23.1182.02000

Sixty-eighth
Legislative Assembly **BILL NO.**
of North Dakota

Introduced by

Representative Schreiber-Beck

1   A BILL for an Act to provide an appropriation to the state board of higher education for

2   workforce education innovation funds; and to provide an effective date.

3   **BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

4   **SECTION 1. APPROPRIATION - STATE BOARD OF HIGHER EDUCATION -**

5   **WORKFORCE EDUCATION INNOVATION PROGRAM.** There is appropriated out of any

6   moneys in the general fund in the state treasury, not otherwise appropriated, the sum of

7   $24,000,000, or so much of the sum as may be necessary, to the state board of higher

8   education for the purpose of awarding workforce education innovation funds to eligible

9   institutions, for the period beginning with the effective date of this Act, and ending June 30,

10   2025.

11   **SECTION 2. EFFECTIVE DATE.** This Act becomes effective immediately upon its filing with

12   the secretary of state.

LEGISLATIVE MANAGEMENT - **October 20, 2023**

Mr. Chairman and members of this committee, I am Cynthia Schreiber-Beck, District 25 Representative. This proposed legislation is to fund the existing Workforce Education Innovation Program. What follows is the legislative history of the Workforce Education Innovation Program, the existing language in century code, the "why" of the funding request, and information from stakeholders.

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2023 LEGISLATIVE SESSION HISTORY: WORKFORCE EDUCATION INNOVATION PROGRAM

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The Legislative Assembly approved House Bill No. 1241 (2023) to establish the workforce education innovation program to create or enhance educational programs that address the workforce needs of North Dakota business and industry. Section 15-10-75 provides for the Legislative Management to receive a biennial program report from SBHE by September 1 of each even-numbered year regarding awards under the workforce education innovation program. The report must include information per educational institution regarding the number, amount, and type of awards; the name of each educational program created, enhanced, or promoted; the amount and percentage of funds used for leadership and coordination costs; and detailed expense reports, including the type of equipment and technology purchased and the number of instructors hired or trained.

House Bill No. 1241 (2023), as introduced, included an appropriation of $24 million from the general fund for workforce education innovation grants; however, this appropriation was removed by the House prior to final passage of the bill. House Bill No. 1003 (2023), as approved by the House and Senate, included an appropriation of $10 million from the general fund for workforce education grants; however, this funding was removed by the Conference Committee prior to final passage of the bill. Therefore, no funding was appropriated for this program for the 2023-25 biennium. (as written by Legislative Council for Interim Higher Education Committee)

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NORTH DAKOTA CENTURY CODE (House Bill 1241 – 68th Legislative Session)

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15-10-75. Workforce education innovation program - Report to legislative management.

1. The state board of higher education may provide award funds to institutions under its control to create or enhance educational programs that address the workforce needs of North Dakota business and industry. An award made under this section may be used for curriculum development, equipment and technology purchases, facility modifications and equipment installation, hiring and training new and existing instructors, educational program promotion, and enhancement of postsecondary partnerships with primary and secondary schools.

2. The state board of higher education shall provide a biennial program report to the legislative management by September first of each even-numbered year. The report must include information by institution regarding:

a. The number, amount, and type of awards;

 b. The name of each educational program created, enhanced, or promoted;

c. The amount and percentage of funds used for leadership and coordination costs; and

d. Detailed expense reports, including the type of equipment and technology purchased and the number of instructors hired or trained.

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WHY THE REQUEST FOR THE APPROPRIATION OF $24,000,000

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Workforce is in a crisis in North Dakota and this existing grant program provides a means to accelerate workforce creation by funding innovation and adaptation across NDUS campuses and their partner TrainND centers. Providing funding to this innovative tool provides resources for campuses to respond to the changing local workforce needs,

and the major challenge now posed by the Minnesota North Star Promise Program, which includes components for program start up and sustainment.

The development and expansion of high-quality programs will prepare students to be successful. Expanding existing programs and developing new programs increases enrollment, but more importantly, it prepares students for the workforce needs in North Dakota. Additionally, the workforce education innovation (grant) program promotes enhancement of partnerships with primary and secondary schools; connecting students in their early education is beneficial to the trajectory of their learning.

The higher education institutions receive funding based on completed student credit hours from the prior biennium; keeping that in mind, it is difficult to enhance or develop a new program with no revenue. The appropriation provided in the higher education funding formula provides for the day-to-day operation of the institutions and seed money is needed to start new or enhance existing programs. The $24,000,000 request fills the gap with an immediate source of funds to address emerging workforce needs. If the expectation of the North Dakota higher education institutions is to rapidly pivot, funding for this program is essential. Once a program launches it will be sustainable. Although I am an advocate of matching funds from the private sector, this often delays the development and implementation of innovative programs and there are institutions that would find it exceedingly difficult to procure a required match.

Is this urgent? In my estimation, yes, it is urgent since the need for an educated workforce is tremendous. Would the state be in a better position if this program had emerged a few years ago? Is this an emergency? In some cases, yes.

INFORMATION FROM STAKEHOLDERS

Please review the input from the stakeholders.

- North Dakota State College of Science
- Dickinson State University
- University of North Dakota
- North Dakota University System

Thank you for the opportunity to present this funding request for the workforce education innovation program. I respectfully request that this proposal be accepted for further consideration by the legislative assembly.

NDSCS

Project Description: Aviation Maintenance Technician Program

The NDSCS Career Pathways for Aviation Maintenance Technicians project will utilize innovation funds to establish a new Aviation Maintenance Technology (AMT) A.A.S. degree at North Dakota State College of Science (NDSCS), to build partnerships with local and regional aviation organizations, and to facilitate Part 147 Certification. Partnerships built in developing the new program will create opportunities for outreach and student recruitment to increase the number of North Dakota residents entering the field of aviation maintenance. Currently, there are no certified Aircraft Maintenance Technician Schools (AMTS) in the state of North Dakota. North Dakota residents interested in becoming aircraft maintenance technicians have to move hundreds of miles out of state for training. A partnership between NDSCS and the aviation industry is needed to meet the future employment needs for aviation technicians in North Dakota.

NDSCS has a strong tradition of providing some of the best technical training in the region. NDSCS has recognized the need and demand for growing the aviation maintenance technical workforce through conversations with regional employers and aviation industry associations such the North Dakota Aviation Association, the North Dakota Aeronautics Commission, Bismarck Aero Center, Fargo Jet Center LLC., Tri-State Aviation, Inc., and Weather Modification International. NDSCS will engage these aviation industry leaders, and other potential partners yet to be identified, to establish an educational program that teaches the technical skills used in aircraft maintenance. The AMT program will be built with the intent of achieving Part 147 Certification as an outcome of this grant project. Currently, North Dakota is one of four states in the nation that does not have a certified ATMS; however, there is great opportunity to rapidly widen the pipeline of certified technicians via numerous high school aviation programs across the state that have brought aviation education opportunities to primary and secondary students.

The costs associated with building new programs can be cost prohibitive, especially for programs that require large and unique pieces of equipment for instructional delivery like an aviation maintenance program. A ND Workforce Innovation grant through the ND Legislature will expand the instructional capacity of NDSCS by providing the start-up funds needed to develop a new program. Once the AMT program is launched and student enrollment grows, instructional costs like faculty salary/benefits and general supplies will become self-sustaining through tuition revenue and state appropriations. Long-term partnerships and collaborations with industry partners will sustain access to instructional lab space, classrooms, and large equipment pieces. Anticipated enrollment 20-30 students /year

Project finance requirements:
$400,000.00 (start up equipment, tools, and supplies)
$95,000.00 (salary + fringe). One faculty position to cover creating program & curriculum and class offerings for AMT program.

NDSCS

Project Description: Electric Vehicle Service Technician Program

This initiative will significantly enhance the capability of NDSCS to provide programming in emerging areas of Electric Vehicle (EV) Service and Repair. This emerging technology in Automotive, Agriculture, Construction, Trucking, Powersports and Outdoor Power Equipment will prepare individuals to meet the demands of service and repair of electric powered vehicles. This program is designed to educate a new generation of technicians and increase skill sets of existing technicians to cover topics of high voltage, diagnosis, service and repair of hybrid and electric vehicles used in the transportation industry.

The EV Service technician program will complement current NDSCS programing as a third-year option or certificate option for students and existing technicians in the transportation industry.

Anticipated enrollment 40-60 students /year

Project requirements:
$400,000.00

       Repurpose an existing lab to become the EV Vehicle Learning Center. The EV lab will be designed to maintain an electrically safe working area and provide the required personal protective equipment (PPE)needed for servicing EV equipment. This lab will be equipped with specialized high voltage tooling and test equipment to diagnose and repair EV and hybrid powered vehicles. The EV Vehicle lab will be designed in conjunction with business and Industry to ensure the students are prepared to meet workforce needs. NDSCS is well positioned for working with Business and Industry because of the many partnerships that currently exist at NDSCS.

$95,000.00 (salary + fringe)

       One faculty position to cover added curriculum and class offerings for EV program.

DSU Innovation: Diesel Technology

- *Estimated start-up cost: $2 to 2.5 million*

- *Due to cooperation with other education entities, NO real estate or building costs*

- *Substantial industry and student demand, so program will cash flow after about year three*

- *Despite substantial cost cutting at DSU, hard to find multiple millions for start-up.*

DICKINSON STATE UNIVERSITY

SWCTE

DICKINSON STATE UNIVERSITY

Hawks are up!

Workforce Education Innovation Fund

Proposals from the **University of North Dakota**

1. **Career and Experiential Learning Center**
2. **Rural Emergency Hospital Simulation Project**
3. **Recruitment and Retention of American Indians into Nursing (RAIN) Program enhancement**
4. **Office of Teacher Recruitment and Retention workforce initiatives**
5. **Bachelor of Science in Space Studies**
6. **Graduate Program in AI and Quantum Science**
7. **Cyber Range to support Cybersecurity Education**
8. **Undergraduate programs in Audio and Visual Production and Engineering**

Career and Experiential Learning Center

The rapid pace of changes in industry and globalization of the workforce requires us to ensure that we can help to accelerate workforce learning and development regardless of program or degree. Where many technical programs accomplish this through a CTE center, students in all degree programs would benefit from gaining similar experience with hands-on workforce education. At UND we have the opportunities available to help our students develop the skills our workforce needs. We should help ensure our students have access to these opportunities in a more intentional way. By explicitly combining the kinds of learning opportunities available across our campus with career development expertise we can ensure that all students are building the skills needed for the workforce of the future.

This center would combine the many options available to students at UND that help them to engage directly in the workforce and with opportunities across the region. The center would include opportunities for student participation in internships, co-op experiences, study abroad, service learning (e.g., Riipen), diversity & inclusion experiential learning (e.g., COIL), UG teaching assistantships, UG research opportunities, and employment available across the region and the state. This will help students see the variety of workforce learning available to them that they may not have considered.

The CEL Center would be one location where all students could learn about the various experiential learning opportunities available to them. CEL Center staff would help students identify what fits within their program of study and what skills will help them to attain the future career(s) of their choice. It would work to provide relevant experiential learning opportunities that match students with the needs of business and community partners and simplify the process for both students and industry partners.

The CEL Center will integrate its activities across campus and the region in the following ways:

- With Career Services to make connections for internships, co-ops, and career preparation
- With study abroad and academic advisors to integrate skills gained with career readiness
- With faculty for service learning, undergraduate research, and teaching assistantships
- With staff opportunities across campus for student employment
- With the soon-to-be-built Career Impact Academy in Grand Forks for employment and training opportunities not available on campus
- With Access UND: Pathways to Career Success for additional academics-to-career planning tools especially for our online and distance learners.

- With Access UND and Teaching Transformation & Development Academy (TTaDA) for digital badging to recognize career skills development and integrate badges with degree curricula.

Rural Emergency Hospital Simulation Project

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 expands workforce training opportunities for already licensed providers in critical need areas like behavioral health and rural communities.

Recruitment and Retention of American Indians into Nursing (RAIN) Program Enhancement

The UND Recruitment and Retention of American Indians into Nursing (RAIN) Program is an Indian Health Service authorized program with a 30+ year history of successfully educating and graduating American Indian/Alaskan Native (AI/AN) nurses who serve North Dakota and our ND Tribal Nations. It maintains outreach and support networks with AI/AN communities, identifies and recruits AI/AN individuals into Nursing education, and provides support services to retain and assist AI/AN students in obtaining nursing degrees. Many graduates of the RAIN program staff the Indian Health Service and tribal health facilities, which currently have a staffing shortage of over 700 nursing positions. More than 54% of RAIN graduates remain in ND to work.

With the enhancement of the RAIN program, UND will expand its nurse mentoring program to include Social Work and Nutrition & Dietetics students. RAIN is recognized nationally for its high (over 90%) retention and graduation rate of minority nursing students. By expanding the program beyond Nursing to include Social Work and Nutrition & Dietetics students, UND will help promote student recruitment, retention, and graduation of students that are in high-demand fields. It is estimated that more than 100 new child welfare social workers are needed in ND in the next five years alone and with 21% of current registered nurses set to retire by 2026, the nursing workforce shortage will continue to be impacted. Nurses, social workers, and dietitians/nutritionists are all listed as "in-demand occupations" by ND Job Service in 2022.

This will help attract and retain new and underserved student populations and restore strong and collaborative relationships with Indigenous Nations in what is now known as North Dakota and the region, including tribal colleges and universities (TCUs). The expansion of our RAIN program into an interprofessional program (RAIN-CNPD) will especially facilitate our college collaborations with our tribal colleges and communities. With this enhancement, we anticipate increased interagency collaborations with tribal colleges and communities, rural health clinics, Altru and Sanford Health systems, and other

community partners. The provision of health and social services to American Indian people by providers who are from similar cultural backgrounds, knowledgeable of the socioeconomic realities of reservation life, and who are committed to the improvement of health in their home communities is needed in North Dakota and is the catalyst for making sure the RAIN program remains viable.

Office of Teacher Recruitment and Retention workforce initiatives

The UND Office of Teacher Recruitment and Retention (OTRR) is pursuing a wide range of initiatives designed to both engage more potential teacher candidates and improve circumstances so that current teachers are more likely to remain in the classroom. With this request, the OTRR staff will be able to:

1. Hire a Career Technical Education (CTE) coordinator to support HS students and other potential students (such as adults living in rural communities) in the steps necessary to obtain a teaching degree, leveraging CTE requirements and training opportunities.
2. Implement the action steps related to a more diverse teacher pipeline promoted by the US Department of Education through the Teach-to-Lead program.
3. Develop a train-the-trainer approach to adopting evidence-supported classroom management and stress reduction programs that have been demonstrated to reduce teacher burnout, increase job satisfaction and increase teacher retention.
4. Establish an annual conference, free to educators throughout North Dakota, that provides PDE opportunities, provides teacher supports, and engages undergraduate students to encourage retention to graduation.

Outcomes:
- 75 new preservice teachers in NDUS programs through CTE pathways: 25 in Yr 1 and 50 in Yr 2
- 20 teacher candidates at UND from Indigenous communities: 8 in Yr 1 and 12 in Yr 2
- Delivery of no-cost PDE to 500 teachers in ND: 200 in Yr 1 and 300 in Yr 2.
- 5% Increase in retention of current teachers in participating school districts

Bachelor of Science in Space Studies

We are living in a new era of remarkable space pursuits where things that were once considered to be science fiction are now reality. With new developments from NASA coupled with US and international commercial companies, there are an increasing number of launch vehicles, satellites, and human spaceflight opportunities that require space professionals trained to advance these growing areas of science, engineering, and operation.

UND is offering a new undergraduate Bachelor of Science Degree in Space Operations to address the aerospace industry's rapid changes as well as to prepare for future trends evidenced by new projects that are taking place, such as the Artemis Program and the Starship launch vehicle.

This degree has been designed specifically for students who want to work in either the private/commercial industry (SpaceX, Blue Origin, Boeing, or other launch and service providers) or the government sector (NASA, FAA, or the military space sector). We developed a multidisciplinary curriculum that follows the needs of this interesting field.

This program is one of the few non-engineering spaceflight-related programs in the world, which will prepare you to work in this unique industry. Covering human factors, launch vehicles, simulations,

international space programs, orbital mechanics, satellite operations, human spaceflight activities, safety, management, space policy and law and other areas, you will be able to understand and integrate these different disciplines in a cohesive way.

The Bachelor of Science in Space Operations program is offered by the John D. Odegard School of Aerospace Sciences, one of the most recognized aerospace schools in the United States. The program is administered by the Department of Space Studies, the global leader in interdisciplinary space studies.

The Department of Space Studies maintains several areas of research for NASA. In the Human Spaceflight Laboratory, students help to design advanced spacesuits and plan analog simulated missions for the moon and Mars at the Inflatable Lunar/Mars Analog Habitat (ILMAH). Other research projects include testing commercial spacesuits, searching for potentially hazardous asteroids, designing spacecraft cockpits using Human-Centered design practices, and testing rocket propulsion systems.

Graduate program in AI and Quantum Science

UND will develop a set of related PhD (with embedded Master's) degrees in Quantum Computing, Artificial Intelligence, and Quantum Information Systems that will provide access for students to some of the most sought after ("hottest") degrees in the current and anticipated job market. The degrees will support a broad range of interests, but emphasis will be on topics that are especially important to national security and to space. As with other recent national security / space endeavors at UND, it is envisaged that the programs will be jointly offered and administered by the College of Arts & Sciences, the College of Engineering and Mines and the Odegard School of Aerospace Sciences. These programs would position UND at the leading edges of these technologies and thus as a leader in the field:

- PhD in Machine Learning & Artificial intelligence
- PhD in Quantum Information Systems.
- PhD in Human-Centered Computing (HCC) [patterned after degree at Georgia Tech]

Cyber Range to support Cybersecurity Education

A "Cyber Range" is a cloud-based cross-disciplinary training tool that teaches students to manage cyber security attacks in a variety of scenarios. It is a very immersive experience in which students log into the system to act in a variety of cyber security roles in away similar to a gun range is used to train first-responders and military members through a variety of realistic scenarios. These devices provide performance-based learning and assessment, an environment for teams to work together to improve teamwork, and simulate on-the-job experience.

A cyber range as described here would be comprised of a collection of servers, located in the NDUS data center at UND, and connected to the university and the state as a whole. The system will have all needed software in place to manage the range for UND students and faculty, as well as students and faculty members at associated colleges across the NDUS and interested tribal colleges.

What We Are Asking For:

- Network, servers, and storage to support cybersecurity educational activities across the NDUS and tribal colleges
- Range Learning Management System (RLMS) - software that manages student progress

- Orchestration Layer – software that manages the activities dictated by the RLMS
- Target Infrastructure – Simulated environment in which students train

Benefits to NDUS:

- A safe, legal environment to gain hands-on cyber skills
- A secure environment for product development and security-posture testing
- Hands-on cyber security training at all levels of complexity from undergraduate certificates to the graduate level

Undergraduate Programs in Audio and Visual Production
Programs in Audio and Visual Production are expected to continue to grow. The demand for audio-visual systems is being fueled by several factors, including the rapid advancements in audio and display technology, the rapid adoption of cloud solutions, the broad use of CGI (computer-generated imagery), and the emergence of artificial intelligence.

Programs that include creating and refining the audio and video that educates and entertains audiences through the radio, television, films, video games, online platforms, human service, and live performances. Students will learn the creative and technical skills to record, edit, mix, and master digital audio and video using industry-standard equipment and technology, and can integrate CGI animation into their curriculum.

This package of interdisciplinary programs could both expand offerings for students in the region as well as link to the KnightRider Recording Studios being developed in local Grand Forks high schools. These programs could include courses within the College of Arts & Sciences, the College of Education & Human Development, the Nistler College of Business and Public Administration, and the College of Engineering & Mines providing unique interdisciplinary degree options. Possible programs include:

- Bachelor degree in Audio Production (Music creation, mixing, and mastering; Music therapy; Film audio; Gaming audio)
- Bachelor degree in Video Production (Animation and special effects; Film; Gaming)
- Bachelor in Recording Arts Technology (Broadcast Journalism; Performance)

Tuition and Fees: State vs State

Minnesota: tuition freeze for 2024-2025 & North Star Promise initiative

South Dakota: Board of Regents proposed tuition freeze for FY2025, which would mark the fourth straight year of tuition freezes for the state. 4/25/2023 – Start Today SD Apprenticeship Program $7.8M.

Montana: in-state tuition increase of 4%, out-of-state increase of 6% for 2024-2025

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