprinting](http://library.ndsu.edu/3Dprinting)

• **NDSU EXPLORE** celebrates research and scholarly accomplishments of NDSU undergraduate students and encourages faculty and students to become involved. The EXPLORE webpage includes NDSU student profiles as well as ideas and funding sources for future activities ([www.ndsu.edu/research/undergraduate_research/ndsu_explore/](http://www.ndsu.edu/research/undergraduate_research/ndsu_explore/)).

• **Pivot Gallery / Scholars@NDSU** provides the public (business, industry, entrepreneurs, potential students) a free and simple way to search for NDSU faculty and researchers with particular disciplinary expertise. Pivot Gallery is made available by the NDSU Research and Technology Park and the NDSU Office of Research and Creative Activity ([scholars.proquest.com/gallery/NDSU](http://scholars.proquest.com/gallery/NDSU)).

• **Research Foundation** is an independent, not-for-profit organization to support the university by protecting, adding value to and licensing for commercialization of intellectual property developed through research activities at the university. By commercializing through licensing of intellectual property, the foundation creates resources that are returned to the individual inventors and the university to promote continued research ([www.ndsuresearchfoundation.org](http://www.ndsuresearchfoundation.org)).

• **Research and Technology Park** is a place where university researchers and private industry can combine talents to develop new technologies, methods and systems. Located on the north side of campus, the park also administers Innovate ND entrepreneurial grants and APUC grants from the state of North Dakota ([www.ndsuresearchpark.com](http://www.ndsuresearchpark.com)).

• **Technology Incubator** is located in the Research and Technology Park and provides access to business development programs and services needed by start-up companies ([www.ndsuresearchpark.com/startups-and-entrepreneurs/join-the-tech-incubator/](http://www.ndsuresearchpark.com/startups-and-entrepreneurs/join-the-tech-incubator/)).

CONTACT US:

Research Development  
ndsu.researchdev@ndsu.edu  
Office of Research and Creative Activity  
www.ndsu.edu/research

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