

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

Submitted for: Action.

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

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

Northern Illinois University

- Doctorate of Philosophy in Electrical Engineering in the Fox Valley Region
- Doctorate of Philosophy in Industrial and Systems Engineering in the Fox Valley Region
- Doctorate of Philosophy in Mechanical Engineering in the Fox Valley Region

Southern Illinois University Carbondale

- Science, Technology, Engineering, and Mathematics (STEM) Education Research Center in the Southern Region

University of Illinois at Urbana-Champaign

- Lemann Center for Brazilian Studies in the Prairie Region
- Master of Agricultural and Applied Economics in the Prairie Region

STATE OF ILLINOIS
BOARD OF HIGHER EDUCATION

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

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

Executive Summary – Public Institutions

Northern Illinois University

- Doctorate of Philosophy in Electrical Engineering

Northern Illinois University requests authorization to offer a Doctorate of Philosophy in Electrical Engineering in the Fox Valley region. The proposed Doctorate of Philosophy in Electrical Engineering offers a traditional track and a professional track to prepare students for research and engineering careers at academic institutions, national research labs, federal and state agencies, and private and public corporations. Students will have multiple opportunities for hands-on professional research experiences through traditional graduate assistantships in the Electrical Engineering Department; partnerships with area industries via one-semester Industry Residencies (optional for Electrical Engineering traditional students and required for Electrical Engineering professional track students); or through an Industrial Fellowship available to students in the professional track, wherein candidates are employed at an industry partner on a specific project to solve and implement solutions for an identified problem. The proposed program requires completion of 90 post-baccalaureate semester credit hours, core courses, specialization courses, candidacy exams, research, and a dissertation. There are policies in place to ensure the faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. Staff, faculty, library, and financial resources are in place to support the proposed program.

- Doctorate of Philosophy in Industrial and Systems Engineering

Northern Illinois University requests authorization to offer a Doctorate of Philosophy in Industrial and Systems Engineering in the Fox Valley region. The proposed doctoral program offers a traditional track and a professional track to prepare students for research and engineering careers at academic institutions, national research labs, federal and state agencies, and private and public corporations. Students will have multiple opportunities for hands-on professional research

experiences through traditional graduate assistantships in the Industrial and Systems Engineering Department; partnerships with area industries via one-semester Industry Residencies, which are required for both the traditional and professional track students in the Industrial and Systems Engineering proposed program; or through an Industrial Fellowship available to students in the professional track, wherein candidates are employed at an industry partner on a specific project to solve and implement solutions for an identified problem. The proposed program requires completion of 90 post-baccalaureate semester credit hours, core courses, specialization courses, candidacy exams, research, and a dissertation. There are policies in place to ensure the faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. Staff, faculty, library, and financial resources are in place to support the proposed program.

- Doctorate of Philosophy in Mechanical Engineering

Northern Illinois University requests authorization to offer a Doctorate of Philosophy in Mechanical Engineering in the Fox Valley region. The proposed doctoral program offers a traditional track and a professional track to prepare students for research and engineering careers at academic institutions, national research labs, federal and state agencies, and private and public corporations. Students will have multiple opportunities for hands-on professional research experiences through traditional graduate assistantships in the Mechanical Engineering Department; partnerships with area industries via one-semester Industry Residencies (an optional course for traditional track students, but required for professional track students); or through an Industrial Fellowship available to students in the professional track, wherein candidates are at an industrial partner on a specific project to solve and implement solutions for an identified problem. The proposed program requires completion of 90 post-baccalaureate semester credit hours, core courses, specialization courses, candidacy exams, research, and a dissertation. There are policies in place to ensure the faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. Staff, faculty, library, and financial resources are in place to support the proposed program.

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

Southern Illinois University Carbondale

- Science, Technology, Engineering, and Mathematics (STEM) Education Research Center in the Southern Region

Southern Illinois University at Carbondale requests approval to permanently establish the STEM Education Research Center (SERC) in the Southern region. The SERC is a public service and research unit, created by Southern Illinois University with the temporary approval from the Illinois Board of Higher Education staff on July 1, 2014. The SERC will advance STEM literacy and address critical issues in STEM education at local, state, and national levels through interdisciplinary and integrative strategies in research, education, and service. The SERC will support existing programs and develop new grant initiatives to provide professional development for PreK-12 educators, advance research on STEM education, and enhance the undergraduate STEM experience. Operating costs of the STEM Education Research Center will continue to be funded through external grants and contracts, service fees, and donations.

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

University of Illinois at Urbana-Champaign

- Lemann Center for Brazilian Studies

University of Illinois at Urbana-Champaign (UIUC) requests authorization to permanently establish the Lemann Center for Brazilian Studies (LCBS). The proposed center was created with temporary status in 2009 as the Lemann Institute for Brazilian Studies. The current proposal would revise the unit's name and make its status permanent, but its mission to promote research and teaching about Brazil by faculty and graduate students at UIUC and their Brazilian counterparts would remain the same. LCBS carries out this mission by funding faculty research, offering fellowships to students at the graduate and undergraduate levels, organizing international conferences on Brazilian subjects, and supporting cultural activities and other programming on campus. Brazil is the world's ninth largest economy and one of the world's top producers of soybean and corn which makes it a worthwhile and relevant research subject and collaborative partner for UIUC. LCBS is largely supported by an endowment gift and grant income that are sufficient to cover center research, scholarship, and other activities.

- Master of Agricultural and Applied Economics

University of Illinois at Urbana-Champaign requests authority to offer a Master of Agricultural and Applied Economics in the Prairie region. The proposed program, offered by the Department of Agricultural and Consumer Economics (ACE) in the College of Agricultural, Consumer, and Environmental Sciences (ACES), will prepare students for careers as analysts and managers in industry, government, and related organizations. The coursework for the proposed program overlaps with that of a similar Master of Science program but, in lieu of a thesis, students will be required to take additional graduate coursework in applied economics, econometrics, and quantitative methods. Students in the proposed program must complete 32 credit hours of coursework including four hours each in microeconomic theory and applied econometrics plus a two-hour internship. A four-plus-one Bachelor of Science (BS) to Master of Agricultural and Applied Economics option will exist for undergraduates enrolled in the BS in ACE program. There are policies in place to ensure faculty members possess the training, credentials, and qualifications to provide instruction in the proposed program. The University has sufficient library, technology, staff, and financial resources in place to support the program.

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

The staff recommends adoption of the following resolutions:

The Illinois Board of Higher Education hereby grants to Northern Illinois University authorization to grant the Doctorate of Philosophy of Electrical Engineering, the Doctorate of Philosophy of Industrial and Systems Engineering and the Doctorate of Philosophy of Mechanical Engineering in the Fox Valley 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 Carbondale authorization to establish the Science, Technology, Engineering and Mathematics (STEM) Education Research Center in the Southern 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 at Urbana-Champaign authorization to establish the Lemann Center for Brazilian Studies and to grant the Master of Agriculture and Applied Economics 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.

Northern Illinois University

Proposed Program Title in the Region of Authorization: Doctorate of Philosophy in Electrical Engineering in the Fox Valley Region

Projected Enrollments and Degrees. Northern Illinois University has projected that enrollments in the proposed Doctorate of Philosophy in Electrical Engineering will grow from three to five students in the first year to 15 to 25 students in the fifth year.

Proposed Program Title in the Region of Authorization: Doctorate of Philosophy in Industrial and Systems Engineering in the Fox Valley Region

Projected Enrollments and Degrees. Northern Illinois University has projected that enrollments in the proposed Doctorate of Philosophy in Industrial and Systems Engineering will grow from three to five students in the first year to 15 to 25 students in the fifth year.

Proposed Program Title in the Region of Authorization: Doctorate of Philosophy in Mechanical Engineering in the Fox Valley Region

Projected Enrollments and Degrees. Northern Illinois University has projected that enrollments in the proposed Doctorate of Philosophy in Mechanical Engineering will grow from three to five students in the first year to 15 to 25 students in the fifth year.

Background

Northern Illinois University (NIU or the University) is seeking authority to offer a Doctorate of Philosophy in Electrical Engineering, a Doctorate of Philosophy in Industrial and Systems Engineering, and a Doctorate of Philosophy in Mechanical Engineering in the Fox Valley region. All three proposed programs offer traditional and professional tracks and require completion of 90 post-baccalaureate semester credit hours, core courses, specialization courses, candidacy exams, research, and a dissertation. For the traditional tracks, the Industrial and Systems Engineering program requires at least a one-semester residency with an industry partner, while the Electrical and Mechanical Engineering programs offer the residency as an option. The professional tracks require students to participate in a professional immersion experience with an industry partner through Industrial Fellowships, which provide an applied research experience in a professional environment that supports the student's doctoral research project. Each program will prepare students for research and engineering careers in academia, national laboratories, and industrial research. The programs will be administered and overseen by Northern Illinois University's College of Engineering and Engineering Technology.

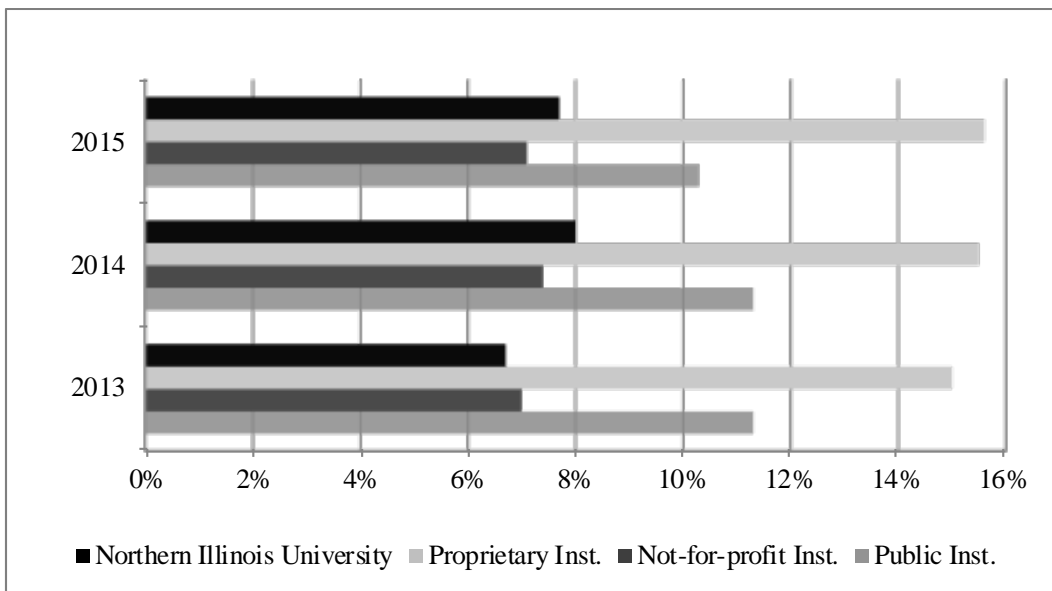
Institutional Data

1050.30(b)(1)(H): Success in student progression and graduation rates across all existing approved programs, and success rates in programs preparing students for certification and licensure, shall be consistent with expectations in higher education and the appropriate related field of study. At a minimum, the Board shall consider these factors based on results for similar institutions. (i) Graduation rates, certificate and degree completion rates, retention rates, and pass rates for licensure and certification aligned with thresholds set by State nor national regulatory bodies. (ii) The success rate shall be, at a minimum, higher than those of the lowest quartile of

these measures for similar Illinois institutions defined as open versus competitive enrollment institutions and primarily associate versus primarily baccalaureate granting institutions. Exceptions may be made to the lowest quartile if an institution is above the national average for these measures using the same comparison categories of institutions.

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

Three Year Cohort Student Loan Default Rate



*Source: National Center for Education Statistics, U.S. Department of Education
 Note: Northern Illinois University is a public institution. A lower number is a positive indicator.*

Student Loan Default Rate

The three-year student loan default rate for Northern Illinois University was 7.7 percent in 2015, 8.0 percent in 2014, and 6.7 percent in 2013. 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. The U.S. Department of Education stated that the Fiscal Year 2015 three-year national cohort default rate was 10.8 percent. The Fiscal Year 2015 three-year national cohort average default rate breakdown by institutional sector is: 10.3 percent for public institutions; 7.1 percent for not-for-profit institutions; and 15.6 percent for proprietary institutions.

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

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 Illinois Public Agenda for College and Career Success

The proposed programs address the *Illinois Public Agenda for College and Career Success* Goal 3 (Strengthen Workforce Development, Address Workforce Needs, and High Quality Credentials) by increasing the number of high-quality post-secondary credentials and providing multiple pathways to achieving those credentials to meet the demands of Illinois's economy, industry, and global society. Graduates of the proposed programs will serve the local economy in the Chicagoland area, where thousands of employment opportunities exist in all sectors of Illinois' economy, as well as the global economy, with growing demands in intelligence systems, transportation and logistics, healthcare, medicine, and automation.

The proposed programs also address the *Illinois Public Agenda for College and Career Success* Goal 4 (Link Research and Innovation to Economic Growth) by integrating educational, research, and innovation assets to meet local and state economic needs in advanced manufacturing, advanced digital technologies, biomedical and biotechnology, as well as other Illinois growth industries such as agriculture, energy, transportation, distribution, and logistics.

Comparable Programs in Illinois

There are five accredited PhD in Electrical Engineering programs in Illinois: Illinois Institute of Technology; Northwestern University; Southern Illinois University Carbondale; University of Illinois at Chicago; and University of Illinois at Urbana-Champaign. Only three universities in Illinois award a PhD in Industrial and Systems Engineering related fields: Northwestern University; University of Illinois at Chicago; and University of Illinois at Urbana-Champaign. Four institutions in Illinois offer a PhD in Mechanical Engineering: Illinois Institute of Technology; Northwestern University; University of Illinois at Chicago; and the University of Illinois at Urbana-Champaign.

The doctoral programs proposed by NIU are intentionally designed to respond to the needs of industry and the employment aspirations of engineers. According to the American Society of Engineering Education, 70 percent of PhD engineering graduates seek work in industry rather than academia. The proposed programs, if approved, would be the only programs in Illinois to offer professional fellowships in the industry, providing engineers with job-embedded opportunities to prepare for work in solving advanced, industry-specific problems. In addition, based on information provided in the applications, the proposed programs would provide a cost-effective option for nontraditional students in the Chicago Metropolitan area and the only programs to serve Illinois's northwest quarter.

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 proposed programs are in alignment with the overall mission of the University and are consistent with the purpose, goals, and objectives of the institution. The requested degree titles reflect the degree program 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

All three proposed programs require similar admissions criteria be met. Prospective students must submit completed application materials to the Graduate School no later than May 1 and will be admitted either for matriculation in the fall semester or spring semester. Admission decisions will be made within two months from the application deadline. Students seeking admission to any of the proposed PhD programs must have a BS degree. In addition to the Graduate School minimum requirements, applicants must also have a minimum GPA of 3.0 on a 4.0 scale and submit three letters of recommendation.

Students with a master's degree can transfer up to 30 semester hours of graduate coursework. The Graduate Studies Committee will assess and recommend acceptance of transfer credit for any graduate work deemed appropriate, subject to the policies of and approval by the Graduate School. Students with backgrounds in fields other than their engineering field are encouraged to apply but may be required to take a sequence of core engineering courses.

Curriculum

The proposed programs require completion of 90 post-baccalaureate semester credit hours, core courses, specialization courses, candidacy exams, research, and a dissertation. Students enrolled in the proposed programs will develop the ability to conduct independent research to address compelling problems of local, national, and global significance in Electrical Engineering,

Mechanical Engineering, or Industrial and Systems Engineering. Each program offers a professional and a traditional track and requires the completion of 90 semester credit hours beyond the baccalaureate. Students in the traditional programs will take or have the option to take the three-hour industry residency course, which could provide a research problem for the research and dissertation components of the programs. The professional tracks require an industry residency or rotation prior to candidacy to identify a potential research problem, as well as completion of industry-oriented research and dissertation hours. Students in the professional tracks are eligible for an Industrial Fellowship with an industry partner to identify a relevant problem and implementable solution as the basis for the PhD research and dissertation. Upon completion of certain milestones in each program, students will sit for the PhD candidacy examination and write a dissertation. Graduates will be prepared to pursue professional careers in academic institutions, national research labs, federal and state agencies, and private and public corporations.

Doctorate of Philosophy in Electrical Engineering

The traditional and professional tracks require 12 credit hours in core coursework within a declared specialization (Digital Signal Processing and Communication; Computer Engineering, Power Electronics, and Control; Semiconductor Fabrication, MEMs, and Devices; or Radio Frequency and Antenna Design); three semester credit hours of doctoral seminar; three semester credit hours of technical writing; 27 semester credit hours of doctoral research and dissertation; and 45 semester credit hours of elective coursework (which may include up to 27 dissertation hours in addition to the required 27 credit hours of doctoral research and dissertation).

Doctorate of Philosophy in Industrial and Systems Engineering

Students in the traditional and professional tracks will complete 12 credit hours of core courses, three credit hours of dissertation seminar, three credit hours of industry residency, three credit hours of technical writing, 36 credit hours of doctoral research and dissertation, and 33 credit hours of elective coursework.

Doctorate of Philosophy in Mechanical Engineering

The traditional and professional tracks require students to take 21 credit hours in mechanical engineering core courses; three credit hours of dissertation seminar; 27 credit hours of doctoral research and dissertation; 15 credit hours of distribution hours, of which at least three credit hours must be from outside the College of Engineering and Engineering Technology and at least three of which must be at or above the 600 level; and 24 credit hours of elective coursework (which may include additional dissertation hours).

Assessment of Student Learning

The University has a standard process for assessing student learning outcomes in all its degree programs. The institution's approach incorporates direct and indirect measures administered periodically throughout the academic program. Some of the direct measures include evaluation rubrics for course learning activities, the Candidacy Examination, the Dissertation Proposal Examination, the written Research Dissertation and Defense, and faculty reports from dissertation committees. Indirect assessments include course evaluations, feedback from industry, and student publications and presentations. Oversight of student assessment processes is completed through University Assessment Procedures/Policies to ensure ongoing monitoring and review. Assessment results will be reported to NIU's Accreditation, Assessment, and Evaluation unit annually.

Program Assessment

The University has an established program review process ensuring all programs are systematically and continuously monitored by both on- and off-campus reviewers. Programs are expected to report annually on their assessment of student learning outcomes and to track annual performance indicators, such as faculty performance, fiscal performance, and job placement performance. All collected and evaluated data will be reviewed by a faculty committee to ensure a process of continuous quality improvement. The University will follow these existing protocols for continuous improvement. Northern Illinois University's program review process is conducted on an eight-year cycle and overseen by the Academic Planning Council.

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.

The proposed PhD programs in Electrical Engineering, Industrial and Systems Engineering, and Mechanical Engineering will be housed in their respective departments located in the College of Engineering and Engineering Technology in the Engineering Building on the University's campus. The Engineering Building is comprised of 11 fully modern classrooms and 46 laboratories where students can get hands-on experience in their areas of emphasis and is sufficient to support the three proposed doctoral programs.

The University Libraries has resources sufficient to support the proposed engineering PhD programs. Students have access to professional and scholarly engineering publications, as well as to online research databases, and interlibrary loan through I-Share (Illinet Online (I/O) System). The University Libraries' collections contain more than 2.4 million circulating volumes, approximately 70,000 current serials, 1.3 million government publications, and more than 3.8 million microforms, maps, recordings, and audiovisual materials. A wide range of library services, including reference, information delivery services, reserves, and library instruction, is also available.

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.

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

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 programs.

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.

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 programs, including description of the admission policies, university policies, tuition, fees, and curriculum, is provided in the proposals and will be published on the University's website.

Staff Conclusion

The staff concludes that the Doctorate of Philosophy in Electrical Engineering, Doctorate of Philosophy in Industrial and Systems Engineering, and Doctorate of Philosophy in Mechanical Engineering proposed by Northern Illinois University meet 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 Carbondale

Proposed Center Title in the Region of Authorization: Science, Technology, Engineering, and Mathematics (STEM) Education Research Center in the Southern Region

New Administrative Unit: This proposal is for the establishment of a STEM Education Research Center (SERC). The SERC at Southern Illinois University Carbondale seeks to organize and sustain a community of university faculty and staff, educators and industry partners across the region, state and nation to collaboratively prepare the next generation of STEM educators, researchers and professionals.

Background

Southern Illinois University Carbondale (the University or SIUC) requests approval to permanently establish the STEM Education Research Center (SERC or the Center). The SERC is a public service and research unit, created by Southern Illinois University (SIU) with the temporary approval from the Illinois Board of Higher Education staff on July 1, 2014. The Center will advance STEM literacy and address critical issues in STEM education at local, state, and national levels through interdisciplinary and integrative strategies in research, education, and service. The SERC will support existing programs and develop new grant initiatives to provide professional development for PreK-12 educators, advance research on STEM education, and enhance the undergraduate STEM experience. The STEM Education Research Center serves SIUC faculty, staff, and students; PreK-12 educators and students at regional schools and informal settings; other educators (e.g., parents, home educators); community centers and organizations; and researchers at universities across the U.S. Partners and funders will include federal and state government agencies, business and industry, regional community colleges, and researchers and educators at other universities.

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.

No data are provided because available student outcomes information would not be applicable to the establishment of this new unit.

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 STEM Education Research Center will fill a critical need to improve the quality of STEM education in PreK-12 schools and increase the number of college graduates in STEM fields who are prepared to work in the industries that will be at the center of the continuing transformation of the world economy. STEM graduates and technical leaders are needed to maintain global leadership in the ever-increasing technology-based economy. Various national reports indicate there is a real danger of the U.S. economy losing ground internationally unless the educational system becomes more effective at producing students interested in and capable of the rigors of the educational programs in the STEM disciplines (*Building the Future Investing in Discovery and Innovation*, National Science Foundation, 2018). In addition, employment prospects in STEM fields are high and expected to continue to grow according to the National Association of Colleges and Employers *Job Outlook 2016 Survey*.

Key to increasing the effectiveness of STEM education is the implementation of the Next Generation Science Standards (NGSS) for elementary and high school students. While adopting these national standards is voluntary, Illinois is implementing the NGSS as expressed in the Illinois Learning Standards in Science. The SERC is well-positioned to provide support to rural school districts in southern Illinois in implementing the NGSS through outreach to students and professional development programs for educators. The structure and programs of the Center align these PreK-12 STEM initiatives with undergraduate and graduate STEM education. As a result, the STEM Education Research Center is strategically positioned to collaboratively prepare the next generation of STEM educators, researchers, and professionals.

The Illinois Public Agenda for College and Career Success

The University's proposed STEM Education Research Center will address Goal 1 of the *Illinois Public Agenda for College and Career Success*, which is to increase educational attainment to match the best performing states, by partnering with local educational agencies and regional educators to improve curriculum alignment to standards and by providing rigorous and relevant professional development opportunities for educators and administrators.

Goal 4 is to better integrate Illinois' educational, research, and innovation assets to meet economic needs of the state and its regions. The Center will support the University by developing and studying quality STEM educational programs that strengthen educational and career pathways from PreK-12 to postsecondary to the workforce. SERC is partnering with the National Science Foundation and STEM faculty across SIU to identify best practices and implement new academic strategies to develop global STEM leaders.

Comparable Institutes and Centers in Illinois

Similar academic centers to the proposed STEM Education Research Center exist throughout the nation. The Center serves the University's faculty, staff and students; PreK-12 educators and students at regional schools and informal settings; other educators (e.g., parents, home educators); community centers and organizations; and researchers at universities across the U.S. Partners and funders will include federal and state government agencies, business and industry, regional community colleges, and researchers and educators at other universities.

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 STEM Education Research Center mission and objectives are consistent with the mission of the University. The Center's goals and actions align with priorities from the SIUC strategic plan as follows:

- **Student Success:** The SERC will provide work experiences in STEM education, research, and outreach for undergraduate and graduate students and in collaboration with faculty and academic departments will provide undergraduate scholarships through various federal programs and continue to seek external funding for additional STEM scholarships and internships.
- **Research, Scholarship, and Creative Activity:** The SERC will consult with SIUC faculty to enhance pedagogy and provide instructional support for science content courses for pre-service teachers.
- **Campus Community:** The SERC will collaborate with and support faculty members on grant applications and promote interdisciplinary research projects, which enhances the competitiveness of federal grants.
- **Community Relations:** The SERC will serve as a leading PreK-12 outreach organization at SIUC. Most of the faculty and staff collaborating in the SERC have long and extensive partnerships with local education agencies and community organizations.

Assessment of Outcomes

The STEM Education Research Center will be reviewed in accordance with the University's formal program review process. The STEM Education Research Center conducted a program self-study during the spring of 2018 followed by an internal review that included an evaluation of the director. The self-study process was used to examine the performance of the center and its programs, resulting in recommendations for improvement and future planning. In accordance with SIUC policy, the SERC will submit an annual report. This annual report will describe center performance using measures identified in the self-study, highlight key accomplishments, and provide evidence of alignment to the *Illinois Public Agenda for College and Career Success* and the University's strategic plan.

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.

The University has adequate facilities to support the Center. Since July 2016, the STEM Education Research Center has been occupying temporary space provided by the College of Education and Human Services within the Science Education area. The Center will be relocated to a more suitable space on campus. Upon relocation, the Center will have an office suite, a dedicated

Educational Resource Area, research and instructional classrooms, conference room and storage areas. Currently, there is shared space available to hold discussion groups, work on research projects, develop and test curriculum and instructional activities, and prepare materials for community outreach. The SERC has password protected computers, locking cabinets, and access to closed rooms and workspaces suitable for confidential human subjects data and research discussions. The Center also has access to digital audio and video recorders for interviewing and archiving data and software for analysis of quantitative and qualitative data.

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 STEM Education Research Center is staffed by an interim director, two research staff, an administrative aide contracted through the College of Education and Human Services, and a part-time grants and outreach support staff person. Currently, four faculty are partially supported through the center by external grants and contracts, three additional faculty have external grant support on collaborative projects with the center, and an additional 12 faculty have submitted collaborative proposals that include support. The Center has been instrumental in contributing to advancing STEM education and research at SIUC. While operating under temporary approval, SERC faculty and staff served as principal investigator (PI) or Co-PI on 17 proposals requesting more than \$25 million. SERC faculty developed research-based learning experiences for grant programs, assisted teachers in developing standards-based lessons and assessments, and instructed and mentored participants in action research development, writing, and presentation. SERC faculty and staff will continue collaborating and innovating across the STEM schools and colleges to increase a diverse and highly qualified workforce of STEM educators and professionals in Illinois and beyond.

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.

Resources during temporary operation for the past four years (Fiscal Year 2015 to Fiscal Year 2018) have included state funds, indirect cost recovery, and external funds from state and federal grants and contracts. Operating costs of the STEM Education Research Center will continue to be funded through external grants and contracts, service fees, and donations.

Accreditation and Licensure

1050.30(b)(3): 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.

There is no specialized accreditation required for this new unit of administration.

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.

Information about the STEM Education Research Center including a description of the mission, objectives, and structure will be available on the University's website.

Staff Conclusion

The staff concludes that the STEM Education Research Center proposed by Southern Illinois University at Carbondale 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 at Urbana-Champaign

Proposed Center Title in the Region of Authorization: Lemann Center for Brazilian Studies.

New Administrative Unit: The proposal is for the establishment of the Lemann Center for Brazilian Studies. The Center serves all faculty and students with an interest in the economic, political, and cultural aspects of Brazil.

Background

The University of Illinois at Urbana-Champaign (UIUC or the University) requests approval to establish the Lemann Center for Brazilian Studies (LCBS or the Center). The proposed center was created with temporary status in 2009 by the Illinois Board of Higher Education staff as the Lemann Institute for Brazilian Studies. The current proposal would revise the unit's name and make its status permanent but its mission to promote research and teaching about Brazil by faculty and graduate students at UIUC and their Brazilian counterparts would remain the same. The Center serves students, professors, academic professionals, and community members through many programs. For example, in the 2018-2019 academic year, five grant awards were made to faculty and four Lemann Fellowships and three Baer Fellowships were made to graduate students. Furthermore, LCBS pays the salary of the Director of the Portuguese Language Program and hosts several lectures and at least one cultural event per year. The organizational structure consists of a Director, an Associate Director, a Program Coordinator, an Office Support Specialist, and about 50 faculty affiliates. The Center is largely supported by an endowment and grant income.

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.

No data are provided because available student outcomes information would not be applicable to the establishment of this new unit.

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 Lemann Center for Brazilian Studies will continue to serve all faculty and students with an interest in the economic, political, and cultural aspects of Brazil as it has on a temporary

basis since 2009. LCBS supports research in Brazilian studies, programming for the University around Brazilian studies, research collaboration between UIUC and Brazilian collaborators, and scholarships for graduate students and for Brazilian students to attend the University. Brazil is the world's ninth largest economy and one of the world's top producers of soybean and corn, making this a strategic connection as well for the University of Illinois at Urbana-Champaign with its focus on soybean and corn research.

The Illinois Public Agenda for College and Career Success

The proposed Lemann Center for Brazilian Studies supports Goal 3 of the *Illinois Public Agenda for College and Career Success*. Goal 3, to increase the number of high-quality post-secondary credentials to meet the demands of the economy and an increasingly global society, will be met by providing students with the cultural competency on Brazil that will help them be more competitive for opportunities in the international job market. Furthermore, the Center offers multiple lectures and cultural events each year that are open to the public, thus increasing the cultural literacy of the community at large.

Comparable Institutes and Centers in Illinois

No such institute or center focused on Brazilian studies exists in the state of Illinois, although there is a Center for Latin American Studies at the University of Chicago. Other units focused specifically on Brazil exist at Columbia University, University of Washington, and Stanford University.

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 permanent establishment of the proposed center is in alignment with the overall mission of the University and is consistent with the purpose, goals, and objectives of the institution. The requested unit title is consistent with its objectives to advance Brazilian studies and research collaboration.

Assessment of Outcomes

Outcome targets for LCBS include research output, grants and scholarships awarded, and successful collaborations between UIUC faculty and Brazilian faculty. The Center staff collect data from grant recipients about their activities, travel, presentations, and publications. One example of Center impact is a recent agreement with the Coordination for the Improvement of Higher Education Personnel (CAPES) in the Ministry of Education of Brazil. CAPES will provide four years of support for ten Brazilian students to pursue PhD degrees at UIUC per year. The University is one of about ten universities with this agreement. Another example of measurable impact is grant collaboration in fields such as engineering and agriculture that involve developing new products or knowledge about how to enhance nutrition or animal production. The Director reports to the Dean of the College of Literature, Arts, and Sciences and to the Director of the Illinois Global Institute. The Dean and the Director review LCBS annually and will assess the quality of the unit and the extent to which its outcomes achieve the stated objectives.

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.

The Lemann Center for Brazilian Studies is a part of the Illinois Global Institute housed in the College of Literature, Arts, and Sciences and located in the International Studies Building. Classroom, technology, and library resources are sufficient for the Center's needs and are already in place. No new office or meeting spaces will be needed to accommodate the Center.

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 organizational structure of the Lemann Center for Brazilian Studies consists of a Director, Associate Director, Program Coordinator, and a half-time Office Support Specialist. In addition, the unit has about 50 faculty affiliates. The Director reports to the Dean of the College of Literature, Arts, and Sciences and to the Director of the Illinois Global Institute. No additional faculty or staff will be needed to support the proposed Center.

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 support the proposed Lemann Center for Brazilian Studies. LCBS generates sufficient grant and endowment income to cover its expenses.

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.

There is no specialized accreditation required for this new unit of administration.

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 Lemann Center for Brazilian Studies, including descriptions of the purpose, history, and activities is provided in the proposal and published on the University's website.

Staff Conclusion

The staff concludes that the Lemann Center for Brazilian Studies proposed by the University of Illinois at 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.

Proposed Program Title in the Region of Authorization: Master of Agricultural and Applied Economics in the Prairie Region

Projected Enrollments and Degrees: University of Illinois at Urbana-Champaign has indicated that the enrollment in the proposed Master of Agricultural and Applied Economics is projected to be five to eight students in the first year increasing to 15 to 20 students the fifth year. The University projects that 15 to 20 degrees will be awarded in the fifth year.

Background

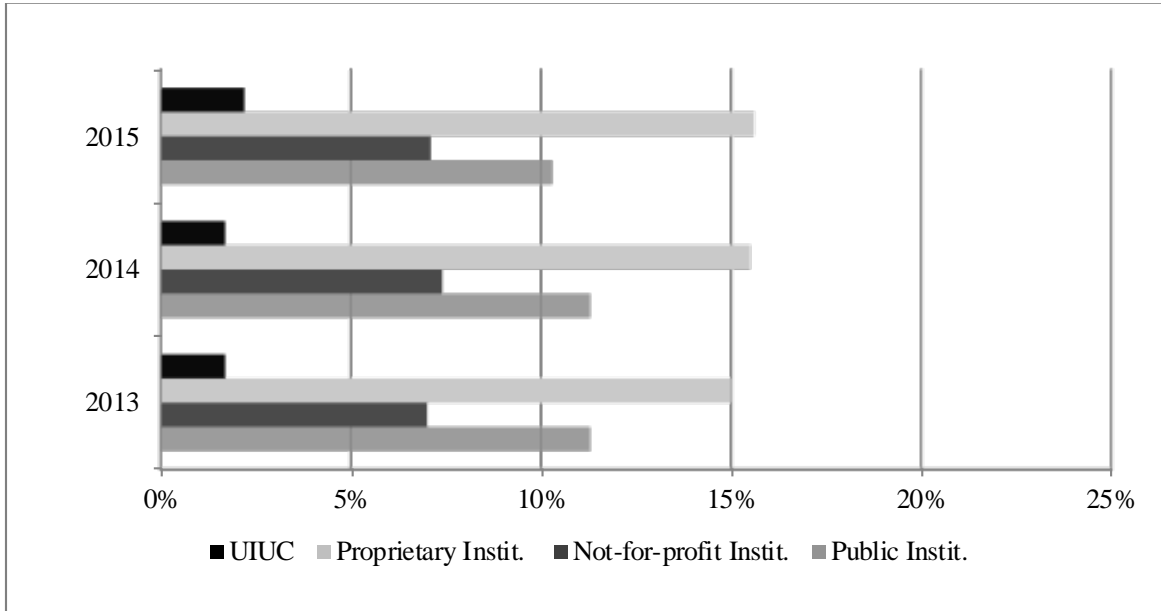
The University of Illinois at Urbana-Champaign (UIUC or the University) requests authorization to offer a Master of Agricultural and Applied Economics (MAAE). If approved, the program will be administered by the Agricultural and Consumer Economics Department in the College of Agricultural, Consumer, and Environmental Sciences (ACES). The MAAE is a non-thesis program designed to provide students with training in economic theory and modeling, data management and analysis, and statistical/econometric and optimization techniques needed to pursue careers as applied economists in the fields of agriculture and food, environment and natural resources, sustainability, and economic development. The 32 credit hours of required coursework will overlap with the existing Master of Science in Agricultural and Applied Economics, but include additional courses and an internship experience that will take the place of a traditional Master's thesis. The proposed degree is designed to meet an identified need in food/agribusiness, government, and non-government sectors for individuals with a strong background in agricultural economics in addition to basic business training.

Institutional Data

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

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

Three Year Cohort Student Loan Default Rate



Source: National Center for Education Statistics, U.S. Department of Education

Note: UIUC is a public institution. A lower number is a positive indicator

Student Loan Default Rate

The three-year student loan default rate for the University was 2.2 percent in 2015, 1.7 percent in 2014 and 1.7 percent in 2013. 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. The U.S. Department of Education stated that the Fiscal Year 2015 three-year national cohort default rate was 10.8 percent. The Fiscal Year 2015 three-year national cohort average default rate breakdown by institutional sector is: 10.3 percent for public institutions; 7.1 percent for not-for-profit institutions; and 15.6 percent for proprietary institutions.

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 degree is designed to meet an identified need in food/agribusiness, government, and non-government sectors for individuals with a strong background in agricultural economics in addition to basic business training. Students will be prepared to pursue careers as analysts and managers in industry, government, and related organizations for which projected employment growth exceeds the state average of 5.76 percent from 2016 to 2026. For example, a

growth of 14.49 percent for management analysts, 17.41 percent for financial managers, and 10.96 percent for soil and plant scientists is projected in Illinois from 2016 to 2026.

The Illinois Public Agenda for College and Career Success

The proposed program supports Goal 3 of the *Illinois Public Agenda for College and Career Success*. Goal 3, to increase the number of high-quality post-secondary credentials to meet the demands of the economy and an increasingly global society, will be met by providing training for graduates that will equip them for management and analyst roles in the food and agribusiness sectors. These roles are increasingly reliant on data-driven decisions formed using the techniques and topics covered in the Master of Agricultural and Applied Economics curriculum.

Comparable Programs in Illinois

There are several examples of similar non-thesis programs in agricultural and applied economics in other states. These include a Professional Master of Science in International Agribusiness at Purdue, a Master of Agriculture at Oklahoma State, and a Master of Agribusiness at Kansas State. In Illinois, the Master of Science in Policy Education (MSPE) offered through the Department of Economics at UIUC is likely the most similar to the proposed program. The MSPE is a non-thesis program focused on economic analysis as it relates to policy. While similar, the proposed program will provide more focused training on the quantitative and analytic skills for applied economists entering industry.

Mission and Objectives

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

The proposed program is in alignment with the overall mission of the University and is consistent with the purpose, goals, and objectives of the institution. The requested degree title reflects the degree program 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

To be admitted to the Master of Agricultural and Applied Economics program, students must hold a bachelor's degree from a regionally accredited four-year college or university in the United States or a comparable degree from a recognized institution of higher learning abroad. An exception to this requirement exists for undergraduate students enrolled in the Bachelor of Science in Agricultural and Consumer Economics at UIUC; they may apply during the term in which they will achieve junior standing and pursue the BS/MAAE as a four-plus-one program. A GPA of 3.0 on a 4.0 scale, or comparable GPA for an international applicant, for the last two years of undergraduate study is a minimum requirement for admission. GRE scores are encouraged, but optional.

Curriculum

The Master of Agricultural and Applied Economics program curriculum requires a total of 32 credit hours of coursework. Core requirements include four hours in microeconomic theory and four hours in applied econometrics plus a two-hour internship. The remaining credit hours consist of electives in the chosen field/specialization and additional quantitative methods courses including at least six hours of graduate-level electives. Students will spend a summer or semester in a professional or research internship on a part- or full-time basis at an on- or off-campus location. Students will be required to summarize their experience in a written report submitted for review to their academic advisor and the Director of Graduate Studies in the Agricultural and Consumer Economics department. Students participating in the four-plus-one BS/MAAE option may apply six advanced hours from their undergraduate coursework in Agricultural and Consumer Economics to the MAAE requirements.

Assessment of Student Learning

Each course in the proposed curriculum serves a role in promoting student learning objectives, and faculty assess student learning outcomes using direct and indirect measures. Direct measures include course assignments, class discussions, papers, exams, and an annual review process in which all graduate students participate. Assessment of the learning outcomes within each course takes place throughout each semester. Indirect measures of student learning outcomes include feedback from graduates solicited during exit interviews and from the Department of Agricultural and Consumer Economics' external advisory committee.

Program Assessment

The proposed program will be evaluated annually by the Department of Agricultural and Consumer Economics' external advisory committee. This committee will consider information gathered during graduate exit interviews and student annual reviews; feedback from the department's graduate student organization and from course evaluations; and other metrics such as graduation and retention rates, time to degree completion, internship placement and satisfaction, and job placement rates. Information gathered will be shared with the ACE Director of Graduate Studies, the Graduate Programs Committee, and the ACE Department Head.

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.

The proposed program will use existing facilities, equipment, and instructional technologies. Courses for the proposed program will be taught in Mumford Hall and neighboring buildings, all of which are equipped with wireless internet service. Courses that require additional technology or resources will be scheduled in classrooms or computer labs equipped with the appropriate software.

The UIUC University Library's robust collection will support the Master of Agricultural and Applied Economics degree with books, full-text article databases, comprehensive e-book collections from relevant publishers, and core journals and reference sources. Some examples include ProQuest, EBSCO, and Springer, IEEE E-books, and Sage Research Methods Online.

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 academic professionals hired possess the training, credentials, and other related qualifications in order 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.

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 Agricultural and Applied Economics.

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, licensure nor certification requirements exist for the proposed program.

Program Information

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

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

Staff Conclusion

The staff concludes that the Master of Agricultural and Applied Economics proposed by the University of Illinois at 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.