

APPROVED
JUNE 29, 2022

Item #F-5
June 29, 2022

**NEW UNITS OF INSTRUCTION, PUBLIC SERVICE,
AND RESEARCH AT PUBLIC UNIVERSITIES**

Submitted for: Action.

Summary: This item requests approval of four degree programs at three public universities.

Action Requested: That the Illinois Board of Higher Education approve the following:

Southern Illinois University Edwardsville

- Bachelor of Science in Cybersecurity Engineering in the Southwestern Region

University of Illinois Chicago

- Master of Physiology for Therapeutic Development in the Chicago Region
- Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society in the Chicago Region

University of Illinois Urbana-Champaign

- Bachelor of Science in Neural Engineering in the Prairie Region



STATE OF ILLINOIS
BOARD OF HIGHER EDUCATION

**NEW UNITS OF INSTRUCTION, PUBLIC SERVICE,
AND RESEARCH AT PUBLIC UNIVERSITIES**

By statute, the Illinois Board of Higher Education (IBHE) is responsible for approving new on-campus and off-campus units of instruction, organized research, and public service, and units of administration proposed by public university governing boards. The Board's approval criteria, defined in rules adopted for administering the statute, addresses university mission, academic control, faculty and staff, support services, financial resources, student demand, curriculum, statewide need, and congruence with Board policies and priorities. In addition to the approval criteria in rules, each new program was reviewed for its contributions to the goals of the *Illinois Public Agenda for College and Career Success*, which sets forth new priorities to guide Illinois higher education. Staff recommendations are based on analyses of application materials and responses to staff questions.

Executive Summary – Public Institutions

Southern Illinois University Edwardsville

Southern Illinois University Edwardsville (SIUE or University) requests authorization to offer a Bachelor of Science in Cybersecurity Engineering in the Southwestern Region. The 128-credit hour interdisciplinary program is designed to cover all the core technical areas of computer science, electronic and computer engineering, network engineering, data communication, and software engineering, producing highly qualified engineers with deep technical background in both hardware and software cybersecurity. Students will gain hands on experience through a two-part culminating capstone sequence. In addition to cybersecurity careers, graduates of this program will be strong candidates for many closely related careers in software development, hardware engineering, communications, and network engineering.

The University has laid out equity strategies that involve closing gaps on who enrolls, persists, and completes degrees in the field. Embedded strategies exist within the curricular and academic support framework of the program to promote student success. The University and School of Engineering employed the following Five Principles for Exacting Equity by Design that was developed by USC's Center for Urban Education:

- Clarity in language, goals, and measures is vital to effective equitable practices;
- “Equity-mindedness” should be the guiding paradigm for language and action;
- Equitable practice and policies are designed to accommodate differences in the contexts of students’ learning—not to treat all students the same;
- Enacting equity requires a continual process of learning, disaggregating data, and questioning assumptions about relevance and effectiveness; and
- Equity must be enacted as a pervasive institution- and system-wide principle. The School of Engineering has engaged industry partners in planning the proposed program. Industry partners are in support of the program and will continue to inform the curriculum and research agenda through formal partnerships and advisory structures. They will also

provide opportunities for students to engage in internships and apprenticeships within their companies.

SIUE has instituted a campus wide initiative to enhance campus support systems to improve retention and engagement of underserved and underrepresented students. The Student Opportunities for Academic Results (SOAR) program is an established comprehensive academic and professional support program designed to elevate success for first-year underrepresented students and second-year students who are still deciding on their majors. Students receive advising, academic monitoring, and tutoring, as well as targeted programming to promote growth and development. The existing SOAR program has expanded to include multiple elements that stack to promote belonging, academic advancement and degree completion among Black students. Upon enrollment, all incoming first-year students are assigned to a learning community, complete several general education courses together as a cohort and engage in robust co-curricular programming as they select courses of study and establish a collegiate foundation. Students will also be enrolled in gender-based programs that are designed to provide support to students of color and serve as a gateway into the study of African American arts and humanities.

The University and School offer high-impact practices and pre-professional experiences to support student retention and success including research and internship opportunities. Department faculty will identify underrepresented students in their classes and encourage them to apply to SIUE's Undergraduate Research and Creative Activities (URCA) program where students will engage in research, develop meaningful relationships with their faculty, and expand their curriculum by applying what they've learned in the classroom to real world settings. Each semester students can earn course credit, receive a stipend for their participation or both. Additionally, the School of Engineering will leverage support from industry partners and advisory board members to secure internships for underrepresented students.

There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The University has sufficient library, technology, staff, and financial resources in place to support the program.

Approval request summary, including staff conclusion, follows in Attachment A.

University of Illinois Chicago

The University of Illinois (UIC or University) requests authorization to offer a Master of Physiology for Therapeutic Development in the Chicago Region. The one-year, 32-credit-hour program with summer internship is designed to provide a strong foundation in human physiology and disease; use and application of this knowledge for the development of drugs, therapeutics, and medical technologies; applications to clinical trials; as well as regulatory requirements and data analysis. The proposed program prepares students for entry-level positions in the biopharmaceutical industry and for positions that rely on a strong knowledge of human physiology/pathophysiology, preclinical physiology, human clinical trials, data management, analysis, and regulatory compliance.

The proposed program is the first in the state to integrate hard physiologic science with the regulatory framework. The decision to develop and propose this program is based on employer and alumni feedback and National Institutes of Health reports citing concerns that graduates lack a fundamental understanding of medical/regulatory and business operations. Students who complete the requirements of the program will be eligible to pursue careers in basic and clinical

research, teaching, biotechnology, research at private research institutions, and government or regulatory agencies, or to pursue graduate or professional programs in medicine, dentistry, veterinary medicine, physical therapy, occupational therapy, or physician assistant.

The University has laid out equity strategies centered on closing any gaps in recruitment, progression, and completion. To aid in the recruitment, retention, and support of underrepresented students, several high-impact services exist throughout the University, College, and departments. The Graduate College and the College of Medicine provide program-specific student advising and connect students to campus resources. A variety of campus programs and resources support underrepresented minority students at the graduate level, including the LARES (Latin American Recruitment and Educational Services) program, the African American Academic Network, the seven Centers for Cultural Understanding and Social Change, the Native American Support Program, and various Office of Diversity, Equity and Engagement initiatives.

The proposed program includes high-impact practices to support student retention and success, including embedded professional development opportunities, individual mentorship, and a professional internship. In support of students' ability to succeed, the Department of Physiology and Biophysics arranges all internship sites according to student interest in specific biopharmaceutical subspecialties and provides students with weekly faculty/supervisor meetings.

There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The University has sufficient library, technology, staff, and financial resources in place to support the program.

Approval request summary, including staff conclusion, follows in Attachment B.

University of Illinois Chicago

Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society

The University of Illinois Chicago (UIC or University) requests authorization to offer a Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society in the Chicago Region. The 40-credit hour program with research requirements and optional 1,500 supervised fieldwork hours embedded in the curriculum focuses on the application of behavior analysis to underserved populations. Students who complete the requirements of the program will be eligible to sit for the Board-Certified Behavior Analyst national exam and obtain board certification in behavior analysis. Graduates will be eligible to enter doctoral-level programs in related fields or pursue a career as a clinical practitioner or director, advanced special education teacher (if they currently are licensed), behavior specialist, behavior consultant, or research assistant. The proposed program will prepare students to work with underserved and high-needs populations, including culturally and linguistically diverse communities, urban communities, and individuals with disabilities across the lifespan.

The University has laid out equity strategies centered on closing any gaps in recruitment, progression, and completion. To aid in the recruitment, retention, and support of underrepresented students, several high-impact services exist throughout the University, College, and departments. The Graduate College provides program-specific student advising and connects students to campus resources. A variety of campus programs and resources support underrepresented minority students at the graduate level, including the LARES (Latin American Recruitment and Educational Services) program, the African American Academic Network, the seven Centers for Cultural Understanding

and Social Change, the Native American Support Program, and various Office of Diversity, Equity and Engagement initiatives.

The proposed program includes high-impact practices to support student retention and success, including 1,500 hours of optional supervised fieldwork embedded in the curriculum and empirical research practicum in Applied Behavior Analysis as related to the focus on urban societies and underserved populations. In support of students' ability to succeed, the Department of Special Education arranges all clinical site assignments according to student interest in specific populations and provides students with weekly faculty/supervisor meetings. Research is conducted as part of two courses and serve multiple purposes, including to increase research in Applied Behavior Analysis; align with UIC's institutional mission; and provide students with opportunities to consider pursuing doctoral programs in ABA-related topics.

There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The University has sufficient library, technology, staff, and financial resources in place to support the program.

Approval request summary, including staff conclusion, follows in Attachment C.

University of Illinois Urbana-Champaign

The University of Illinois Urbana-Champaign (UIUC or University) requests authorization to offer a Bachelor of Science in Neural Engineering in the Prairie Region. The 128-credit-hour program will train students in neuro- and quantitative sciences and is designed to prepare students for work in the development and advancement of leading-edge medical devices. These medical devices include brain-computer interfaces, neuroimaging systems, and neurostimulation devices that can be used to restore mobility to individuals with paralysis, relieve symptoms of movement disorders, reduce chronic pain, restore the sense of hearing, and provide sensory perception to individuals with sensory deficits. Graduates will be prepared to enter industry as engineers, particularly in healthcare sectors to immediately impact the emergent fields of neural prosthetics and rehabilitative and assistive robotics, and to work in research and development as well as clinical implementation. The program will also position graduates for the pursuit of professional degree programs in medicine and graduate studies in the life and behavioral sciences, as well as diverse engineering disciplines. There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The University has sufficient library, technology, staff, and financial resources in place to support the program.

The University has laid out equity strategies that involve closing gaps in who enrolls, persists, and completes degrees in the field. Embedded strategies exist within the proposed program's curricular and academic support framework to promote student success. For example, during a four-week intensive summer bridge experience, incoming freshman will be matched with an Illinois Scholars Program Mentor, receive personalized math and writing instruction, and build a strong relationship with peers and campus to support them during their first year and inclusive academic support will continue throughout their undergraduate experience. The Grainger College of Engineering offers admission, orientation, early engagement, and advising programs to support student success and equitable access in the proposed program. Also, within the College, the Morrill Engineering Program (MEP), Women in Engineering (WIE) program, and the Academic Redshirt in Science and Engineering (ARISE) program support students from underserved and underrepresented backgrounds in engineering. These programs are designed to facilitate successful student engagement and retention through peer mentoring, community building among learning

communities, proactive and comprehensive advising, and academic support. Particular attention has also been paid to transfer pathways for this program.

The University and College offer high-impact practices and pre-professional experiences to support student retention and success including internship, research, and global programs. Engineering Career Services within The Grainger College of Engineering hosts several opportunities for students to engage in career development, exploration, and experiences. The Grainger College of Engineering has engaged industry partners in planning the proposed program. Industry partners are in support of the program and will continue to inform the curriculum and research agenda through formal partnerships and advisory structures. They will also provide opportunities for students to engage in internships and jobs within their companies.

Approval request summary, including staff conclusion, follows in Attachment D.

The staff recommends adoption of the following resolutions:

The Illinois Board of Higher Education hereby grants to Southern Illinois University Edwardsville authorization to grant the Bachelor of Science in Cybersecurity Engineering in the Southwestern Region, subject to the institution's implementation and maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted.

The Illinois Board of Higher Education hereby grants to University of Illinois Chicago authorization to grant the Master of Physiology for Therapeutic Development in the Chicago Region, subject to the institution's implementation and maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted.

The Illinois Board of Higher Education hereby grants to University of Illinois Chicago authorization to grant the Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society in the Chicago Region, subject to the institution's implementation and maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted.

The Illinois Board of Higher Education hereby grants to University of Illinois Urbana-Champaign authorization to grant the Bachelor of Science in Neural Engineering in the Prairie Region, subject to the institution's implementation and maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted.

Southern Illinois University Edwardsville

Proposed Degree Title in the Region of Authorization: Bachelor of Science in Cybersecurity Engineering in the Southwestern Region

Projected Enrollments and Degrees:

First Year Enrollment	Fifth Year Enrollment	Degrees Awarded Fifth Year
10-15	60-75	15

Background

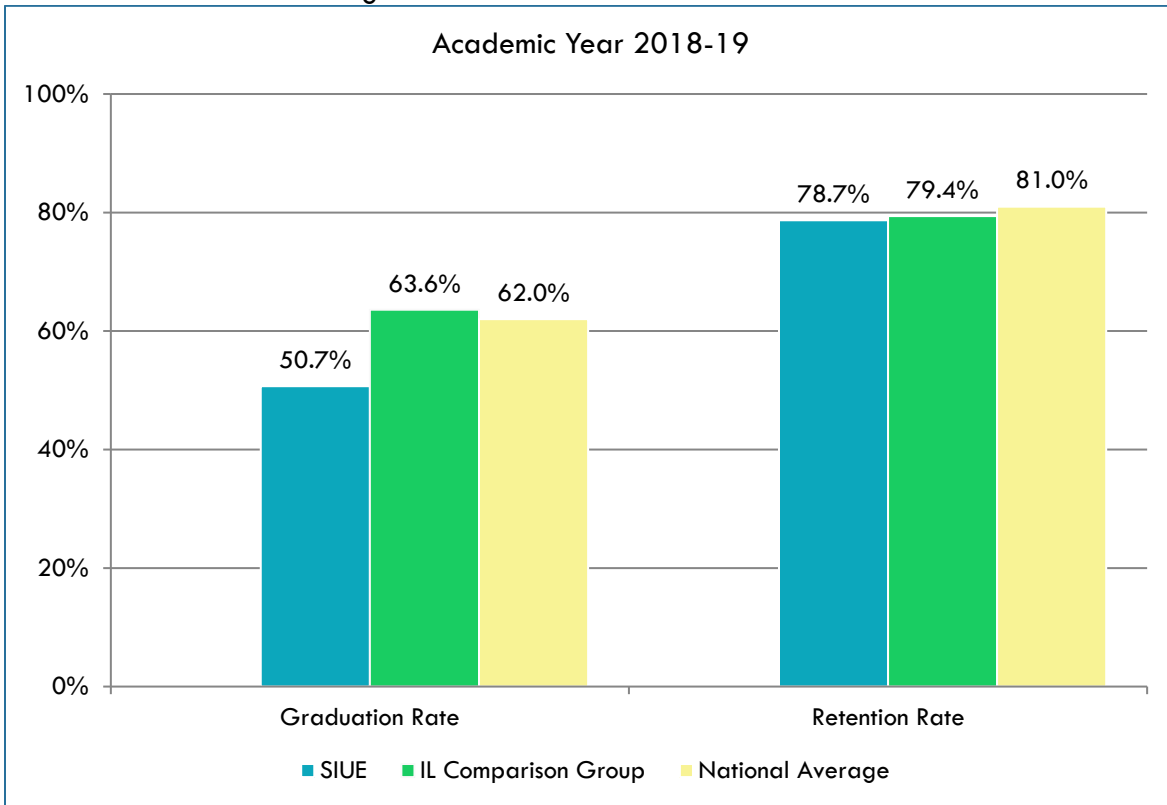
Southern Illinois University Edwardsville (SIUE or University) is seeking authorization to offer a Bachelor of Science (BS) in Cybersecurity Engineering in the Southwestern Region. The program will be housed in the Computer Science department of the School of Engineering. The existing BS in Computer Science program offered by the Computer Science department and the BS in Computer Engineering program offered by the Electrical and Computer Engineering department will cover the foundational material of proposed program curriculum while new courses will be developed to provide the technical core of the program. This interdisciplinary degree will be a forerunner in producing a highly skilled and trained workforce in the field of cybersecurity. The emphasis on technical skill preparation in cybersecurity differentiates the proposed program from the existing Business Administration degree with Cybersecurity specialization offered through the SIUE School of Business. Graduates will be prepared for careers in cybersecurity, software development, hardware engineering, communications, and network engineering in addition to opportunities for graduate school.

Institutional Data

1050.30(b)(1)(H): Success in student progression and graduation rates across all existing approved programs, and success rates in programs preparing students for certification and licensure, shall be consistent with expectations in higher education and the appropriate related field of study. At a minimum, the Board shall consider these factors based on results for similar institutions. (i) Graduation rates, certificate and degree completion rates, retention rates, and pass rates for licensure and certification aligned with thresholds set by State nor national regulatory bodies. (ii) The success rate shall be, at a minimum, higher than those of the lowest quartile of these measures for similar Illinois institutions defined as open versus competitive enrollment institutions and primarily associate versus primarily baccalaureate granting institutions. Exceptions may be made to the lowest quartile if an institution is above the national average for these measures using the same comparison categories of institutions.

This section includes information about institutional and student success measures for each institution seeking program approval. The institution's rates will be compared to Illinois institutions from within a select comparison group and against the national standards or averages. For a proposed undergraduate program, this section will include undergraduate graduation rates, first to second year retention rates, student loan default rates, and any applicable licensure passage rates. For a proposed graduate program, this section will primarily focus on student loan default data since this measure also includes graduate students in the calculation.

Undergraduate Graduation Rates and Retention



Source: National System for Education Statistics (NCES), US Department of Education

Note: Southern Illinois University Edwardsville is in the four-year, selective Illinois comparison group. Higher percentages are positive indicators.

Undergraduate Graduation Rate

The graduation rate measures the rate at which entering freshmen graduate within 150 percent of normal program length. Data are provided for six-year graduation rates for first-time, full-time bachelor’s degree-seeking students and three-year graduation rates for full-time associate degree-seeking students. The national standard for graduation rates is reported annually by the National Center for Education Statistics (NCES).

Undergraduate Retention Rate

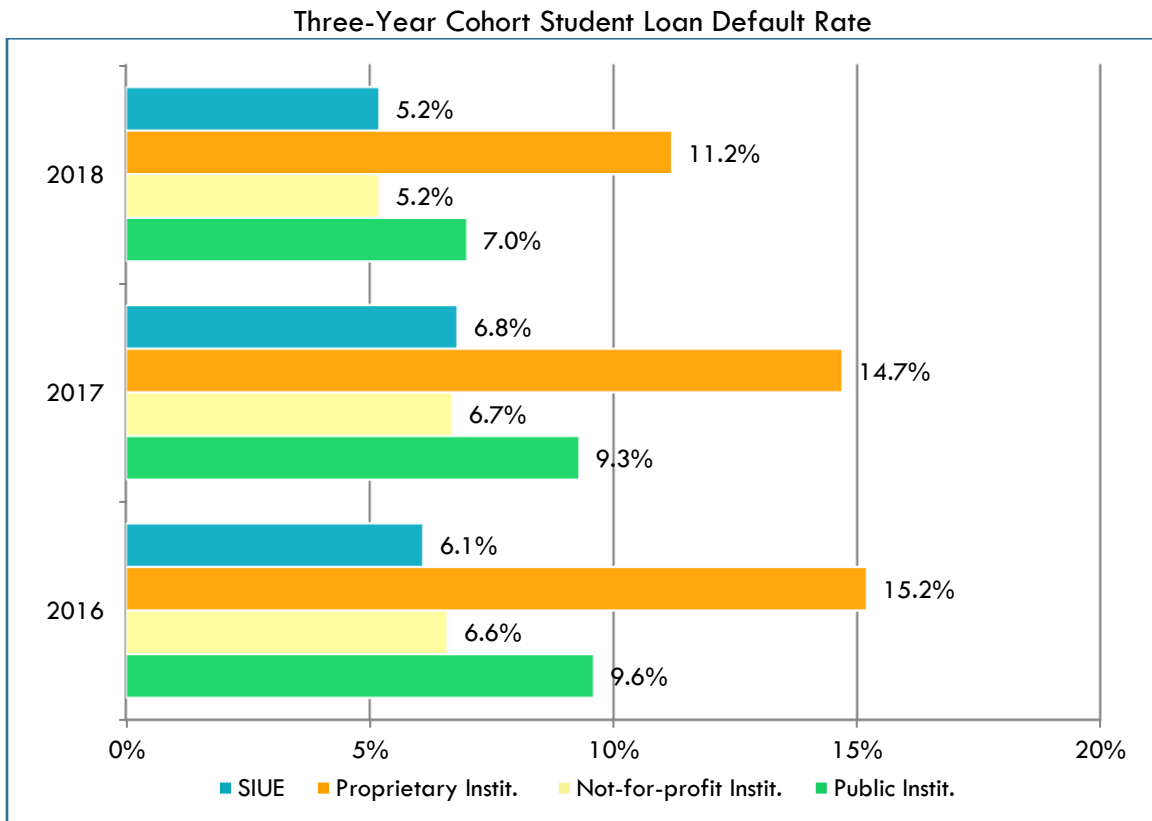
Retention rates examine the percentage of first-time degree seeking students enrolled in the fall of the prior year that are still enrolled in the fall of the current year. The national standard for retention rates is reported annually by NCES.

Undergraduate Completions per 100 FTE

Academic Year 2018-19	Southern Illinois University Edwardsville	Comparable Illinois Institutions
	26	24.3

The full-time equivalent (FTE) data is a unit of measurement intended to represent one student enrolled full-time for one academic year. The calculation is based upon credit/contact

hours offered at an institution divided by a standard minimum (12 credit hour) full-time course load. The completions per 100 FTE data are included to provide a holistic view of completion across different student populations.



Source: National Center for Education Statistics (NCES), US Department of Education
 Note: The national cohort default rate for fiscal year 2018 is 7.3 percent. A lower number is a positive indicator.

The three-year cohort student loan default rate is the percentage of a school’s borrowers who enter repayment on certain Federal Family Education Loan Program or William D. Ford Federal Direct Loan Program loans during a particular federal fiscal year, October 1 to September 30, and default or meet other specified conditions prior to the end of the second following fiscal year.

Need

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically consistent with the educational priorities and needs of the State of Illinois. B) The unit of instruction, research or public service meets a need that is not currently met by existing institutions and units of instruction, research or public service.

Data breaches have grown significantly, crippling infrastructures, compromising sensitive consumer information, and causing immense financial loss. Conversely, the skills gap in cybersecurity is rapidly widening and high-quality skilled labor in this sector of the industry is and will be greatly in-demand. According to the U.S. Bureau for Labor Statistics (BLS) occupational projections, Information Security Analysts provides the closest match to the graduates of the proposed program. At 33 percent, employment growth for Information Security Analysts is the fastest average for all occupations from 2020-2030. The 2020 median annual salary for information security analysts

was \$103,590. Workers in this field on average earn \$90,850 in Illinois whereas ten percent of workers earn \$48,900 or less and ten percent earn \$140,750 or more. According to the Illinois Department of Employment Security, data projections from 2016-2026 indicate 1,007 new job openings for Information Security Analysts in Illinois during this span. The State of Illinois projection trends mimic that of national projection trends with careers for Information Security Analysts having the largest percentage change by 2026. Moreover, as of May 2017 BLS data, Illinois had the eighth highest employment level for Information Security Analysts in the country. These statistics clearly demonstrate the national and state-level unmet workforce needs in cybersecurity, and a clear projection of employment opportunities in the foreseeable future. The University received letters of support from industry leaders in the St. Louis metro area including Emerson, Enterprise Holdings, and Mastercard suggest the BS in Cybersecurity Engineering program will produce highly sought-after graduates to contribute to the regional, national, and global economy in critical ways.

A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth

The proposed BS in Cybersecurity Engineering supports Goal 1, Equity of *A Thriving Illinois* to close the equity gaps for students who have historically been left behind. The proposed program will improve access to high-quality postsecondary education in a rural area of the state. It will further close the prosperity gap for rural, minority, and females in engineering by providing a baccalaureate completion opportunity that will provide them with a career that is lucrative, family-sustaining, and in high demand. SIUE's continuous commitment to closing equity gaps for underrepresented is reflected in the University's growing enrollments of minority students. The proportion of underrepresented students was the highest in SIUE's history with the fall 2020 student cohort. The School of Engineering (SOE) has implemented numerous retention initiatives, including an \$830,000 [National Science Foundation](#) Science (NSF), Technology, Engineering, and Mathematics Talent Expansion Program (STEP) grant to improve graduation rates through mathematics enrichment sessions, mentoring, tutoring, and student engagement. Over the years, the School has worked hard to attract students in the surrounding rural areas and in the minority community through various outreach programs. This includes engaging with the East St. Louis Charter High School and Upward Bound program for two years through a variety of activities including presentations on careers in STEM fields, organized interactions among underrepresented students and SOE faculty and staff, and robotic demonstrations. These combined efforts have resulted in an increase in female enrollment in engineering from 10.7 percent in 2013 to 15.4 percent in 2021 and minority enrollment from 8.4 percent to 16.2 percent over the same period. The SOE plans to intentionally engage underrepresented prospective students through engineering events and competitions hosted by SIUE student chapters of National Society of Black Engineers, Society of Hispanic Professional Engineers, and Society of Women Engineers.

Additional recruiting efforts planned for the School of Engineering will include hands-on exercises and summer camps for the region's middle and high school students to introduce them to cybersecurity. Cost will be offset for students from underrepresented groups through scholarships from Philips 66 Wood River Refinery, one of the School's sponsors. SOE plans to run a pilot program with the East St. Louis Charter School, offering an introductory freshmen engineering course (IE 106 Engineering Problem Solving) for credit. If the program is successful, it may be expanded to other local high schools. The objective of these initiatives is to create a pathway for underrepresented students to consider careers in technology, engineering, computer science, or cybersecurity through the programs offered at SIUE.

SIUE has created alternative entry pathways into the institution and program. With the recent test-optional admission policy at SIUE, there has been an increase in the number of freshmen

from underserved communities applying for engineering majors. The SOE is working with the admissions office to use predictive analytics framework results for direct admission to engineering majors. It is expected that using this method will provide underrepresented and underserved students an equal opportunity for access to engineering. The SOE is also in the process of revising its pre-engineering program structure which will lead to earlier declaration of majors in engineering and allow students to engage with the School's high-impact learning opportunities and resources sooner. The School of Engineering has several well-established 2+2 programs with community college partners. The School is in the process of expanding 2+2 agreements with more regional partners including St. Louis Community College which is a multi-campus system with the largest post-secondary enrollment in the metro St. Louis area. The College enrolls a significant number of underrepresented students, and the partnership is anticipated to create a pipeline for the Cybersecurity Engineering program. The School of Engineering will continue to recruit students through scheduled site visits at community colleges as well as hosting students from 2+2 partner schools who are interested in engineering.

SIUE has instituted a campus wide initiative to enhance campus support systems to improve retention and engagement of underserved and underrepresented students. The Student Opportunities for Academic Results (SOAR) program is an established comprehensive academic and professional support program designed to elevate success for first-year underrepresented students and second year students who are still deciding on their majors. Students receive advising, academic monitoring, and tutoring, as well as targeted programming to promote growth and development. The existing SOAR program has expanded to include multiple elements that stack to promote belonging, academic advancement and degree completion among Black students. Upon enrollment, all incoming first-year students are assigned to a learning community, complete several general education courses together as a cohort and engage in robust co-curricular programming as they select courses of study and establish a collegiate foundation. Students will also be enrolled in gender-based programs that are designed to provide support to students of color and serve as a gateway into the study of African American arts and humanities. The School is working on a framework for a more proactive engagement and retention process. There is a plan to propose a realignment of the university's general advising and retention offices to accommodate a life coach within each advising unit to work with at risk students to monitor their progress and attend to their life issues. Engineering Student Services is developing a framework for tracking and monitoring student progress for underrepresented and underserved student groups. The academic progress of the underrepresented students will be closely monitored by chairs, faculty, and academic advisors via Starfish alerts to ensure a high retention rate, especially during their first four semesters of study. A plan is underway to establish mentorship for underrepresented students in the program utilizing faculty, advisory board members, and volunteers from technology companies. SOE maintains dedicated support for many engineering student organizations as well as student chapters of the National Society of Black Engineers, Society of Hispanic Professional Engineers, and Society of Women Engineers that will promote a sense of belonging, emphasize teamwork, develop leadership skills, and allow for professional networking opportunities with employers. In addition to these opportunities for involvement, the program aims to establish and mentor a student organization specific to cybersecurity, so they feel more connected to the university and others in the program.

The University and School offer high-impact practices and pre-professional experiences to support student retention and success including research and internship opportunities. Department faculty will identify underrepresented students in their classes and encourage them to apply to SIUE's Undergraduate Research and Creative Activities (URCA) program where students will engage in research, develop meaningful relationships with their faculty, and expand their curriculum

by applying what they have learned in the classroom to real world settings. Each semester students can earn course credit, receive a stipend for their participation or both. Additionally, students understand the value associated with internship experience in the field of engineering and seek internships through the Career Development Center, faculty and dean's office industry connections, personal connections, or independent searches. The SOE will leverage support from industry partners and advisory board members to secure internships for underrepresented students. Several board members from underrepresented backgrounds hold executive positions with major technology companies and have expressed strong interest in finding internship opportunities in their companies for underrepresented students. Corporate partners were in full support of launching this program and are eager to engage with students to develop their technical and soft skills. Another support mechanism SOE is working on involves collaborating with industry partners to offer apprentice programs for low-income students that will enable them to work part-time in technical vocational jobs and while pursuing their degree. This initiative can be a viable model for supporting low-income students with good paying jobs, engage them in their field of study so they continue with their studies, and at the same time gain valuable work experience. Lastly, SOE plans to leverage corporate partners' Equity, Diversity, and Inclusion (EDI) initiatives to provide scholarships for underrepresented students and engage them in career development opportunities that includes field trips to corporate facilities, finding industry mentors, and student projects.

The proposed program will also address Goal 2, *Sustainability, to build a stronger financial future for individuals and institutions by finding ways to reduce the financial burden of education on students and their families.* Most regional and state institutions that offer a baccalaureate option in cybersecurity are private institutions. Moreover, an overwhelming number of state institutions that offer cybersecurity education are heavily concentrated around the Chicago area. College affordability is central to the success of SIUE as it prides itself by being one of the most affordable higher education institutions in the Southwestern Illinois and Metro St Louis areas. Even with projected tuition increases, SIUE still ranks in the middle in Illinois in terms of cost of study. The availability of the proposed program at SIUE will provide an attractive option for economically deprived students in the region.

Over the recent years, the School of Engineering has increased scholarship availability and continues to make this a priority to its students. The number of scholarship funds available in 2021 reached \$140,000 and is twice as large as what was awarded in 2020. The SOE launched a campaign for endowed scholarship funds for each engineering program and plans to increase their endowed scholarship fund to \$5 million within the next five years. Additionally, the School plans to intensify fundraising efforts for the equity, diversity, and inclusion endowed scholarship fund. A Fortune 500 technology company in the region recently announced investing \$200 million dollars to support equity, diversity, and inclusion initiatives in the region. The School is exploring opportunities with this company to establish support programs and scholarships for underrepresented students.

The proposed degree program will contribute to Goal 3, *Growth, to increase talent and innovation to drive economic growth.* The skills gap in cybersecurity is a national issue and there is great demand for high-quality skilled labor in this sector of the industry. The Metro St. Louis area is an emerging technology hub with several major employers including Wells Fargo, TD Ameritrade, Boeing, National Geospatial Agency, Centene, and Bayer AG. Furthermore, the United States Transportation Command at Scott Air Force base, which is home to three cybersecurity squadrons, is within 40 miles of SIUE. About 70 percent of School of Engineering students do an internship or coop before they graduate. A significant number of these experiential learning opportunities turn into permanent positions upon graduation. Given the high demand in cybersecurity related

opportunities and strong interest among industry partners, it is expected that students of this new program will have ample internship and coop opportunities. A significant number of the region's largest employers are represented on SIUE's Industrial and Professional Advisory Board. Members of the advisory board, which meets with the department twice a year, have expressed the need for and interest in a cybersecurity program. Likewise, interest from current and prospective students has grown significantly. SIUE's industrial partners are eager to create career pathways for students and graduates of the planned program. It is expected that graduates would be preeminently employable in the southwestern region and beyond. Hence, the proposed program will make positive contributions to the local economy by supplying a steady stream of highly educated and skilled workforce to meet the demand and close the skills gap in cybersecurity.

Comparable Programs in Illinois

There are no directly comparable programs that offer a Bachelor of Science in Cybersecurity Engineering. There are six private and three public institutions offering various cybersecurity programs in Illinois, none of which are offered by a School of Engineering with engineering focus. Additionally, most degree programs have a software or IT focus and are heavily concentrated around the Chicago Metro area. The neighboring State of Missouri has three private and two public institutions that offer various bachelor's level programs in cybersecurity, also with a focus on software or IT. Thus, the program would be the first cybersecurity program of its kind in the state with a technical focus and offered by a School of Engineering. It would provide a qualified workforce of cybersecurity engineers for an in-demand field.

Mission and Objectives

1050.30(a)(1): A) The objectives of the unit of instruction, research or public service are consistent with the mission of the college or university. B) The objectives of the unit of instruction, research or public service are consistent with what the unit title implies.

The program is consistent with the purpose, goals, objectives, and mission of the University. The requested degree title reflects the programs objectives and curriculum.

Curriculum and Assessment

1050.30(b)(1) [applicable only to units of instruction]: A) The caliber and content of the curriculum must assure that the objectives of the unit of instruction will be achieved. B) The breadth and depth of the curriculum must be consistent with what the title of the unit of instruction implies. C) The admission and graduation requirements for the unit of instruction must be consistent with the stated objectives of the unit of instruction. D) Institutions must show the capacity to develop, deliver and support academic programs. Procedures and policies that will assure the effective design, conduct and evaluation of the degree programs under the academic control of the institution must be developed. Assessment plans must demonstrate that the institution has identified clear and appropriate program and student learning goals and has defined appropriate outcomes. Appropriate data must be collected and may be requested by the Board to show the level of student learning that has occurred as a result of participation in the institution's programs of study.

1050.30(a)(2): The design, conduct and evaluation of the unit of instruction, research or public service are under the direct and continuous control of the sponsoring institution's established processes for academic planning and quality maintenance.

Admission Requirements

Applicants interested in the Bachelor of Science in Cybersecurity Engineering program must meet University requirements for admission to Southern Illinois University Edwardsville. Most students are initially admitted to the University rather than to a specific engineering program and must complete the following high school course requirements: four years of English, three years of mathematics, three years of laboratory science, three years of social studies, and two years of electives. Those students who are eligible to take MATH 125 (Pre-Calculus) or higher are directly admitted to the School of Engineering. School of Engineering admission requirements are as follows:

- Complete all Academic Development courses required by the University;
- Complete any courses required to address high school deficiencies;
- Complete Math 120, College Algebra (or high school equivalents) with a grade of C or better; and
- Attain a cumulative grade point average (GPA) of at least 2.0 on a 4.0 scale.

Multidimensional efforts are underway to recruit students from underrepresented and underserved backgrounds including outreach and collaborations with high schools and community colleges. The School of Engineering is working with the admissions office to use predictive analytics framework results for direct admission to engineering majors, creating greater access for underserved and underrepresented students. Established 2+2 programs allow students to complete two years at a community college and transfer into SIUE. Lastly, the School is updating its policies to allow for earlier declaration of majors and student access to supports.

Curriculum

The Bachelor of Science in Cybersecurity Engineering is a 128-credit-hour program that includes 40 hours of upper-division coursework and aligns with the Accreditation Board of Engineering and Technology (ABET) accreditation requirements. The proposed degree is a blend of core concepts in computer science, electrical and computer engineering, and foundational mathematics. Students will complete a two-semester capstone sequence in which teams will first complete the design and planning stages of a cybersecurity system development, then implement their design. Categories of requirements for the degree are:

- Computer Science – 21 hours
- Electrical and Computing Engineering – 20 hours
- Mathematics – 20 hours
- Cybersecurity Engineering Core Courses – 24 hours
- Cybersecurity Engineering Technical Elective Courses – 9 hours
- General Education – 34 hours

The proposed program has two minor degrees built into its curriculum whereby students become eligible to apply for the minor in Computer Science and minor in Computer Engineering at the conclusion of specified courses. It is also possible for students to pursue a minor in Mathematics by taking one more 300-level mathematics course. Furthermore, the proposed curriculum opens a significant portion of Computer Science and Electrical and Computer Engineering curricula for those who wish to either pursue an accelerated additional major(s), and/or to specialize in particular technical aspects.

The proposed curriculum is designed so that students have early interaction with cybersecurity faculty through program specific courses early on. Small group projects and assignments will help students form support groups that sometimes goes beyond the specific assignment or project and creates camaraderie among students for sense of belonging. When assigning project team, faculty will be intentional in placing struggling students with near peer mentor students to lift their performance. The department will use a software program called Discord to facilitate peer to peer interaction where users have the ability to communicate with voice calls, video calls, text messaging, media and files in private chats or groups. Students that are struggling academically will be flagged and advised by general advising staff who will closely monitor progress during the warning or probation period. The advisor will lend support and connect the student to resources to improve their academic performance and address other emerging needs in a holistic manner.

Assessment of Student Learning

Southern Illinois University Edwardsville has established processes to measure and analyze student learning outcomes data. The Accreditation Board of Engineering and Technology learning objective assessment guidelines will be used and consists of the following components: assessment of outcomes by teaching faculty members in a select number of courses in the program; assessment of multiple outcomes in the capstone project courses; and an exit survey of the graduating class. Direct measures include homework assignments, exams, and projects. Each student learning objective is mapped to at least two courses, and data collection will be performed in at least one course per academic year. Indirect measures of student learning outcomes include various surveys, retention rates, graduation rates, and job placement data.

Program Assessment

An annual assessment report will be prepared by the program director and shared with the faculty members at the beginning of the next academic year. The faculty will discuss the report, and consider if any changes to the curriculum, educational practice, or any other aspects should be changed to improve the educational effectiveness, especially if the percentage of students meeting or exceeding expectation falls below 80 percent for any particular student outcome. Key elements of program evaluation include:

- Previous program review results
- Actions taken in response to the previous program review
- Enrollment data and trends, including demographic data
- Recent trends in retention and completions
- Demand for the program
- Faculty qualifications
- Program curriculum, including culminating experience
- Advising procedure
- Student satisfaction with the program
- Student assessment of rigor and quality of the program
- Student learning outcomes
- Faculty satisfaction with the program
- Evidence of learning outcomes and program improvement
- Strength and weakness of the program

- Diversity, equity, and inclusion goals

Facilities (space, equipment, instructional materials)

1050.30(a)(4): A) Facilities, equipment and instructional resources (e.g., laboratory supplies and equipment, instructional materials, computational equipment) necessary to support the high quality academic work in the unit of instruction, research or public service are available and maintained. B) Clinical sites necessary to meet the objectives of the unit of instruction, research or public service. C) Library holdings and acquisitions, owned or contracted for by the institution, that are necessary to support high quality instruction and scholarship in the unit of instruction, research and public service, are conveniently available and accessible, and can be maintained.

Existing facilities are sufficient for implementing the proposed program. The School of Engineering will acquire a space and re-purpose it as a laboratory facility supporting the software-based cybersecurity instructional and experimentation needs of the cybersecurity engineering program. Additionally, an existing laboratory will be re-modeled and improved to meet the hardware-based cybersecurity instructional and experimentation needs. The University possesses appropriate library resources with access to online databases, books, journal holdings, and other electronic resources, to support teaching and scholarly work.

Faculty and Staff

1050.30(a)(3): A) The academic preparation and experience of faculty and staff ensure that the objectives of the unit of instruction, research or public service are met. B) The academic preparation and experience of faculty and staff, as evidenced by level of degrees held, professional experience in the field of study and demonstrated knowledge of the field, ensure that they are able to fulfill their academic responsibilities. At a minimum, faculty shall have a degree from an institution accredited by a U.S. Department of Education and/or Council for Higher Education Accreditation recognized accrediting body or a degree from another country evaluated for U.S. equivalency in the discipline they will teach or for which they will develop curricula at least one level above that of the courses being taught or developed. C) The involvement of faculty in the unit of instruction, research or public service is sufficient to cover the various fields of knowledge encompassed by the unit, to sustain scholarship appropriate to the unit, and to assure curricular continuity and consistency in student evaluation. E) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, that are directly assigned to the unit of instruction, research or public service, have the educational background and experience necessary to carry out their assigned responsibilities.

The University has identified institutional policies that ensure faculty and staff hired possess the training, credentials, and other related qualifications to provide instruction at the institution. Faculty teaching in the proposed program will have the appropriate qualifications. A formal faculty evaluation process is in place. SOE and the Computer Science department have made strides in hiring diverse faculty and continue to develop their hiring strategies. The SOE and Computer Science department post open positions through diverse venues targeting underrepresented communities, include an equity advisor on the search committees, and host Equity, Diversity, and Inclusion (EDI) training for search committee members. Faculty attend orientation with built in onboarding and activities, coverage of the EDI strategic plan and other related campus initiatives as well as schedule semester meetings with the dean during the first year of appointment. The School of Engineering will provide appropriate training for faculty to be more engaged in detecting, reporting, and working with underrepresented and academically at-risk students.

Fiscal and Personnel Resources

1050.30(a)(5): A) The financial commitments to support the unit of instruction, research or public service are sufficient to ensure that the faculty and staff and support services necessary to offer the unit of instruction, research or public service can be acquired and maintained. B) Projections of revenues necessary to support the unit of instruction, research or public service are based on supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

The University has adequate faculty, staff, and other instructional resources to administer the BS in Cybersecurity Engineering program. Two new tenure-track faculty members will be hired to support the teaching, developmental, and research needs of the proposed program. By year two, faculty members will have adjustments to their current appointments to accommodate instructional needs. In addition, one of the existing faculty members will have additional administrative responsibilities of the new program as its program director, functioning like that of a typical department chair. Starting year three, a halftime administrative assistant position will be assigned to the program. Initial funds to implement the program, including salaries, equipment, and instructional resources, are provided by the SIUE Office of the Provost and Vice Chancellor for Academic Affairs. By year three of implementation, the School of Engineering budget will support and sustain the proposed program.

Accreditation and Licensure

1050.30(b)(3)[applicable only to units of instruction]: Appropriate steps shall be taken to assure that professional accreditation needed for licensure or entry into a profession as specified in the objectives of the unit of instruction is maintained or will be granted in a reasonable period of time.

No specialized accreditation or licensure is required. The Department will pursue specialized accreditation for the program through the Accreditation Board of Engineering and Technology (ABET) as well as the National Center of Academic Excellence in Cyber Defense Education (CAE-CDE) designation.

Program Information

1050.30(b)(2)[applicable only to units of instruction]: A) The information which the institution provides for students and the public shall include the following: i) An accurate description of the unit of instruction, including its objectives, length, and residency requirements if any; ii) Schedule of tuition, fees, and all other charges and expenses necessary for completion of the unit of instruction, cancellation and refund policies; iii) Student rights and responsibilities; iv) A statement regarding the transferability of college credits, including the fact that the decision to accept transfer credits is determined by the receiving institutions; v) A statement as to how the institution will advise students on the nature of the transfer process, including the importance of consulting with institutions to which the student may seek to transfer; vi) Evidence of arrangements for the transfer of courses or credits or both to institutional counterparts, when these arrangements exist; these arrangements are also known as articulation agreements; vii) A statement of the institution's most recent graduation rates and the number of graduates and enrollments as provided by the institution to the Integrated Postsecondary Education Data System (IPEDS) and any submission of data to satisfy Board reporting requirements; and viii) Other material facts concerning the institution and the unit of instruction as are likely to affect the decision of the student to enroll. B) The information listed in subsection (b)(2)(A) shall be available to prospective students prior to enrollment and shall be included in the institution's catalog of programs.

Detailed information about the proposed program, including description of the admission policies, university policies, tuition, fees, and curriculum are provided in the proposal and will be published on the University's website.

Staff Conclusion

The staff concludes that the Bachelor of Science in Cybersecurity Engineering proposed by the Southern Illinois University Edwardsville meets the criteria to implement the Board of Higher Education Act (110 ILCS 205/et.seq.) as set forth in 23 Illinois Administrative Code, Ch. II, Section 1050.30, and the Illinois Board of Higher Education policies pertaining to assessment and accreditation or licensure.

University of Illinois Chicago

Proposed Degree Title in the Region of Authorization: Master of Physiology for Therapeutic Development in the Chicago Region

Projected Enrollments and Degrees:

First Year Enrollment	Fifth Year Enrollment	Degrees Awarded Fifth Year
10	25	25

Background

The University of Illinois Chicago (University or UIC) is seeking authorization to offer a Master of Physiology for Therapeutic Development in the Chicago Region. The proposed program was conceived to train students in an unmet need in the biopharmaceutical industry: employees with advanced science degrees who understand and can respond to business, operational, and regulatory demands. The Department of Physiology and Biophysics, in which the proposed program will be administratively housed, currently offers a Master of Science in Physiology and Biophysics; a Master of Science in Medical Physiology; and a PhD in Physiology and Biophysics. The program is designed to teach a strong foundation in human physiology and disease. Students learn the use and application of this knowledge to achieve the following outcome:

- Learn how drugs, therapeutics, and medical technologies are developed in the pharmaceutical industry;
- Learn how this knowledge gets applied to clinical trials;
- Observe and learn how the regulatory agencies operate and examine data; and
- Learn how small, biotech, multinational companies, third-party consultancies, and academic tertiary care and research operations navigate these activities.

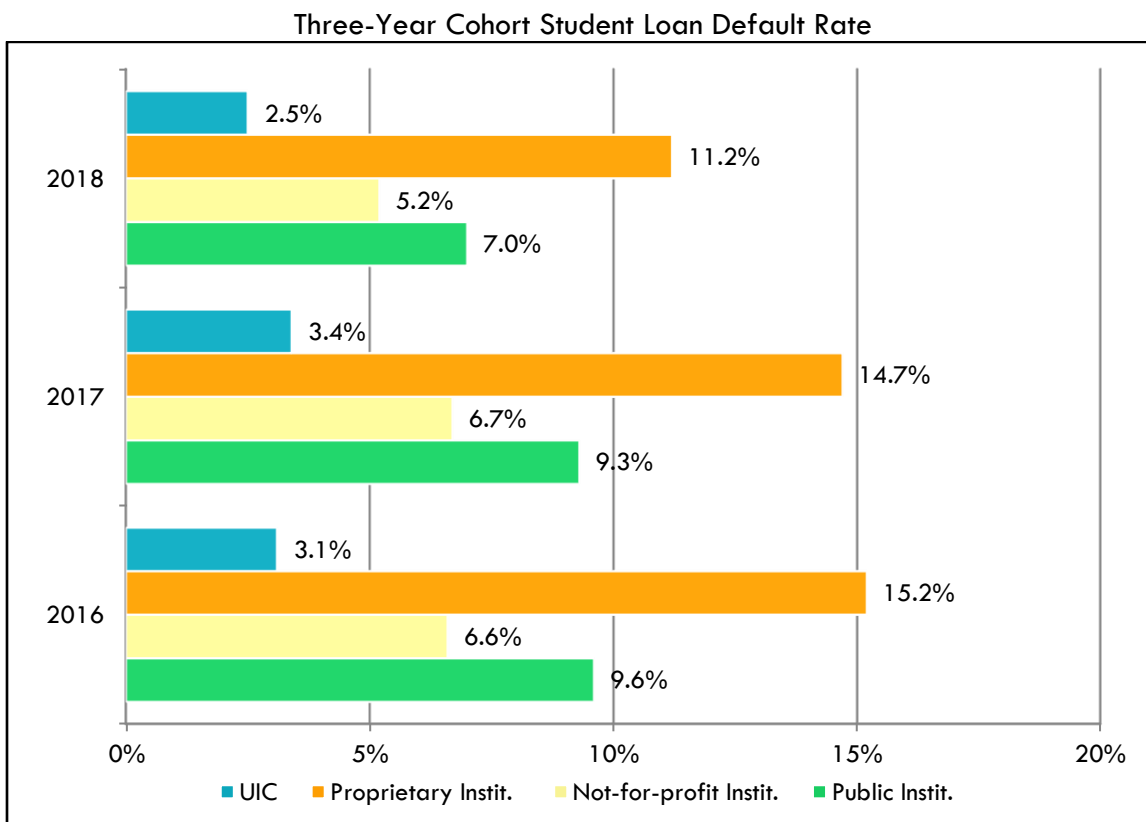
The proposed program will utilize and integrate some coursework from existing programs and will add new courses, an internship, and professional development requirements.

Institutional Data

1050.30(b)(1)(H): Success in student progression and graduation rates across all existing approved programs, and success rates in programs preparing students for certification and licensure, shall be consistent with expectations in higher education and the appropriate related field of study. At a minimum, the Board shall consider these factors based on results for similar institutions. (i) Graduation rates, certificate and degree completion rates, retention rates, and pass rates for licensure and certification aligned with thresholds set by State nor national regulatory bodies. (ii) The success rate shall be, at a minimum, higher than those of the lowest quartile of these measures for similar Illinois institutions defined as open versus competitive enrollment institutions and primarily associate versus primarily baccalaureate granting institutions. Exceptions may be made to the lowest quartile if an institution is above the national average for these measures using the same comparison categories of institutions.

This section includes information about institutional and student success measures for each institution seeking program approval. The institution's rates will be compared to Illinois institutions

from within a select comparison group and against the national standards or averages. For a proposed undergraduate program, this section will include undergraduate graduation rates, first to second year retention rates, student loan default rates, and any applicable licensure passage rates. For a proposed graduate program, this section will primarily focus on student loan default data since this measure also includes graduate students in the calculation.



Source: National Center for Education Statistics (NCES), US Department of Education
 Note: The national cohort default rate for fiscal year 2018 is 7.3 percent. A lower number is a positive indicator.

The three-year cohort student loan default rate is the percentage of a school’s borrowers who enter repayment on certain Federal Family Education Loan Program or William D. Ford Federal Direct Loan Program loans during a particular federal fiscal year, October 1 to September 30, and default or meet other specified conditions prior to the end of the second following fiscal year.

Need

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically consistent with the educational priorities and needs of the State of Illinois. B) The unit of instruction, research or public service meets a need that is not currently met by existing institutions and units of instruction, research or public service.

In 2012, the National Institutes of Health biomedical workforce working group published its recommendation that institutions should provide more effective training of science students for non-academic careers and suggested programs to “ease transitions” into them. Specifically, the lack of graduate education and training in regulatory affairs at U.S. universities is highlighted as an impediment in the development of an educated biopharmaceutical workforce. Such programs that

do exist tend to be located predominantly in the northeast and southeast or southwest U.S., but not in the Midwest. As well, the bio/pharma industries prefer master's-level education in job candidates, especially for such positions as research and clinical research coordinators, clinical trial assistants, medical and regulatory writers and content editors, regulatory and scientific affairs specialists, regulatory support specialists, and regulatory affairs specialists. There are no other institutions in Illinois that offer a program with the occupational title, "Pharmacy, Sciences, and Administration, Other," as defined by the U.S. Bureau for Labor Statistics (BLS).

The proposed program will help meet the demand for healthcare professionals with advanced degrees locally and at the state and national levels. The BLS projects an increase of 18 percent in master's degrees needed to satisfy employment requirements, especially for jobs in healthcare and related industry. The combined projected increase in "Life, physical, and social science occupations," "Healthcare practitioners and technical occupations," and "Healthcare support occupations"—all career categories in which graduates of the proposed program might be employed—by 2022 is more than three million jobs and is 59.7 percent of all jobs predicted to be added by that year. As well, Lake County, Illinois, is home to the nation's second largest cluster (after New York/New Jersey/Philadelphia) of pharmaceutical and medical device companies, including Abbott, AbbVie, Astellas, Baxter, Fresenius Kabi, Horizon Pharma, Lundbeck, Pfizer, and Takeda, and comprises the majority of the employees in Illinois life sciences industries. Lake County is also home to several biopharma companies, including Assertio, Athenex, and TerSera. Cook, Macon, Kankakee, and Champaign counties are home to small-scale bioindicator facilities to large-scale manufacturing. However, the biopharma industry operations within Illinois tend to focus on regulatory and medical affairs, further highlighting the need for a graduate-level program that explicitly addresses regulatory frameworks in the curriculum.

A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth

The proposed Master of Physiology for Therapeutic Development supports Goal 1, Equity, of *A Thriving Illinois to close the equity gaps for students who have historically been left behind*. The University of Illinois Chicago serves more than 22,000 undergraduate students and nearly 12,000 graduate and professional students and is one of only 16 institutions defined both as a Carnegie I research university and a Minority-Serving Institution (MSI). UIC also has been specifically designated by the U.S. Department of Education as a Hispanic-Serving Institution and an Asian American and Native American Pacific Islander-Serving Institution. More than half of UIC incoming first-year undergraduate students are first generation students, and nearly 60 percent have high financial need (based on Pell Grant eligibility). At the graduate level, student enrollment in Fall 2021 included nine percent Asian students, nine percent Black students, 14 percent Latinx students, and two percent multiracial students, in addition to a large population of international students; 60 percent of graduate and professional students are female. Also in Fall 2021, there were more than 7,500 graduate and professional students age 24 or older at UIC (who were not at the doctoral level), with more than 3,300 age 30 and older.

Equity in access to educational opportunities is supported by the University, the Graduate College, and the Department of Physiology and Biophysics. Specifically, the Department has compiled and completed its Advancing Racial Equity (ARE) strategic plan recommendations, in alignment with the College of Medicine initiatives aimed at closing equity gaps. The Department's program directors and the Graduate Education Committee (GEC), which oversees graduate program admissions, are focused on student equity and inclusion. The GEC has a strong record of assessing students' well-being and will lead the ARE initiative to close any equity gaps. A recent three-year program review of the existing Master of Science in Medical Physiology program by

UIC's Senate Committee on Educational Policy found the program "in good standing" in terms of inclusion, as 29 percent of the present cohort is composed of underrepresented minority students. In addition, UIC has been recognized nationally in recent years for its commitment to and implementation of increasing diversity and student success efforts.:

Further, the proposed Master of Physiology for Therapeutic Development will attract a broad spectrum of students through advertising and recruiting efforts in multiple venues. The Department will actively recruit students via its Community Outreach Committee; Department, College, and University social media platforms and websites; advertisement with career counselors from local undergraduate campuses and undergraduate advisors; and UIC's diverse undergraduate population. The Department will invest in a graduate assistant to help with recruitment efforts to assist with mass mailing and emailing of brochures and flyers to targeted universities and schools to make potential students aware of the program and to generate interest. The Department will advertise the proposed program in regional and national trade and professional publications and on their websites.

High-impact student retention and support efforts within the proposed program include team-taught courses; embedded professional development events, activities, and assignments within the curriculum; and the capstone/internship. The proposed program requires students to take graduate seminars each semester to which the Department will invite commercial industry professionals; collaborators from, for example, the UIC Innovation Center and the Chicago Biomedical Consortium; and government regulatory agency representatives and international organizations. The Department will invite underrepresented minority speakers to the seminars, professional networking, and speaking events, both in-person and virtual, who can discuss the difficulties they have faced as underrepresented minority professionals and the resiliency they have demonstrated in their career pathway choices in the biopharma industry. As well, students are assigned a faculty advisor to develop an Individual Development Plan directing them to an appropriate capstone/internship experience and associated industry mentor; the Department has established preliminary agreements with multiple on-campus (e.g., the UIC Cancer Center) and commercial entities (e.g., Phathom Pharma, Aptinyx, Xeris Pharma, and Astellas) for student internships. Students will be made aware of these opportunities and requirements during program orientation, first day of class and course syllabi, program advising, and program emails.

To aid in the retention and support of underrepresented students, several high-impact services exist throughout the University, College, and departments. The Graduate College provides program-specific student advising and connects students to campus resources via its website and a published guide. UIC graduate students are served by other core services, such as the Office of Student Financial Aid and Scholarships, the Office of the Registrar, Career Services, the Disability Resource Center, on-campus student health and mental health services, the Wellness Center and Pop-Up Pantry, Student Veterans Affairs, the Writing Center, and the Office of International Services. The Center for the Advancement of Teaching Excellence provides orientation and support for graduate students with teaching assistantships, and the Graduate College's Fellows Mentoring and Support Initiative provides similar services to students receiving Diversifying Faculty in Higher Education in Illinois fellowships or Lincoln fellowships. A variety of campus programs and resources support underrepresented minority students at the graduate level, including the LARES (Latin American Recruitment and Educational Services) program, the African American Academic Network, the seven Centers for Cultural Understanding and Social Change, the Native American Support Program, and various Office of Diversity, Equity and Engagement initiatives.

Students are made aware of these resources through the recruitment process, orientation, advising, a webpage maintained by the Graduate College, other campus offices and their webpages, and various student-focused guides and organizations.

Departmental and institutional committees devoted to DEI, student success, and hiring include UIC's Office of Diversity, Equity and Engagement (including through the Achieving Transparency and Accountability component of the Advancing Racial Equity initiative); Chancellor's Status Committees (Committee on the Status of Asian Americans (CCSAA); the Committee on the Status of Blacks (CCSB); the Committee on the Status of Latinos (CCSL); the Committee on the Status of Lesbian, Gay, Bisexual, Transgender, and Queer People (CCSLGBTQP); the Committee on the Status of Persons with Disabilities (CCSPD); and the Committee on the Status of Women (CCSW); accreditation processes; and dashboards maintained by the Office of Institutional Research (OIR). The Graduate College similarly maintains dashboards related to the retention and graduation of graduate/professional students and provides colleges engaged in academic program review with data in relation to enrollment, persistence, and time-to-degree.

The proposed program will also address Goal 2, Sustainability, *to build a stronger financial future for individuals and institutions by finding ways to reduce the financial burden of education on students and their families.* Various avenues of financial assistance exist at the campus, college, and department levels to support recruitment and retention of students from underrepresented and underserved backgrounds. Graduate students may receive assistantships, fellowships, department-based scholarships, tuition waivers, or other awards available through UIC or the University of Illinois System, which may include the cost of tuition, partial fee waivers, and stipends. The Graduate College provides funds for travel and research, as well as emergency grants for students facing hardship; the Graduate Student Council provides funds for travel and service projects; and the University of Illinois System provides funds for graduate student travel to present on diversity at conferences. Additionally, all U.S. citizens and any military veteran or family member of a veteran are encouraged to work with UIC's Office of Student Financial Aid and Scholarships to access other special scholarships and loans.

Within the Department, the Department of Physiology and Biophysics academic advisor will facilitate student access to institutional fellowships and financial help resources. The Department will identify and provide access to part-time work in the research laboratories run by Departmental faculty and affiliated faculty, as is the case with the existing Master of Science in Medicine and Physiology program, for students who need paid work. As well, students in the proposed program will have access to a broader group of researchers for part-time employment since this program will engage faculty from more departments, institutions, and centers at UIC.

The proposed degree program will contribute to Goal 3, Growth, *to increase talent and innovation to drive economic growth.* According to iBio, a life-sciences industry association, both public and private investment in the life science industries in Illinois has significantly grown over the past decade, with an overall economic output of \$98 billion. The average wage in life sciences industries, which includes pharmaceuticals, therapeutics, and medical device manufacturers, is \$129,866, and they employ more than 41,000 people statewide. Within this sector, the Medical Device and Pharmaceutical industries alone account for \$33.3 billion in economic output, employing 79 percent of the workforce and comprises the majority of the employees in the Illinois life sciences industry. There are about 200 pharmaceutical companies in the Chicago area and Lake County, Illinois (the "I-294" corridor), comprises the nation's second-largest cluster of pharmaceutical and medical device companies (e.g., Abbott, AbbVie, Astellas, Baxter, Fresenius Kabi, Horizon Pharma, Lundbeck, Pfizer, and Takeda). Lake County is also home to a number of growth-stage biopharma

companies, including Assertio, Athenex, and TerSera. Cook, Macon, Kankakee, and Champaign counties are home to small-scale bioindicators to large scale manufacturing facilities.

Given the one-year length of the proposed program, its incorporation of regulatory frameworks in the curriculum, and the breadth of opportunity for students wishing to find employment, pursue a career, or move laterally between jobs in the therapeutic development and healthcare-related fields, the proposed Master of Physiology for Therapeutic Development will provide a significant incentive to students to enroll and stay within the state of Illinois. Students would otherwise need to apply directly to other health professional degree programs that typically take two to four years to complete. The direct connection to area companies via the professional development and networking embedded in the curriculum along with access to alumni will provide students many opportunities for excellent careers in a vital sector of Illinois' and the nation's economy and healthcare industry.

The Department has engaged with the following for the purposes of student recruitment, engagement of clinical sites for internships, and potential employers of future graduates:

- Chicagoland bio/pharma experts, business leaders, and professionals;
- Partnering UIC Colleges and Departments (e.g., College of Pharmacy, Research College of Applied Health Sciences, Department of Biological Sciences);
- Relevant industry organizations and associations
- Local biopharma innovation hubs (MATTER, Chicago Biomedical Consortium);
- Local biopharma companies for student placement in practice settings (e.g., Phathom Pharmaceuticals, Aptinyx, Xeris Pharmaceuticals, Astellas, Discovery Partners Institute, University of Illinois Cancer Center)

Comparable Programs in Illinois

The proposed Master Physiology for Therapeutic Development is the only one of its kind in Illinois because it is strongly geared toward job placement in the pharmaceutical and clinical trials fields . Programs that might be considered similar at Northwestern University and the University of Illinois College of Medicine are biotechnology heavy or laboratory oriented. Nonetheless, the following are base-rate tuition costs for a master's program at other regional universities:

Northwestern University	\$56,567
University of Illinois College of Medicine (Rockford)	\$46,800
University of Illinois Chicago	\$21,500

Students enrolled in the proposed one-year program will complete a rigorous course sequence that provides students with advanced training in human physiological sciences and enhanced preparation for professional careers in the health sciences, particularly in the biopharmaceutical industry.

Mission and Objectives

1050.30(a)(1): A) The objectives of the unit of instruction, research or public service are consistent with the mission of the college or university. B) The objectives of the unit of instruction, research or public service are consistent with what the unit title implies.

The program is consistent with the purpose, goals, objectives, and mission of the University. The requested degree title reflects the program's objectives and curriculum.

Curriculum and Assessment

1050.30(b)(1) [applicable only to units of instruction]: A) The caliber and content of the curriculum must assure that the objectives of the unit of instruction will be achieved. B) The breadth and depth of the curriculum must be consistent with what the title of the unit of instruction implies. C) The admission and graduation requirements for the unit of instruction must be consistent with the stated objectives of the unit of instruction. D) Institutions must show the capacity to develop, deliver and support academic programs. Procedures and policies that will assure the effective design, conduct and evaluation of the degree programs under the academic control of the institution must be developed. Assessment plans must demonstrate that the institution has identified clear and appropriate program and student learning goals and has defined appropriate outcomes. Appropriate data must be collected and may be requested by the Board to show the level of student learning that has occurred as a result of participation in the institution's programs of study.

1050.30(a)(2): The design, conduct and evaluation of the unit of instruction, research or public service are under the direct and continuous control of the sponsoring institution's established processes for academic planning and quality maintenance.

Admission Requirements

Applicants interested in the proposed Master of Physiology for Therapeutic Development must meet requirements commensurate with standards established by UIC's Graduate College and Department of Physiology and Biophysics, including obtaining a baccalaureate degree, having a grade point average of 3.0 or higher on a 4.0 scale for the last 60 semester hours and at least 3.00 in all science courses. Other requirements include submission of a personal statement, a statement of purpose, a resume, and letters of recommendation.

To attract underrepresented students into the program, the Department of Physiology and Biophysics will leverage established networks of collaborations with all of the 15 minority-serving institutions in the Chicago area, including UIC's undergraduate student population, Chicago-area biotech consortia and nonprofit organizations such as iBio, MATTER, and the Chicago Biochemical Consortium, and the Department's Outreach Committee, which will work with the UIC High School Development Office to develop a pipeline of students to Department programs, including the proposed program, from local school districts with underrepresented student populations.

Curriculum

The curriculum for the proposed Master of Physiology for Therapeutic Development combines an in-depth study of physiology with transferrable or translational applications in therapeutic treatments and the most recent research advances in the biopharmaceutical industry. The program is targeted at students with a bachelor's degree in chemistry, physical sciences, and

biological discipline or pre-medical program who wish to consider the biopharmaceutical industry or related support industries as career options. The curriculum will bridge the gaps between hard physiologic science, the operations of biopharma, the pharmaceutical development pipeline, commercialization, and medical/regulatory regulations. The proposed program requires 32 semester credit hours of graduate coursework to be completed in two semesters and an eight-week internship over the summer following course completion.

The proposed curriculum supports the Thriving Illinois Equity goal in synergistic and multi-faceted ways. First, the program plans to recruit diverse students from diverse educational backgrounds and from diverse populations, including from UIC's diverse undergraduate student population, ensuring that students who have historically been left behind have access to a high-quality graduate credential. Second, the proposed program uses high-impact teaching and learning practices, such as team-teaching, high-touch advising and mentoring, frequent and specific student engagement and professional development opportunities, and a capstone/internship experience arranged by the program that places the student in their area of primary interest; interest is identified via the high-touch advising and mentoring activities.

Given the program's focus on filling the regulatory and operations knowledge gaps among students, the Department has established industry partnerships to provide an internship experience, which will open doors professionally for students, ensuring their future success, and will provide them with opportunities to apply their scientific and regulatory knowledge, ensuring their indispensability in future careers. Upon completion of the proposed program and the internship, students will be able to pursue careers in basic and clinical research, teaching, biotechnology, research at private research institutions, and government or regulatory agencies, or to pursue graduate or professional programs in medicine, dentistry, veterinary medicine, physical therapy, occupational therapy, or physician assistant.

Assessment of Student Learning

The University of Illinois Chicago has established processes to measure and analyze student learning outcomes data. Direct measures include homework assignments, exams, projects, and presentations. Indirect measures of student learning outcomes include fieldwork site supervisor reports, student course evaluations, and alumni and employer surveys.

Support services for the advancement of student learning include high-impact student retention and support practices such as team-taught courses; embedded professional development events, activities, and assignments within the curriculum; faculty-student advising; and industry mentoring via the capstone/internship.

Program Assessment

Program evaluation will involve the Program Co-Directors and program faculty, who will track graduates of the proposed program regarding the number of students who obtain industry employment, in what area, and the time it takes for students to pursue their next goal. Assessment results will be used to refine the program to better prepare students for future employment and professional development. The following metrics will aid in program evaluation:

- Course evaluations
- Faculty performance evaluations
- Quantification of achievement of learning objectives

- Exit surveys
- Success rate of graduates
- Internship site supervisor feedback
- Employer and alumni feedback
- Diversity, equity, and inclusion goals

The data will be presented to the faculty annually for discussion of levels of attainment need for changing measurement tools and/or other program assessment practices. Data analysis and action items will be presented in a self-study report. To continuously improve the program and student learning, data will be collected and evaluated every three years, allowing for the opportunity to make and assess changes in program curriculum, advising processes, and the assessment process itself.

Facilities (space, equipment, instructional materials)

1050.30(a)(4): A) Facilities, equipment and instructional resources (e.g., laboratory supplies and equipment, instructional materials, computational equipment) necessary to support the high quality academic work in the unit of instruction, research or public service are available and maintained. B) Clinical sites necessary to meet the objectives of the unit of instruction, research or public service. C) Library holdings and acquisitions, owned or contracted for by the institution, that are necessary to support high quality instruction and scholarship in the unit of instruction, research and public service, are conveniently available and accessible, and can be maintained.

Existing facilities are sufficient for implementing the proposed program. The University possesses appropriate library resources with access to online databases, books, journal holdings, and other electronic resources, to support teaching and scholarly work.

Faculty and Staff

1050.30(a)(3): A) The academic preparation and experience of faculty and staff ensure that the objectives of the unit of instruction, research or public service are met. B) The academic preparation and experience of faculty and staff, as evidenced by level of degrees held, professional experience in the field of study and demonstrated knowledge of the field, ensure that they are able to fulfill their academic responsibilities. At a minimum, faculty shall have a degree from an institution accredited by a U.S. Department of Education and/or Council for Higher Education Accreditation recognized accrediting body or a degree from another country evaluated for U.S. equivalency in the discipline they will teach or for which they will develop curricula at least one level above that of the courses being taught or developed. C) The involvement of faculty in the unit of instruction, research or public service is sufficient to cover the various fields of knowledge encompassed by the unit, to sustain scholarship appropriate to the unit, and to assure curricular continuity and consistency in student evaluation. E) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, that are directly assigned to the unit of instruction, research or public service, have the educational background and experience necessary to carry out their assigned responsibilities.

The University has identified institutional policies that ensure faculty and staff hired possess the training, credentials, and other related qualifications to provide instruction at the institution. Faculty teaching in the proposed program will have the appropriate qualifications. A formal faculty evaluation process is in place.

The University supports recruitment and retention of diverse faculty, staff, and administrators. Nearly 60 percent of UIC faculty, administrator, staff, and civil service are minority or international status. However, as with other institutions across higher education, UIC actively seeks to increase diversity in the faculty and in administrative leadership, particularly in relation to Black and Latinx faculty and staff (who in Fall 2021 accounted for approximately 13 percent of the full-time faculty and 24 percent of full-time academic professionals). The new strategic plan, Advancing Racial Equity (ARE) is a campus initiative focused in part on these goals.

UIC has initiatives in place to hire minority faculty through the following programs:

- Target of Opportunity program (focused on diversifying faculty in departments with high enrollment courses) has led to 16 hires;
- Bridge to Faculty program (designed to attract underrepresented postdoctoral scholars with the goal of a direct transition to a tenure-track faculty position after two years, particularly in departments with low or no presence of faculty who are underrepresented in their field) led to 33 hires, with the ten hires from the first cohort in Fall 2020 transitioning this year into tenure-track positions;
- Diversifying Higher Education Faculty in Illinois Fellowship had 24 UIC recipients in 2022, including five students in STEM-related fields receiving support through this initiative;
- Pipeline to an Inclusive Faculty Fellowships, primarily focused on doctoral students but open to students in master's programs who plan to continue to doctoral work;
- FY2023-24 Faculty Hire Program, aimed at programs with high enrollment and growth, will be used in part to improve underrepresentation in select disciplines; and
- Under-Represented Faculty Recruitment Program (UFRP), with the goal of attracting and retaining a faculty that more closely resembles the UIC student population by providing funds toward salary and research for underrepresented faculty candidates.

The Department of Physiology and Biophysics is implementing its ARE recommendations to hire and retain faculty, staff, and administrators of color. Those recommendations include increasing recruitment and retention of minority/marginalized staff; prioritizing new hires in distributing surplus equipment/resources, including newly hired minority/marginalized staff; recognizing diversity activities and having these included in departmental norms for faculty promotion, a metric that will be considered for tenure-track advancement. The Department currently has a total of 56 faculty, technicians, and administration, of which 11 (20 percent) are underrepresented minorities and 26 (46 percent) are female. Among other goals, the Department aspires to hire one to two new underrepresented minorities in staff positions and to prioritize hiring underrepresented minorities in tenure-track faculty positions with a particular focus on the hiring of African American candidates.

In addition to full-time faculty and staff, the Department employs 13 postdoctoral fellows, of which four (31 percent) are underrepresented minorities and four (31 percent) are female. The Department will provide opportunities for postdoctoral fellows to engage in teaching activities to help build their teaching portfolios so that they may be competitive for faculty/staff positions, both within the Department and at other institutions. The Department will ensure teaching opportunities are available to all fellows, actively track participation, provide lecture material support, and provide teaching evaluation feedback. As well, the Department hopes that guest speakers invited as part of the graduate seminar speakers' series incorporated in the proposed program will result in identifying new potential underrepresented faculty recruits.

The Department will monitor progress in the areas of recruiting, retaining, and advancing underrepresented faculty, staff, and administration as part of the program and faculty annual

review and will be conducted by the program directors and the External Advisory Board. Recommendations regarding recruitment and hiring of additional faculty or administrative staff will be shared with the Department chair and the Departmental Advisory Committee as the program grows. Finally, recent underrepresented minority graduates from the proposed program will be asked either to serve as mentors to incoming students or to participate in External Advisory Board activities to help guide further growth and development of the proposed program.

The University has strategies in place to attract and retain diverse faculty, staff and administrators including women, individuals with disabilities, veterans, persons of color, and members of other underrepresented groups.

Fiscal and Personnel Resources

1050.30(a)(5): A) The financial commitments to support the unit of instruction, research or public service are sufficient to ensure that the faculty and staff and support services necessary to offer the unit of instruction, research or public service can be acquired and maintained. B) Projections of revenues necessary to support the unit of instruction, research or public service are based on supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

The University has adequate faculty, staff, and other instructional resources to administer the proposed program. The Department of Physiology and Biophysics intends to hire a program coordinator to meet the needs of the new program.

Accreditation and Licensure

1050.30(b)(3)[applicable only to units of instruction]: Appropriate steps shall be taken to assure that professional accreditation needed for licensure or entry into a profession as specified in the objectives of the unit of instruction is maintained or will be granted in a reasonable period of time.

Accreditation

There are no specialized accreditation or licensure requirements for the proposed program.

Program Information

1050.30(b)(2)[applicable only to units of instruction]: A) The information which the institution provides for students and the public shall include the following: i) An accurate description of the unit of instruction, including its objectives, length, and residency requirements if any; ii) Schedule of tuition, fees, and all other charges and expenses necessary for completion of the unit of instruction, cancellation and refund policies; iii) Student rights and responsibilities; iv) A statement regarding the transferability of college credits, including the fact that the decision to accept transfer credits is determined by the receiving institutions; v) A statement as to how the institution will advise students on the nature of the transfer process, including the importance of consulting with institutions to which the student may seek to transfer; vi) Evidence of arrangements for the transfer of courses or credits or both to institutional counterparts, when these arrangements exist; these arrangements are also known as articulation agreements; vii) A statement of the institution's most recent graduation rates and the number of graduates and enrollments as provided by the institution to the Integrated Postsecondary Education Data System (IPEDS) and any submission of data to satisfy Board reporting requirements; and viii) Other material facts concerning the institution and the unit of instruction as are likely to affect the

decision of the student to enroll. B) The information listed in subsection (b)(2)(A) shall be available to prospective students prior to enrollment and shall be included in the institution's catalog of programs.

Detailed information about the proposed program, including description of the admission policies, university policies, tuition, fees, and curriculum are provided in the proposal and will be published on the University's website.

Staff Conclusion

The staff concludes that the Master of Physiology for Therapeutic Development proposed by the University of Illinois Chicago meets the criteria to implement the Board of Higher Education Act (110 ILCS 205/et.seq.) as set forth in 23 Illinois Administrative Code, Ch. II, Section 1050.30, and the Illinois Board of Higher Education policies pertaining to assessment and accreditation or licensure.

University of Illinois Chicago

Proposed Degree Title in the Region of Authorization: Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society in the Chicago Region

Projected Enrollments and Degrees:

First Year Enrollment	Fifth Year Enrollment	Degrees Awarded Fifth Year
24	60	24

Background

The University of Illinois Chicago (University or UIC) is seeking authorization to offer a Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society in the Chicago Region. Applied behavior analysis (ABA) is now considered the most effective treatment approach for individuals with developmental disabilities, including autism (Wong et al., 2014), and it is recommended for individuals across the lifespan. Further, practicing as an applied behavior analyst requires a master's degree in the field and national certification by the Behavior Analyst Certification Board. As a result of the increase in ABA services due to the increase in insurance coverage of ABA services, the need for individuals who hold the Board-Certified Behavior Analysis (BCBA) credential has grown exponentially over the past ten years. In response to that need, an increasing number of institutions offer graduate-level degree or certificate programs in ABA. However, the scope and quality of existing programs vary and do not address the needs of underserved populations, including culturally and linguistically diverse communities, urban communities, and individuals with disabilities across the lifespan. In addition, there is an urgent need to expand the scope of ABA research and integrate the research into professional practice to meet the unique needs of underserved populations.

In 2018, a hiring initiative sponsored by the UIC Provost supported departments that were interested in exploring an area in their field that held potential for growth. The Department of Special Education proposed a new tenure track position with expertise in ABA, autism spectrum disorder (ASD), and program development, allowing the College of Education to develop a master's level program in ABA that would be aligned with the Behavior Analyst Certification Board and that would do the following: (a) develop a program to increase graduate student enrollment by meeting demand in the field for professionals with ABA experience and training, (b) promote scholarship aligned with a college and departmental mission to improve the academic and social-emotional lives of students with disabilities and their families, (c) expand grant funding opportunities to include more research, clinical opportunities, and organization or foundation grants, (d) increase international and national recognition, and (e) align with existing graduate programs in the department, which also focus on the needs of underserved populations in an urban setting. Currently, the Department houses two graduate programs in special education. The MEd in Special Education prepares practicing and pre-service teachers to work as special educators in urban communities, such as Chicago. The department also offers a PhD in Education: Special Education, with a focus on preparing special education researchers and advanced practitioners to conduct research in urban communities.

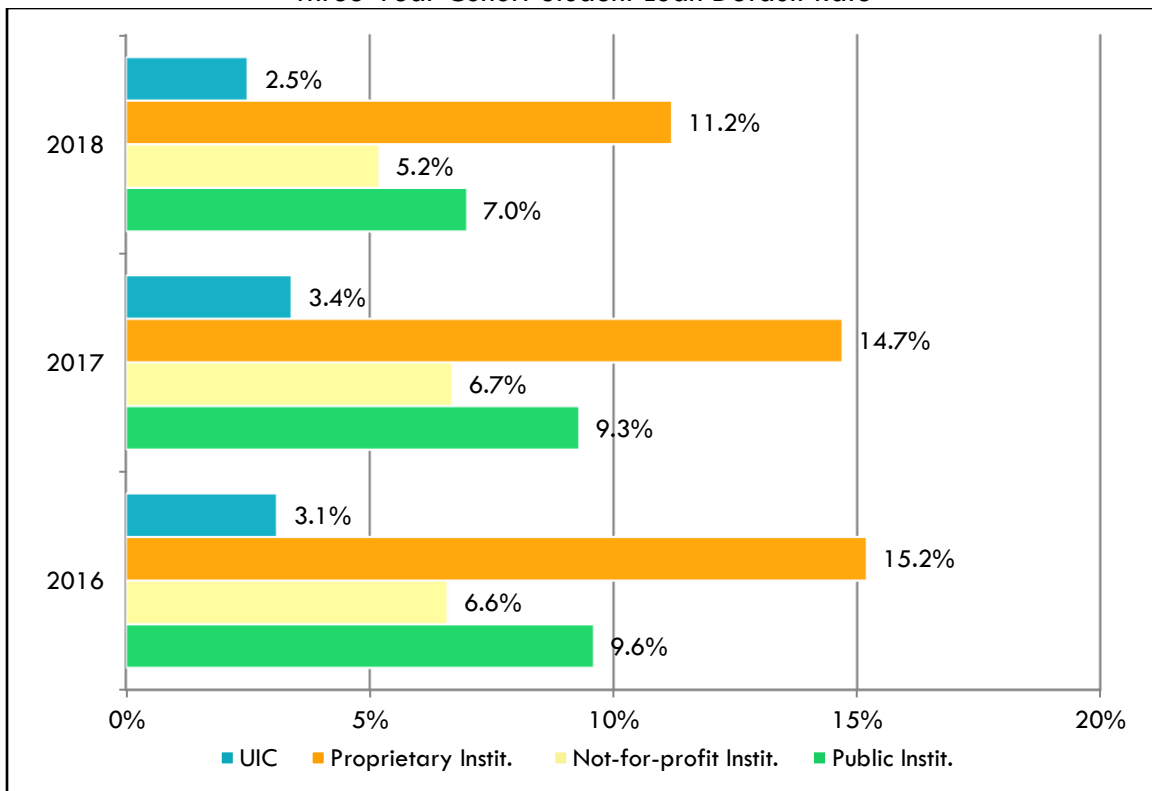
Institutional Data

1050.30(b)(1)(H): Success in student progression and graduation rates across all existing approved programs, and success rates in programs preparing students for certification and licensure, shall be

consistent with expectations in higher education and the appropriate related field of study. At a minimum, the Board shall consider these factors based on results for similar institutions. (i) Graduation rates, certificate and degree completion rates, retention rates, and pass rates for licensure and certification aligned with thresholds set by State nor national regulatory bodies. (ii) The success rate shall be, at a minimum, higher than those of the lowest quartile of these measures for similar Illinois institutions defined as open versus competitive enrollment institutions and primarily associate versus primarily baccalaureate granting institutions. Exceptions may be made to the lowest quartile if an institution is above the national average for these measures using the same comparison categories of institutions.

This section includes information about institutional and student success measures for each institution seeking program approval. The institution's rates will be compared to Illinois institutions from within a select comparison group and against the national standards or averages. For a proposed undergraduate program, this section will include undergraduate graduation rates, first to second year retention rates, student loan default rates, and any applicable licensure passage rates. For a proposed graduate program, this section will primarily focus on student loan default data since this measure also includes graduate students in the calculation.

Three-Year Cohort Student Loan Default Rate



Source: National Center for Education Statistics (NCES), US Department of Education
 Note: The national cohort default rate for fiscal year 2018 is 7.3 percent. A lower number is a positive indicator.

The three-year cohort student loan default rate is the percentage of a school's borrowers who enter repayment on certain Federal Family Education Loan Program or William D. Ford Federal Direct Loan Program loans during a particular federal fiscal year, October 1 to September 30, and default or meet other specified conditions prior to the end of the second following fiscal year.

Need

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically consistent with the educational priorities and needs of the State of Illinois. B) The unit of instruction, research or public service meets a need that is not currently met by existing institutions and units of instruction, research or public service.

The proposed Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society program will help meet the national and state demand for individuals holding board certification in behavior analysis. The population of individuals in Illinois needing ABA services is far greater than the population of BCBAAs. The need for individuals holding Board certification in behavior analysis is highest in five states, with Illinois ranked as the fifth-highest state with need (BACB, 2018). As of 2016, there were 21, 837 Illinois residents between the ages of three and 21 with autism spectrum disorder and 294, 916 Illinois residents with other disabilities (Easterseals, 2016) who could benefit from behaviorally based interventions. However, there are only 1,164 practicing BCBAAs or assistant BCBAAs (BCaBA) in Illinois (BACB, 2019) with more than 750 current BCBA positions open in Illinois. In addition, many other professions outside the ABA field (e.g., school psychology, speech-language pathology, clinical psychology, vocational counselors, behavioral healthcare, etc.) now require the behavior analyst credential (BACB, 2015).

Furthermore, the existing racial gap in the workforce representation has likely contributed to a lack of cultural consciousness among practitioners (Jackson, 1976; Levy, 2021), which replicates as existing programs continue to graduate mostly white practitioners. Fifty-six percent of BCBAAs are white (BACB, 2020), but BCBAAs are expected to serve students from historically underrepresented groups, including individuals from culturally and linguistically diverse backgrounds, despite lacking appropriate training. The proposed program is designed to train professionals in a wide range of public service disciplines with emphasis on awareness of and sensitivity to cultural, logistic, and environmental conditions of underserved populations. By promoting culturally responsive programming, the proposed program will create new knowledge in the field of applied behavior analysis that transforms practitioners' understanding of underserved individuals with disabilities by enhancing the relationship between empirical research and applied behavior analysis in urban society. Students in the program will work alongside faculty to generate new knowledge in a research practicum course in which students will learn to design and implement an empirical research study that seeks to advance the field's understanding of culturally responsive ABA programming, person-centered approaches to ABA treatment for adults with disabilities, or the application of ABA in urban communities. Students will have the opportunity to disseminate this research at the end of the semester by submitting the final product to a peer-reviewed practitioner journal. Additionally, all courses in the program will focus on ways to use empirical research to inform applied practice and clinical decision-making.

A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth

The proposed Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society supports Goal 1, Equity, of *A Thriving Illinois to close the equity gaps for students who have historically been left behind*. The University of Illinois Chicago serves more than 22,000 undergraduate students and nearly 12,000 graduate and professional students and is one of only 16 institutions defined both as a Carnegie I research university and a Minority-Serving Institution (MSI). UIC also has been specifically designated by the U.S. Department of Education as a Hispanic-Serving Institution and an Asian American and Native American Pacific Islander-Serving Institution. More than half of UIC incoming first-year undergraduate students are first generation students, and

nearly 60 percent have high financial need (based on Pell Grant eligibility). At the graduate level, student enrollment in Fall 2021 included nine percent Asian students, nine percent Black students, 14 percent Latinx students, and two percent multiracial students, in addition to a large population of international students; 60 percent of graduate and professional students are female. Also in Fall 2021, there were more than 7,500 graduate and professional students age 24 or older at UIC (who were not at the doctoral level), with more than 3,300 age 30 and older. In addition, UIC has been recognized nationally in recent years for its commitment to and implementation of increasing diversity and student success efforts.

Equity in access to educational opportunities is supported by the University, the Graduate College, and the Department of Special Education by virtue of diverse and multi-faceted recruitment efforts and the proposed program's flexibility for working students. Students will be recruited from UIC's more than 22,000 diverse undergraduate student population; collaborative national and international organizations that provide avenues to diverse students across diverse fields and programs; and local school and community-based organizations to develop a pipeline of underrepresented students into the program. In particular, the Department has a longstanding partnership in relation to workforce development with Chicago Public Schools and other area school districts that serve diverse student populations and from which the Department of Special Education recruits diverse teachers for its graduate programs. The Department also leverages professional contacts and faculty from other minority-serving institutions in the region to recruit students from historically underrepresented groups. As of Fall 2021, half of the Department's students identify as Black, Latinx, multiracial, or Asian; it's anticipated that the Department can recruit similarly diverse student cohorts for the proposed program.

To ensure diverse student population are recruited, the program allows flexibility by offering courses in hybrid and online formats; and implementing hybrid course meetings in the evenings to assist in the enrollment of working adults. In addition, the program provides flexible option for completing supervised fieldwork experience by allowing non-traditional students who work full-time the option to earn their fieldwork hours at the UIC Clinic for Assessment, applied behavior analysis, and Responsive Educational Supports (CARES). UIC CARES provides behavioral programming to individuals with disabilities and their families using telehealth technology. Because telehealth programming is provided in the evening, students working full-time or otherwise obligated during the day when most fieldwork facilities operate will have the option to complete their hours after their workday has ended.

As a best practice and key feature, the proposed program utilizes a cohort-based model, high-impact practices, and supports students to ensure student success in the program. The cohort model provides students with an array of experiences and services including collaborating through group projects and other applied experiences, developing a network of individuals with similar career aspirations, and fostering active engagement in learning, setting the foundation for working in collaborative multidisciplinary teams in schools and other early childhood education agencies. The proposed program includes high-impact practices to support student retention and success, including optional 1,500 hours of supervised fieldwork embedded in the curriculum and empirical research practicum in Applied Behavior Analysis as related to the focus on urban societies and underserved populations. In support of students' ability to succeed, the Department of Special Education arranges all clinical site assignments according to student interest in specific populations and provides students with weekly faculty/supervisor meetings. Research is conducted as part of two courses and serve multiple purposes including to increase research in Applied Behavior Analysis; align with UIC's institutional mission; and provide students with opportunities to consider pursuing doctoral programs in ABA-related topics. A variety of campus programs and resources support

underrepresented minority students at the graduate level, including the LARES (Latin American Recruitment and Educational Services) program, the African American Academic Network, the seven Centers for Cultural Understanding and Social Change, the Native American Support Program, and various Office of Diversity, Equity and Engagement initiatives.

The proposed program will also address Goal 2, Sustainability, *to build a stronger financial future for individuals and institutions by finding ways to reduce the financial burden of education on students and their families.* Various avenues of financial assistance exist at the campus, college, and department levels to support recruitment and retention of students from underrepresented and underserved backgrounds. Graduate students may receive assistantships, fellowships, department-based scholarships, tuition waivers, or other awards available through UIC or the University of Illinois System, which may include the cost of tuition, partial fee waivers, and stipends. The Graduate College provides funds for travel and research, as well as emergency grants for students facing hardship. Funding opportunities for graduate students for travel and service projects are also provided by the Graduate Student Council and the University of Illinois System.

Within the Department, a limited number of tuition waivers to students who demonstrate financial need are available to ensure students have the financial assistance needed to complete their program. The Department also has a history of securing federal personnel preparation grants from the Office of Special Education Programs (OSEP), U.S. Department of Education), which provide federal funds to support graduate students seeking to obtain degrees in special education and related fields (e.g., applied behavior analysis). Funds from the grants often pay for tuition and fees, program materials (e.g., textbooks), professional memberships, and a yearly stipend. The Department of Special Education has held eight of these awards over the past five years and faculty continue to actively seek the personnel preparation grants on an annual basis.

The proposed degree program will contribute to Goal 3, Growth, *to increase talent and innovation to drive economic growth.* Finally, the national demand for BCBA's has grown 800 percent since 2010. As such, graduates of this program will be able to take advantage of a rapidly growing job market. After completing the program and meeting all other requirements, students will be qualified to work as a clinical practitioner, behavior specialist, behavior consultant, or research assistant. Students will also be able to practice across settings, including private clinics, public schools, Medicaid-funded programs, and in-patient or out-patient hospital programs, supporting underserved populations, increasing talent that will stay in Illinois, and driving economic growth in the medical and behavioral health sectors.

The Department has engaged with the following for the purposes of student recruitment, engagement of clinical sites that will provide supervised fieldwork hours, and potential employers of future graduates:

- Professional organizations and school-based/community-based organizations, including the Association for Applied Behavior International, the Council for Exceptional Children, and the Higher Education Consortium for Special Education;
- Chicago Public Schools (CPS) and other area school districts that serve diverse and underserved students; and
- Pediatrics unit at UI Health, private clinics, and practicing local BCBA's at clinics and schools.

Comparable Programs in Illinois

The proposed Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society will be the first ABA program in Illinois that is focused on the application of applied behavior analysis to underserved populations. Students enrolled in the proposed program will complete a rigorous course sequence designed to teach students the foundations of ABA; to implement advanced behavior analytic programming; to understand the needs of underserved populations and the behavior analyst's role in serving those communities; and the relationship between culturally responsive and population-responsive practices and effective behavior analytic practices. Unlike other programs that may offer a standalone course in one of these areas (e.g., culturally responsive practices), the proposed program will embed content related to understanding and addressing the needs of these populations within each course. As well, none of the other programs embed the required supervised fieldwork hours, increasing the length of time it takes to achieve the credential. Students who complete the embedded fieldwork hours in the proposed program can sit for the BCBA exam immediately after graduation, while students in programs that don't embed supervised fieldwork hours cannot sit for the exam until the fieldwork is completed, which could take up to five years. Given the need in Illinois for Board-certified ABA practitioners who are well-prepared to work with diverse populations, immediate and sustained enrollment and student employment are anticipated.

Currently, seven programs in the state of Illinois offer a master's degree or certificate program in Applied Behavior Analysis: Aurora University, Chicago School of Professional Psychology, National Louis University, Northern Illinois University, Southern Illinois University, Trinity Christian College, and the University of Illinois Urbana-Champaign.

Cost per credit hour of ABA programs in Illinois

Institution	Cost per Credit Hour
Southern Illinois University	\$469.50
Northern Illinois University	\$469.11
University of Illinois, Chicago	\$624
Aurora University	\$650
National Louis University	\$710
Trinity Christian College	\$745
University of Illinois Urbana Champaign	\$1,058
Chicago School of Professional Psychology	\$1,198

Mission and Objectives

1050.30(a)(1): A) The objectives of the unit of instruction, research or public service are consistent with the mission of the college or university. B) The objectives of the unit of instruction, research or public service are consistent with what the unit title implies.

The program is consistent with the purpose, goals, objectives, and mission of the University. The requested degree title reflects the program's objectives and curriculum.

Curriculum and Assessment

1050.30(b)(1) [applicable only to units of instruction]: A) The caliber and content of the curriculum must assure that the objectives of the unit of instruction will be achieved. B) The breadth and depth of the curriculum must be consistent with what the title of the unit of instruction implies. C) The admission and graduation requirements for the unit of instruction must be consistent with the stated objectives of the unit of instruction. D) Institutions must show the capacity to develop, deliver and support academic programs. Procedures and policies that will assure the effective design, conduct and evaluation of the degree programs under the academic control of the institution must be developed. Assessment plans must demonstrate that the institution has identified clear and appropriate program and student learning goals and has defined appropriate outcomes. Appropriate data must be collected and may be requested by the Board to show the level of student learning that has occurred as a result of participation in the institution's programs of study.

1050.30(a)(2): The design, conduct and evaluation of the unit of instruction, research or public service are under the direct and continuous control of the sponsoring institution's established processes for academic planning and quality maintenance.

Admission Requirements

Applicants interested in the proposed Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society program must meet requirements commensurate with standards established by UIC's Graduate College and Department of Special Education, including obtaining a baccalaureate degree, having a grade point average of 2.75 or higher on a 4.0 scale for the last 60 semester hours and at least 3.00 for all post-baccalaureate course work. Other requirements include submission of letters of recommendation, a resume, and a personal statement.

To attract underrepresented students into the program, the Department of Special Education will leverage established network of collaborations with professional organizations, school-based and community-based organizations, including professional organizations such as the Association for Applied Behavior International (ABAI), the Council for Exceptional Children (CEC), and the Higher Education Consortium for Special Education (HECSE). Each of these organizations espouses a commitment to diversity, equity, and inclusion and provides avenues for recruiting a diverse student body through contacts across diverse fields and existing programs.

Curriculum

The Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society is a 40-credit-hour graduate program that includes ten courses in applied behavior analysis, 1,500-2,000 hours of supervised fieldwork, and research practicum experiences aligned with required coursework. The program curriculum is structured to ensure instructional goals are aligned with targeted strategies to achieve success, including the following standards:

- Teaching students the foundations of applied behavior analysis (ABA);
- Implementing advanced behavior analytic programming;
- Understanding the needs of underserved populations, and the behavior analyst's role in serving those communities; and

- Understanding the relationship between culturally and population-responsive practices and effective behavior analytic practices.

Coursework fulfills the proposed program's purpose of preparing individuals to become Board-Certified Behavior Analysts (BCBA) who are qualified to work with underserved and high-needs populations, including culturally and linguistically diverse communities, urban communities, and individuals with disabilities across the lifespan. Courses will be offered in both hybrid and online formats to allow a flexible educational experience for all students. All students will take a culminating comprehensive examination.

The proposed curriculum supports A *Thriving Illinois* Equity goal in synergistic and multi-faceted ways. First, the program plans to recruit diverse students from diverse backgrounds, including from local school districts and from UIC's diverse undergraduate student population, ensuring that students who have historically been left behind have access to a high-quality graduate credential. Second, the proposed program uses best outcomes-oriented practices, such as cohort-based programming and pedagogy, research opportunities with faculty that create new knowledge in the field of applied behavior analysis for underserved populations, and Department-arranged supervised fieldwork hours with regular program advising and mentoring; these methods ensure students' success in the program, particularly for students who have historically been left behind. As well, the flexibility built into the proposed program by offering online and hybrid courses and supervised fieldwork arrangements that meet students' work and/or home-care responsibilities, ensures that working professionals and parents would have access to and success in the program. Finally, the proposed program would achieve another kind of equity by ensuring that families, schools, communities, and populations historically left out of or left behind by appropriate social, behavioral, and medical services have access to and benefit from a diverse, well-qualified, and Board-certification-eligible population of Applied Behavior Analysts who would be trained specifically in underserved populations in urban settings.

The Department has established industry partnerships to enhance educational experience of students by giving them experiential learning opportunities through supervised fieldwork. Given the program's focus on preparing students to work in urban contexts, students will be specifically trained to work in Chicago and the collar suburbs with similar needs, which will help them build their professional networks and establish ties within the local community and job market. Upon completion of the proposed program and all required fieldwork hours, students will be eligible to sit for the BCBA exam. Students who do not complete their supervised fieldwork hours during their master's program have five years to accrue the required supervised fieldwork hours post-graduation to be eligible to take the BCBA exam.

Assessment of Student Learning

The University of Illinois Chicago has established processes to measure and analyze student learning outcomes data. The BACB learning objective assessment guidelines will be used and will assist faculty in determining whether students are meeting the program and course objectives. Direct measures include homework assignments, exams, research, and weekly fieldwork reports. Indirect measures of student learning outcomes include fieldwork site supervisor reports, student course evaluations, and alumni and employer surveys. Results of these assessments will be used to individualize the types and levels of support given to students. Students who do not meet program and course expectations will be placed on a student improvement plan, which will outline individual goals for the semester related to the student's areas of growth.

Program Assessment

The program will be evaluated annually at multiple levels and will involve the program coordinator, faculty, and other key stakeholders. Assessment results will be monitored and used to refine the program to better prepare students for future employment and professional development. The following metrics will aid in program evaluation:

- Enrollment trends
- Instructor evaluations
- Course evaluations
- Graduation rates
- Time-to-completion rates
- Fieldwork and supervision completion
- BCBA pass rates

The data from program evaluation will be presented to the faculty at the annual faculty retreat and will include discussion of levels of attainment and the need for changing measurement tools and/or other program assessment practices. To continuously improve the program and student learning, data will be collected and evaluated every three years, allowing for the opportunity to make and assess changes in program curriculum, advising processes, and the assessment process itself.

Facilities (space, equipment, instructional materials)

1050.30(a)(4): A) Facilities, equipment and instructional resources (e.g., laboratory supplies and equipment, instructional materials, computational equipment) necessary to support the high quality academic work in the unit of instruction, research or public service are available and maintained. B) Clinical sites necessary to meet the objectives of the unit of instruction, research or public service. C) Library holdings and acquisitions, owned or contracted for by the institution, that are necessary to support high quality instruction and scholarship in the unit of instruction, research and public service, are conveniently available and accessible, and can be maintained.

Existing facilities are sufficient for implementing the proposed program. The University possesses appropriate library resources with access to online databases, books, journal holdings, and other electronic resources, to support teaching and scholarly work.

Faculty and Staff

1050.30(a)(3): A) The academic preparation and experience of faculty and staff ensure that the objectives of the unit of instruction, research or public service are met. B) The academic preparation and experience of faculty and staff, as evidenced by level of degrees held, professional experience in the field of study and demonstrated knowledge of the field, ensure that they are able to fulfill their academic responsibilities. At a minimum, faculty shall have a degree from an institution accredited by a U.S. Department of Education and/or Council for Higher Education Accreditation recognized accrediting body or a degree from another country evaluated for U.S. equivalency in the discipline they will teach or for which they will develop curricula at least one level above that of the courses being taught or developed. C) The involvement of faculty in the unit of instruction, research or public service is sufficient to cover the various fields of knowledge encompassed by the unit, to sustain scholarship appropriate to the unit, and to assure curricular continuity and consistency in student evaluation. E)

Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, that are directly assigned to the unit of instruction, research or public service, have the educational background and experience necessary to carry out their assigned responsibilities.

The University has identified institutional policies that ensure faculty and staff hired possess the training, credentials, and other related qualifications to provide instruction at the institution. Faculty teaching in the proposed program will have the appropriate qualifications. A formal faculty evaluation process is in place. The University has strategies in place to attract and retain diverse faculty, staff and administrators including women, individuals with disabilities, veterans, persons of color, and members of other underrepresented groups. Nearly 60 percent of UIC faculty, administrator, staff, and civil service are minority or international status. However, as with other institutions across higher education, UIC actively seeks to increase diversity in the faculty and in administrative leadership, particularly in relation to Black and Latinx faculty and staff (who in Fall 2021 accounted for approximately 13 percent of the full-time faculty and 24 percent of full-time academic professionals). The new strategic plan, Advancing Racial Equity (ARE), is a campus initiative focused in part on these goals.

UIC has initiatives in place to hire minority faculty through the following programs:

- Target of Opportunity program (focused on diversifying faculty in departments with high enrollment courses) has led to 16 hires;
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- Diversifying Higher Education Faculty in Illinois Fellowship has two current doctoral students in the Department of Special Education receiving support through this initiative;
- Pipeline to an Inclusive Faculty Fellowships, primarily focused on doctoral students but open to students in master's programs who continue to doctoral work;
- Faculty Hire Program for Fiscal Year 2023-2024, aimed at programs with high enrollment and growth, will be used in part to improve underrepresentation in select disciplines; and
- Under-Represented Faculty Recruitment Program (UFRP), with the goal of attracting and retaining a faculty that more closely resembles the UIC student population by providing funds toward salary and research for underrepresented faculty candidates.

Specifically, the Department of Special Education, as with all departments, has developed ARE plans to address issues of diversity and equity at the department level. As part of its plan, the Department has committed to developing a faculty recruitment plan that incorporates racial equity to diversify its faculty. Additionally, the Department has committed to developing a racially equitable mentoring plan to ensure that incoming faculty have the necessary mentoring, professional development, and research fund as supports to succeed at UIC and in the Department. The department also has been actively involved with the University Bridge to Faculty Program and, in the last two years, the Department has secured two of these positions, demonstrating its commitment to diversifying its faculty.

Fiscal and Personnel Resources

1050.30(a)(5): A) The financial commitments to support the unit of instruction, research or public service are sufficient to ensure that the faculty and staff and support services necessary to offer the unit of instruction, research or public service can be acquired and maintained. B) Projections of revenues necessary to support the unit of instruction, research or public service are based on supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

The University has adequate faculty, staff, and other instructional resources to administer the proposed program. The Department of Special Education intends to hire a program coordinator to meet the needs of the new program.

Accreditation and Licensure

1050.30(b)(3)[applicable only to units of instruction]: Appropriate steps shall be taken to assure that professional accreditation needed for licensure or entry into a profession as specified in the objectives of the unit of instruction is maintained or will be granted in a reasonable period of time.

Accreditation

No specialized accreditation is required for the proposed program. Currently, there is no Illinois licensure requirement in Illinois. However, the Behavior Analyst Certification Board (BACB) requires individuals practicing applied behavior analysis to have a master's degree from a program that holds Verified Course Sequence (VCS) status from the Association for Behavior Analysis International (ABAI), which ensures that all program coursework aligns with the professional standards and task list items described by the BACB. The proposed program is designed based on the most updated standards described by the BACB and will be sent to the ABAI for review once approved by IBHE and the Higher Learning Commission.

Program Information

1050.30(b)(2)[applicable only to units of instruction]: A) The information which the institution provides for students and the public shall include the following: i) An accurate description of the unit of instruction, including its objectives, length, and residency requirements if any; ii) Schedule of tuition, fees, and all other charges and expenses necessary for completion of the unit of instruction, cancellation and refund policies; iii) Student rights and responsibilities; iv) A statement regarding the transferability of college credits, including the fact that the decision to accept transfer credits is determined by the receiving institutions; v) A statement as to how the institution will advise students on the nature of the transfer process, including the importance of consulting with institutions to which the student may seek to transfer; vi) Evidence of arrangements for the transfer of courses or credits or both to institutional counterparts, when these arrangements exist; these arrangements are also known as articulation agreements; vii) A statement of the institution's most recent graduation rates and the number of graduates and enrollments as provided by the institution to the Integrated Postsecondary Education Data System (IPEDS) and any submission of data to satisfy Board reporting requirements; and viii) Other material facts concerning the institution and the unit of instruction as are likely to affect the decision of the student to enroll. B) The information listed in subsection (b)(2)(A) shall be available to prospective students prior to enrollment and shall be included in the institution's catalog of programs.

Detailed information about the proposed program, including description of the admission policies, university policies, tuition, fees, and curriculum is provided in the proposal and will be published on the University's website.

Staff Conclusion

The staff concludes that the Master of Science in Applied Behavior Analysis, Disability and Diversity in Urban Society proposed by the University of Illinois Chicago meets the criteria to implement the Board of Higher Education Act (110 ILCS 205/et.seq.) as set forth in 23 Illinois Administrative Code, Ch. II, Section 1050.30, and the Illinois Board of Higher Education policies pertaining to assessment and accreditation or licensure.

University of Illinois Urbana-Champaign

Proposed Degree Title in the Region of Authorization: Bachelor of Science in Neural Engineering in the Prairie Region

Projected Enrollments and Degrees:

First Year Enrollment	Fifth Year Enrollment	Degrees Awarded Fifth Year
35	160	40

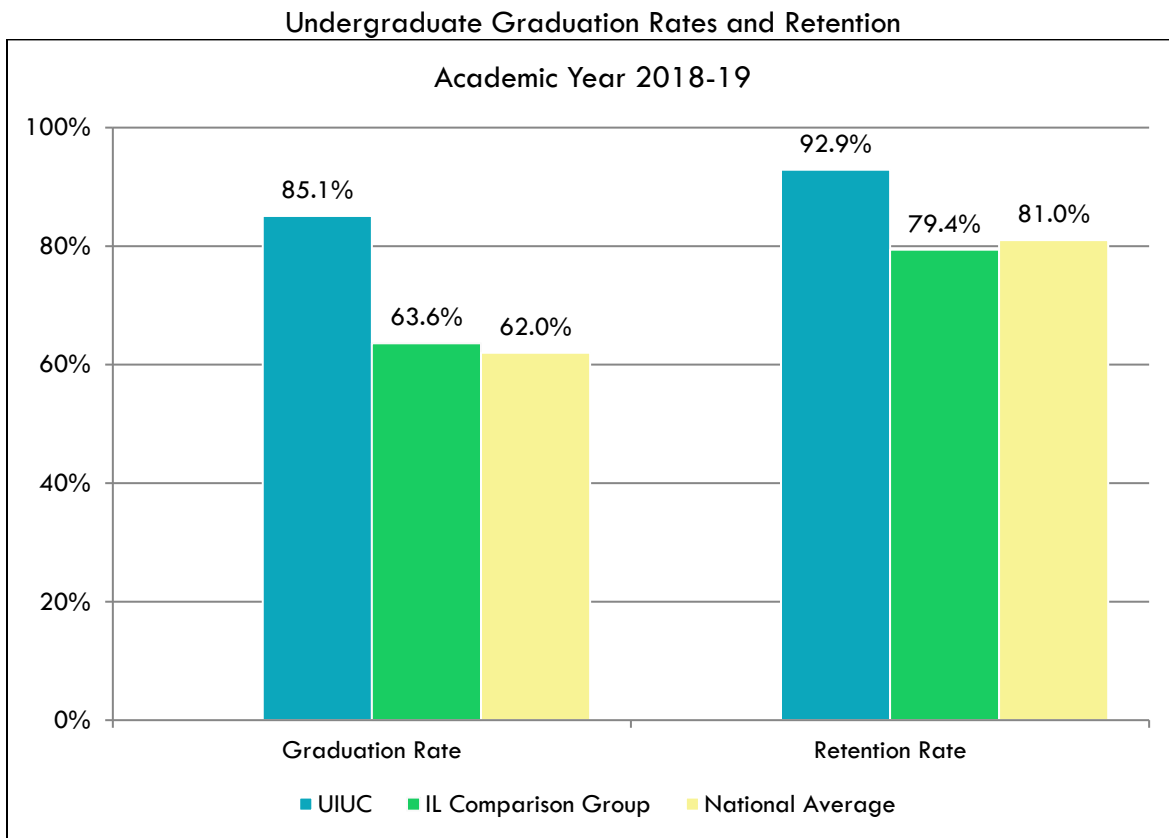
Background

The University of Illinois Urbana-Champaign (University or UIUC) is seeking authorization to offer a Bachelor of Science in Neural Engineering in the Prairie Region. Both engineering and neuroscience disciplines are broadly disseminated across campus units and departments with multiple campus-wide faculty collaborations. The Department of Bioengineering will serve as the functional home for the program, as research and training experiences have long been spearheaded and led across this interface by departmental faculty. Cross-college support discussions between The Grainger College of Engineering and College of Liberal Arts and Sciences have been ongoing for nearly two years to build the proposed program and to ensure that goals of the distinct programs are complementary, sustainable, and functionally independent in management. Separating itself from the bachelor's degree programs in Neuroscience and Brain and Cognitive Sciences, students in the Neural Engineering program will develop skills in device design, molecular and cellular engineering, and quantitative and computational data analysis. The Neural Engineering program differentiates itself from the programs in Bioengineering, Computer Science, and Electrical and Computer Engineering by providing students with in-depth, integrated, and comprehensive knowledge of neurobiology, biological interfaces, and human conditions relevant to clinical neuroscience. Graduates of this program will be prepared for a variety of impactful careers to improve human health across healthcare, including life sciences, biotechnology, and pharmaceuticals. Impactful careers may involve developing robotic systems that mimic the neurological abilities of the human nervous system, developing prosthetic limbs that respond to neurological stimulation, or creating 3D models of neurological structures and activities using computer software to collect data, predict trends, and discover new information about neurological processes. Additionally, graduates will have the opportunity to continue their education through professional degree programs in medicine and graduate studies in the life and behavioral sciences, as well as diverse engineering disciplines.

Institutional Data

1050.30(b)(1)(H): Success in student progression and graduation rates across all existing approved programs, and success rates in programs preparing students for certification and licensure, shall be consistent with expectations in higher education and the appropriate related field of study. At a minimum, the Board shall consider these factors based on results for similar institutions. (i) Graduation rates, certificate and degree completion rates, retention rates, and pass rates for licensure and certification aligned with thresholds set by State nor national regulatory bodies. (ii) The success rate shall be, at a minimum, higher than those of the lowest quartile of these measures for similar Illinois institutions defined as open versus competitive enrollment institutions and primarily associate versus primarily baccalaureate granting institutions. Exceptions may be made to the lowest quartile if an institution is above the national average for these measures using the same comparison categories of institutions.

This section includes information about institutional and student success measures for each institution seeking program approval. The institution's rates will be compared to Illinois institutions from within a select comparison group and against the national standards or averages. For a proposed undergraduate program, this section will include undergraduate graduation rates, first to second year retention rates, student loan default rates, and any applicable licensure passage rates. For a proposed graduate program, this section will primarily focus on student loan default data since this measure also includes graduate students in the calculation.



Source: National System for Education Statistics (NCES), US Department of Education
 Note: University of Illinois Urbana-Champaign is in the four-year, selective Illinois comparison group.
 Higher percentages are positive indicators.

Undergraduate Graduation Rate

The graduation rate measures the rate at which entering freshmen graduate within 150 percent of normal program length. Data are provided for six-year graduation rates for first-time, full-time bachelor's degree-seeking students and three-year graduation rates for full-time associate degree-seeking students. The national standard for graduation rates is reported annually by the National Center for Education Statistics (NCES).

Undergraduate Retention Rate

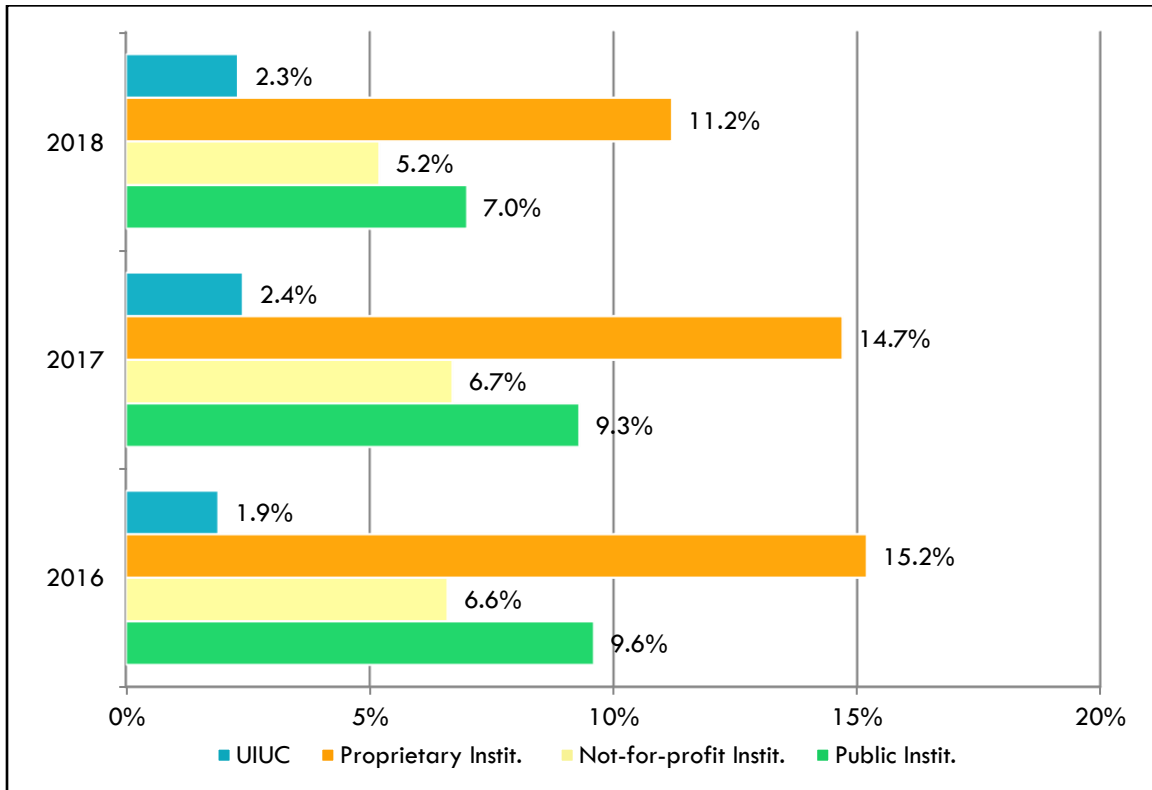
Retention rates examine the percentage of first-time degree seeking students enrolled in the fall of the prior year that are still enrolled in the fall of the current year. The national standard for retention rates is reported annually by NCES.

Undergraduate Completions per 100 FTE

Academic Year	University of Illinois Urbana-Champaign	Comparable Illinois Institutions
2018-19	N/A	24.3

The full-time equivalent (FTE) data is a unit of measurement intended to represent one student enrolled full-time for one academic year. The calculation is based upon credit/contact hours offered at an institution divided by a standard minimum (12 credit hours) full-time course load. For the University of Illinois Urbana-Champaign, the undergraduate completion per 100 FTE is not an accurate indicator. The majority of students at the University are full-time, and substantial numbers double major and take more than 12 (up to 18) credit hours, and the standard calculation does not account for these factors.

Three-Year Cohort Student Loan Default Rate



Source: National Center for Education Statistics (NCES), US Department of Education

Note: The national cohort default rate for fiscal year 2018 is 7.3 percent. A lower number is a positive indicator.

The three-year cohort student loan default rate is the percentage of a school's borrowers who enter repayment on certain Federal Family Education Loan Program or William D. Ford Federal Direct Loan Program loans during a particular federal fiscal year, October 1 to September 30, and default or meet other specified conditions prior to the end of the second following fiscal year.

Need

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically

consistent with the educational priorities and needs of the State of Illinois. B) The unit of instruction, research or public service meets a need that is not currently met by existing institutions and units of instruction, research or public service.

Driving forces motivating the development of the Bachelor of Science in Neural Engineering include growth in industries that develop neural-engineering technologies, including neurological devices, brain-computer interfaces, neurological disease treatments, and brain imaging technologies. Many of the technologies central to neural engineering (e.g., brain-computer interfaces, artificial intelligence) are integral to other rapidly growing industries (e.g., video gaming, robotics). There are no known neural engineering undergraduate degree programs in the country, although neural engineering is a common specialization within existing biomedical engineering degree programs. Given the unique training that will be made available to students in the proposed program, the rapid growth in related industries, the popularity of neuroscience degree programs, and new high-profile companies, immediate and sustained enrollment and student employment are anticipated.

According to the U.S. Bureau for Labor Statistics (BLS) occupational projections, Bioengineers and Biomedical Engineers occupational classification provides the closest job title match to the graduates of the proposed program. Employment of bioengineers and biomedical engineers is projected to grow six percent from 2020 to 2030, about as fast as the average for all occupations. The 2020 median annual salary for bioengineers and biomedical engineers was \$92,620. Workers on average earn \$88,910 in Illinois whereas the bottom ten percent of workers earn \$61,240 or less and the top ten percent earn \$141,640 or more. The employment outlook for graduates of the proposed program is expected to be robust and to grow considerably. Primary employers in the state include large healthcare companies in the Chicago area such as Abbott, Abbvie, and Baxter that develop products related to clinical neurological diseases, as well as smaller companies including Icometrix, Emalex Biosciences, Seurat Therapeutics, and AveXis that manufacture more specialized products. In the Midwest, a further breadth of healthcare industry companies includes Medtronic, Siemens, and Stryker. Graduates of the program are anticipated to have extensive employment opportunities as research scientists and engineers in both academic and medical labs and as clinical engineers in neurological and psychiatric practices.

A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth

The proposed Bachelor of Science in Neural Engineering supports Goal 1, Equity of A Thriving Illinois to close the equity gaps for students who have historically been left behind. The University of Illinois at Urbana Champaign has a significant number of institution and college-level initiatives that are designed to close equity gaps while providing support and creating a community of belonging among diverse student groups. A recent initiative is the development of the Office of the Vice Chancellor for Diversity, Equity, and Inclusion to focus on making the campus a place where all people can achieve their full potential through the development of innovative strategies, collaboration, and partnerships. Other approaches have historically existed at the University. For example, as the oldest collegiate disability support program in the world, the Disability Resources & Educational Services (DRES) continues to be a leader in post-secondary education for persons with disabilities. The Department of Bioengineering will partner with DRES to ensure students have the academic support and services they need to be successful in the program. Additionally, the Illinois Scholars Program (ISP) aims to combine opportunity and access, experiential learning and support to position students for academic success and personal growth throughout their time at Illinois. During a four-week intensive summer bridge experience, incoming freshman will be matched with an ISP Mentor, receive personalized math and writing instruction, and build a strong

relationship with peers and campus to support them during their first year and inclusive academic support will continue throughout their undergraduate experience.

Several high-impact services exist throughout the University, college, and departments to aid in recruitment, retention, and support of underrepresented students. The Office of Minority Student Affairs provides academic coaching, tutoring, graduate school preparation, and sourcing scholarship opportunities for all students. The Center for Academic Resources in Engineering provides academic tutoring, mentorship, and support for all engineering students. The Grainger College of Engineering offers admission, orientation, early engagement, and advising programs to support student success and equitable access in the proposed program. Also, within the College, the Morrill Engineering Program (MEP), Women in Engineering (WIE) program, and the Academic Redshirt in Science and Engineering (ARISE) program support students from underserved and underrepresented backgrounds in engineering. These programs are designed to facilitate successful student engagement and retention through peer mentoring, community building among learning communities, proactive and comprehensive advising, and academic support. Each program offers opportunities for students to experience the onset of their adjustment to the university with others from similar backgrounds. MEP engages first-year students from underrepresented backgrounds in its MEP Mentoring Course (ENG 111) that promotes academic skill-building, professional development, and campus engagement while using peer mentors as role models for best practices. The ARISE program helps develop academic study skills and creates opportunities for career and curricular exploration in students who often arrive to campus without the exposure and resources that most students have available. In conjunction with these support programs, the College and Department actively monitor student progress at the beginning, middle, and end points of the semester and proactively reaches out to students whose instructors indicate they are struggling. The overall annual operating budget to support these college-level support programs is approximately \$670,000, with the financial resources allocated to support recruitment, retention, programming, and assessment efforts.

Equity in access to educational opportunities is supported by alternative points of entry for students transferring into the institution and program. The Engineering Pathways program offers students interested in beginning their college education at a partner community college a streamlined transfer experience and guaranteed admission to The Grainger College of Engineering upon successful completion of program requirements. As a best practice, the program utilizes a cohort-based model and supports students with an array of services including academic advising, tutoring, and mentoring; orientations and events; opportunities for major exploration and professional development; early engagement with Grainger Engineering and the University of Illinois; and an eight-week summer transition program (GearUP) designed to reduce transfer shock, shorten time to degree completion, and increase post-transfer retention. Preliminary data indicates that of the 230 transfer students that entered the College of Engineering between summer or fall terms of 2019 and 2020, 64 percent of the GearUP participants graduated within two years as compared to only 36 percent of Pathways students who did not participate in GearUP and 23 percent of non-Engineering Pathways participants. The Engineering Pathways program works in close collaboration with community college partners on funding and access initiatives such as the Bridges into Engineering and Computer Science summer experience offered at Wilbur Wright College, which focuses on increasing the number of underrepresented students entering engineering and computer science through math preparation for calculus. The cost savings for students who pursue admission via Engineering Pathways is substantial, providing increased access to engineering degree programs. Enrollment of all qualified students attending partner community colleges is encouraged but the Engineering Pathways program places emphasis on the recruitment and retention of Illinois residents from historically underrepresented race and ethnic groups, women,

individuals from low-income and or first-generation households, and veterans. Fifty-three students are expected to transfer through Pathways in the Fall 2022 cohort, 64 percent of which are considered underrepresented in engineering: 26 percent underrepresented racial or ethnic minority, 13 percent women, 4 percent veteran, 21 percent first-generation student or low socioeconomic status.

Various avenues of financial assistance exist at the campus, college, and department level to support recruitment and retention of students from underrepresented and underserved backgrounds. At the institutional level, if a student is an Illinois resident whose family makes \$67,100 or less, they may be eligible for the Illinois Commitment financial aid package, which covers the cost of tuition and campus fees. Thirty percent of incoming students received Illinois Commitment in 2020-2021 and over half of the recipients were from underrepresented minority groups. Additionally, the President's Award Program awarded \$21,893,800 in Academic Year 2020-2021 to students in historically underrepresented groups who have demonstrated outstanding academic achievement. Within the College, great care is taken to ensure that there is an equitable distribution of scholarship offers for first-year and continuing student scholarships. Some scholarships are required to be given to students from specific groups based on the donor's intentions; however, many more scholarships are provided to women and other underrepresented groups of students beyond those with specific donor requirements. The 2021-2022 scholarship distributions for continuing students included 51.1 percent women, 73.9 percent Illinois residents, 15.9 percent underrepresented students, and 17.6 percent first generation students. For the 2022-2023 academic recruiting year, approximately 487 first-year students were offered scholarships, and of those 50.8 percent went to women, 66.8 percent went to Illinois residents, 22.8 percent went to students in underrepresented minority groups, and 19.4 percent went to first generation students.

The University and College offer high-impact practices and pre-professional experiences to support student retention and success including internship, research, and global programs. Engineering Career Services within The Grainger College of Engineering hosts several opportunities for students to engage in career development, exploration, and experiences. City Scholars offers students the opportunity to participate in a semester-long study and work program in Chicago where they gain valuable work experience, build their network, and are compensated for 20 hours of work per week while they continue to take coursework required for their degree. Currently, the program serves other engineering majors, but this opportunity will be integrated into the Neural Engineering program with a specific focus on faculty engaging Chicago industry contacts to support industry diversity pipeline efforts. First and Second year students are encouraged to participate in weTREKS, which is a program designed to explore different industries via in-person and virtual job shadow days with industry partners. The International Programs in Engineering (IPENG) facilitates semester, summer, short term and virtual global experiences for undergraduate students. IPENG works intentionally to support under-represented students in study abroad through partnering with the Grainger First Year Experiences (GFX) program on a series of short-term opportunities as well as ARISE and MEP to provide a short-term study abroad experience and scholarships to support students' international travel. The College also offers a suite of global classrooms or collaborative online international learning (COIL), which use international project-based learning to bring teams of students from Grainger to partner with students at universities abroad. Students are paired up with their overseas peers to work on a project for five to eight weeks. Not all students are able to study abroad, and virtual experiences provide accessible global experiences to students who cannot travel. Illinois Scholars Undergraduate Research (ISUR) Program is a college of engineering wide program that facilitates two-semester, structured, mentored research experiences for undergraduate students, especially students from underrepresented groups. ISUR scholars receive research scholarships and travel support to present their research at conferences.

The proposed program will also address Goal 2, Sustainability, *to build a stronger financial future for individuals and institutions by finding ways to reduce the financial burden of education on students and their families.* In 2020-2021, the University provided over \$86 million in need-based scholarships and grants and almost \$70 million in talent and merit-based scholarships to undergraduates. UIUC's Illinois Commitment financial aid package is an initiative that makes education more affordable for undergraduates by providing full funding for tuition and fees for up to four years for all qualified in-state students. The Grainger College of Engineering will also extend eligibility for the Engineering Visionary Scholarship to students in the Bachelor of Science in Neural Engineering to attract students, ensure a diverse and talented class, and help reduce the burden of debt. The proposed program will be more affordable than comparable institutions in Illinois. Tuition is projected to cost \$40,000 less than Northwestern University, and at least \$30,000 less than Illinois Institute of Technology.

The proposed degree program will contribute to Goal 3, Growth, *to increase talent and innovation to drive economic growth.* During its development, the program engaged with representative businesses and industries including a federal agency, two neuro-tech startup companies, and a large company focusing on neuroimaging technologies that are expected to be employers of program graduates. Feedback from these partners will ensure that students in the program are afforded opportunities to gain industry experience and contribute to the growing neuro-tech industry sector in the state and across the country. The degree seeks to provide a rigorous and focused training at the intersection of neuroscience and engineering fundamentals. The Bachelor of Science in Neural Engineering will be distinguished by attributes that are not available together in any individual degree program in the nation. Large-scale basic research efforts are currently underway, supported by the National Institutes of Health BRAIN Initiative and Human Connectome Project, as well as the European Union Human Brain Project, while new companies such as Neuralink are inspiring innovations from the next generation of STEM trainees. Graduates will be in high demand in research laboratories and industry. Students will have the opportunity to participate in neural engineering research via independent study credit or summer research internships. Similarly, students will be able to pursue industrial internships and be afforded the opportunity to engage with industry through the Neural Engineering Senior Design course. Graduates will have the opportunity to be on the cutting edge of advances in neural engineering such as restoring mobility to individuals with paralysis, relieving symptoms of movement disorders, reducing chronic pain, restoring the sense of hearing, and providing sensory perception to individuals with sensory deficits.

Comparable Programs in Illinois

There are no known existing programs in the country that offer a Bachelor of Science in Neural Engineering or Neuroengineering. While neuroscience and bioengineering programs are available at UIUC and other neighboring state institutions, none offer a similar program as the proposed Neural Engineering program. Thus, this program would be the first of its kind in the state and nation.

Mission and Objectives

1050.30(a)(1): A) The objectives of the unit of instruction, research or public service are consistent with the mission of the college or university. B) The objectives of the unit of instruction, research or public service are consistent with what the unit title implies.

The program is consistent with the purpose, goals, objectives, and mission of the University.

The requested degree title reflects the programs objectives and curriculum.

Curriculum and Assessment

1050.30(b)(1) [applicable only to units of instruction]: A) The caliber and content of the curriculum must assure that the objectives of the unit of instruction will be achieved. B) The breadth and depth of the curriculum must be consistent with what the title of the unit of instruction implies. C) The admission and graduation requirements for the unit of instruction must be consistent with the stated objectives of the unit of instruction. D) Institutions must show the capacity to develop, deliver and support academic programs. Procedures and policies that will assure the effective design, conduct and evaluation of the degree programs under the academic control of the institution must be developed. Assessment plans must demonstrate that the institution has identified clear and appropriate program and student learning goals and has defined appropriate outcomes. Appropriate data must be collected and may be requested by the Board to show the level of student learning that has occurred as a result of participation in the institution's programs of study.

1050.30(a)(2): The design, conduct and evaluation of the unit of instruction, research or public service are under the direct and continuous control of the sponsoring institution's established processes for academic planning and quality maintenance.

Admission Requirements

Applicants interested in the Bachelor of Science in Neural Engineering program must meet requirements commensurate with standards of The Grainger College of Engineering.

Recommended high school course requirements for admission are four years of the following:

- English
- Mathematics
- Laboratory science
- Social sciences
- Language other than English
- Electives

Admission requirements for freshmen include meeting admission requirements of the University, application fee, self-reported academic record, official standardized test scores, and English proficiency. Students originating outside of The Grainger College of Engineering who entered UIUC as first-time freshmen will be required to participate in the pre-engineering program to be reviewed for transfer to Neural Engineering. These students are required to demonstrate interest in the program by:

- Earning grades of B or better in introductory courses such as CHEM 102, 103; MATH 221, 231; PHYS 211; and MCB 150.
- Maintain a cumulative GPA of 3.0 or higher
- Successfully complete the Inter-College or Inter-Department transfer application

Admissions through the recently adopted Common Application (Common App) is handled at the University level, while recruitment and retention activities are undertaken collaboratively between the College and each academic program to increase diverse talent in Illinois. Significant effort has gone into recruiting students from underrepresented backgrounds which includes public

outreach and engagement in high schools as well as programs such as summer camps and high school research experiences aimed at overcoming opportunity gaps. Another point of entry is through the Engineering Pathways program which allows students to complete two years at a partner community college and transfer with guaranteed admission to The Grainger College of Engineering upon successful completion of program requirements.

Curriculum

The Bachelor of Science in Neural Engineering is a 128-credit-hour program that includes 40 hours of upper-division coursework and aligns with requirements of the Accreditation Board of Engineering and Technology (ABET). The program will be distinguished by 1) an introduction to and an immersion in fundamentals of neuroscience, 2) integrated skill development in electrical and imaging systems, molecular and cellular engineering, biological interfacing, and computational data sciences, and 3) coursework framed around the application of design principles to solve modern problems in basic neuroscience to inform applications that improve health and well-being. The curriculum will provide rigorous and focused training at the intersection of neuroscience and engineering where principles are applied to the design of technologies to repair and enhance the function of the nervous system. Students will complete a culminating capstone course that takes them through identification of a problem, prototyping solutions, testing, and solution analysis for real world problems focusing on end-user value and benefit. Other categories of requirements for the degree are:

- Introduction to neural engineering – 2 hours
- Foundational math and science – 34 hours
- Neural engineering technical core – 55 hours
- Neural engineering elective coursework – 9 hours
- General education coursework – 18 hours
- University composition – 4 hours
- Free elective credit – 6 hours

The College has targeted support programs designed to assist students from underrepresented backgrounds in their transition to the University and engage them through proactive and comprehensive advising, tutoring, academic skill building, learning communities, mentoring, and career and professional development. The Engineering Pathways transfer program uses a cohort-based model and built in supports. Although not required for the program, students have opportunities to participate in internships and experiences in a variety of lengths and formats of short-term, semester, summer, and virtual global experiences. Illinois Scholars Undergraduate Research (ISUR) Program is a college of engineering wide program that facilitates two-semester, structured, mentored research experiences for undergraduate students, especially students from underrepresented groups. Financial support is available to ensure students have the opportunity to participate in such experiences.

Assessment of Student Learning

The University of Illinois Urbana-Champaign has established processes to measure and analyze student learning outcomes data. Direct measures include homework assignments, exams, projects, lab reports, and poster displays. Examples of works that demonstrate desired student outcomes will be collected from all Neural Engineering core course offerings. Indirect measures of student learning outcomes include the following campus and departmental surveys: Chancellor's

Senior Survey, Neural Engineering Student Satisfaction and Climate Survey, Neural Engineering Senior Exit Satisfaction with Program Services Survey.

Support services exist throughout the University, College, and Department to support student learning. Student progress is actively monitored at several designated points through the semester through grade checks and advising appointments. Appropriate and timely interventions are used to help students stay on track and receive wrap-around support for emerging needs. Undergraduate research has been used as a recruitment and retention tool for students from underrepresented groups and is assessed through end-of-semester evaluations from scholars and their mentors. Also, the department proactively reaches out to students whose instructors indicate they are struggling and connects them to appropriate resources to help them be successful.

Program Assessment

Program evaluation will involve the Neural Engineering Program Committee and Program Director. Assessment results will be used to refine the program to better prepare students for future employment and professional development. The following metrics will aid in program evaluation:

- Enrollment trends
- Instructor evaluations
- Course evaluations
- Senior survey results
- Satisfaction survey results
- Graduate school acceptance rates
- Job placement rates
- Progress toward diversity, equity, and inclusion goals

Once all data are collected, the student example data are analyzed according to the rubric by the Neural Engineering Program Committee for the specific outcome and level of achievement on the desired question or assignment will be tabulated. The data will be presented to the faculty at the annual faculty retreat for discussion of levels of attainment and recommendations will be made for changing or keeping the current measurement tools. Data analysis and action items will be presented in a self-study report. To continuously improve the program and student learning, data will be collected and evaluated every three years, allowing for the opportunity to make and assess changes in program curriculum, advising processes, and the assessment process itself.

The University of Illinois Urbana-Champaign has identified goals and strategies to increase the retention, four-year and six-year graduation rates for all students, including closing the gap for underrepresented minority students. Progress is monitored through the collection of data, external and internal reviews, and reports from committees. Measures of success include monitoring enrollment and retention numbers, program assessments, direct assessments of student learning, end-of-semester evaluations, and a tracking system for program participants. UIUC and The Grainger College of Engineering also offer several key support services to ensure equitable access and facilitate student success in the proposed program.

Facilities (space, equipment, instructional materials)

1050.30(a)(4): A) Facilities, equipment and instructional resources (e.g., laboratory supplies and equipment, instructional materials, computational equipment) necessary to support the high quality

academic work in the unit of instruction, research or public service are available and maintained. B) Clinical sites necessary to meet the objectives of the unit of instruction, research or public service. C) Library holdings and acquisitions, owned or contracted for by the institution, that are necessary to support high quality instruction and scholarship in the unit of instruction, research and public service, are conveniently available and accessible, and can be maintained.

Existing facilities are sufficient for implementing the proposed program. The University possesses appropriate library resources with access to online databases, books, journal holdings, and other electronic resources, to support teaching and scholarly work.

Faculty and Staff

1050.30(a)(3): A) The academic preparation and experience of faculty and staff ensure that the objectives of the unit of instruction, research or public service are met. B) The academic preparation and experience of faculty and staff, as evidenced by level of degrees held, professional experience in the field of study and demonstrated knowledge of the field, ensure that they are able to fulfill their academic responsibilities. At a minimum, faculty shall have a degree from an institution accredited by a U.S. Department of Education and/or Council for Higher Education Accreditation recognized accrediting body or a degree from another country evaluated for U.S. equivalency in the discipline they will teach or for which they will develop curricula at least one level above that of the courses being taught or developed. C) The involvement of faculty in the unit of instruction, research or public service is sufficient to cover the various fields of knowledge encompassed by the unit, to sustain scholarship appropriate to the unit, and to assure curricular continuity and consistency in student evaluation. E) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, that are directly assigned to the unit of instruction, research or public service, have the educational background and experience necessary to carry out their assigned responsibilities.

The University has identified institutional policies that ensure faculty and staff hired possess the training, credentials, and other related qualifications to provide instruction at the institution. Faculty teaching in the proposed program will have the appropriate qualifications. A formal faculty evaluation process is in place.

The University has strategies in place to attract and retain diverse faculty, staff and administrators including women, individuals with disabilities, veterans, persons of color, and members of other underrepresented groups. The university supports recruitment and retention of diverse faculty, staff and administrators. The Grainger College of Engineering Diversity Committee is made up of faculty, students, and academic professionals that advise the Dean and college and departmental leadership on programs for recruiting underrepresented students, hiring practices, strategic planning, and ways of fostering a more inclusive climate within the college. The Department of Bioengineering has faculty representation on this committee, as well as its own Diversity, Equity and Inclusion (DEI) committee. The Department of Bioengineering recruits diverse faculty by advertising in multiple diverse sources and leveraging campus incentives to attract diverse candidates. Every search committee has a designated diversity advocate, all search members undergo diversity training in advance of the applicant review and the department's DEI committee is included in both the review of the job posting and the applicant pool. Resources are provided to support and retain faculty including weekly interactive seminars to discuss instructional design, research-based teaching strategies, and innovative assessment techniques. Faculty in the program are assigned mentors and encouraged to participate in programs across campus designed to ensure student success. The Institute for Inclusion, Diversity, Equity and Access (IDEA) in The Grainger College of Engineering supports scholarship, innovation, collaboration, and leadership in

the areas of inclusion, diversity, equity, and access at all levels: faculty, staff, students, and K-12 outreach/public engagement. The Institute offers anti-racism resources including webinars, blogs, reading materials, action items, talks, and more. Recently, the promotion and tenure process has been updated to explicitly include diversity, equity, and inclusion work. With this additional campus-level emphasis on DEI work, it is anticipated that faculty in the program are going to be better supported and incentivized to put in the time and effort in creating, participating in, and leading programming to support students, particularly those from underrepresented groups.

Fiscal and Personnel Resources

1050.30(a)(5): A) The financial commitments to support the unit of instruction, research or public service are sufficient to ensure that the faculty and staff and support services necessary to offer the unit of instruction, research or public service can be acquired and maintained. B) Projections of revenues necessary to support the unit of instruction, research or public service are based on supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

The University has adequate faculty, staff, and other instructional resources to administer the proposed program. The Department of Bioengineering intends to hire four additional tenure track faculty or two teaching track faculty, or some combination thereof to meet the needs of the new program and support the anticipated growth of existing degree programs within the department. For the first two years, the department will leverage existing staff to support the administrative needs of the program. By year three, using program revenue, a program coordinator will be hired to manage day-to-day aspects of the program, advising and student services.

Accreditation and Licensure

1050.30(b)(3)[applicable only to units of instruction]: Appropriate steps shall be taken to assure that professional accreditation needed for licensure or entry into a profession as specified in the objectives of the unit of instruction is maintained or will be granted in a reasonable period of time.

No specialized accreditation or licensure is required. Accreditation Board of Engineering and Technology (ABET) accreditation will ultimately be sought for this program following the graduation of the first cohort of students.

Program Information

1050.30(b)(2)[applicable only to units of instruction]: A) The information which the institution provides for students and the public shall include the following: i) An accurate description of the unit of instruction, including its objectives, length, and residency requirements if any; ii) Schedule of tuition, fees, and all other charges and expenses necessary for completion of the unit of instruction, cancellation and refund policies; iii) Student rights and responsibilities; iv) A statement regarding the transferability of college credits, including the fact that the decision to accept transfer credits is determined by the receiving institutions; v) A statement as to how the institution will advise students on the nature of the transfer process, including the importance of consulting with institutions to which the student may seek to transfer; vi) Evidence of arrangements for the transfer of courses or credits or both to institutional counterparts, when these arrangements exist; these arrangements are also known as articulation agreements; vii) A statement of the institution's most recent graduation rates and the number of graduates and enrollments as provided by the institution to the Integrated Postsecondary Education Data System (IPEDS) and any submission of data to satisfy Board reporting requirements; and viii)

Other material facts concerning the institution and the unit of instruction as are likely to affect the decision of the student to enroll. B) The information listed in subsection (b)(2)(A) shall be available to prospective students prior to enrollment and shall be included in the institution's catalog of programs.

Detailed information about the proposed program, including description of the admission policies, university policies, tuition, fees, and curriculum are provided in the proposal and will be published on the University's website.

Staff Conclusion

The staff concludes that the Bachelor of Science in Neural Engineering proposed by the University of Illinois Urbana-Champaign meets the criteria to implement the Board of Higher Education Act (110 ILCS 205/et.seq.) as set forth in 23 Illinois Administrative Code, Ch. II, Section 1050.30, and the Illinois Board of Higher Education policies pertaining to assessment and accreditation or licensure.