

# 68<sup>TH</sup> NORTH DAKOTA LEGISLATIVE ASSEMBLY (2023-25 BIENNIUM)

## University of North Dakota Proposed Legislative Asks/Proposed Legislative Changes

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### Programs and Research Support

#### National Security Initiative

The House Appropriations Education and Environment Division has added \$45M to the UND budget for the national security initiative. This initiative provides funding for: high-speed laser research for optical communications; satellite and space debris tracking; molecular beam epitaxy; digital engineering and a virtual reality laboratory; a cyber range; cybersecurity research infrastructure; a 3D rocket laboratory; a controlled environment field-testing facility; an autonomous system environment; and a development and test facility.

#### Research and Economic Development Fund (Legacy earnings)

- Legislation creating an economic diversification research fund passed unanimously in the Senate during the last session but failed in the House. In the end, \$30M was committed to research, workforce development and LIFT. HB 1379 includes \$10M for research.
- Proposed research investment will be directed strategically to build research strength, train students for high-level skills, reach all campuses in NDUS, and demonstrate and report measured outcomes and ROI.
- Invest strategically, prioritize areas of state significance, expand national reputation and competitiveness, and broaden relevance to existing and new industries.
  - Energy and environmental sustainability.
  - Health care and rural health and biotechnology.
  - Agriculture and ag technology.
  - UAS and autonomous systems.
  - Advanced manufacturing and materials.
  - Cross-cutting national security challenges.
- Issue block grants to build capacity in human and physical research infrastructure (excluding new buildings) and for basic and applied research projects, programs and initiatives.

#### High-Performance Computing

- \$3.2M for UND portion of joint submission with NDSU.
- Internet2 Connectivity: Covers operating costs for high-speed connections and express routing between research universities in the United States, national laboratories and other research organizations.
- Computational Research Center: Supports the state-of-the-art computing resources necessary for the award and successful participation in funded activities of big data research in a variety of areas including medicine, autonomous systems, national security and energy.
- Cybersecurity Maturity Model Certification (CMMC): Funds additional staffing, equipment and licensing necessary for UND to remain eligible for DoD grants and contracts by reaching compliance with new DoD security standards for Controlled Unclassified Information (institutions must be formally certified by 2025).

#### Redesignation of State Energy Research Center — SB 2161

- Removal of sunset clause; Increase funding to \$10M
- Nearly 50 State Energy Research Center (SERC) projects have been initiated over the last two biennia, already resulting in 12 new invention disclosures and seven new patent applications.
- As a result of these SERC projects, over \$12M of proposals, resulting in over \$6M worth of additional funding to date, have been secured to advance these ideas further.
- The Energy Hawks Program, funded through SERC, has supported 56 university students of all disciplines from UND and four other NDUS institutions to become knowledgeable North Dakota energy advocates and stewards.

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### Capital Project

#### Science, Engineering & National Security Corridor/STEM

- Two phases, one each of the next two biennia:
  - Engineering, Technology & National Security Corridor: \$82M (\$57.4M State / \$24.6M Local)
  - Science and Math: \$75M (\$52M State/\$23M Local)
- Initial funds to finish design work for bidding and site preparation (demolition of Hyslop) for a new building.
- Final design and project scope will result in demolition, remodeling and new construction involving 9 buildings. Results in a net reduction of around 200K GSF and eliminates around \$175M in capital renewal needs.
- New construction geared toward modern lab spaces that cannot be designed in existing buildings with limited ceiling heights and existing structural limitations.
- Provide new, enhanced space for STEM undergraduate and graduate students in all colleges.

- The combined growth in enrollment and research activity has created a significant need in the College of Engineering & Mines (CEM) for not only more space, but also space better suited for the type of research CEM conducts.
  - Grown from roughly 1,300 students in 2010 to over 2,100 students today.
  - Offers more than 35 degrees across 17 different fields of engineering, computing and geology. Includes the addition of computer science to the CEM, along with the creation of new programs in cybersecurity, data science, biomedical engineering and systems engineering.
  - Growth in programs has coincided with increased employer demand across North Dakota in same areas.
  - CEM research has grown by more than 40% in the past several years, with over \$9M in externally funded research expected this year in areas such as energy, rare earth elements, UAS and national security.



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## Additional Consideration for Inflationary Impacts

- Support increase to funding formula to offset operational impact of inflation.
  - Use remaining federal ARPA funding for inflationary adjustments to projects approved in the 2021 Special Session.
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## For Consideration in Future Biennia

### Armory

- \$8.9M remodeling budget (\$7.12M in State appropriations + \$1.78M in local funds).
- 20,174 GSF building completed in 1919.
- Provides adequate instructional space, office space, storage space and drill space for ROTC.
- UND's first Battalion courses were taught in 1890. Growing demand in ROTC due to having a local Air Force Base and growing relationship with U.S. Space Force. ROTC programming is important for recruitment of campus students, especially with John D. Odegard School of Aerospace Sciences students.

### Consolidated Allied Health Master Planning, Design & Construction

- \$9M (\$7.2M in state appropriations + \$1.8M in local funds).
- Funds to begin necessary testing, design work and cost-estimating to scope a project to consolidate allied health space needs campuswide, leveraging the newer School of Medicine & Health Sciences (SMHS) building/site.
- Currently allied health programs and services are spread across 10+ buildings and utilize around 528K GSF.
- UND cannot take advantage of economies of scale and scope because the fractionated physical plant and geography related to allied health spaces. Consolidation of spaces would result in operational efficiencies, dual use of space, shared space, improved space utilization, a reduction in UND's GSF and deferred maintenance.
- SMHS laboratory space will be directly impacted by the closure of Columbia Hall, which operates a well-funded research center studying epigenetics in the basement. In addition, the Neuroscience Research Center and Biomedical Research Center have shared MEP systems with Columbia Hall. Coupled with an enormous increase in SMHS research awards, the most pressing space need for SMHS is wet and dry laboratory space. SMHS sponsored funding was up 25% in FY21 compared with FY20, and to date is up 50% in FY22.
- SMHS's continued growth and new programming help alleviate North Dakota's healthcare workforce shortage and have resulted in substantial enrollment growth in areas, such as public health and Indigenous health.

### Simulated Rural Emergency Hospital

- \$6M
- Undergraduate nursing enrollment/growth is restricted due to limited local and regional agency capacity for students' clinical experiences, as well as availability of masters or doctoral prepared, qualified nurse educators.
- A portion of required direct patient care experiences in clinical agencies can be replaced by simulated clinical experiences.
- To provide comparable clinical learning experiences through simulation, qualified simulation staff, additional advanced simulation equipment, and extended, complex, and multifaceted scenarios are needed.
- A Simulated Rural Emergency Hospital (SREH) expands the nursing students' experiences to offer individual and shift-based scenarios that prepare students for patient situations that will be integral to their clinical practice.
- An SREH provides opportunities for interprofessional learning with other allied health programs (i.e. psychology, medicine, and social work) where students learn to work as a team in a safe, supported educational environment.
- Interprofessional education will lead to workforce development in critical areas, as well as prepare health care students to improve patient outcomes.
- A SREH also expands workforce training opportunities for already licensed providers in critical need areas, such as behavioral health and rural communities.

