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

| Submitted for: | Action. | | |
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| Summary: | This item requests approval of six degree programs at four public universities. | | |
| Action Requested: | That the Illinois Board of Higher Education approve the following: | | |
| Eastern Illinois UniversityMaster of Arts in Teaching - Secondary Teaching in the Prair | | | |
| | Illinois State University Master of Public Health in the Central Region Master of Science in Marketing Analytics in the Central Region | | |
| | Southern Illinois University Edwardsville Bachelor of Science in Surveying and Geomatics in the Southwestern Region | | |
| | University of Illinois Urbana-Champaign Bachelor of Science in Business + Data Science in the Prairie Region Bachelor of Science in Environmental 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 oncampus 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 A Thriving Illinois: Higher Education Pathways to Equity, Sustainability, and Growth, 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

Eastern Illinois University

Eastern Illinois University (EIU or University) requests authorization to offer a Master of Arts in Teaching (MAT) – Secondary Teaching in the Prairie Region. The 33-credit-hour online program will provide an accessible, efficient route to teacher licensure for candidates who possess a qualifying undergraduate or graduate degree. The format is conducive to place-bound and nontraditional candidates who would not be able to complete a traditional, on-campus program. The full-year residency enables candidates to select unpaid, paid, or third-party funded placements in their local communities. Completion of the program leads to an Illinois Professional Educator License in various grade spans, depending on the specific content area completed. 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 an equity plan that involves 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. Programs and offices across campus are designed to reduce barriers and intentionally connect students with resources and experiences necessary to thrive at EIU. These programs are designed to facilitate successful student engagement and retention through mentoring, community building, advising, supplemental instruction and academic support. Lastly, both EIU and the Department of Teaching, Learning and Foundations, where this program will be housed, offer high-impact practices to support student retention and success including an intensive teaching residency and involvement in teaching-related student organizations.

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



Illinois State University

Master of Public Health in the Central Region

Illinois State University (ISU or the University) is seeking authorization to offer a Master of Public Health in the Central Region. The 42- semester credit-hour program will prepare students to develop essential public health skills in epidemiology, biostatistics, environmental health, health behavior, health policy, and public health leadership. Students will also have an opportunity to study important health issues from diverse disciplinary perspectives such as nursing, geography, economics, sociology, and business. Graduates of the program will be prepared to enter different employment settings, including local, state, or national public health agencies; local, state, or national voluntary health or non-governmental organizations; and local centers with a health-related focus, including mental health clinic, drug education center and community centers. 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 an equity plan that involves closing gaps in who enrolls, persists, and completes degrees in the field. Embedded strategies exist within the proposed program's curriculum and academic support framework to promote student success. For example, the program will implement high impact co-curricular learning experiences outside of the classroom, including civic engagement, leadership and professional development, multicultural and global perspectives learning. The Department employs inclusive teaching by implementing a curriculum that is innovative, experiential and industry-informed; embedding individualized student experiences through implementing a variety of high impact practices; and providing flexibility in curricular pathways for students. The proposed MPH program will not require the Graduate Record Examination (GRE) allowing for a more equitable review of program applicants.

To attract underrepresented students into the program, the Department of Health Sciences will leverage established networks with minority affinity groups, employers like state and local health departments, hospitals, community non-profits, and to minority professional groups such as The Black Caucus of Health Workers, Society for Public Health Educators, Historically Black Colleges and Universities (HBCU), The Consortium of African American Public Health Programs, Hispanic-Serving Health Professions Schools (HSHPS), and Association of Minority Health Professions.

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

Illinois State University

Master of Science in Marketing Analytics in the Central Region

Illinois State University (ISU or the University) is seeking authorization to offer a Master of Science in Marketing Analytics in the Central Region. The 36-hour Marketing Analytics master's degree is an expansion of the current 12-hour Business Analytics Graduate Certificate Program that has been offered by the Department of Marketing since 2019. The program targets professionals seeking to advance their career and enhance their contribution to the business enterprise by improving their proficiency in data analytics as well as undergraduates who seek greater breadth and depth of analytics training a master's program offers to be better able to compete in the analytics job market. The Marketing Analytics Master's degree emphasizes the quantitative and analytical side of marketing managerial decision-making and provides breadth



of coverage to include advanced data management and other business analytics foundations. The program will prepare students to develop essential data-driven analytical and technical skills in marketing analytics as marketing positions continue to evolve into a technical role within an organization. The program requires an internship and thesis, both of which give students opportunities to interact with businesses and gain practical learning experience. Nine hours of the curriculum are devoted to experiential learning via internships and thesis wherein skills and competencies developed in the program are applied to practical, meaningful business problems. 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 an equity plan that involves 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, the program will implement high-impact, co-curricular learning experiences outside of the classroom, including civic engagement, leadership and professional development, multicultural and learning. The program will target recruitment efforts towards underrepresented minority and women affinity groups at major local employers (e.g., State Farm, Country Financial and Caterpillar), and towards local chapters of minority professionals such as the 100 Black Men, Alpha Kappa Alpha Sorority, Delta Sigma Theta Sorority, and the Alpha Phi Alpha Fraternity. In addition, Marketing Analytics faculty will work in an advising role to help ensure the success of students as they progress through the program. and professional development, multicultural and global perspectives learning. The program will target recruitment efforts towards underrepresented minority and women affinity groups at major local employers (e.g., State Farm, COUNTRY Financial and Caterpillar), and towards local chapters of minority professionals such as the 100 Black Men, Alpha Kappa Alpha Sorority, Delta Sigma Theta Sorority, and the Alpha Phi Alpha Fraternity. In addition, Marketing Analytics faculty will work in an advising role to help ensure the success of students as they progress through the program.

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

Southern Illinois University Edwardsville

Southern Illinois University Edwardsville (SIUE or University) requests authorization to offer a Bachelor of Science in Surveying and Geomatics in the Southwestern Region. The program will be administered through the Department of Construction in the School of Engineering. The 127-credit hour program provides the knowledge and skills necessary for entering the field and to be licensed or certified professionals, as well as complete a minor in business. The surveying courses were approved by the Illinois Department of Financial and Professional Regulation and aligns with the State of Illinois Land Surveying Licensure requirements. Students will be eligible to sit for licensure examinations in Illinois and the surrounding states of Missouri, Iowa, Indiana, and Kentucky. Upon completion of the degree, graduates will be prepared for surveying careers in land, construction, hydrographic, route, mine, forestry, mapping, engineer, and geodetic in both public and private sectors.

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. SIUE has instituted a campus wide initiative to enhance campus support systems that are designed to improve retention and engagement of underserved and underrepresented students. Existing and new comprehensive



supports include advising, academic monitoring, and tutoring, while fostering a sense of belonging among students in the program. The University and School offer high-impact practices and preprofessional experiences to support student retention and success, including research and internship opportunities. Additionally, the program will leverage support from industry partners and advisory board members to ensure standards are realized for the direct productive placement of students within the Illinois workforce. 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 D.

University of Illinois Urbana-Champaign

The University of Illinois Urbana-Champaign (UIUC or University) requests authorization to offer a Bachelor of Science in Business + Data Science in the Prairie Region. The 124-credit hour program incorporates a strong foundation in data science, training in the foundations of business, and a specialization in an area of business administration along with a capstone discovery experience. The Department of Business Administration will offer coursework and advising in four areas of specialization (Information Systems, International Business, Management, Operations Management) that the students will choose from. The Departments of Computer Science, Mathematics, Statistics, and the iSchool offer a core framework of courses and advising in data science; and all three departments in the Gies College of Business provide the coursework, experiential learning, and advising that integrate those data science courses within the core disciplines of business. Graduates will be prepared to bridge the gap between the technical and business teams as well as continued study. The University has sufficient library, technology, staff, and financial resources in place to support the program.

The University has laid out an equity plan that involves 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. Programs and offices across campus are designed to reduce barriers and intentionally connect students with resources and experiences necessary to thrive at UIUC. These programs are designed to facilitate successful student engagement and retention through mentoring, advising, and academic support. Lastly, UIUC and Gies College of Business offer high-impact practices to support student retention and success built into the curriculum, in addition to outside classroom experiences involving research and hands-on opportunities to solve real world problems and involvement in business-related student organizations.

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

University of Illinois Urbana-Champaign

The University of Illinois Urbana-Champaign (UIUC or University) requests authorization to offer a Bachelor of Science in Environmental Engineering in the Prairie Region. The 128-credit-hour program has the following concentrations that students will chose as their primary focus: Public Health Engineering; One Water; Energy and Environmental Sustainability; Climate and Environmental Sustainability; and Water Systems and Sustainability. The program has been designed to ensure that students have a strong foundation in engineering economics, mathematics, probability and statistics, fluid mechanics and hydraulics, environmental chemistry, surface water



resources and hydrology, water and wastewater, air quality and control, and energy and the environment that will enable them to sit for the Fundamentals of Engineering Exam FE if they choose to do so. Graduates of the program will be positioned to pursue professional degree programs in engineering as well as diverse programs related to environmental policy, public health, and the natural sciences. The graduates will also be equally prepared to enter industry as environmental or water resources engineers. 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 fourweek intensive summer bridge experience, incoming freshman from historically underserved populations and low-sending counties 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 F.

The staff recommends adoption of the following resolutions:

The Illinois Board of Higher Education hereby grants to Eastern Illinois University authorization to grant the Master of Arts in Teaching - Secondary Teaching 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.

The Illinois Board of Higher Education hereby grants to Illinois State University authorization to grant the Master of Public Health in the Central 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 Illinois State University authorization to grant the Master of Science in Marketing Analytics in the Central 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 Southern Illinois University Edwardsville authorization to grant the Bachelor of Science in Surveying and Geomatics 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 Urbana-Champaign authorization to grant the Bachelor of Science in Business + Data Science 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.

The Illinois Board of Higher Education hereby grants to University of Illinois Urbana-Champaign authorization to grant the Bachelor of Science in Environmental 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.



Eastern Illinois University

Proposed Degree Title in the Region of Authorization: Master of Arts in Secondary Teaching in the Prairie Region

| Projected Enrollments and Degrees: | | | | |
|------------------------------------|------------|-----------------|--|--|
| First Year | Fifth Year | Degrees Awarded | | |
| Enrollment | Enrollment | Fifth Year | | |
| 20 | 40 | 40 | | |

Background

Eastern Illinois University (EIU or University) is seeking authorization to offer a Master of Arts in Teaching - Secondary Teaching in the Prairie Region to expand options for nontraditional students to enter the teaching workforce. EIU was involved in the state's one-year-plus alternative certification program but discontinued the program when the Illinois State Board of Education (ISBE) required a two-year internship and interest waned from prospective students. In the interim, EIU has offered other options to support individuals with undergraduate or graduate degrees in specific content areas to enter the field of education. These include: (1) an on-campus path in which candidates may complete a full preparation program as non-degree post-baccalaureate candidates which has typically taken two-three years to complete; and (2) an accelerated cohort program since 2020 where candidates with a qualifying undergraduate or graduate degree may complete a 12-month hybrid program leading to secondary-level licensure in specific content areas. The proposed MAT program builds upon these approaches to offer a 12-month online cohort program with a full-time, full-year residency requirement that will culminate in a graduate degree as well as a Professional Educators License through the Illinois State Board of Education. The program will be administered by the Department of Teaching, Learning and Foundations located in the College of Education, and will incorporate coursework from that department as well as the Department of Special Education, the content area programs (i.e., English, Mathematics, History, World Languages and Cultures, Career and Technical Education), and the Student Teaching Office.

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

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 rapidly growing shortage of public school teachers, particularly in rural areas and across all secondary education content areas, is well-documented. The declining number of high school graduates in Illinois, along with the perceived challenges of the teaching profession, have contributed to a long-term, statewide decline in the number of traditional undergraduates pursuing teacher education as a major. For several years, regional superintendents, district superintendents, and school principals have encouraged universities to develop creative approaches to teacher education that will leverage the willingness of nontraditional candidates including older students, career changers, and place-bound individuals to enter the teacher workforce provided that an



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.

efficient, effective pathway could be provided. The teacher shortage in Illinois is projected to keep increasing for the next several years, and this proposed Master of Arts in Teaching – Secondary Teaching program has the potential to provide an efficient and accessible pathway to licensure through the offerings of a well-established, long-term preparer of teachers in the state.

According to the Bureau of Labor Statistics (BLS), employment of high school teachers is projected to grow eight percent and middle school teachers is projected to grow seven percent from 2020 to 2030, about as fast as the average for all occupations. In May 2021, the median annual wage for high school teachers was \$61,820 where the lowest ten percent earned less than \$46,090, and the highest ten percent earned more than \$100,310. Middle school teacher wages were \$61,320 per year with the lowest ten percent earning less than \$45,510, and the highest ten percent earning more than \$99,470.

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

The proposed Master of Arts in Teaching – Secondary Teaching degree supports Goal 1, Equity of A Thriving Illinois to close the equity gaps for students who have historically been left behind. Eastern Illinois University's current racial and ethnic student profile is comprised of 13.1 percent African American, 13.5 percent Hispanic, 3.2 percent Asian, 2.1 percent from two or more races, and 0.3 percent Native American. Additionally, a broad and diverse set of students are represented across all socioeconomic groups including 46 percent Pell-Eligible students and 47 percent MAP recipients. EIU continues to focus efforts on recruiting and retaining a diverse student body including those who have been historically underrepresented and underserved.

The Illinois State Board of Education (ISBE) Diversity Pipeline Initiative is designed to increase the diversity of teachers in Illinois. Beginning fall 2020-2023, the Colleges of Education are charged with setting enrollment targets for recruiting, retaining, and promoting completion of teacher education candidates who are underrepresented. ElU's target is to have 45 candidates who are culturally diverse in the pipeline by Fall 2024. Given the Master of Arts in Teaching program is online with a broad reach, the program can serve as a vehicle toward meeting that enrollment target. In parallel, ISBE has issued Culturally Responsive Teaching and Leading Standards which are grounded in research-based practices for closing equity and achievement gaps. ElU's educator preparation programs are implementing these standards to help aspiring educators build the skills needed to create inclusive environments and engage students who come from different cultures and backgrounds. Students with exceptionalities are also indirectly included in these standards and practices.

Over the past decade, EIU has expanded institutional approaches for monitoring student retention and graduation data disaggregated by race and ethnicity, as well as other factors. The University has developed a set of key performance indicators including first-time full-time (FTFT) cohort and new transfer demographics, as well as demographics by student type, socioeconomic status, and standing/progression. Data are reviewed and assessed each year by the Committee on Retention Efforts (CORE) and shared with internal and external shareholders. In 2021, the University expanded its progress-monitoring capacities by investing in Tableau software to move beyond simple indicators towards a dashboard that permits data-brushing. The first project was analyzing drop, withdraw, and fail (DWF) rates of classes and sections by race, ethnicity, gender, and major to determine what barriers might exist relative to the recruitment and retention of minority preservice K-12 educators and beyond. All members of CORE, Enrollment Management, and the Provost's Advisory Council have access to the dashboard and utilize it to inform offerings and orientation registration strategies. The University also assesses the impact of high impact practices



on student success and participates in the National Survey of Student Engagement every three years to assess EIU's student performance relative to peers. Based on the data and a presidential charge to focus on student success for all learners, the Division of Academic Affairs initiated a student success taskforce that made a range of policy, practice, and structural recommendations that have been addressed over the past few years, including creation of an improved early alert system and streamlined, one-stop, online student services website.

The University has longstanding and new recruitment and retention efforts designed to support students from underrepresented backgrounds. ElU's Access Granted has been a successful recruitment and retention program for first generation minority students for over 15 years. The College of Health and Human Services, where the proposed program will be housed, annually covers expenses associated with two major recruitment events in the Chicago area where students will be actively recruited to the proposed program and where the prospects for diversifying this major are especially strong. Gateway is a longstanding provisional admission program that provides intensive academic support and mentoring for students in their first year on campus and as needed after that. ElU has expanded its degree completion programs and wrap around support to serve adults through online learning opportunities. Eight undergraduate programs are offered online as well as 20 graduate degree programs to meet the needs of adult learners. The mechanisms for establishing positive and supporting relationships will be structured differently for the online Master of Arts in Teaching - Secondary Teaching. Candidates in the program will receive targeted support and wraparound services through these initiatives.

Eastern Illinois University promotes social integration and connectedness among students by investing in and supporting student organizations. Candidates enrolled in the Master of Arts in Teaching program will be expected to participate in the student chapters of their respective professional organizations. Opportunities for participation will be created by establishing communication mechanisms for candidates to participate virtually with their peers via Zoom or similar technologies. Advisors, course instructors, and the residency supervisor will serve as a mentor to guide candidates and assist them in navigating and meeting the program requirements. The Associate Dean will cooperatively work with the Department Chair, Residency Supervisor, and the candidates to assure that field placements are consistent with residency requirements and the age range of licensure. Information and opportunities to participate in relevant professional conferences will be offered. The Dean of the College of Education has funds that can be used to assist candidates with professional organization memberships and conference registration fees. Faculty teaching in the on-line program will promote the importance of research by encouraging candidates to participate in the existing Graduate Student Research Fair and by allowing candidates to virtually present their research. Further, with the number of graduate on-line programs at EIU, discussions of offering an alternative Graduate Student Research Fair to support the research efforts of candidates across campus have been taking place.

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. Eastern Illinois University's historical value proposition has been to provide Illinois residents with a high-quality education at an affordable price point. For that reason, EIU continues to be the lowest cost of attendance of all four-year public institutions and has specifically developed scholarship programs that simultaneously support academic excellence and access. EIU has intentionally designed several need-based aid programs that enable students to leverage financial aid and merit-based programs effectively and efficiently. A variety of full and partial coverage scholarship programs exist for students and their families. In addition to the scholarship programs, EIU's admissions team has also created online resources to support students of color. The



University has created a web resource for minority students that aggregates outside scholarship resources. Similar online resources have been developed for undocumented students, veterans, and children of veterans. The Financial Aid Office's streamlined procedures are beneficial to nontraditional students making career changes and needing to maximize financial resources during the accelerated program experience. Specific to the Master of Arts in Teaching program, EIU is entering the fourth year of a partnership with the Golden Apple Foundation's "Accelerators" program. Participants in this program receive a stipend that covers the cost of attendance plus some living expenses. They are placed in a school of need for their residency and receive assistance in placement for their first professional placement. Throughout the program and the beginning career years, Golden Apple provides additional mentoring to promote program and early-career success.

The proposed degree program will contribute to Goal 3, Growth, to increase talent and innovation to drive economic growth. EIU regularly fields inquiries from nontraditional students who have earned an undergraduate or graduate degree and are interested in becoming educators. The largest barriers to pursuing this career path are time to completion and the requirement to attend classes on campus. Only about 20-25 percent of those that inquire can enroll, as a result. Offering this one-year, online program will enable candidates to complete the program efficiently and without having to leave their current living situation.

EIU consulted with high school principals, school district leaders, and Regional Offices of Education to both design the proposed program and to develop recruitment strategies. Additionally, the Illinois State Board of Education was advised during the planning process to ensure the proposed program will meet state teacher licensure requirements. Formal approval for the program will be sought from ISBE prior to recruitment and enrollment of students. The Golden Apple Foundation will be partnering with EIU to recruit and support students in the program, including a generous stipend that covers all program costs and which includes a condition to teach in Illinois for four years after program completion, thus incentivizing candidates to remain in Illinois.

Academic coursework for this program will be offered in an online format and will enable candidates to remain in their local communities while completing the program, and thus be available for residencies and employment in high-need, hard-to-staff secondary school settings. The program includes a full-time, full-year residency component in which candidates will work in a secondary school setting under the guidance of cooperating teachers, mentors, school administrators, and EIU residency coordinators. The residency is twice the length of the traditional student teaching semester, and will incorporate not only practice teaching, but required experiences that will allow candidates to develop a well-grounded understanding of their placement site in addition to the many factors that impact the effectiveness of schooling, including involvement in all aspects of school life and connections with the local community. Enhancing the educational outcomes of Illinois secondary school students is key to developing the future post-secondary and career prospects of adolescents and young adults, which in turn is key to the increased health of the State as a whole.

Comparable Programs in Illinois

Currently, there are 11 master's degree programs in secondary education at two public universities and nine independent institutions. All programs are concentrated in the Chicago area so this online secondary education master's program would be the first of its kind at a public university in downstate Illinois. The proposed Master of Arts in Teaching – Secondary Teaching distinguishes itself as a one-year online program catering to place-bound and nontraditional candidates who would not be able to complete a traditional, on-campus program.



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

A candidate interested in the MAT program must first be admitted to the university via the Graduate School. Applicants interested in the Master of Arts in Teaching – Secondary Teaching program must meet the following requirements:

- Possess an undergraduate or graduate degree in a specified content area aligned with the licensure areas offered in the program;
- Have a 2.65 undergraduate or 3.00 graduate grade point average; and
- Pass a criminal history background check through the university's background check vendor.

The Graduate School and the MAT program do not require a standardized graduate exam. Elimination of the exam requirement is in response to the discrepancies in performance among underrepresented groups and the lack of predictive validity in determining candidate success. The primary candidates for recruitment and admission are individuals that have completed a baccalaureate degree or other advanced degree in English, Mathematics, History, a World Language (French, German, or Spanish), Business, and Computer Technology, Family Consumer Sciences, or the equivalent. Individuals with degrees and minors in other recognized secondary disciplines or allied professions with at least 32 of content specific course work will also be considered provided they have successfully completed all state-required content tests. Admitted students must pass the applicable teacher licensure content test through the Illinois Licensure Testing System by the end of the program's second semester to continue to the second semester of residency.



The recruitment of graduate students is conducted by the Graduate School and the Marketing and Communication unit. Efforts used to recruit graduate students includes the sharing of marketing differentials that promote the quality of ElU's graduate programs through a variety of mediums such as texts, emails, social media, phone conversations, and in person meetings. Recruitment strategies for the Master of Arts in Teaching Program will be conducted by the Teaching, Learning, and Foundations department. Strategies for recruitment will include mediums such as flyers, emails, texts, social media platforms, bus signs, and personal contact in addition to partnerships with K-12 schools, Regional Offices of Education, career and job fairs, and alumni. ElU shared planned outreach efforts to recruit underrepresented and underserved students. Specific targeted areas of outreach for ethnic and racial diversity will include Champaign-Urbana, Danville, Decatur, Peoria, and the Metro-East St. Louis area. Recruitment efforts will also include potential teachers who are first generation and from rural areas in Southern Illinois surrounding Mt. Vernon, Marion, Carbondale, and further south to Cairo.

Wrap-around services for candidates enrolled in the Master of Arts in Teaching Program are designed to address the individual candidate needs to improve retention and program completion. The graduate advisor will lead the orientation and provide academic advisement for the new students. Online students will have the opportunity to meet virtually with Writing Center Consultants and access online library service and databases. Student support and accommodation are readily available for online students and include Disability Services, Testing Services, Technology Services and Counseling Services. Monthly seminars will be held for the cohort in conjunction with EIU and the Golden Apple Foundation to provide additional support and training relevant not only to the residency setting but also for early-career induction and success.

Curriculum

The Master of Arts in Teaching – Secondary Teaching is a 33-credit-hour program that includes 18 hours of required core courses, 12 hours of teaching residency, and three hours of an elective credit course. Students will complete a two-semester teaching residency in addition to taking the required state teacher performance assessment during the second semester. Core foundational courses of the program will focus on secondary teaching methods, recognizing and addressing different learning needs, theory application, and educational psychology. The elective course provides content specific knowledge related to interest in secondary teaching.

The curriculum within the Master of Arts in Teaching program focuses on delivering evidencebased and culturally responsive pedagogy. Curricular equity is demonstrated throughout the course sequence by being intentionally conscious of how candidates' differences and backgrounds influence approaches to learning. Candidates are called upon to bring their social, cultural, economic, and geographical experiences to provide context for how they access and process learning. Based on the varying cultural contexts, faculty select and deliver curricular content in a manner that is relevant and promotes their academic success. Additionally, the program content is aligned with the ISBE Culturally Responsive Teaching and Leading Standards. These standards encourage future teachers to engage in self-reflection, get to know their students' families, connect the curriculum to students' lives, and to support student leadership as part of broader systems to close equity and achievement gaps.

The University has provided plans to assist students with their transition and provide wraparound student support. The advisor will provide an online synchronous orientation, proactive and intentional advisement, and flexible delivery of support services. The graduate advisor will lead the orientation and provide academic advisement for the new students. Online students will be able



to meet virtually with Writing Center consultants and access online library service and databases. Student support and accommodation are readily available for online students and include Disability Services, Testing Services, Technology Services and Counseling Services. Monthly seminars will be held for the cohort in conjunction with EIU and the Golden Apple Foundation to provide additional support and training relevant not only to the residency setting but also for early-career induction and success.

Assessment of Student Learning

Eastern Illinois University has established processes to measure and analyze student learning outcomes data. All educator preparation programs use three different rubrics including "Impact on P-12", "Student Teaching", and "Dispositions" to assess all candidates at program completion. Students will construct a summative program portfolio during the second semester of residency to document competency in the program's learning objectives. The following assessment data for each cohort will be collected during the last half of the second semester of residency and analyzed in relation to program learning objectives during each summer:

- Grades from course assignments and courses
- Residency supervisor evaluations
- Content test results
- Teacher performance assessment results

Support services exist throughout the University and Department to support student learning. Student progress is monitored through the semester using an alert system, grade checks, and advising appointments. Student teaching residency is a key component of the program, and students are assessed at multiple points throughout the program.

Program Assessment

Program evaluation will be conducted in a continuous fashion by the Department of Teaching, Learning and Foundations. The following metrics will be used to inform ongoing course revision and program improvement as needed:

- Recruitment, retention, and completion of candidates from diverse backgrounds;
- Student learning in coursework;
- Candidate performance during the full-year residency;
- Candidate performance on required state educator assessments;
- Job placement and employer satisfaction data; and
- Candidate feedback

Data generated from observations will be used to determine if adjustment in residency expectations and experiences is needed to improve application by candidates. Ongoing candidate feedback will be collected at multiple points during enrollment and five years after career placement. Sub-tests and components of these assessments will be correlated to program learning objectives to determine if expectations are being met and adjustments are warranted. Results will be analyzed to determine if the institution is meeting state expectations of 80 percent or higher pass rate. The analysis will be distributed to all program faculty and coordinators early in each fall semester, and at least one meeting will be conducted to discuss outcomes and make decisions about any program adjustments or the need to provide supports to program candidates. Lastly, this program will be part of the annual and periodic reviews by the Council for Accreditation of Educator Preparation (CAEP) and the Specialized Professional Associations (SPAs) for the specific



content area programs within the overall 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. As this program will be taught online, there is no need for additional physical facilities. The campus's online technology infrastructure is appropriate to support program delivery, faculty innovations, and enhance student learning. 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.

Eastern Illinois University supports faculty development through its own Faculty Development and Innovation Center (FDIC) devoted to faculty professional development activities. In addition, the University provides research release opportunities, research grant opportunities and professional travel support to enhance faculty professional development. In 2019, the University initiated a Higher Learning Commission Quality Initiative (QI) that resulted in the formulation of a campus-wide plan to diversify faculty and staff for student success. The plan is in active implementation, and the search for a Senior Diversity Officer is underway to support the actions and goals of the plan. All faculty at EIU will be encouraged to participate in the QI program, which is aimed at understanding the hiring practices utilized at the University to ensure that best practices are employed to promote a diverse workforce. EIU is in the process of updating critical internal



governing policies by redefining role, structure, and make up of search committees for faculty, administrative, and professional searches. In addition to the QI, EIU's President's Council on Diversity serves as a coordinating and critical resource for campus programming, problem solving, and innovation. The Council is complemented by the faculty-led Making Excellence Inclusive (MEI) which coordinates First Generation Study Day to recognize and celebrate first-generation students, faculty, staff, and alumni and hosts an annual campus conference for faculty, advisors, and professional staff at EIU. Over the next few years, the University will be closely monitoring hiring and retention across all demographic groups with the articulated goal to increase diversity across all employee groups and create a campus community that reflects the demography of our student community.

Eastern Illinois University's Faculty Development and Innovation Center has created a workshop on creating syllabi that enhances inclusivity. Faculty delivering on-line instruction must complete Online Course Development Institute (OCDI), Illinois Online Network's Master Online Teacher certificate or another documented and equivalent training activity before teaching program courses for the first time. Approximately \$250,000 has been set aside from the Congressional Direct Spending Grant to enhance faculty effectiveness in delivering on-line instruction. The funds will be used to provide additional training in online pedagogy and instructional design which leads to earning an On-line Teaching Certification. Although faculty are required to have OCDI training to deliver online instruction, Online Teaching Certification is not currently required but is encouraged. Open interactive faculty lab sessions will be provided to faculty to acquire or hone skills in technology being used in Illinois public schools and serve in aiding and troubleshooting for candidates who need to enhance their own skills. Faculty are also being trained in the application of the Culturally Responsive Teaching and Leading Standards mandated by the ISBE. Monitoring of training needs will be the purview of the Department of Teaching, Learning, and Foundations and the Council on Teacher Education (COTE). Faculty will be evaluated annually by peers and the Department Chair on the use of technology and additional training will be implemented as needed.

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. Faculty loads and other resources will be adjusted to meet the program's needs where appropriate. This will be achieved through increased efficiency in personnel and other resource usage in the current offerings of the departments and colleges.

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.



The proposed program will operate in alignment with existing approved and accredited teacher educator programs at EIU. These approvals, accreditations, and recognitions have had long-standing status with the Illinois State Board of Education, the Council for the Accreditation of Educator Preparation (CAEP), the National Council of Teachers of English (NCTE), the National Council of Teachers of Mathematics (NCTM), the National Council for the Social Studies (NCSS), and the American Council on the Teaching of Foreign Languages (ACTFL).

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 Arts in Teaching – Secondary Teaching proposed by Eastern Illinois University 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.



Illinois State University

Proposed Degree Title in the Region of Authorization: Master of Public Health in the Central Region

| Projected Enrollments and Degrees: | | | |
|------------------------------------|------------|-----------------|--|
| First Year | Fifth Year | Degrees Awarded | |
| Enrollment | Enrollment | Fifth Year | |
| 10 | 50 | 20 | |

Background

Illinois State University (ISU or the University) is seeking authorization to offer a Master of Public Health (MPH) in the Central Region. The Department of Health Sciences, in collaboration with several other academic units at Illinois State University worked together to develop the proposed MPH program. The program will be housed in the Department of Health Sciences but will provide opportunities for students to develop their professional competencies in academic units across campus and foster interactive collaboration with other colleges and units across the University. The MPH program will enhance students' ability to effectively address complex health problems, such as the recent global pandemic. The pandemic has brought to light long-standing health and social inequities that have resulted in increased risk of infection, severe illness, and death from COVID-19 among communities of color and under-resourced communities. Students will develop essential public health skills in epidemiology, biostatistics, environmental health, health behavior, health policy, and public health leadership. The Department of Health Sciences has a long history of preparing undergraduates in the fields of environmental health and sustainability, occupational safety, medical lab science, health informatics, public health and health promotion and education. These current undergraduate programs provide the foundation to develop and implement the MPH program.

In its proposal for the MPH program, Illinois State University has articulated a vision and plans centered on equity that focus on providing support for underrepresented students to enroll, persist, and complete their degrees. The MPH program will also enhance the mission of the College of Applied Science and Technology and Illinois State University by preparing students to enter challenging and evolving work settings that deal with essential population-based health issues. This will be accomplished in several ways including:

- Enrolling students from diverse personal, experiential, and educational backgrounds;
- Building courses that examine ecological influences on health, with a focus on health equity; and
- Featuring assignments with a focus on problem-based learning and service learning

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.



3-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 was 7.3%. 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.

Undergraduate-related data fields are not provided because the University proposes to offer a new graduate program.



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.

As the challenges posed by complex health issues from combatting a global pandemic, chronic disease, healthcare access, health equity, mental health, and so many more, the need for public health professionals continues to grow. Public health initiatives affect people and communities every day in every part of the world. MPH graduates are needed with skills and knowledge to address broad issues that can affect the health and well-being of individuals, families, communities, populations, and societies—both now, and in the future. The Bureau of Labor Statistics (BLS) projects 11 percent growth in public health careers between 2020-2030. This is particularly true for public health educators (17 percent projected growth), epidemiologists (30 percent), environmental scientists (eight percent), and statisticians (33 percent). BLS reports median annual wages for individuals working in public health education in the U.S. in 2021 at \$48,860, epidemiologists at \$78,830, environmental scientists at \$76,530, and statisticians at \$96,280. At the state level, the Illinois Department of Employment Security (IDES) projects a four percent increase in employment for medical and health services managers statewide from 2018-2028, from 14,919 individuals working in these occupations to 15,515. For community health workers, IDES projects a 2.47 percent increase from 2,308 to 2,365 statewide from 2018-2028 respectively. In addition, the need for public health professionals as evidenced by vacancies in employment continues to rise. According to the Association of Schools and Programs of Public Health (ASPPH), the deficit of public health professionals in the State of Illinois is projected to exceed 20,000. These data for both national and state-wide demand indicate continued need for programs aimed at preparing individuals to begin and remain working in public health occupations. The proposed program meets long-standing demand from undergraduate students and alumni who wish to pursue advanced education in public health at Illinois State University.

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

A Thriving Illinois strategic plan aims to address the present and future aims, needs, and requirements of higher education in Illinois through achieving a higher education ecosystem that reinforces equity, sustainability, and growth (110 ILCS 205/6) (from Ch. 144, par. 186) Sec. 6).

The proposed Master of Public Health in the Central Region program supports Goal 1, Equity of A Thriving Illinois to close the equity gaps for students who have historically been left behind. Based on extensive research and consultation, ISU has developed diversity strategies mapped to support recruitment and retention of students, faculty staff, and administrators; students' timely graduation; and post-graduation outcomes. The proposed MPH proposal is informed by strategies targeted at meeting the needs and support the success of historically underserved and underrepresented students in public health. As part of Illinois State University's commitment to equity, diversity, and inclusion, in 2019, ISU's President created a position for an Interim Assistant to the President for Diversity and Inclusion and the President's Diversity and Inclusion Advisory Council (DIAC). The council works to create an equitable path ensuring student success is obtainable and accessible for all. Under this leadership, the Comprehensive Plan to Promote Diversity, Equity, Inclusion, and Anti-Racism at Illinois State University has been developed. This plan articulates how these commitments are being operationalized across the institution, including identifying strategies the University has taken and will continue to take to increase persistence and retention of



underrepresented students; to increase and retain the number of faculty, staff, and administrators from underrepresented groups; and implement a campus-wide diversity and inclusion training plan. Through stakeholder input, DIAC has defined Equity, Diversity, Inclusion, and Access so that University stakeholders operate under the same shared definitions. In addition, ISU is also currently one of 16 institutions nationwide selected by the Association of Public and Land Grant Institutions (APLU) to participate in the Institutional Transformation Assessment (ITA) for student success and equity. The ITA is a web-based tool that helps universities understand institutional strengths and areas for improvement with the goal of building capacity to better support students on campus and develop an action plan for reaching the institution's student success goals. Participating in this process is allowing ISU to advance planning and initiatives addressing both student success and equity.

From its inception, the MPH program will operationalize the institutional commitment to equity, diversity, and inclusion by implementing the strategies identified in the Comprehensive Plan. This plan ranges from the existing partnership programs faculty and staff have with communitybased organizations and schools that serve underrepresented and underserved students, to the financial support offered to students from low-income families to a curriculum that exemplifies best practices for not only retention in public health, but also for fostering self-determination among student pursuing careers in public health. Furthermore, the program will attract a broad spectrum of students through advertising and recruiting efforts in multiple venues. In recruiting new graduate students, the master's program will reach out to minority affinity groups, employers like state and local health departments, hospitals, community non-profits, and to minority professional groups such as American Public Health Association, The Black Caucus of Health Workers, Society for Public Health Educators, Historically Black Colleges and Universities (HBCU), The Consortium of African American Public Health Programs, Hispanic-Serving Health Professions Schools (HSHPS), and Association of Minority Health Professions. In addition, the faculty and staff have established partnerships with organizations that serve underrepresented and underserved populations and are involved in professional organizations, including Illinois Public Health Association, Illinois Society for Public Health Educators, American Public Health Association, and Society for Public Health Education, which will be leveraged for marketing the program.

To aid in the retention and support of underrepresented students, the program will implement high-impact, co-curricular learning experiences outside of the classroom including civic engagement, leadership and professional development, multicultural and global perspectives learning. The Department employs inclusive teaching by implementing a curriculum that is innovative, experiential and industry-informed; embedding individualized student experiences through implementing a variety of high impact practices; and providing flexibility in curricular pathways for students

The proposed MPH program will contribute to 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. ISU's Graduate School offers financial aid support, which students in the program will benefit from, including graduate assistantships and tuition waivers that often cover two-thirds of tuition costs, based on financial need. Through established programming through the Office of Alumni Relations, alumni will also be afforded networking opportunities so that they can maintain connections with each other while also growing their own professional networks. In addition, with ISU's continued support, alumni affinity groups are strongly connected and dedicated to raising money for scholarships. The Latinx Alumni Network has fundraised and awarded nine - \$500 scholarships since establishing as an affinity network in 2014. The Black Colleagues Association has awarded 224 scholarships worth over \$273,000 since 1987. The



Association has also had a record fundraising year during the pandemic.

To further expand opportunities for recruiting diverse students, the Graduate School has recommended holistic admission processes to each program and as a result, the proposed MPH program will not require GRE, which allows working adults to easily enroll in the program and for a more equitable review of program applicants. In addition, the online nature of the program will increase access to working adults who might be interested in pursuing a graduate degree in public health but are unable to attend an in-person program, thereby reducing cost of attendance.

The proposed MPH program will also contribute to Goal 3, Growth, to increase talent and innovation to drive economic growth. The Department of Health Sciences has longstanding partnerships with industry and community partners ranging from hospital and healthcare systems, state and local health departments, and community-based organizations. The program will engage these industry leaders and community partners through a variety of ways including service learning, civic engagement, and research. These experiences provide important exposure to real world work in public health as well as future networking opportunities with professionals in the field. The interdisciplinary nature of the proposed program will provide graduates with a breadth and depth of knowledge and experience thereby enabling them to effectively meet the most pressing public health issues of our day. The program offers internship opportunities with professional learning outcomes. Students will work with the graduate coordinator to find an appropriate professional practice site with local, state, national public health agencies; local, state, or national voluntary health or non-governmental organizations; and local centers with a health-related focus, including mental health clinic, drug education center and community centers.

Comparable Programs in Illinois

Currently, about eight public and five independent institutions offer a degree in Public Health at the master's level. Of these, only three programs are offered in the Central Region. Due to the online nature of the proposed MPH program and the flexibility of its curriculum, students who live in geographic regions beyond central Illinois and even beyond state borders can enroll, effectively meeting the needs of those surrounding states listed as having critical shortages. The proposed program at ISU is not anticipated to negatively impact the existing program at the University of Illinois Urbana Champaign because of the format difference. Those who desire a faceto-face graduate program may continue to be more attracted to UIUC's program.

| Enrollment and | Degree | Award, | Fall 2020 |
|----------------|--------|--------|-----------|
|----------------|--------|--------|-----------|

| Institutions | Enrollment* | Degree Award | Region |
|------------------------------------|-------------|--------------|----------------------|
| Public | | | |
| Chicago State University | 10 | 2 | Chicago |
| Northern Illinois University | 135 | 16 | West Suburban, Fox |
| | | | Valley |
| Northeastern Illinois University | 25 | N/A | Chicago |
| University of Illinois Chicago | 345 | 130 | Central, Fox Valley, |
| | | | Chicago |
| University of Illinois Springfield | 46 | 34 | Central |
| University of Illinois Urbana | 28 | 10 | Prairie |
| Champaign | | | |
| Southern Illinois University | 14 | 12 | Southern |
| Carbondale | | | |
| Southern Illinois University | 21 | 0 | Southwestern |



| Edwardsville | | | |
|------------------------------|-----|-----|---------------------|
| Private | | | |
| Benedictine University | 335 | 262 | West Suburban, |
| | | | Central, Fox Valley |
| DePaul University | 63 | 21 | Chicago |
| Chamberlain University | 269 | 63 | West Suburban |
| Loyola University of Chicago | 74 | 27 | Chicago |
| Northwestern University | 58 | 35 | North Suburban |

Source: IBHE Program Inventory

Note: Enrollment per program includes total enrollments in all regions

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 Public Health must meet requirements established by ISU's Graduate School and the Department of Health Sciences, including obtaining a baccalaureate degree, having a grade point average of 2.8 or higher on a 4.0 scale for the last 60 semester hours of undergraduate work and the approval of the academic department. Other requirements include submission of a statement of purpose, a resume, and letters of recommendation. The proposed MPH program will not require the GRE, allowing for a more equitable review of program applicants.

To attract underrepresented students into the program, the Department of Health Sciences will leverage established network with minority affinity groups, employers like state and local



health departments, hospitals, community non-profits, and to minority professional groups such as The Black Caucus of Health Workers, Society for Public Health Educators, Historically Black Colleges and Universities (HBCU), The Consortium of African American Public Health Programs, Hispanic-Serving Health Professions Schools (HSHPS), and Association of Minority Health Professions. As the program is being developed, a complete set of metrics has been identified to be collected and monitored to measure progress towards attaining set Equity, Diversity, and Inclusion goals. Similarly, qualitative measures exploring the culture and climate of the program; student, faculty, and staff's sense of belonging will be utilized to ensure practical and engaging student experiences and the success of underrepresented and underserved students.

Curriculum

The proposed Master of Public Health will prepare students to develop essential public health skills in epidemiology, biostatistics, environmental health, health behavior, health policy, and public health leadership. Students will also have an opportunity to study important health issues from diverse disciplinary perspectives such as nursing, geography, economics, sociology, and business. The two-year MPH program will be a fully online degree program but will have the flexibility to accommodate in-person electives for new students and those enrolled in the department's new, accelerated (4+1) master's degree program who wish to take some classes on campus. Individual courses may also be delivered in a hybrid or HyFlex format, accommodating both online and in-person learners. The curriculum is aligned with national standards and competencies from the Council on Education for Public Health (CEPH), including strategies to accomplish Evidence-based Approaches to Public Health, Public Health and Health Care Systems, Planning and Management to Promote Health, Policy in Public Health, Leadership, Communication, Interprofessional Practice, and Systems Thinking. The proposed MPH degree requires nine core courses (27 semester credit hours), three elective courses (nine semester credit hours), and a professional practice or thesis project (six semester credit hours), totaling 42 semester credit hours. Students will also complete an internship or a thesis project. The internship and thesis are intended to measure application of core knowledge areas of public health in real situations, as well as proficiency in the core competencies.

The interdisciplinary nature of the proposed program complements the mission of the University by "fostering a small college atmosphere with large university opportunities," as well as allowing the program to align with the goals of A Thriving Illinois. The MPH will provide opportunities for students to develop their professional competencies in academic units across campus and encourage collaboration with faculty, students, and staff to elevate the student experience and inspire future health leaders through learning, research and service that is collaborative, innovative, and ultimately, transformative. The Department of Health Sciences has a long history of preparing undergraduates in the fields of environmental health and sustainability, occupational safety, medical lab science, health informatics, public health and health promotion and education, which provides the foundation to develop an MPH program. To achieve a diverse student population, students from a variety of disciplines will be admitted, take a significant number of courses together and have access to courses focused on a variety of topics critical to public health. In addition, the MPH will create new opportunities for existing programs, including the opportunity for faculty to explore research activities and grants from federal agencies such as the U.S. Centers for Disease Control and Prevention. Upon completion of the proposed program and the internship, students will be able to pursue careers in professional practice site with local, state, national public health agencies; local, state, or national voluntary health or non-governmental organizations; and local centers with a health-related focus, including mental health clinic, drug education center and community centers.



Assessment of Student Learning

Illinois State University has established processes to measure and analyze student learning outcomes data. Direct measures include exams, projects, assessments of learning via capstone courses, internships, portfolios, theses, dissertations, professional licensure and certificate exams. Indirect measures of student learning outcomes include student course evaluations, professional practice sites supervisors' evaluations, alumni and employer surveys.

The embedded individualized student experiences through implementing a variety of high impact practices and providing flexibility in curricular pathways will ensure that underrepresented and underserved students receive support to be successful in the program.

Program Assessment

Program evaluation will be conducted on a continuous basis to allow the department and program leadership as well as faculty to identify interventions that will support all students' learning, advisement, and accelerated time to degree as well as evaluate whether identified solutions and implemented interventions are reaching their intended audiences and goals. With assistance from the Office of Policy, Research, and Planning Analysis and University Assessment Services, institutional leadership and the department will track both overall and disaggregated student enrollment in the programs to monitor progress towards achieving set student enrollment and retention goals. To ensure continuous improvement of program outcomes, the Department of Health Sciences faculty uses statistical reports of program inputs, productivity, and outputs relating to admissions, enrollment, student and faculty demographics, and degrees conferred from the Office of Planning, Research, and Policy Analysis at the University in evaluating the program and identifying areas for improvement. Upon implementation of the program, MPH faculty members will review academic program profiles annually and will report their findings in an annual assessment update submitted to University Assessment Services. Annual program and student learning outcomes data will be evaluated in a progress report submitted after the first three years of program delivery. After that report, regular program review processes will occur on an 8-year cycle (with the first scheduled 5 years after the 3-year progress report). These processes allow 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 Department of Health Sciences will enhance the learning environment by renovating one existing classroom space into a HyFlex learning space capable of accommodating synchronous online instruction and recording of MPH lectures and discussion. 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. ISU has instituted several new practices, including the implementation of the Faculty Diversity Enhancement Program targeted at recruiting, retaining, and supporting diverse faculty and additional strategies and processes are currently under review and in development. If approved, the Department of Health Sciences will apply for Faculty Diversity Enhancement Program funds to recruit and retain faculty who promote equity, diversity, inclusion, and access through their research, teaching, service, and mentoring. The Department of Health Sciences will provide appropriate training for faculty to be more engaged in identifying and working with underrepresented, underserved, and academically at-risk students. In addition, ISU's Office of the Provost continues to support a Joint Hire Program which helps the growth of tenuretrack faculty affiliated with and contributing to Interdisciplinary Studies (IDS) programs in order to diversify the curriculum and better serve students. Searches for faculty in the proposed MPH program may benefit from the Joint Hire Program as these faculty members will hold a major appointment in the Department, where locus of tenure will reside, with a minor appointment in an IDS program.

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 MPH program. Currently the department has 17 full time faculty members, 13 of whom have expertise to teach in the MPH program. These resources are adequate to launch a new degree program. When fully implemented one new, full-time, tenure-track faculty member will be hired to provide instruction for students in the program. Any new faculty hires will be supported from the university's Academic Impact Fund.



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.

The institution will seek accreditation through the Council on Education for Public Health (CEPH). The Department of Health Sciences understands this accreditation process and requirement as their existing Bachelor of Science in Health Promotion and Education program is CEPH accredited.

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 Public Health proposed by Illinois State University 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.



Illinois State University

Proposed Center Title in the Region of Authorization: Master of Science in Marketing Analytics in the Central Region

| Projected Enrollments and Degrees: | | | | |
|------------------------------------|------------|------------|--|--|
| First Year Fifth Year Degrees Awa | | | | |
| Enrollment | Enrollment | Fifth Year | | |
| 25 | 40 | 30 | | |

Background

Illinois State University (ISU or the University) is seeking authorization to offer a Master of Science in Marketing Analytics in the Central Region. The proposed program will be administered by the Department of Marketing and is an expansion of the current 12-hour Business Analytics Graduate Certificate Program that has been offered by the department since 2019. The master's degree program builds on existing Master of Business Administration (MBA) courses and adds new topics. The program targets professionals seeking to advance their career and enhance their contribution to the business enterprise by improving their proficiency in data analytics as well as undergraduates who seek greater breadth and depth of analytics training a master's program offers to be better able to compete in the analytics job market. The Marketing Analytics Master's degree emphasizes the quantitative and analytical side of marketing managerial decision-making and provides breadth of coverage to include advanced data management and other business analytics foundations. The program will train students in the use of business analytics to power data-driven, customer-centric decisions.

In its proposal for the Marketing Analytics program, Illinois State University has articulated a vision and plans centered on equity that focus on providing support for underrepresented students to enroll, persist, and complete their degrees. The Marketing Analytics program is consistent with the University's focus on expanding opportunities for degree completion and career building in STEM related fields. The Department of Marketing will ensure equitable access to the program through recruitment methods consistent with the Thriving Illinois Equity Strategy to promote the degree to underrepresented minority groups as a means to re-skill, up-skill, or change career paths. The program will target recruitment efforts towards underrepresented minority and women affinity groups at major local employers (e.g., State Farm, COUNTRY Financial and Caterpillar), and towards local chapters of minority professionals such as the 100 Black Men, Alpha Kappa Alpha Sorority, Delta Sigma Theta Sorority, and the Alpha Phi Alpha Fraternity. In addition, Marketing Analytics faculty will work in an advising role to help ensure the success of students as they progress through the program.

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.



3-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 was 7.3%. 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.

Undergraduate-related data fields are not provided because the University proposes to offer a new graduate program.

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 Marketing Analytics program will help meet the national and state demand for business analytics in STEM-related fields. As the COVID-19 pandemic stalls



global economic recovery and poses challenges in the economy, the need for data-driven approaches in the management of business enterprise continues to rise. According to the U.S. Bureau of Labor Statistics, the expected growth rate of jobs between 2021-2031 for Market Research Analysts is 19 percent. As of 2021 there were 792,500 jobs in the U.S. in that category, and 150,300 jobs are expected to be added by 2031. In addition, a job search of marketing analytics on popular job search platform, Indeed.com, yields further evidence of demand for data analytics professionals with marketing analytics background. There were over 1,000 data analyst jobs in Illinois listed on Indeed.com.

To further gauge interest in the program, ISU conducted a survey of undergraduate marketing students, and found 65.5 percent of respondents indicated moderate to strong interest in a 4+1 Master's degree program by which a student can earn a master's degree in Marketing/Business Analytics by staying in school one more year in addition to the four-year bachelor's program. Analysis conducted by Pearson, also shows that marketing is continuing to evolve into a data-driven career, with fastest growing skills involving technology.

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

A Thriving Illinois strategic plan aims to address the present and future aims, needs, and requirements of higher education in Illinois through achieving a higher education ecosystem that reinforces equity, sustainability, and growth (110 ILCS 205/6) (from Ch. 144, par. 186) Sec. 6).

The proposed Marketing Analytics program in the Central Region supports Goal 1, Equity of A Thriving Illinois to close the equity gaps for students who have historically been left behind. Based on extensive research and consultation, ISU has developed purposeful diversity strategies mapped to support recruitment and retention of students, faculty staff, and administrators; students' timely graduation; and post-graduation outcomes. The proposed Marketing Analytics proposal is informed by strategies targeted at meeting the needs and support the success of historically underserved and underrepresented students in marketing analytics. As part of Illinois State's commitment to equity, diversity, and inclusion, in 2019, ISU's President created a position for an Interim Assistant to the President for Diversity and Inclusion and the President's Diversity and Inclusion Advisory Council (DIAC). The council works to create an equitable path ensuring student success is obtainable and accessible for all. Under this leadership, the Comprehensive Plan to Promote Diversity, Equity, Inclusion, and Anti-Racism at Illinois State University has been developed. This plan articulates how these commitments are being operationalized across the institution, including identifying strategies the University has taken and will continue to take to increase persistence and retention of underrepresented students; to increase and retain the number of faculty, staff, and administrators from underrepresented groups; and implement a campus-wide diversity and inclusion training plan. Through stakeholder input, DIAC has defined Equity, Diversity, Inclusion, and Access so that University stakeholders operate under the same shared definitions. In addition, ISU is also currently one of 16 institutions nationwide selected by the Association of Public and Land Grant Institutions (APLU) to participate in the Institutional Transformation Assessment (ITA) for student success and equity. The ITA is a web-based tool that helps universities understand institutional strengths and areas for improvement with the goal of building capacity to better support students on campus and develop an action plan for reaching the institution's student success goals. Participating in this process is allowing Illinois State to advance planning and initiatives addressing both student success and equity.

The University has a strong infrastructure with many research and service centers that are well-positioned to cultivate a thriving Marketing Analytics program that promotes experiential



learning and inclusiveness. The Center for Civic Engagement (CCE) supports the University's core value of civic engagement and is well-positioned to provide numerous opportunities for marketing students to partner with communities to develop solutions to social problems. CCE coordinates curricular and co-curricular experiences that give students the chance to collaborate with local, national, and global partners to support just and sustainable community development. Through a variety of interdisciplinary opportunities, CCE provides students with real world experiences such as internships and community-engaged coursework that prepare them to act as ethical leaders in a rapidly changing global economy, where the ability for marketing analytics to create person-centered design solutions will be critical. With the established network and institutional practice to support underserved and underrepresented students, students in the proposed program will have the opportunity to connect with existing student affinity groups such as, Association of Latinx American Students, Black Student Union, Black Graduate Student Association (BGSA), Asian Pacific American Coalition, and PRIDE.

From its inception, the Marketing Analytics program will operationalize the institutional commitment to equity, diversity, and inclusion by implementing the strategies identified in the Comprehensive Plan. This plan ranges from the existing partnership programs faculty and staff have with community-based organizations and schools that serve underrepresented and underserved students, to the financial support offered to students from low-income families to a curriculum that exemplifies best practices for not only retention in marketing analytics, but also for fostering self-determination among students pursuing careers in marketing analytics. Furthermore, the program will attract a broad spectrum of students through advertising and recruiting efforts in multiple venues, including minority and women affinity groups at major local employers (e.g., State Farm, COUNTRY Financial and Caterpillar), and local chapters of minority professionals such as the 100 Black Men, Alpha Kappa Alpha Sorority, Delta Sigma Theta Sorority, and the Alpha Phi Alpha Fraternity. Marketing Analytics faculty will work in an advising role to help ensure the success of students as they progress through the program.

To aid in the retention and support of underrepresented students, the program will implement high impact co-curricular learning experiences outside of the classroom, including civic engagement, leadership and <u>professional development</u>, <u>multicultural</u> and <u>global perspectives</u> <u>learning</u>. The Department of Marketing employs inclusive teaching by implementing a curriculum that is innovative, experiential and industry-informed; embedding individualized student experiences through implementing a variety of high impact practices; and providing flexibility in curricular pathways for students and professional development, multicultural and global perspectives learning. The Department of Marketing employs inclusive teaching by implementing a curriculum that is innovative, experiential and industry-informed; embedding individualized student experiences through implementing a variety of high impact practices; and providing flexibility in curriculum that is innovative, experiential and industry-informed; embedding individualized student experiences through implementing a variety of high impact practices; and providing flexibility in curricular pathways for students.

The proposed Marketing Analytics program will contribute to 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. ISU's Graduate School offers financial aid support, which students in the program will benefit from, including tuition waivers that often cover two-thirds of tuition costs, based on financial need. Other scholarships offered through the Graduate School that students in the program are eligible for include the McNair Book Scholarship Program (which provides aid for book purchases for students from underrepresented segments of society) and American Association of University Women fellowship and grant opportunities. Through established programming through the Office of Alumni Relations, alumni will also be afforded networking opportunities so that they can maintain connections with each other while also growing their own



professional networks. In addition, with ISU's support, alumni affinity groups are strongly connected and dedicated to raising money for scholarships. The Latinx Alumni Network has fundraised and awarded nine - \$500 scholarships since establishing as an affinity network in 2014. The Black Colleagues Association has awarded 224 scholarships worth over \$273,000 since 1987. The Association has also had a record fundraising year during the pandemic.

The proposed Marketing Analytics program will also contribute to Goal 3, Growth, to increase talent and innovation to drive economic growth. The master's degree program was discussed with and is supported by ISU's Department of Marketing Advisory Board, which consists of members from COUNTRY Financial, Caterpillar, Nielsen, Enterprise Holdings, Northwestern Mutual, Jewel-Osco Food Stores, US Foods, Sherwin Williams, and other major Illinois employers. ISU will also leverage the partnership with these industry leaders to serve as future networking opportunities for graduates in the program. With its emphasis on business and marketing analytics, the program opens pathways to high paying jobs in STEM fields. The program requires an internship and thesis, both of which give students opportunities to interact with businesses and gain practical learning experience. Students will work with the graduate coordinator as well as alumni network and the department and college partner firms to find placements. Those experiences better prepare students for success upon graduation as they begin or advance in their marketing analytics career.

Comparable Programs in Illinois

Currently, only one independent institution – Illinois Institute of Technology (IIT) offers a similar Master of Science in Marketing Analytics program. Aurora University offers a related Master of Science in Digital Marketing and Analytics. The IIT in-person program serves the Chicago metropolitan area. The proposed Illinois State University master's meets the demand for graduate marketing analytics training in the central Illinois marketplace among professionals who want to advance their analytics education in a flexible, hybrid format while continuing their full-time employment.

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 Marketing Analytics must meet requirements established by ISU's Graduate School and the Department of Marketing, including obtaining a baccalaureate degree, having a grade point average of 2.8 or higher on a 4.0 scale for the last 60 semester hours of undergraduate work and the approval of the academic department. Other requirements include submission of a GMAT score (which students can petition to waive), undergraduate training in business and/or have been employed at least one year in a business enterprise, statement of purpose, a resume, and letters of recommendation.

To attract underrepresented students into the program, the Department of Marketing will leverage established network with minority affinity groups, employers like at local employers like State Farm, COUNTRY Financial and Caterpillar, and to local minority professional groups such as Delta Sigma Theta and Alpha Kappa Alpha sororities, the Alpha Phi Alpha fraternity and 100 Black Men. As the program is being developed, a complete set of metrics has been identified to be collected and monitored to measure progress towards attaining these Equity, Diversity, and Inclusion goals. Similarly, qualitative measures exploring the culture and climate of the program student, faculty, and staff's sense of belonging will be utilized to ensure practical and engaging student experiences and the success of underrepresented and underserved students.

Curriculum

The proposed Master of Science in Marketing Analytics will prepare students to develop essential data-driven, analytical and technical skills in marketing analytics as marketing positions continue to evolve into a technical role within an organization. The 36-hour Marketing Analytics master's degree is an expansion of the current 12-hour Business Analytics Graduate Certificate Program that has been offered by the Department of Marketing since 2019. The master's degree program builds on existing MBA courses and adds new topics. Courses are delivered in a hybrid format, with one class per week meeting in-person for 90 minutes and the balance of weekly course work conducted online asynchronously.

To support the success of underrepresented and underserved students, the program will employ specific sets of strategies targeted at achieving and maintaining a diverse student population, including:

- Creating a student-centered institutional culture and offering targeted support services to close opportunity gaps for students who have been historically underserved and underrepresented in the fields of marketing and marketing analytics;
- Achieving inclusive teaching excellence by implementing a curriculum that is innovative, experiential, and industry-informed;
- Embedding individualized student experiences through implementing a variety of highimpact practices;
- Providing flexibility in curricular pathways;



- Engaging with industry partners, both local and beyond, to align curriculum and applied student experiences so that graduates are effectively prepared to enter the workforce; and
- Recruiting and retaining faculty, staff, and administrators from historically underserved and underrepresented groups

The program requires an internship and thesis, both of which give students opportunities to interact with businesses and gain practical learning experience. Nine hours of the curriculum are devoted to experiential learning via internships and thesis wherein skills and competencies developed in the program are applied to practical, meaningful business problems. Those experiences better prepare students for success upon graduation as they begin or advance in their marketing analytics career.

Assessment of Student Learning

Illinois State University has established processes to measure and analyze student learning outcomes data. Direct measures include exams, projects, assessments of learning via internships, portfolios, and theses. Indirect measures of student learning outcomes include student course evaluations, alumni and employer surveys.

The embedded individualized student experiences through implementing a variety of high impact practices and providing flexibility in curricular pathways will ensure that underrepresented and underserved students receive support to be successful in the program.

Program Assessment

Program evaluation will be conducted on a continuous basis to allow the department and program leadership, and faculty to identify interventions that will support all students' learning, advisement, and accelerated time to degree as well as evaluate whether identified solutions and implemented interventions are reaching their intended audiences and goals. With assistance from the Office of Policy, Research, and Planning Analysis and University Assessment Services, institutional leadership and the department will track both overall and disaggregated student enrollment in the program to monitor progress towards achieving set student enrollment and retention goals. To ensure continuous improvement of program outcomes, the Department of Marketing faculty uses statistical reports of program inputs, productivity, and outputs relating to admissions, enrollment, student and faculty demographics, and degrees conferred from the Office of Planning, Research, and Policy Analysis at the University in evaluating the program and identifying areas for improvement. Upon implementation of the program, the Master of Science in Marketing Analytics faculty members will review academic program profiles annually and will report their findings in an annual assessment update submitted to University Assessment Services. Program and student learning outcomes data collected will be evaluated every three years in a progress report, 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 Marketing Analytics master's degree program will be offered by the Department of Marketing and will be taught in the State Farm Hall of Business. 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. ISU has instituted several new practices, including the implementation of the Faculty Diversity Enhancement Program targeted at recruiting, retaining, and supporting diverse faculty and additional strategies and processes are currently under review and in development.

Four tenure-track faculty and one non-tenure track faculty currently teach in the undergraduate marketing program. Upon approval of the program, the department will hire one additional marketing analytics faculty member within the first five years of operation and will place high priority on recruiting a highly qualified new faculty member from underserved and under-resourced populations to further diversify faculty. Once hired, the faculty will be provided with research grant funding through ISU's Faculty Diversity Enhancement Program and will be supported for steady progress and successful attainment of promotion and tenure by the sixth anniversary of the faculty's hiring. In addition, the Department of Marketing will provide appropriate training for faculty to be engaged in identifying and working with underrepresented students 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 proposed Master of Science in Marketing Analytics program. Currently, the department has four tenure-track faculty and one non-tenure track faculty. These resources are adequate to launch a new degree program. When fully implemented one new, full-time, tenure-track faculty member will be hired to provide instruction for students in the 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 is required for the program. However, the College of Business where this program will be housed is accredited by the Association to Advance Collegiate Schools of Business (AACSB). The program will be evaluated through the AACSB accreditation review process.

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 Science in Marketing Analytics proposed by Illinois State University 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.



Southern Illinois University Edwardsville

Proposed Degree Title in the Region of Authorization: Bachelor of Science in Surveying and Geomatics in the Southwestern Region

| Projected Enrollments and Degrees: | | |
|------------------------------------|------------|-----------------|
| First Year | Fifth Year | Degrees Awarded |
| Enrollment | Enrollment | Fifth Year |
| 5 | 27 | 12 |

Background

Southern Illinois University Edwardsville (SIUE or University) is seeking authorization to offer a Bachelor of Science (BS) in Surveying and Geomatics in the Southwestern Region. The program will be administered through the Department of Construction in the School of Engineering. The department currently offers a Bachelor of Science in Construction Management with a land surveying specialization consisting of 24 hours of surveying courses, including 18 hours of core courses and six hours of electives which were approved by the Illinois Department of Financial and Professional Regulation and aligns with the State of Illinois Land Surveying Licensure requirements. All required courses for the proposed program already exist and are regularly offered by the Department of Construction, the Department of Civil Engineering, and the Department of Geography in the College of Arts and Sciences. The proposed program will prepare individuals for a career in geomatics and the land surveying profession and related fields. The curriculum involves hands-on laboratory work with conventional and advanced survey systems and includes coursework in math, engineering, science, and general business and accounting. Graduates will be prepared for surveying careers in land, construction, hydrographic, route, mine, forestry, mapping, engineer, and geodetic in both public and private sectors.

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: 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 2019-20 | Southern Illinois University Edwardsville | Comparable Illinois Institutions |
| | 27 | 24.5 |



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.



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 program is needed to fill the demand for surveyors in Illinois and to meet existing state license requirements. Presently there is no other institution in the State of Illinois that provides a Bachelor of Science in Surveying. Parkland College provides a two-year program in surveying, and Northern Illinois University provides survey coursework within its geography degree program. Currently, the Department of Construction at SIUE offers a land surveying specialization. The survey



fundamentals class averages 40 students per semester, and the upper division class averages ten to 15 students with five to ten graduates expected each year in the next five years. It is estimated that once the Bachelor of Science in Surveying and Geomatics is established, there will be an increase in the number of graduates by five to ten per year. Several local surveying companies including Clayton Engineering Company, Inc., Seiler Instrument & Mfg. Co., Inc., Heneghan and Associates, P.C., and Juneau Associates, Inc., P.C. have written to the Department of Construction or School of Engineering in support of a surveying program. These companies all agree that there is a growing need for graduates with degrees in surveying and geomatics to contribute to the regional, national, and global economy in critical ways.

The U.S. Bureau for Labor Statistics (BLS) identified surveying as one of 15 occupations that offer the "freedom to work outdoors, connections to the natural world, and a chance to answer ageold questions about our planet and solar system." According to the BLS occupational projections, employment of surveyors is projected to grow two percent from 2020 to 2030. Despite this limited employment growth projection, about 4,000 openings for surveyors are projected each year, on average, over the decade. The 2021 median annual salary for surveyors was \$61,600 whereas the lowest ten percent earned less than \$37,360, and the highest ten percent earned more than \$101,240. Additionally, a program development and review analysis predicts the expected growth in jobs for surveying occupations is greater than six percent and the labor market demand in the Midwest Region is expected to increase by 4.6 percent. The majority of those in surveying occupations are over the age of 45, indicating that as these individuals retire, there will be an increasing demand for new surveyors to take their place.

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

The proposed BS in Surveying and Geomatics supports Goal 1, Equity of A Thriving Illinois to close the equity gaps for students who have historically been left behind. SIUE's continuous commitment to closing equity gaps for underrepresented students 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 (NSF), Science, 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 proposed program will improve access to highguality postsecondary education and further work to close equity gaps by employing the following strategies to recruit a diverse population of students to the proposed program and the institution:

- Engage with the students in summer work camps and programs targeted at students within urbans areas such as TRiO programs and events;
- Visit urban high schools within the state explaining the long-term benefit associated with a professional degree in the field of surveying and geomatics;
- Strengthen relationship with urban charter schools;
- Participate with high school students in community service events within urban communities; and



• Encourage student recruitment at area community colleges with a well-structured curriculum that can be easily articulated as students transfer.

SIUE has instituted 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 of Engineering 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.

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, there is a land surveying club which does community development work in the Metro East area. The Department has also leveraged the relationship with Illinois Professional Land Surveyors Association which has a strong involvement in activities of the student organization. The Department will work with the Industry Advisory Board to coordinate networking opportunities and competitive events. With the land surveying specialization, the Department has established a sense of connection and belonging for the students which will only be enhanced by the creation of this program major. Adding the BS in Surveying and Geomatics will increase student enrollment, participation in events, and improve the overall experience for current and future students with this career interest.

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.

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. SIUE has been recognized by Forbes magazine as one of "America's Top Colleges" for return on investment, success after graduation, low student debt and high student satisfaction. SIUE offers in-state tuition to every student from all 50 states, plus more than \$148 million in scholarships and financial aid is awarded annually. 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. Because there are no bachelor's programs that exist in Illinois, the availability of the proposed program at SIUE will provide an attractive option for students who wish to remain in Illinois to complete this degree. SIUE believes finances should not be a barrier to getting a high-quality education. The Office of Student Financial Aid is available to help students navigate the many grant, scholarship, loan, student employment, and assistantship opportunities available to help make paying for college as affordable as possible. Additionally, SIUE takes pride in maintaining affordability to all departments. 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 scholarships 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 of Engineering is exploring opportunities with this company to establish support programs and scholarships for underrepresented students. The School already awards up to \$10,000 per year in scholarships to students either enrolled as construction management majors with a surveying specialization, civil engineering majors, and others who are taking surveying coursework required to apply for state licensure exams. The Department of Construction provides financial aid to students in the form of scholarships and grants for the existing surveying specialization. The surveying programs have strong industry support, and the Department has started working with partners to increase higher level financial commitments to create more scholarship opportunities for students in the program. Once the Bachelor of Science in Surveying and Geomatics is initiated, the potential for more scholarships for both middle- and lower-income students will likely increase since companies that hire surveyors will be more likely to support a program that directly produces the employees they need.

The proposed degree program will contribute to Goal 3, Growth, to increase talent and innovation to drive economic growth. According to a poll provided by the Illinois Professional Land Surveyor's Association (IPLSA), 51 percent of all professional land surveyors in the State of Illinois are over the age of 51 years. With increasing revenue spent on infrastructure and land development, IPLSA sees a tremendous gap between the prediction of future work and the ability of the labor force to perform the work. Also, according to IPLSA, the average salaried surveyor in Illinois received a yearly pay of \$106,302 per year in 2020 and a self-employed surveyor received \$119,667 annually during the same year. The highest salary was surveyed to be



\$390,000. Current graduates within the specialization have an employment rate 100 percent after graduation with starting salaries averaging \$65,000 per year. Through existing and expanding networks, apprenticeship and internship opportunities exist, making the program affordable to all students.

The proposed program is designed to provide mentorship for each student as they develop the skills to become surveying professionals. The program builds a network of student, faculty, and industrial contacts to build a professional community for each student beginning freshman year. It will prepare a surveying network for students while in school and assist them in internship and work placement opportunities with reliable companies. The Construction Department has already started to build higher levels of commitments from industrial partners in preparation to provide aid in scholarships and grants to assist those in need. The department is in the process of raising funds through organizations such as IPLSA and the Southern Illinois Builder's Association (SIBA) for equipment. Funds have been received in the past and additional funds are garnered for the technological enhancement of the surveying equipment at the university. Students will be required to complete an internship. As the program grows, SIUE will offer high-flex teaching approaches and schedules to extend this profession to non-traditional students to provide a flexible curriculum that will accommodate full time work schedules and enable a viable career path for those interested in surveying.

The field of land surveying is broad and there are many different employment and career opportunities from governmental land management to small local firms to large international engineering and land surveying firms that cover the complete range of high-tech land surveying services. The professional surveyor of the future must be an individual on the forefront of technologic advances in electronics, robotics, drones, three-dimensional modeling, prefabrication, contracts, accounting, chemistry, physics, geomatics, and satellite data transfer. Technological advancements are not only changing how land surveying is done, but also where the work is performed and by whom. More work is performed in the office by fewer people than ever before, but that does not necessarily mean the industry is shrinking. In fact, the demand for licensed surveyors is expected to increase by 800 jobs over the next decade, according to the US Bureau of Labor Statistics. While field crews are becoming smaller, the industry continues to grow and offer career opportunities. Additionally, the shift in technology is opening the field to those who have a wider and more diverse set of interests. GPS and drones, for example, have afforded new opportunities for more experienced professionals as well. Drone operators can use drones with specialized software to calculate the volume of stockpiles of aggregate for managing project materials. The data is collected and transferred to surveyors and engineers, and they can determine exactly how much aggregate is available for future construction projects. So, while the traditional surveying concentrations such as geography, land management, and history are still required, they are being applied in new ways for students and current surveyors. Surveying students will be exposed to even more technology in school, such as Mobile 3D Mapping, robotics, artificial intelligence, and LiDAR, a form of 3D laser scanning.

Comparable Programs in Illinois

Currently, there is no bachelor's degree program in surveying and geomatics that exists in the State of Illinois. Parkland College is the only community college in Illinois that offers an Associate in Applied Science in Land Surveying. To become a licensed surveyor in Illinois, students must complete a bachelor's degree to meet the educational requirements for licensing. The nearest schools to Illinois with accredited four-year programs in surveying are Tennessee, Ohio, and Michigan. Thus, the proposed program would be the first program of its kind in the state, to address



the rapidly changing engineering, construction and technology industry and its need for highly skilled, licensed, or certified employees.

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 Bachelor of Science in Surveying and Geomatics program must meet University requirements for admission to Southern Illinois University Edwardsville. To be admitted to the program, students must:

- 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 GPA of at least 2.0 on a 4.0 scale.
- For transfer students, a minimum grade of C is required in all chemistry, computer science, mathematics, physics, and engineering science courses applied to major or minor requirements.

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. 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 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 multicampus 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 proposed program. The School of Engineering will continue to recruit students through scheduled site visits at community colleges as well as hosting students from 2+2partner schools who are interested in engineering. The Construction Department has already begun discussions with several area community colleges throughout the State of Illinois, developing articulation agreements for alternate pathways for success. The relationships exist for students beginning in the trades and articulations will be forthcoming to ease the transition from a trade career emphasis to a professional career emphasis.

Curriculum

The Bachelor of Science in Surveying and Geomatics is a 127-credit-hour program that aligns with the land surveying licensure requirements, meeting requirements to sit for examinations in Illinois and the surrounding states of Missouri, Iowa, Indiana, and Kentucky. The survey-related courses include math, engineering, science, and general business and accounting components. The surveying courses were approved by the Illinois Department of Financial and Professional Regulation and aligns with the State of Illinois Land Surveying Licensure requirements. Students will participate in hands-on laboratory work and complete a semester-long internship as well as a senior assignment. Built within the program are 21 credit hours of business courses that will provide the graduate with a minor in business. Additionally, the curriculum provides an opportunity for students to obtain a minor in construction management or geographic information systems if they apply and take the additional required courses. Categories of requirements for the degree are:

- 39 hours of general education classes
- 58 hours of surveying and geomatics core courses
- 6 hours of surveying and geomatics elective courses
- 24 hours of business minor classes associated with major

The proposed curriculum includes experiential and collaborative learning by incorporating hands on community development projects and combining the efforts of individuals from both privileged and underserved demographics in the program. Small group projects and assignments will help students form support groups that sometimes go beyond the specific assignment or project and create camaraderie among students for a sense of belonging. Students that are struggling academically will be flagged and advised by advising staff who will closely monitor progress. 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.

SIUE provides students with many avenues of high-impact, wrap around services to assist each student with their academic success. The Office of Retention and Student Success offers services such as student mentoring, academic planning, and resource management to help students meet the demands of college. Counseling Services provides short-term assistance to foster student's



psychological well-being and development. The Career Development Center incorporates career counseling and development with cooperative education and internships in a comprehensive program to prepare students to enter the world of work. Additional campus services include accommodations, open access tutoring, and testing services. Specifically for the program, the Department of Construction monitors student performance on a continual basis. Instructors notify academic advising, and the Department chair receives reports of deficiencies in student performance. Follow up is conducted with the student, the problem is assessed, and a course of action is mapped out for the student. Each semester, the Chair ensures that each student is engaged and progressing towards their learning objectives at a satisfactory pace. Department initiatives to ensure students will be successful, engaged, and retained, include mentorship utilizing peers, faculty, and advisory board members. Additionally, elevated internship and workforce placement help to reduce financial impact for students.

Assessment of Student Learning

Southern Illinois University Edwardsville has established processes to measure and analyze student learning outcomes data. Direct measures include evaluation of the exams, projects, senior assignment, and comprehensive exams. Student learning objectives are mapped to learning outcomes of the program and collected every semester. Indirect measures of student learning outcomes include course evaluations, senior exit interviews, senior, alumni, and employer surveys.

Program Assessment

An annual assessment report will be prepared by the program director. Data collected through the assessment procedure is reviewed and evaluated by program faculty to determine if any changes need to be made to the curriculum, educational practice, or any other aspects to improve the educational effectiveness. The annual performance report is submitted to the Office of Academic Innovation and Effectiveness and reviewed and approved yearly by the Committee on Assessment. The following data will be used to inform ongoing course revision and program improvement as needed:

- Recruitment, retention, and completion of students from diverse backgrounds
- Student learning outcomes assessment results
- Job placement and employment data
- Professional Licensure
- Membership in professional organizations
- Continuation of professional education

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 Department of Construction has adequate classroom, laboratory, and office space to support the new 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. Each Dean is required to complete an equity scorecard report on the progress their school or college has made toward equity goals. Equity scorecards will set representation goals, assist with monitoring departmental climate to promote an inclusive environment, and track the advancement and promotion of women and persons of color along the academic pipeline. SIUE has adopted a strategy for female faculty recruitment. Toward an Inclusive Model of Excellence (TIME) is funded by a three-year grant from NSF and the ADVANCE Program at the University. TIME seeks to increase recruitment, retention, and hiring of diverse female STEM faculty, by improving departmental climate and support for female faculty, and increasing promotion by mitigating bias in the tenure and promotion review processes. Additionally, SIUE has developed the Higher Education Recruitment Consortium (HERC) Resources Program that offers an expansive library of webinars, a toolkit developed for faculty search committee members, and other resources to assist the committees with fair and inclusive hiring practices. SOE and the Construction Department have made progress in hiring diverse faculty and continue to develop their hiring strategies. Open faculty positions are posted through diverse venues targeting underrepresented communities. Search committees include an equity advisor and training is conducted on Equity, Diversity, and Inclusion (EDI). Faculty attend orientation with built in onboarding and activities, coverage of the EDI strategic plan, and other related campus initiatives. During the first year of appointment, semester meetings are scheduled with the Dean. Training for faculty will involve 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 Surveying and Geomatics program. There is a plan for program growth with resources allocated for adding an adjunct faculty by year three, an additional instructor if enrollment reaches above 30 students as projected by year six, and another instructor would be added when enrollment reaches 70 students. Advising staff is currently adequate to provide student support and advisement. The program will be self-sustaining, and no other sources of temporary funds are being requested.

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.

The program will seek accreditation from the Accreditation Board for Engineering and Technology (ABET). ABET accredits a variety of surveying programs either under the Applied and Natural Science Accreditation Commission (ANSAC), Engineering Accreditation Commission (EAC) or the Engineering Technology Accreditation Commission (ETAC). SIUE has several existing programs accredited by ABET and is familiar with the accreditation process.

This program will prepare graduates for a profession regulated by the State of Illinois. The Illinois Land Surveyor Board of the Illinois Department of Financial and Professional Regulation (IDFPR) reviewed the proposed course curriculum for the Land Surveying Bachelor of Science program and concluded in January 2019, that the proposed course curriculum as written, would serve to satisfy the educational requirements necessary to be an Approved Land Surveying Program. Students completing the program that want to be licensed will then take the Fundamentals of Surveying exam. After completing the experience requirements for licensure, the graduate then applies to register for the Principles and Practice of Surveying exam. Once they successfully complete this exam, they can then be licensed in the State of Illinois or other states depending on that state's requirements as a Land Surveyor.

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 Surveying and Geomatics 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 Urbana-Champaign

Proposed Degree Title in the Region of Authorization: Bachelor of Science in Business + Data Science in the Prairie Region

| Projected Enrollments and Degrees: | | |
|------------------------------------|------------|-----------------|
| First Year | Fifth Year | Degrees Awarded |
| Enrollment | Enrollment | Fifth Year |
| 20 | 50 | 45 |

Background

The University of Illinois Urbana-Champaign (University or UIUC) is seeking authorization to offer a Bachelor of Science in Business + Data Science in the Prairie Region. In December 2021, the University was approved to offer four "+ Data Science" degree programs in Accountancy, Finance, Information Science, and Astronomy in the Prairie Region. This is in response to the University's 2018 Strategic Plan "The Next 150" which calls for "providing all Illinois students the opportunity to have a meaningful exposure to data science." In recognition of the interdisciplinary and outward-looking nature of data science, the University developed the "X + Data Science Majors" to offer students the opportunity to study data science while engaging with an application domain. The Departments of Computer Science, Mathematics, Statistics, the Gies College of Business, and the School of Information Sciences (iSchool) collaborated to develop a framework for the X + Data Science majors. Each X + D ata Science major builds on education and training in the field of study X together with education and training in data science. The structure of the proposed Business + Data Science program follows the four precedent "X + DS programs" that were approved by IBHE, in particular the Accountancy + DS and the Finance + DS programs from the Gies College of Business. The program will provide students focusing on the areas covered by the Department of Business Administration (e.g., entrepreneurship, information systems, international business, management, marketing, operations management, supply-chain management, and strategy) the opportunity to earn a complementary education in data science. Adding a data science component to the Business undergraduate programs provides increased employment options and better prepares students for graduate work.

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.

| Academic Year | University of Illinois Urbana-Champaign | Comparable Illinois Institutions |
|---------------|--|-------------------------------------|
| 2019-20 | 24 | 24.5 |

| Undergraduate Completions per 100 FIE | Undergraduate | Completio | ns per 10 | 0 FTE |
|---------------------------------------|---------------|-----------|-----------|-------|
|---------------------------------------|---------------|-----------|-----------|-------|

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. 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.

The rapid emergence of massive data sets has created demand for people trained in data science across most of the economy, including sectors that are of great importance in Illinois, such as agribusiness, computing, education, engineering, finance, government, insurance, marketing, medicine, supply chain management, and many more. The U.S. Bureau of Labor Statistics (BLS) groups data scientists as "15-2098 Data Scientists and Mathematical Science Occupations, All



Other." This category does not necessarily capture the full breadth and impact of data science and may lead to an underestimate of current and future demand. Even so, in a 2018 "Beyond the Numbers" article, the BLS projected 28 percent growth in data science occupations over the period 2016-2026, driven by the demand for workers who can handle big data. The projected growth is greater than the average growth rate for all occupations. The 2021 median annual salary for data scientists was \$100,910. Although there is not a specific category for data scientists in the IDES employment projections, data scientists are employed in sectors that are expected to grow in Illinois including health, management, scientific, and technical services. In the private sector, the demand for data science professionals is growing at a very rapid pace, with the number of data science job openings expected to grow by 15 to 25 percent over the next five years, depending on the job description. BLS projects "Data scientists and mathematical science occupations" as one of the top ten fastest growing occupations excluding pandemic recovery. Illinois is among the top five for states with the highest employment level in Data Scientists.

Increased demand for data science education has seen dramatic increases within business graduate programs over the last decade. A data science component to the Business undergraduate programs provides more options for undergraduate employment and better prepares students for graduate work. Surveys note that employees with the ability to be business translators, combining data savvy with industry and functional expertise, are in high demand. This degree seeks to develop students at that intersection. The Association to Advance Collegiate Schools of Business (AACSB) mandates in their standards that learning experiences that develop skills and knowledge related to the integration of information technology in accounting and business include the development of skills and knowledge related to data creation, data sharing, data analytics, data mining, data reporting, and storage within and across organizations. In a 2015 report, PricewaterhouseCoopers LLP, a primary employer of Gies graduates, recommends that skills such as understanding of structured and unstructured databases, obtaining and cleaning data, univariate and multivariate regression, machine learning, and programming languages such as Python, Java, or R be added to undergraduate business education.

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

The proposed Bachelor of Science in Business + Data Science 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 initiatives include the Disability Resources & Educational Services (DRES), the oldest collegiate disability support program in the world. The DRES continues to be a leader in post-secondary education for persons with disabilities and provides an array of programs and services for differently abled students. 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 to peers and campus to support them during their first year and inclusive academic support will continue throughout their undergraduate experience. The Office of Minority Student Affairs provides academic coaching, tutoring, graduate school preparation, and sourcing scholarship opportunities for all students.



A recent city-wide equity initiative involves the Campus-Community Compact which is a coequal partnership between UIUC and the broader Champaign-Urbana community with an ambitious and visionary initiative to accelerate social justice by addressing structural racism, bias, and social injustice over the next five to ten years in six interrelated grand challenge areas: inclusive education; accessible technology; economic development; health, wellness, and resilience; workforce development; and community relations. The Compact also includes several crosscut areas; namely, accessible campus/transportation, accessible information, community safety, and language (e.g., multilingualism, communications, and messaging).

Critical efforts on the UIUC campus surround activities related to closing the graduation gap and increasing student success. UIUC is an active participant in the American Talent Initiative (ATI) that is focused on expanding student access to high graduation-rate institutions, with the goal of enrolling and graduating 50,000 additional high-achieving, low-and moderate-income students from these institutions by the year 2025. The University of Illinois Urbana-Champaign has targeted the following goals: first, to increase the six-year graduation rate for Pell students to 81 percent for the 2017 entering cohort and second, to increase targeted opportunities for incoming students to participate in summer scholar or bridge programming to increase the number of Pell students enrolling, improve retention rates, and reduce graduate rate gaps for this population. Additionally, the University is part of the Association of Public and Land Grant Universities Powered by Publics (APLU PxP) initiative. The goals of APLU PxP are to produce several hundred thousand more degrees by 2025; to eliminate the achievement gap for low-income, minority, and first-generation students; and to expand access to higher education for students from all backgrounds. One hundred thirty universities and state systems participate in 16 transformation "clusters." UIUC is the lead in the Big Ten Academic Alliance (BTAA) Cluster, which is studying retention and persistence starting with a focus on foundational course "DFW" rates to determine barriers faced by students pursuing degree advancement and align best practices to address those challenges. BTAA Cluster institutions identified courses common across institutions and looked at the total enrollment on census date, number of D grades, number of F grades, and number of course withdrawals from the Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, and Spring 2019 terms. To illustrate the connection between DFW and progress to degree, BTAA institutions exchanged metrics based on DF grades in the first semester. Sub-cohorts of the 2014 new freshman entrance cohort were sorted based on the number of D/F grades in the first term. The graduation gap between students who had one D/F grade and those without any was 19.9 percent; the gap for those with more than one D/F grade was 47.3 percent. UIUC has begun to use these data to examine foundational course curriculum and determine additional supports needed for students in these courses.

Aligned with the goals of the ATI and APLU work is the campus' Student Success Initiative (SSI). Goals of the SSI are to: (1) increase access (reduce cost of attendance, increase aid, consider time to degree); (2) eliminate equity gaps (increase retention and graduation rates for underrepresented and minoritized students); (3) improve the Illinois experience (abandon "sink or swim" mentality, identify and broaden campus programs, support services, and opportunities for engagement). In February 2022, SSI hosted the inaugural Student Success Symposium, which engaged over 200 faculty, staff, and students. A variety of other projects emerged from SSI that have enabled the university to provide greater support to the campus community including efforts toward improving wellness and mental health, developing a more streamlined Learning Management System (LMS) experience for students, providing instructional support and innovative programs in response to COVID-related learning loss, and support for faculty to adopt, and create Open Educational Resources to help reduce classroom material costs. Additionally, the review of the Academic Policies and Regulations of the Student Code with an equity lens, led to the recommendation of policy changes to be implemented in the 2022-2023 Student Code. In the



upcoming academic year, the SSI will focus on the following: better understanding and improving the first-year student experience broadly and the transfer student experience specifically; increasing access to the institution for underrepresented students; and providing professional development for faculty to ensure excellent student experiences and outcomes regardless of where a student is located.

High-impact practices exist at the institution, college, department, and program level. The Office of Undergraduate Research (OUR) is guided by the philosophy that all Illinois undergraduate students should learn about current disciplinary research, take part in research discussions, and be exposed to research experiences in their regular coursework. The presence of a substantial research or discovery experience is an integral part of the BS in Business + DS program where students will gain the skill to present data in meaningful ways. This capstone experience will be fulfilled through a required course in the Business Core curriculum. This course provides an active learning, real-client experience that will allow students to join their data science skills with their business skills. The College's Academies and Centers help to create learning opportunities within the entrepreneurial space and research hubs that allow students to explore issues across the globe, while providing professional development experiences that bolster student growth. Related to the proposed program, the University of Illinois-Deloitte Foundation Center for Business Analytics is on the leading edge of data analytics, developing innovative, in-demand curriculum that empowers students to become the business leaders of tomorrow. Students can gain real world experiences through involvement in Action Learning, Illinois Business Consulting, and EntreCORPS experiential learning programs.

Gies College of Business provide opportunities, comprehensive programs, and services that engage students early in each semester to encourage a successfully completion of each semester. Through workshops, early intervention, personal counseling and mentoring opportunities, specialized courses, and collaborative partnerships within Gies and across campus, students will receive a personalized support system that will nurture their academic experience. There are more than 1,000 registered student organizations across campus and over 30 business-related clubs and organizations for students to join. The College's career and professional development program provides advising, career discovery and planning as well as customized employer engagement opportunities for students to learn more about a company, a career path, internships, jobs, and networking. Employer showcases, on campus recruiting, and career fairs provide internship and fulltime employment opportunities for students. The academic advising team helps guide students through their academic journey by helping students choose and register for classes, declare a major, and stay on track for graduation. Located within the College, the Undergraduate Success Lab serves as a designated hub for students seeking academic, emotional, financial, or social support. It is the initial access point to address questions and has services such as peer advising and advising workshops; peer tutoring and exam workshops; study abroad information sessions and course planning; and success guides for time management, study skills, goal setting, and more. Academic Success Programs aim to establish meaningful engagements, provide comprehensive resources, and foster successful relationships with all students that could benefit from additional academic support. Programs in this space include early intervention course outreach, freshman mid-semester outreach, academic preparedness resources, college and campus tutoring referral resources, re-entry support, and civil discourse class. The Summer Experience Scholars is a program that allows students who had limited opportunities with dual credit, AP courses, or IB courses and exams to kick off their collegiate career and work towards a successful experience while at Gies. Students will have an early taste of university life, develop critical skills for academic success, engage in exclusive professional development opportunities, and enhance their academic performance for the first year while earning academic credit. Trained peer leaders will assist with mentoring, tutoring, community



development, and class work. The Access and Multicultural Engagement (AME) programs were created in Fall 2018 to provide opportunities for mentorship, affinity groups, and community within Gies. As part of Gies Business' commitment to better support underserved populations, AME develops programs to reach first generation, low income, international, rural, and historically underrepresented students in Illinois.

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. The University of Illinois System and the University of Illinois Urbana-Champaign have been committed to implementing strategies to make college more affordable, particularly for those who have been historically underserved. The President's Award Program (PAP) and PAP Honors provide financial support for students admitted to one of the UI Systems three institutions from historically underrepresented groups. Promising outcomes have already been realized. The PAP award is \$5,000 per year available for a maximum of four years while PAP Honors awards \$10,000 per year for four years. Over \$244 million has been distributed between 2006 and 2020. The University participates in the State of Illinois AIM HIGH Grant program, which provides \$5,000 per year over four years in merit-based awards to the top academically admitted new freshmen who meet eligibility requirements.

Recognizing the barrier that affordability creates to higher education, the University of Illinois Urbana-Champaign has taken action to increase the portfolio of financial support for students. The University annually provides over \$465 million in financial aid funding to undergraduate students, with 72 percent of students receiving some type of aid. Over \$145 million of that funding comes from institutional sources, with the vast majority provided to Illinois residents as need-based grants and scholarships. Two signature financial aid programs include Illinois Promise and Illinois Commitment. Since 2005, Illinois Promise program has covered tuition, campus fees, room/board, and books/supplies through a combination of federal, state, and institutional grants and a \$2,500 Federal Work-Study award to Illinois residents whose family income is at or below the federal poverty level. The Illinois Commitment program began in 2019 and provides a combination of federal, state, and institutional grants to cover tuition and campus fees for Illinois residents whose family income is \$67,100 or less. Approximately 30 percent of Illinois residents attending UIUC receive funding through either the Illinois Promise or Illinois Commitment programs. Of the 2020-2021 cohort of Illinois Commitment recipients, 36 percent identify as Hispanic, 28 percent as White, 19 percent as Black, 14 percent as Asian, and 3 percent identify as two or more races. The Gies College of Business offers one-time and recurring four-year scholarships to freshman and transfer students with merit and need-based applications.

The proposed degree program will contribute to Goal 3, Growth, to increase talent and innovation to drive economic growth. The University of Illinois Urbana-Champaign has strong partnerships with business and industry through the statewide initiatives like the Discovery Partners Institute (DPI) and the Illinois Innovation Network (IIN), which closely align with A Thriving Illinois' Growth Strategies. As a key gubernatorial initiative, DPI's Tech Talent Lab and immersion programs engage with Chicago's technology workforce, allowing students to interact with Chicagoland technology and innovation culture. Students make meaningful connections to regional employers and industries, university research teams, civic and nonprofit organizations, and startups that will lead to employment and talent retention in the region. IIN works to enrich the student experience through short-term boot camps around topics such as artificial intelligence, data science, entrepreneurship, and more. These intensive programs will encourage students' interest in topics that are key to the 21st century economy and give them a foundation for continued study.



UIUC has additional partnerships in the community that contributes to Thriving Illinois' growth pillar. Research Park provides meaningful and industry-focused research and internship opportunities, employing 800 undergraduate and graduate interns year-round in part-time employment. Students are paid highly competitive wages for their specialized skillsets in areas like computer science, data analytics, UX/UI design, engineering, business development, and human resources. Research Park internships increase students' employment prospects by expanding their professional networks, building their professional portfolios, and developing their leadership skills. Many of the corporate sites focus on DEI outreach and participate as sponsors to various student groups and campus units. Building on the well-established relationships of the affinity and community groups both on campus, the Research Park campus office has ongoing partnerships with the career center, cultural centers, and student organizations across campus to educate Illinois' diverse population of students on the opportunities available within the Park. The Illinois Reboot tech training program provides a free course in data science literary to Central Illinois professionals who are underrepresented in technology and looking to upskill their careers. Since its inception in 2020, Reboot has trained 150 community members, 61 percent from underrepresented populations. Reboot also provides career coaching and access to Research Park data science professionals. Accelerating Women And underrepresented Entrepreneurs (AWARE), programmed through the EnterpriseWorks incubator at the Research Park, supports entrepreneurship training, counseling, and networking for women and underrepresented entrepreneurs. Another local program, We CU, connects student volunteers with community projects. This program empowers students to make a positive impact in the community while building their resume and enriching their university experience. By joining, students become part of a diverse group of peers passionate about serving the community. In the first two years of the program (2020-2022), 1,973 UIUC students from 12 colleges worked to complete almost 37,000 hours of training and service on 516 service projects.

Undergraduate students in the Gies College of Business have an integrated experiential learning curriculum throughout their entire undergraduate experience. Working with more than 200 companies each year, students apply classroom learning to solve real problems for real businesses, while deepening their understanding. All Gies College of Business undergraduate students take an experiential learning course ensuring every Gies graduate participates in an action learning project. As such, Gies College of Business produces prepared students with well-developed, business-ready skills. Students in this class have gone on to be hired at local, partner businesses such as Ashley HomeStores, consulted on bringing broadband internet to underserved communities in Central Illinois with Urbana Champaign Big Broadband (UC2B), assisted Business Elevator in developing minority-owned business financing and opportunities, and improved the harvesting and analysis of data related to fire safety for the Illinois Fire Service Institute.

Comparable Programs in Illinois

No other university in the state is offering a bachelor's degree program that integrates study in business and data science to the extent that the proposed degree program does. These generally are distinct degrees offered by different colleges within the same university, each requiring its own set of courses, resulting in extended time to degree at a greater cost to the student.

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 Bachelor of Science in Business + Data Science program must meet requirements commensurate with standards of the University. Students interested in general business, or a specific major should select "Business Undeclared" as their first choice major. Admissions is handled by the Office of Undergraduate Admissions (OUA). The University recommends four years for all courses below, but the minimum high school course requirements for admission are as follows:

- Four years of English
- Three or more years of mathematics
- Two years each of social sciences, laboratory sciences, and language other than English
- Two years of flexible academic units

Applications are reviewed holistically by both the OUA and Gies College of Business admissions staff. The committee takes the following into consideration: high school curriculum, course rigor, and grades; ACT/SAT scores if provided; writing prompts; involvement in community, workplace, or school activities; achievements and honors; and additional explanation of lower grades or unique personal situations. Current students at the University are eligible to apply for Intercollegiate Transfer if they have completed two semesters of full-time enrollment or at least 24 graded credit hours at UIUC by end of spring semester. Students transferring from outside of the University must have completed required courses outlined by the College for transfer applicants.

The University offers several outreach and recruitment programs geared toward historically underrepresented populations. The University of Illinois Urbana-Champaign has adopted the Common App to encourage high school graduates to enroll at and keep talent in Illinois. The University also moved to test-optional, with ACT/SAT scores optional for all first-year applicants. Additionally, the University of Illinois Urbana-Champaign has multiple transfer pathway programs. The Parkland Pathway program allows students to dual enroll at Parkland College and



UIUC while living in UIUC residence halls. There are also intensive advising partnerships with City Colleges of Chicago, Danville Area Community College, Illinois Central College, and Rock Valley College. UIUC recently implemented Public Act 102-0187, the Public University Uniform Admission Pilot, which guarantees transfer students admission to the university if they meet minimum requirements.

A new role of Associate Chancellor for PreK-12 Initiatives was created in August of 2021 to develop or enhance sustainable outreach and partnerships with superintendents statewide as well as identify and partner with key education stakeholders to attract and retain undeserved and underrepresented students. This allows UIUC to enhance the high school to college pipeline in Illinois by partnering with organizations to ensure students have wraparound supports necessary to be successful in obtaining a degree, including financial assistance, career services, alumni outreach, and program performance goals. A College recruitment initiative at the Gies College of Business involves the Emerging Business Leaders (EBL) program, which is a two-week summer program designed for high-achieving underrepresented minority students entering their senior year of high school. During the program, participants live on campus learn from participating faculty, work on a capstone group project with other students, and connect with corporate executives to expand their knowledge on business-related careers. EBL students who apply, are admitted, and enroll into Gies Business will qualify for a renewable scholarship up to \$5000 to help cover their academic costs.

For admitted students, the Gies Summer Success Program is for select first-year students entering Gies College of Business to enable them to gain academic credit and take part in exclusive opportunities at the University of Illinois. It is intended particularly for students who have had limited options for earning college credit through their high school, such as AP courses or exams, dual credit, or completing IB courses and exams. This program will prepare participants for a successful academic career by providing an early taste of college life, developing critical skills for academic success, engaging in exclusive professional development opportunities, and enhancing their academic performance for the first year while earning academic credit. All costs associated with the program including tuition, fees, books, and room and board will be covered by the Office of Student Financial Aid and Gies College of Business.

Curriculum

The Bachelor of Science in Business + Data Science is a 124-credit-hour interdisciplinary program that includes at least 40 hours of upper-division coursework and aligns with the Association to Advance Collegiate Schools of Business (AACSB) accreditation requirements. The program incorporates a strong foundation in data science, training in the foundations of business, and a specialization in an area of business administration in addition to substantial research and hands-on discovery experience. This capstone experience is an active learning, real-client experience that will allow students to join their data science skills with their business skills. Graduation requirements include:

- General Education and free elective coursework
- Data science core 29 hours
- Business core 42 hours
- Specialization coursework in information systems, international business, management, or operations management – 12 hours
- Discovery experience three hours

The College has targeted support programs designed to assist all students, including those from underrepresented backgrounds, in their transition to the University and engage them through



comprehensive advising, tutoring, academic skill building, mentoring, student organizations, and research opportunities, along with career and professional development.

Assessment of Student Learning

The University of Illinois Urbana-Champaign has established processes to measure and analyze student learning outcomes. Students will be assessed on a course-by-course basis periodically throughout using direct measures such as class participation and academic grade performance on exercises, quizzes, exams, and project work. Indirect measures of student learning include an exit survey provided to students completing their final semester in the program. Based on the feedback received, modifications will be made to teaching and learning as needed so that students are supported to meet objectives and learning outcomes.

Program Assessment

The program will be evaluated annually at multiple levels and involve key faculty, curriculum committee, and stakeholder groups. The proposed BS in Business +DS uses standard evaluation methods as established by the Council for Learning Outcomes Assessment. Exit surveys will be provided to students completing their final semester in the program. Survey results will be monitored by Department of Business Administration for demonstration of acquisition of stated program learning outcomes and student engagement in high-impact practices available through the department, college, and University including undergraduate research, study abroad, and internships. The department will also regularly evaluate job placement and graduate school acceptance rates as well as employer and alumni satisfaction surveys.

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. Business courses will primarily be held in the Business Instructional Facility and Wohlers Hall. The data science core will be delivered in the Campus Instructional Facility and the Siebel Center for Design that provide modern classroom and collaboration spaces that are well-suited to instruction and student research in data science. The University is currently renovating and rebuilding the buildings that house Mathematics and Statistics to provide increased classroom and lab spaces for instruction and student research. Together these constitute suitable facilities for delivering all of the X + DS programs. 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 UI System and the UIUC Campus support efforts to recruit and retain faculty, staff, and administrators of color. The Distinguished Faculty Recruitment Program has a stated goal of increasing underrepresented minority faculty. Since 2017, the System has committed \$20 million to this program, the recruitment of tenured, star, or rising faculty from a range of disciplines who can transform our universities by their exceptional scholarship and teaching. One criterion is that the faculty member "will enhance diversity in the unit and in the college." Additionally, the Public Voices Fellowship is a year-long program open to tenured faculty to join a cohort of leaders, the majority of whom will be underrepresented (including women) and provide them with support, leadership skills, and knowledge to ensure their ideas shape not only their fields, but also the greater public conversations of our age. Another effort, The Leadership Initiative for Women Faculty, brings together women faculty from across the UI System who are leaders or potential leaders to identify barriers to and facilitators for advancement of women. Finally, the System will also be providing funding in support of each University's faculty recruitment plans which will also emphasize the recruitment of underrepresented minority faculty.

As a campus, the University of Illinois Urbana-Champaign is committed to investing in strategic hiring of faculty to maintain the institution's academic strengths, respond to student demand, and capture opportunities. Investments from the Office of the Provost in faculty hiring, retention, and development are critical to maintaining and enhancing the academic excellence of our campus, especially at a time when the competition for top talent is intense. The Next 150 strategic plan identified a major hiring initiative to expand faculty hiring in key areas over the next five years, with the goal of expanding the overall size of the faculty. Though all faculty hiring is a department and college-level decision, the campus has devoted significant resources to incentivize hiring activities that support diversity, recruitment, and retention goals. The Targets of Opportunity Program (TOP) program provides recurring funds for salary support for hires that enhance campus diversity, including faculty from underrepresented groups and women in STEM fields with roughly \$1 million per year in recurring salary support from the Provost. An additional \$1 million was made available from the Office of the Provost and Office of the Vice Chancellor for Diversity, Equity, and Inclusion to units to recruit and support more faculty of color. For the Dual Career Academic Couples (DCAC) program, the Provost provides recurring matching funds in the amount of one third of the initial salary if the partner is hired into a tenure track position through the DCAC program.



For non-tenure track partner hires, non-recurring funding is provided for one to three years. The campus also continues to fund postdoctoral fellowships targeted to underrepresented groups and women scholars in ethnic studies programs and through the Illinois Distinguished Postdoctoral and Visiting Scholar Program sponsored by the Diversity Realized at Illinois by Visioning Excellence (DRIVE) program where they receive mentorship and faculty support. Finally, through a partnership with the University System Office and departments, the Provost's Office also supports the Underrepresented Faculty Recruitment Program in making available non-recurring funds for research to enhance offers of employment. Awards up to \$20,000 per year for each of the first three years of employment are available for those hired in the 2022-2023 academic year.

Additional retention efforts include programming and development activities for executive officers and faculty members across ranks. Programming and resources for unit executive officers (EOs) equip them with the knowledge and skills necessary for leadership including ways to enhance their ability to support and mentor faculty within their units, particularly faculty members of color. The Office of the Provost coordinates several leadership development programs to increase the pool of potential academic leaders on campus with intentional focus on supporting faculty members from marginalized and underrepresented groups to explore campus leadership and administrative roles. From recruitment to onboarding, through promotion, and retirement, faculty members have access to programming and resources designed to meet them and address their careers needs. The Office also supports several institutional memberships that provide external resources to our faculty, such as the National Center for Faculty Development and Diversity to ensure faculty members' continued access to NCFDD's resources.

Efforts to recruit and retain faculty members of color are monitored through data collected by the Division of Management Information and Office for Access and Equity. Additionally, a yearly report on hiring and retention of women faculty of color is released and disseminated through the Women at Illinois report.

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. By leveraging the resources of four departments, the University has been able to efficiently provide for the teaching needs for the data science core of the X+DS programs. The collaborating departments have sufficient staffing to provide advising for projected enrollments. If enrollments eventually grow more than anticipated, then the departments will request additional staffing, appealing to the enrollment-driven portion of the university's budget allocation policy.

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 is required for the proposed program. However, the BS in Business + Data Science program will be offered by the Department of Business Administration which is itself accredited by the Association to Advance Collegiate Schools of Business (AACSB).

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 Business + Data Science 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.



University of Illinois Urbana-Champaign

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

| Projected Lintonments and Degrees: | | |
|------------------------------------|------------|-----------------|
| First Year | Fifth Year | Degrees Awarded |
| Enrollment | Enrollment | Fifth Year |
| 30 | 200 | 50 |

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Background

The University of Illinois Urbana-Champaign (University or UIUC) is seeking authorization to offer a Bachelor of Science (BS) in Environmental Engineering in the Prairie Region. Engineering is a discipline broadly disseminated across campus units and departments with multiple campus-wide faculty collaborations. The program will be administered by the Department of Civil and Environmental Engineering Department (CEE) in the Grainger College of Engineering. The proposed program will be distinguished from other programs in Illinois and the nation by several attributes, including (i) the integration of atmospheric sciences with infrastructure planning and design, (ii) the development of computational skills including mathematical techniques to work with environmental and temporal datasets, (iii) the incorporation of engineering design experience distributed across the curriculum, and (iv) the provision of concentration areas and coursework in emerging areas of critical importance in the 21st century. Graduates of the program will be skilled in computational tools, climate adaptation and mitigation, and the design and advancement of environmental infrastructure and technologies. They will also be competent in analytical and computational approaches necessary for the analysis, planning, and design of environmental infrastructure and technologies. These skills will position graduates to pursue professional degree programs in engineering as well as diverse programs related to environmental policy, public health, and the natural sciences. The graduates will also be prepared to enter industry as environmental or water resources engineers.

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



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.

| Academic Year | University of Illinois Urbana-Champaign | Comparable Illinois Institutions |
|---------------|--|-------------------------------------|
| 2017-20 | 24 | 24.5 |

Undergraduate Completions per 100 FTE



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.



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 Bachelor of Science in Environmental Engineering was developed to meet the demand for environmental engineers and the need to train engineers equipped to solve a broad range of challenges related to sustainable development while improving quality of life. Environmental



engineers must be prepared to address the increasingly complex and evolving challenges associated with population growth, urbanization, and changing environments. According to the U.S. Bureau of Labor Statistics, environmental engineering related professions have grown rapidly in recent decades and are associated with two of the three engineering occupations, titled Architecture and Engineering Occupations. Specifically, the positions titled "Environmental science and protection technicians", "Environmental engineering technologists and technicians", and "Environmental engineers" are projected to increase by 10.6 percent, 7.8 percent, and 3.7 percent, respectively, from 2020-2030. Across these professions, the U.S. Bureau of Labor Statistics estimates a total employment increase of 6,800, with annual occupational openings to average roughly 10,500. Students trained in the Environmental Engineering program will be well positioned to pursue employment in any of these occupations, with potential employers in industry and government as well as opportunities in graduate school. Similarly, in Illinois, the Illinois Department of Employment Security statewide projections from 2018-2028 list Environmental Engineers and Environmental Engineering Technicians as two of the fastest growing architecture and engineering occupations. Specifically, "Environmental engineers" are projected to have the second fastest growth rate in the category of "Engineers" at 5.54 percent from 2018-2028, and "Environmental engineering technicians" are projected to have the second fastest growth rate among "Drafters, engineering & mapping technicians" at 2.49 percent. In addition, graduates from the Environmental Engineering program would also be qualified to be employed as "Environmental scientists & specialists", which similarly has the highest projected growth rate among "Physical scientists" at 5.85 percent.

Environmental engineering is a profession that aims to achieve equitable, healthy, and prosperous communities while simultaneously maintaining the ecosystems that support them. Environmental engineers are involved in efforts to improve public health, to reduce or eliminate water and air pollution, to enable resilient water and natural resource management, to improve resource circularity, to avoid waste production and safely manage waste disposal, and to proactively develop infrastructure, food and energy systems that sustainably support society. This requires a sound foundation in natural sciences in addition to engineering fundamentals, mathematics, and computational tools. Environmental engineering as a profession is increasingly interacting with broader societal goals to ensure good health and well-being, providing clean water and sanitation, enabling circular economies, catalyzing action to combat and adapt to climate change, building resilient infrastructure, and supporting ecosystems. Environmental engineers collaborate with environmental and climate scientists, planners, hazardous waste technicians, engineers, public policy experts and other specialists, such as experts in law and business, to address environmental problems and sustainability.

The program is expected to be of greater interest to female and underrepresented minority students relative to civil engineering and most other engineering disciplines, which will help the Grainger College of Engineering to increase their representation in the student body. Further, this degree program will be providing all students with educational opportunities to pursue high-wage, high-skill occupations leading to economic self-sufficiency.

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

The proposed Bachelor of Science in Environmental 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 initiatives include the Disability Resources & Educational Services (DRES), the oldest collegiate disability support program in the world. The DRES continues to be a leader in post-secondary education for persons with disabilities and provides an array of programs and services for differently abled students. The Department 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 from historically underserved populations and low-sending counties 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. 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 has expanded entry points beyond the traditional high school to college transition. The 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. 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. Between summer and fall terms of 2019 and 2020, 230 transfer students entered the Grainger College of Engineering. The program breakdown for these students are: 141 non-Engineering Pathways, 64 general Engineering Pathways, and 25 GearUP Engineering Pathways participants. 64 percent of GearUP Engineering Pathways participants graduated within two years, compared to only 36 percent of Engineering Pathways students who did not participate in GearUP and 23 percent of non-Engineering Pathways students that did not participate in GearUP. 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, 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, four percent veteran, 21 percent first-generation or low socioeconomic student 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. 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. The College hosts two career fairs per year and, and beyond that the Department of Civil and Environmental Engineering hosts two additional career fairs per year. The CEE career fairs include many top national environmental engineering firms that regularly hire students from the Civil and Environmental Engineering Department for internships and permanent positions. The Grainger College of Engineering has well-established organizations and supports to help promote a sense of identity and belonging for students. Student chapters of prominent national organizations have been in existence for decades with the goals of connecting students to student support services, professional organizations, and the community. More specifically, through the WIE program, women students are invited and encouraged to form connections in community with other women as well as the overall student population. At the recruitment stage, women students are recruited strategically through mailings that feature handwritten notes from women students in the admitted student's major. Admitted women students are supported academically, socially, and professionally toward their success through various platforms, including monthly newsletters highlighting successful alumnae (especially women of color) and noting relevant scholarship and professional development activities and social engagement event. Through these recruiting and support activities, the college fosters an inclusive community of belonging for women students. 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 projectbased learning to bring teams of students from Grainger to partner with students at universities abroad. 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 CEE Department offers additional, supported research opportunities for undergraduates in which a student and faculty pair writes and submits a proposal for consideration. Proposals that are selected for award are financially supported such that the student, working together with a faculty member, carries out the research on the proposed CEE research topic at a level of 10 hours per week for 12 weeks during the semester. This academic year, the CEE department supported 24 proposals and expect to increase the number of supported proposals once the Environmental Engineering program has started to support the expected increased demand for such opportunities with the new student population.

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. Recognizing the barrier that affordability creates to higher education, the University of Illinois Urbana-Champaign has taken action to increase the portfolio of financial support for students. The University annually provides over \$465 million in financial aid funding to undergraduate students, with 72 percent of students receiving some type of aid. Over \$145 million of that funding comes from institutional sources, with the vast majority provided to Illinois residents as need-based grants and scholarships. The University of Illinois and the University of Illinois System have been committed to implementing strategies to make college "more affordable, particularly those who have been historically underserved." The following initiatives have been implemented and promising outcomes have already been realized. The President's Award Program (PAP) and PAP Honors program provide financial support for students admitted to one of the University of Illinois Systems three institutions from historically underrepresented groups. The PAP award is \$5,000 per year available for a maximum of four years while the PAP Honors Program awards \$10,000 per year for four years. Over \$244 million has been distributed between 2006 and 2020. The University participates in the State of Illinois AIM HIGH Grant program, which provides \$5,000 per year over four years in merit-based awards to the top academically admitted new freshmen who meet eligibility requirements. Two signature financial aid programs include Illinois Promise and Illinois Commitment. Since 2005, Illinois Promise program has covered tuition, campus fees, room/board, and books/supplies through a combination of federal, state, and institutional grants and a \$2,500 Federal Work-Study award to Illinois residents whose family income is at or below the federal poverty level. The Illinois Commitment program began in 2019 and provides a combination of federal, state, and institutional grants to cover tuition and campus fees for Illinois residents whose family income is \$67,100 or less. Approximately 30 percent of Illinois residents attending UIUC receive funding through either the Illinois Promise or Illinois Commitment programs. Of the 2020-2021 cohort of Illinois Commitment recipients, 36 percent identify as Hispanic, 28 percent as White, 19 percent as Black, 14 percent as Asian, and three percent identify as two or more races.



The Grainger College of Engineering and Department of Civil and Environmental Engineering offsets tuition costs through scholarship incentives, especially for incoming first-year students. Both the Grainger College and CEE Department have significant amounts of funds provided by generous donors for this purpose. Scholarships are distributed to recruit the best and brightest students nationally. But within that select group of candidates, the College and Department traditionally further deploy the funds to incentivize the recruitment of women, traditionally under-represented student populations, and first-generation students. For example, beyond offers made by the Grainger College of Engineering for the 2022 incoming first year CCE class, the Department made 66 scholarship offers, of which 50 percent were to those from traditionally under-represented populations in science and engineering, 80 percent were to women, and 35 percent were to first-generation students. The Department is committed to make higher education more affordable for historically underserved students is evident and will continue in future years.

The proposed degree program will contribute to Goal 3, Growth, to increase talent and innovation to drive economic growth. The University of Illinois Urbana-Champaign has strong partnerships with business and industry through the statewide initiatives like the Discovery Partners Institute (DPI) and the Illinois Innovation Network (IIN), which closely align with A Thriving Illinois' Growth Strategies. As a key gubernatorial initiative, DPI's Tech Talent Lab and immersion programs engage with Chicago's technology workforce, allowing students to interact with Chicagoland technology and innovation culture. Students make meaningful connections to regional employers and industries, university research teams, civic and nonprofit organizations, and startups that will lead to employment and talent retention in the region. IIN works to enrich the student experience through short-term boot camps around topics such as artificial intelligence, data science, entrepreneurship, and more. These intensive programs will encourage students' interest in topics that are key to the 21st century economy and give them a foundation for continued study.

UIUC has additional partnerships in the community that contributes to A Thriving Illinois' growth pillar. Research Park provides meaningful and industry-focused research and internship opportunities, employing 800 undergraduate and graduate interns year-round in part-time employment. Students are paid highly competitive wages for their specialized skillsets in areas like computer science, data analytics, engineering, business development, and human resources. Research Park internships increase students' employment prospects by expanding their professional networks, building their professional portfolios, and developing their leadership skills. Many of the corporate sites focus on DEI outreach and participate as sponsors to various student groups and campus units. Building on the well-established relationships of the affinity and community groups both on campus, the Research Park campus office has ongoing partnerships with the career center, cultural centers, and student organizations across campus to educate Illinois' diverse population of students on the opportunities available within the Park. The Illinois Reboot tech training program provides a free course in data science to Central Illinois professionals who are underrepresented in technology and looking to upskill their careers. Since its inception in 2020, Reboot has trained 150 community members, 61 percent from underrepresented populations. Reboot also provides career coaching and access to Research Park data science professionals. Accelerating Women And underrepresented Entrepreneurs (AWARE), programmed through the EnterpriseWorks incubator at the Research Park, supports entrepreneurship training, counseling, and networking for women and underrepresented entrepreneurs. Another local program, We CU, connects student volunteers with community projects. This program empowers students to make a positive impact in the community while building their resume and enriching their university experience. By joining, students become part of a diverse group of peers passionate about serving the community. In the first two years of the program (2020-2022), 1,973 UIUC students from 12 colleges worked to complete almost 37,000 hours of training and service on 516 service projects.



The College's Engineering Career Services (ECS) bridges college and community relations by delivering relevant career exploration, development, and recruitment services to all students in the college. ECS builds and maintains industry relationships through strategic engagement and intentional outreach and collaboration. At the Department level, several actions to connect with Illinois industry to promote collaboration and growth will be undertaken. The Department of CEE plans to expand the departmental alumni advisory board to include environmental engineering representatives from within the State of Illinois. The advisory board will meet regularly to provide review input to the program regarding curricular matters as well as job need and placement strategies. Also, the Department will expand its successful Backpack to Briefcase (B2B) program which is comprised of a series of informational seminars geared towards preparing students for their transition to a professional workplace to include specific content for students in the Environmental Engineering program. Beyond these formal activities carried out by the Department, environmental and water resources engineering faculty will leverage professional networks and working partnerships to engage industry contacts and colleagues to participate in the environmental engineering seminar series. In particular, the Department will offer a specialized series discussing diversity in the workplace, inviting industry connections to discuss their experiences and journey with undergraduate students.

The Department of Civil and Environmental Engineering demonstrates the highest percentage of enrolled in-state Illinois students with the Grainer College of Engineering. Evidence from annual graduating student exit surveys suggest that in-state students are more likely to stay and become employed in Illinois within the first few years after graduation. Thus, the Department of CEE aims to continue the successful recruitment and retention of in-state Illinois students with the Environmental Engineering program. Furthermore, the Department intends to continue recruitment and retention of transfer students from Illinois community colleges, as exemplified by the Pathways program. To strengthen connections to the environmental engineering industry within Illinois, the alumni advisory board will be expanded to include environmental engineering representatives from within the state of Illinois. The advisory board will meet regularly to provide review input to the program regarding curricular matters as well as job need and placement strategies for the state of Illinois.

Comparable Programs in Illinois

There are three private institutions and one public institution that offer a BS in Environmental Engineering degree in Illinois, all of which are in the Chicago area. In comparison with the proposed program at UIUC, there are significant differences in curricular focus. Distinct from these programs, the proposed BS in Environmental Engineering at the University of Illinois Urbana-Champaign will center on the integration of atmospheric sciences with infrastructure planning and design, and the development of computational skills including mathematical techniques to work with environmental and temporal datasets. Additionally, consistent with the unique approach used in the BS in Civil Engineering program at UIUC, the proposed program will incorporate engineering design experience distributed across the curriculum. Finally, students will be able to select a primary concentration within the BS in Environmental Engineering program from among the following five alternatives: Public Health Engineering; One Water; Energy and Environmental Sustainability; Climate and Environmental Sustainability; and Water Systems and Sustainability.

| Institution | Program Name | Sector |
|-------------------|---------------------|------------------|
| DePaul University | BS in Environmental | Private Not-For- |



| | Engineering | Profit |
|------------------------|---------------------|------------------|
| Loyola University of | BS in Environmental | Private Not-For- |
| Chicago | Engineering | Profit |
| Northwestern | BS in Environmental | Private Not-For- |
| University | Engineering | Profit |
| University of Illinois | BS in Environmental | Public |
| Chicago | Engineering | |

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 Bachelor of Science in Environmental Engineering program must meet requirements commensurate with standards of The Grainger College of Engineering. Admission requirements for freshmen include meeting general 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 Engineering Undeclared Program to be reviewed for transfer into Environmental Engineering. Engineering Undeclared and current University students should demonstrate interest in the program by:

- Earning grades of B or better in introductory courses such as CHEM 102, 103, 104, 105; MATH 221, 231; PHYS 211; and CS 101
- Maintain a cumulative and specialized 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. 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 8-week summer transition program (GearUP) designed to reduce transfer shock, shorten time to degree completion, and increase post-transfer retention.

Undergraduate research is used as a recruitment and retention tool for students from underrepresented groups by cultivating a culture of student-student and faculty-student mentoring, learning by apprenticeship, and building a community of undergraduate researchers. Measures of success include monitoring enrollment and retention numbers, program assessments, direct assessments of student learning, post-graduation student satisfaction surveys of students, and a tracking system for program participants.

Curriculum

The Bachelor of Science in Environmental 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 curriculum has been designed to ensure students have a strong foundation in core topics on the Fundamentals of Engineering Exam FE including engineering economics, mathematics, probability and statistics, fluid mechanics and hydraulics, environmental chemistry, surface water resources and hydrology, water and wastewater, air quality and control, and energy and the environment. The proposed program will be distinguished by 1) the integration of atmospheric sciences with infrastructure planning and design, 2) the development of computational skills including mathematical techniques to work with environmental and temporal datasets, 3) the incorporation of engineering design experience distributed across the curriculum, and 4) the provision of concentration areas and coursework in emerging areas of critical importance in the 21st century. Specifically, students will gain core knowledge in math, science, and engineering and select a primary concentration within the program from the following: Public Health Engineering; One Water; Energy and Environmental Sustainability; Climate and Environmental Sustainability; and Water Systems and Sustainability. Students will complete a project based introductory class and culminating professional practice where students will participate in a series of lectures by outstanding authorities on the practice of civil engineering and its relations to economics, sociology, and other fields of human endeavor. Other categories of requirements for the degree are:

- Orientation and professional development 8 hours
- Foundational math and science 32 hours
- Environmental engineering technical core 35 hours
- Primary concentration fields 29-32 hours
- Electives 10-13 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.

Assessment of Student Learning

The University of Illinois Urbana-Champaign has established processes to measure and analyze student learning outcomes data. Direct measures of student learning include exams and assignments and indirect measures include survey data. Student work will be analyzed against a rubric to determine the fraction of students achieving each level of performance, with the target goal of 70 percent of junior and senior students achieving a high-performance level. Lower-level course attainment scores will be used as formative feedback on how students are progressing in the desired skill areas.

The associate head and director of undergraduate studies in the CEE department will monitor individual students for academic performance and notify, engage with, and support those who land on academic probation. In addition, the director of the undergraduate program, working together with the CEE curriculum committee, will review the course outcomes satisfaction result metrics that each faculty provides to assure satisfactory performance and will follow up in specific cases where performance is less than satisfactory.

Support services exist throughout the University, College, and Department to support student learning. Student progress is actively monitored at several designated points during 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

Annual program evaluation will involve the Civil and Environmental Engineering Associate Head, Director of Undergraduate Studies, and the CEE Curriculum Committee. Assessment results will be used to refine the program to better prepare students for future employment. To continuously improve the program and student learning, data will be collected and evaluated every three years so that the program can make and assess changes in program curriculum, advising processes, and the assessment process itself. The following metrics will aid in program evaluation:

- Enrollment, retention, and completion trends, including underrepresented students
- Instructor evaluations
- Course evaluations
- Senior survey results
- Satisfaction survey results



- Graduate school acceptance rates
- Job placement rates

Once all data are collected, the student example data are analyzed according to the rubric by the CEE 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.

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 CEE department maintains eight classrooms, four teaching laboratories and two design spaces in its facilities that comprise the Newmark Civil Engineering Building, the Yeh Student Center, and the new Civil and Environmental Engineering Building. 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 University of Illinois System and the UIUC Campus support efforts to recruit and retain faculty, staff, and administrators of color. The Distinguished Faculty Recruitment Program has a stated goal of increasing underrepresented minority faculty. Since 2017, the System has committed \$20 million for the recruitment of tenured, star, or rising faculty from a range of disciplines who can transform the Universities by their exceptional scholarship and teaching. Additionally, the Public Voices Fellowship is a year-long program open to tenured faculty to join a cohort of leaders, the majority of whom will be underrepresented (including women) and provide them with extraordinary support, leadership skills, and knowledge to ensure their ideas shape not only their fields, but also the greater public conversations of our age. Another effort, The Leadership Initiative for Women Faculty, brings together women faculty from across the University of Illinois System who are leaders or potential leaders to identify barriers to and facilitators for advancement of women. Finally, the System will also be providing funding in support of each University's faculty recruitment plans which will also emphasize the recruitment of underrepresented minority faculty.

As a campus, the University of Illinois Urbana-Champaign is committed to investing in strategic hiring of faculty to maintain the institution's academic strengths, respond to student demand, and capture opportunities. Investments from the Office of the Provost in faculty hiring, retention, and development are critical to maintaining and enhancing the academic excellence of the campus, especially at a time when the competition for top talent is intense. The Next 150 strategic plan identified a major hiring initiative to expand faculty hiring in key areas over the next five years, with the goal of expanding the overall size of the faculty. Though all faculty hiring is a department and college-level decision, the campus has devoted significant resources to incentivize hiring activities that support diversity, recruitment, and retention goals. The Targets of Opportunity Program (TOP) program provides recurring funds for salary support for hires that enhance campus diversity, including faculty from underrepresented groups and women in STEM fields with roughly \$1 million per year in recurring salary support from the Provost. An additional \$1 million was made available from the Office of the Provost and Office of the Vice Chancellor for Diversity, Equity, and Inclusion to units to recruit and support more faculty of color. For the Dual Career Academic Couples (DCAC) program, the Provost provides recurring matching funds in the amount of one third of the initial salary if the partner is hired into a tenure track position through the DCAC program. For non-tenure track partner hires, non-recurring funding is provided for one to three years. The campus also continues to fund postdoctoral fellowships targeted to underrepresented groups and women scholars in ethnic studies programs and through the Illinois Distinguished Postdoctoral and Visiting Scholar Program sponsored by the Diversity Realized at Illinois by Visioning Excellence (DRIVE) program where they receive mentorship and faculty support. Finally, through a partnership with the University System Office and departments, the Provost's Office also supports the Underrepresented Faculty Recruitment Program in making available non-recurring funds for research to enhance offers of employment. Awards up to \$20,000 per year for each of the first three years of employment are available for those hired in the 2022-2023 academic year.

The Grainger College of Engineering and Department of Civil and Environmental Engineering offer many resources to support and retain faculty. At the college level, the Collins Scholars Program for new engineering faculty exists to help faculty get their careers off to an efficient and productive start. The program provides a culture of support for teaching, research, and service in a relaxing and collegial environment. Another college-level example is the Strategic



Instructional Innovation Program (SIIP) which awards education-innovation grants to faculty teams using a model similar to research-grant funding. SIIP has achieved marked success by bringing aspects of Illinois' outstanding research culture to teaching, including an engaged community, collaborative projects, faculty-led innovation, rigorous evaluation, and a scholarly approach to pedagogical methods. The college also designates faculty members as Education Innovation Fellows (EIF's) and Entrepreneurial Mindset Fellows (EMF's). EIFs and EMFs have a connecting role in the College by interacting with staff, departmental colleagues, and others across the College involved in educational innovation to share and unify educational efforts.

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 degree program will be developed and maintained by existing faculty and staff. There will be no impact on teaching loads given that all the classes are already taught or have been planned to be included in faculty's teaching responsibilities. The current staff of the Civil and Environmental Engineering department will be able to sufficiently handle all new duties associated with the new degree program as this will be a rather modest increase in student advising activities.

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. However, the Department has earned Accreditation Board of Engineering and Technology (ABET) accreditation for its civil engineering degree and will pursue specialized accreditation with ABET for the environmental engineering degree once it is eligible to do so. The degree program will provide students with high quality credentials enabling them to enter the workforce and pursue the Fundamentals of Engineering (FE) licensure examination.

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 Environmental 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.

