

APPROVED
JUNE 3, 2014

Item #V-13
June 3, 2014

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

Submitted for: Action.

Summary: This item requests approval of two degree programs and one center at two public universities.

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

Northern Illinois University

- Master of Science in Integrated Systems Engineering in the Fox Valley and West Suburban Regions

University of Illinois at Urbana-Champaign

- Bachelor of Science in Learning and Education Studies in the Prairie Region
- Center for Business and Public Policy 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 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, address 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, and, for advanced degree programs, recommendations of external consultants.

Northern Illinois University

Proposed Program Title in Region of Authorization: Master of Science (M.S.) in Integrated Systems Engineering in the Fox Valley and West Suburban Regions

Projected Enrollments and Degrees: Northern Illinois University has projected combined enrollment in the proposed M.S. in Integrated Systems Engineering will grow from ten students in the first year to 20 students in the fifth year. The University has projected that approximately 15 degrees will be awarded in this program in its fifth year.

Background

Northern Illinois University (NIU or the University) seeks authority to offer an M.S. in Integrated Systems Engineering at its main campus in DeKalb and an existing NIU branch in Naperville. This proposed degree program was approved through college and university level curriculum committees, endorsed by the Academic Planning Council, and approved by the NIU Board of Trustees. The program will be housed in the College of Engineering and Engineering Technology. The mission of the proposed M.S. in Integrated System Engineering is to prepare the next generation of engineers with the skills needed to evaluate and analyze subunit interactions of an integrated system in order to maximize its overall reliability. This nationally unique program was developed and approved by a college curriculum committee consisting of faculty representatives of Electrical, Mechanical, Industrial and Systems Engineering, and Technology departments. The cross-disciplinary approach led to the development of the two specialization tracks within the degree: Mechatronics and Intelligent Systems and Biomedical and Healthcare Systems. These two tracks have their origin in the existing NIU undergraduate emphasis areas in Electrical (Biomedical emphasis area), Mechanical (Mechatronics emphasis area), and Industrial and Systems Engineering (Health Systems Engineering emphasis area) departments.

Need

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically justified based on the educational priorities and needs of the citizens 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 development of this program grew from industrial needs as identified by the College of Engineering and Engineering Technology's Executive Advisory Board, whose members represent a wide spectrum of industries. Industrial advisory members voiced their concerns that engineering products were becoming increasingly more complex due to the unpredictable interaction of a large number of subsystems involved in the design process. In response to this feedback, all three engineering departments within the college – Electrical Engineering; Industrial and Systems Engineering; and Mechanical Engineering – collaborated on the development of this program.

Integrated systems engineering is highly interdisciplinary in nature and cuts across many engineering fields. Data obtained from the Bureau of Labor Statistics demonstrates high projected employment needs (from seven percent to 13 percent) in the following integrated systems disciplines: micro-systems engineering, nano-systems engineering, industrial systems engineering, and solar energy systems engineering. At the state level, employment for engineering in systems fields is projected to increase by 6.3 percent from 2010 to 2020 (Illinois Department of Employment Security). In the past five years, the College has heard from various industrial advisory board members that they need integrated systems engineers. The following is the anticipated need for integrated systems engineers reported in surveys among the industry advisory board members: Caterpillar (100), UPS (100), Hamilton Sundstrand (50), Motorola (50), Navistar (100), Ingersoll (five), Emerson Electric (100), Excelon (20), and John Deere (30). Owing to its new and unique nature, no relational figures can be provided on the estimated supply of graduates for this program compared to existing similar programs within the state.

The Illinois Public Agenda for College and Career Success

NIU's proposed M.S. in Integrated Systems Engineering will address Goals 2, 3, and 4 of *The Illinois Public Agenda*. Goal 2 is to “ensure affordability for students, families and taxpayers.” The College of Engineering and Engineering Technology has been successful in securing graduate assistantships to recruit and provide financial assistance for quality graduate students. Also, student laboratory fees have been kept to a minimum through subsidization of laboratory materials. Industry in-kind grants and direct gifts of materials for laboratory usage have been a significant factor in stemming otherwise increasing expenditures. The College fostered direct ties with industry that are beneficial to NIU and its students. The College provides students with advanced skills and access to state-of-the-art equipment in many areas over the broad range of technology, but general revenue funding and student fees for equipment and other infrastructure have not been able to keep pace with the growing needs and increasing costs of materials and equipment. As a result, the College collaborates with more than 200 industrial partners to provide financial and material assistance.

Goal 3 is to “increase the number of high-quality post-secondary credentials to meet the demands of the economy and an increasingly global society.” The College and its departments have in place industrial advisory boards (IAB) that represent a cross-section of CEOs, vice presidents, and managers from regional industries. Through periodic meetings with IABs, the College strives to guide its programs in its mission of maintaining high quality credentials of its

faculty and student graduates to be responsive to the economic demand of the northern Illinois region. Through its network of over 200 corporate partners, the College provides internship and cooperative education opportunities for qualified students. Student design projects are sponsored by industry in large numbers as a means of further strengthening students' applied and functional skills with respect to industrial needs.

Goal 4 is to “better integrate Illinois’ educational, research, and innovation assets to meet economic needs of the state and its regions.” The College has been active in the area of “in-house” research and prototyping for industry as a means to integrate its educational and innovation assets when an industry partner would like to try out new technological approaches to a problem but finds it difficult to establish an on-site scaled down manufacturing capability. The College has branched out and explored innovative technologies in enhancing manufacturing processes and products to further accelerate the economic expansion of the region. The proposed program will be specifically assessed in how it engages students in practical research leading to process or product innovation with respect to industrial needs.

Comparable Programs in Illinois

No existing Master’s degrees in Integrated Systems Engineering were identified at Illinois colleges or universities. Two programs in the 14.2701 CIP code are offered in the state, an M.S. in Systems and Entrepreneurial Engineering and a Ph.D. in Systems and Entrepreneurial Engineering, both at the University of Illinois at Urbana-Champaign. The proposed degree is dissimilar to these degrees because it develops skills and a knowledge base for engineering product and process innovations from a subsystem analysis point of view towards maximization of overall system reliability. This is in contrast to the University of Illinois programs, which are heavily concerned with process optimization in a business setting. The proposed program provides interdisciplinary science-based inquiry and analysis to bring about integrated product and process innovation.

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 central mission of NIU is to promote excellence and engagement in teaching and learning, research and scholarship, creativity and artistry, and outreach and service. The proposed program is consistent with NIU’s mission to meet the needs of the northern Illinois region by preparing individuals for effective membership in a complex society and their chosen professions and in meeting the needs of students for professional and lifelong education. In particular, the program prepares the next generation of engineering students who are responsive to the needs of northern Illinois industry in designing complex products with the highest reliability through principles and applications of integrated systems engineering. Further, the proposed program and its primary objective are aligned with three of the University’s strategic imperatives to:

1. Preserve, strengthen, and extend NIU’s teaching and learning environment;
2. Strengthen and extend NIU’s global/regional impact; and
3. Make NIU an institution of “first choice” for faculty, students, and staff.

The objectives of the proposed program are consistent with, and support, the mission of the University and the requested degree title is congruent with the corresponding degree program objectives and curricula.

Curriculum and Assessment

1050.30(b)(1): 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 program 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. E) Degree programs must meet [appropriate] requirements.

Admission Requirements

Students seeking admission to the M.S. in Integrated Systems Engineering must hold an accredited B.S. degree in engineering, engineering technology, or a science field with a minimum grade point average (GPA) of 2.75. Although applicants are required to submit GRE scores for admission to the Graduate School, for NIU students with a GPA of 3.0 or better, the GRE may be waived by the college. Other Graduate School requirements must also be followed as described in the graduate catalog. In addition, the applicant must arrange to have at least three letters of reference submitted directly to the Graduate School.

Students from other engineering or science majors should fulfill deficiency requirements in order to meet the needed prerequisites for courses in each specialization area. Depending on the student's desired specialization area and previous completion of mathematics and physics courses, accompanying prerequisites for each deficiency may be required in order for the student to succeed in the program. Students will be made aware of any deficiency requirements on a case-by-case basis by the college-wide advising committee and will be provided with a formal plan of expected deficiencies and prerequisites prior to enrolling in the program. Students will declare their desired area of specialization upon admission.

Curriculum

The M.S. in Integrated Systems Engineering will be offered with three options: thesis, project, or course. Students pursuing the thesis option must earn a minimum of 30 semester hours of graduate credit, consisting of six credit hours of integrated system engineering core courses, 18 credit hours in a specialization area, and six credit hours of Master's Thesis. The thesis option will prepare students to concentrate on original research techniques. The master's thesis topic must be approved by the student's graduate committee and defended at an oral examination.

Students pursuing the project option must earn a minimum of 30 semester hours of graduate credit, consisting of six credit hours of integrated system engineering core courses, 18 credit hours in a specialization area, three credit hours of 600 level courses approved by the student's advising committee, and three semester hours of Independent Study for a master's

project. The master's project must be on a topic approved by the student's graduate committee. The master's project must be defended at an oral examination and presented in a written report. Employed students may use topics and facilities from their work, if approved.

Students pursuing an M.S. degree under the course option will be required to complete 33 semester hours of graduate credit, consisting of six credit hours of integrated system engineering core courses, 18 credit hours in a specialization area, six credit hours of 600 level courses approved by the student's advising committee, and three credit hours of Independent Study. The independent study requirement may be met by a company internship report or a master's paper. The report or paper will need to be examined and approved by the student's graduate committee.

Assessment of Student Learning Outcomes

The M.S. in Integrated Systems Engineering is designed to prepare graduates of the program to:

1. Demonstrate the ability to develop innovative solutions to complex integrated systems engineering problems;
2. Collect, analyze, and interpret data relevant to integrated systems engineering problems;
3. Apply analytical and computational skills to model, analyze, and design integrated engineering system;
4. Demonstrate the ability to engage in research and development; and
5. Demonstrate the ability to communicate effectively with those inside and outside the field of integrated systems engineering.

A variety of teaching/learning techniques including projects, field experiences such as internships or research projects, case studies, assignments, and/or examinations will assure that students meet each learning objective. An assessment plan has been submitted to and approved by NIU's University Assessment Panel related to the specific measurable outcomes listed above.

Program Assessment

The proposed M.S. in Integrated Systems Engineering's assessment plan will comprise direct and indirect methods to evaluate and improve its overall effectiveness. A college-wide assessment committee will implement and oversee the plan, whose critical components are: pre-admission screening; end-of-semester evaluation; internship performance; fellowships, grants, and employment opportunities; final thesis, project, or paper review; faculty survey; and alumni survey. The program assessment plan will result in a progress report during the third year of operation and will become part of the Illinois Board of Higher Education's program review process.

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 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.

Technology and Instructional Resources

The e-Learning Services under the Division of Outreach, Engagement, and Regional Development, and the Faculty Development and Instruction Design Center under the Division of Academic Affairs will provide the support needed to develop online courses. NIU Libraries offer a full range of instructional resources, including an online catalog, research tools, and instruction in the use of library resources. Both the main campus and the Naperville site provide access to the technology and software necessary for this degree program.

Library

The library system of the University consists of close to 2.2 million circulating volumes, approximately 339,000 volumes of print serials, over 38,000 electronic titles, and over 239,000 government publications. NIU Libraries participate in the I-Share System and provide access to a variety of electronic databases. A wide range of library services is also provided including reference, information delivery services, reserves, and library instruction. The Information Delivery Services Department provides NIU faculty, staff, and students with access to library materials not owned by the Northern Illinois University Libraries. The students at the Naperville campus will have access to all of these resources, along with “cloud” access to the software integral to the projects and research required for an engineering program.

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.

Owing to its integrated nature, the proposed program requires faculty expertise and sharing of resources from all three engineering departments and so has official affiliation of all the engineering faculty members. Each engineering department will offer a minimum of four courses per year for this program. The Associate Dean of Research and Graduate Programs will serve as the Chair of a college-wide advising committee to oversee this program. Within each school, faculty personnel reviews and curricular changes will be undertaken in alignment with school-specific personnel and curricular policies.

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 upon supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

No new state resources are needed to establish the M.S in Integrated Systems Engineering because most resources, including facilities, personnel, equipment, and library resources that will support the proposed program, are already in place. Any additional costs will be covered by budget reallocations within the College.

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.

1050.50(a)(1): Three years after approval of a new program, the institution shall provide a program progress report to the Board as part of the institution's annual report. The third year progress report shall describe the institution's performance in meeting program objectives and show where any improvements are necessary. The placement of a program in voluntary temporary suspension will not negate the requirement of submitting a third year progress report.

1050.50(a)(2)(C): Requirement for Programs in which State Licensure is Required for Employment in the Field: In the case of a program in which State licensure is required for employment in the field, a program can be found to be in good standing if the institution is able to provide evidence that program graduates are eligible to take the appropriate licensure examination and pass rates are maintained as specified in the objectives of the unit of instruction. If there is no such evidence, the institution shall report the program as flagged for review.

The proposed M.S. in Integrated Systems Engineering does not require specialized accreditation or licensure. NIU is regionally accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools.

Program Information

1050.30(b)(2)(A): The information the institution provides for students and the public...(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 Northern Illinois University's M.S. in Integrated Systems Engineering, including a detailed description of the curriculum, admission requirements, tuition, fees, and other cost information of the program, as well as university and graduate school policies, will be published on the University's website. Comparable information about the program will be published in the University's Graduate catalog, and similar information will be available at the College of Engineering and Engineering Technology's website.

Staff Conclusion. The staff concludes that the Master of Science in Integrated Systems Engineering program proposed by Northern Illinois University meets the criteria to implement the Board of Higher Education Act (110 ILCS 205/et.seq.) as set forth in the Board of Higher Education administrative rules (23 Ill. Adm. Code 1050.30), and the Illinois Board of Higher Education policies pertaining to assessment and accreditation for licensure.

University of Illinois at Urbana-Champaign

Proposed Program Title in the Region of Authorization: Bachelor of Science in Learning and Education Studies in the Prairie Region

Projected Enrollments: The University projects enrollments in this program of 25 students in the first year, increasing to 150 students by the fifth year.

Background

The University of Illinois at Urbana-Champaign (the University) requests authority to offer a Bachelor of Science (B.S.) in Learning and Education Studies in the Prairie Region. Currently, the College of Education cannot admit or offer an undergraduate degree to students who are not in a licensure teacher education program. Notwithstanding, there is a need for a non-licensure major and degree to serve undergraduate students who are interested in education, but who are not necessarily interested in a traditional state licensure degree program (i.e., becoming a licensed teacher). Many students discover an interest in education at a point too late in their academic plan to be candidates for the existing education majors due to the many state requirements that accompany a licensure program. The concentrations established with the Learning and Education Studies major were derived from existing graduate/master-degree programs/units in the College. The faculty members in these departments have not previously taught in the existing undergraduate teacher education program but were interested in developing undergraduate majors that emphasize their expertise and value in the field of education and society-at-large.

Accordingly, the Learning and Education Studies major will have the following key components: focus on learning, assessment and evaluation, workplace training, cultural understanding, globalization, diversity, and technology. It will provide formal education to provide students with 21st century skills such as critical thinking, problem solving, and collaboration. The University expects that these elements make the Learning and Education Studies major attractive to a variety of students, including incoming freshmen, transfer students, international students, and intercollege transfer students.

Need

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically justified based on the educational priorities and needs of the citizens 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.

There is an ever-increasing demand in the United States and abroad for persons trained to work in business and non-profit organizations in areas of specialization in education beyond those that require traditional school licensure. As this proposal was being established, the University reached out to Northwestern University, who offers a similar program, for guidance on these matters and was assured that their graduates have no trouble finding employment. Many of their graduates obtain work in differing fields of human capital consulting and business. The University anticipates graduates of the proposed program will be marketable in these fields as well. The program will prepare students for positions as education analysts, data assessment specialists, and as learning coordinators in school districts. The proposed program will serve a growing demand for graduates who have an interest in helping adults learn and improving organizational performance. The demand comes from a range of business sectors, but most often from health care, manufacturing, and logistics. Job titles include Training and Development Specialist, Training Coordinator, and Training Analyst.

The Illinois Public Agenda for College and Career Success

The University's proposed B.S in Learning and Education Studies will address Goals 1 and 3 of *The Illinois Public Agenda*. Goal 1 is to "increase educational attainment to match the best performing states." Nationally, interest in students wanting to receive a B.A. or B.S. degree

in education without the licensure requirements to become a teacher is growing. Some students work for private or alternative schools, teach abroad, work for Teach for America, do data assessment for differing systems of learning in the United States, or seek to apply their foundational training in education to a broader array of opportunities outside the sphere of education. This program will make this goal more attainable for countless students interested in education writ large, but not interested in becoming a teacher in a K-12 setting. It is also a suitable option for students interested in becoming a teacher, but who do not apply to a teacher education program at the appropriate times determined by the state and College of Education, respectively. Obtaining a B.S. in Learning and Education Studies would allow them to enroll in classes as undergraduate students that overlap with and have been historically reserved for students in a licensure program. This access will prepare them for admission into a master's program that leads to licensure, and it has the potential to shorten their time to the completion of that post-baccalaureate licensure-preparation degree work.

As such, one of the goals of this new degree offering will align with one of the action steps of *The Illinois Public Agenda* to increase educational access and attainment. This goal “is to increase the number of high quality P-12 teachers and school leaders in low-performing schools” by providing additional avenues in which students can gain access to the expertise of faculty in the College of Education and graduate as an alum and leader in the field of education.

Goal 3 is to “increase the number of high-quality post-secondary credentials to meet the demands of the economy and an increasingly global society.” Education is no longer conceptualized as an enterprise restricted to schools. The pace of change in the nature of literacies, expansion of technology, and access to information affords learning in both school and non-school contexts so as to challenge universities to prepare students in new ways. Successful participation in contemporary society requires the ability to learn complex information and to support problem-solving and decision-making across a wide range of contexts. Learning must also be lifelong and life-wide to afford adaptation to change in the economic, political, technological, and cultural landscape. The new degree offering is interdisciplinary and will assist in preparing and producing college graduates with high-quality credentials to meet the economic demands of a global economy. The University recognizes the new skills, innovations, and challenges graduates will face in the 21st century and is prepared to assist these students in being best prepared to address these concerns head-on.

Comparable Programs in Illinois

In the State of Illinois, a peer college and institution – the School of Education at Northwestern University – has a comparable program to the Applied Learning Science concentration. This program, Learning and Organizational Change, explores how organizations and the individuals within them use knowledge and learning to create and respond to change within their environments. In addition, at its April 2014 meeting, the Board of Higher Education approved a bachelor's program at Eastern Illinois University to prepare education majors to work in adult education and nonprofit settings. The Eastern Illinois University program does not lead to licensure through the Illinois State Board of Education. Outside of Illinois, the peer institutions of Michigan State University and Texas A&M University offer a non-licensure degree program in addition to their licensure degree programs. Michigan State University offers a non-licensure degree program to students interested in international education and Texas A&M offers a non-licensure degree program to students interested in workforce development.

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.

This proposed degree offering supports the mission of the University to provide a well-rounded education to its students, to educate students for the challenges they will face as citizens and leaders in a global economy, and to give them a strong foundation in research, teaching, and public engagement – characteristics that have defined the University for nearly 150 years. The University hopes that students who graduate from this major will advocate for the pivotal role diversity plays and will continue to play in all aspects of society, data assessment, human resource development, and the overall ecology associated with learning and education in society.

Curriculum and Assessment

1050.30(b)(1): 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 program 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. E) Degree programs must meet [appropriate] requirements.

Admission Requirements

For first-year applicants, the criteria for admission include: (1) high school grade point average and class rank; (2) SAT or ACT composite score that meets the range requirements for admission to the University; (3) essays that speak to why the prospective student wants to be an education major; (4) academic interests and extracurricular activities that illustrate personal strengths and skills; and (5) minimum high school coursework requirements for admission to the University. Incoming freshmen admitted directly into the Learning and Education Studies major will declare their concentration in consultation with their academic advisor during the spring of their freshman year prior to the first day of priority registration for fall. On-campus students seeking to transfer into the Learning and Education Studies major will be required to meet with an undergraduate Education advisor and then apply to the program and declare a concentration. Outside transfer students seeking admission to the Learning and Education Studies major will propose a concentration while applying and declare their concentration when they accept their offer of admission into the major.

Curriculum

The proposed degree in Learning and Educational Studies will be a Bachelor of Science, so that students will spend much of the first two years with general education courses, achieving a solid preparation in the humanities, social and natural sciences, technology, and mathematics. In the final two years of the major, students will take a set of core courses, as well as coursework in

a concentration. Students will have the opportunity to choose from one of the following concentrations: (1) Applied Learning Science; (2) Educational Equality and Cultural Understanding; and (3) Workplace Training and Development. Students in Applied Learning Science will explore the foundations and principles of learning and the application of problem-solving skills in education, health care, business, and other organizational contexts. Students in the Educational Equality and Cultural Understanding concentration will explore the role of education in addressing issues of equality and cultural understanding from domestic and international perspectives. Students in Workplace Training and Development will acquire a broad set of knowledge and skills that will enable them to develop, deliver, and evaluate training and development programs across workplace settings. A minimum of 120 semester hours is necessary for graduation in the Learning and Education Studies program.

Assessment of Student Learning Outcomes

Learning objectives for students in this new major are not significantly different than those for students in a licensure teacher education degree program. Students in the proposed major will be expected to obtain advanced knowledge with students in a licensure program in the general education offered across campus and core courses in the College. They will be expected to obtain a strong understanding of important theories and content knowledge in their specific concentration of study and they will be expected to advance their knowledge obtained in their major and concentration with a minor complementary of their professional interests and preparation. Each course will have specific learning goals; their attainment will be regularly assessed via student programming projects, homework, and exams, as students move through the courses and curriculum.

Program Assessment

The Academic Programs Committee under the leadership of the Associate Dean for Academic Programs will evaluate the effectiveness of this new degree offering three years after its implementation and submit a report to the Illinois Board of Higher Education summarizing its implementation and initial developments. Similar to the licensure degree programs in the College, an annual report will be submitted to the Dean of the College illustrating an overview of successes and challenges. Data to aid in the evaluation of the program will include: admission numbers disaggregated by race, gender, socio-economic status, geography, concentration, and academic year (when applicable); student performance data, in comparison to students enrolled in licensure majors; undergraduate research opportunities; retention rates and average time to degree; annual senior survey results; employment rates and salaries, as compared to national averages; rates of acceptance to graduate schools; and alumni surveys, approximately every five years.

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 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.

Currently the University of Illinois at Urbana-Champaign offers several bachelor's, master's, and doctoral programs in the College of Education. As such, sufficient facilities, equipment, instructional technology, library resources, including textbooks, journals and databases, and other resources are available to support the proposed program.

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.

The faculty that have formally committed to teach in this new non-licensure degree program are from all four departments in the College of Education. Disproportionately faculty from the departments of Educational Psychology and Education Policy, Organization, and Leadership will teach courses for the three proposed concentrations. There are a total of 45 tenure track faculty in these two departments. These faculty currently teach at the master and doctoral level, but have agreed to teach undergraduate courses in the new program as part of their regular course load.

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 upon supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

No new state resources are needed to establish this program. Existing academic departments within the College of Education have the required resources. It is indicated in the proposal that \$45,000 to \$55,000 in additional funds may be needed in year five of implementation. These additional funds would be used to pay for advising personnel commensurate with the expected increase in student enrollment at that point. These funds will be secured through differential tuition paid by students enrolled in the programs.

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.

1050.50(a)(1): Three years after approval of a new program, the institution shall provide a program progress report to the Board as part of the institution's annual report. The third year progress report shall describe the institution's performance in meeting program objectives and show where any improvements are necessary. The placement of a program in voluntary temporary suspension will not negate the requirement of submitting a third year progress report.

1050.50(a)(2)(C): Requirement for Programs in which State Licensure is Required for Employment in the Field: In the case of a program in which State licensure is required for employment in the field, a program can be found to be in good standing if the institution is able to provide evidence that program graduates are eligible to take the appropriate licensure

examination and pass rates are maintained as specified in the objectives of the unit of instruction. If there is no such evidence, the institution shall report the program as flagged for review.

The proposed B.S. in Learning and Education Studies does not require specialized accreditation or licensure. The University of Illinois at Urbana-Champaign is regionally accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools.

Program Information

1050.30(b)(2)(A): The information the institution provides for students and the public...(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 University of Illinois at Urbana-Champaign's Bachelor of Science in Learning and Education Studies, including a detailed description of the curriculum, admission requirements, tuition, fees, and other cost information as well as university and graduate school policies, will be published on the University's website. Comparable information about the program will be published in hard copy in the University's Graduate catalog and similar information may be available from the School of Education upon request.

Staff Conclusion. The staff concludes that the Bachelor of Science in Learning and Education Studies program proposed by 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 the Board of Higher Education administrative rules (23 Ill. Adm. Code 1050.30), and the Illinois Board of Higher Education policies pertaining to assessment and accreditation for licensure.

Proposed Center Title in Region of Authorization: Center for Business and Public Policy in the Prairie Region

Projected Enrollments and Degrees: This proposal is for a new organized research and public service center, the Center for Business and Public Policy. Projections of student enrollments and degrees awarded are not relevant to this proposal. However, the Center plays an important role in promoting and contributing to the research, teaching, and public engagement mission of the University.

Background

The Center for Business and Public Policy (CBPP) was established in June 2007 to create and disseminate new knowledge regarding the economic effects of public policy on businesses and markets. It is a research, teaching, and public engagement unit housed in the College of Business and is focused on four primary areas:

1. Business and individual tax policy;
2. Government insurance programs (e.g., Social Security, Medicare, public employee pensions, federal catastrophe insurance, etc.);
3. The effect of health care policy on businesses, consumers, and the economy; and
4. The effect of energy and environmental policy on businesses, consumers, and the economy.

Faculty affiliates are expected to produce research on topics related to the interactions among governments, businesses, and markets that advance knowledge (as measured by publication in leading academic journals) and that have applications to businesses operating in a “mixed” economy (i.e., a regulated market economy in which the government is an important actor, as in the United States and all OECD/developed nations). Thus, the research produced by the CBPP will be, on average, more applied than is often the case in discipline-centered departments.

Although the Center does not offer classes, the faculty associated with the center, termed research associates, have worked closely with the Department of Finance to develop and teach a number of new courses that train students to analyze the effect of public policy on firms, consumers, and social well-being. New in the 2013-2014 academic year, the Department of Finance has worked with the CBPP and the Department of Accountancy to propose a new graduate concentration in Business and Public Policy. This concentration will initially be offered to students in the Master of Accountancy Science (MAS) program, although the individual courses will also be available to students in other master’s programs.

The CBPP is well-positioned to contribute in at least three of the key areas identified as part of the University of Illinois Urbana-Champaign (or the University) “Visioning Future Excellence” process. These include:

- Economic Development;
- Energy and the Environment; and
- Health and Wellness

Economic Development: The government plays an integral role in the success or failure of any economy. For example, it has long been understood that the government can contribute to technological progress and economic growth by enforcing property rights, by creating public goods such as infrastructure, and by careful regulation of the financial system. However, governments can also detract from economic development if policies are not well-designed or implemented. Faculty members associated with the CBPP have substantial expertise in evaluating the design and implementation of public-sector activity and regulation of the market economy.

Energy and the Environment: This is a substantive area of focus for the CBPP. Indeed, one of the senior faculty members in the CBPP is the Director of the Environmental and Energy Economics program at the National Bureau of Economic Research (the nation’s leading nonprofit research organization that includes 1,100 economists at leading colleges and universities in North America, including 22 Nobel Laureates). He is a lead author for the ongoing “Climate Assessment Report” of the Intergovernmental Panel on Climate Change. In addition, he provided the keynote address at a meeting about the economic effects of greenhouse gas emissions taxes, which was attended by all finance ministers of the 27 nations in the European Union. Several other CBPP faculty affiliates also conduct research in the area of environmental policy.

Health and Wellness: The health care sector comprises over one-sixth of gross domestic product (GDP) in the United States. Federal and state governments are deeply involved in this market: Medicare and Medicaid comprise a large share of total U.S. spending on health care. The Patient Protection and Affordable Care Act has further expanded the government’s role through an individual insurance mandate and the creation of health insurance exchanges. All of these programs have deep and important economic implications, and a large majority of all current CBPP Research Associates have conducted research in these areas.

Need

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically justified based on the educational priorities and needs of the citizens 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 University's proposed Center for Business and Public Policy will address Goals 3 and 4 of *The Illinois Public Agenda*. Goal 3 is to "increase the number of high-quality post-secondary credentials to meet the demands of the economy and an increasingly global society." The Department of Finance and the CBPP have worked collaboratively on the creation of a new graduate concentration for master's degree students in the College of Business. Specifically, the Department of Finance has submitted for campus approval a proposal to offer a graduate concentration in Business and Public Policy starting in the 2013-14 academic year. This graduate concentration has the strong support of the Dean's Office in the College of Business, the Department of Accountancy (whose students it will serve), the MBA program (whose students will have new electives available to them as a result of this addition) and the Department of Finance (which is the home unit to the CBPP-affiliated faculty who, initially, will teach the courses that comprise this graduate concentration).

Goal 4 is to "better integrate Illinois' educational, research, and innovation assets to meet economic needs of the state and its regions." CBPP is well-positioned to help build the University's reputation as a leader on issues related to economic policy. With the public sector in the United States on a path to grow as a percentage of GDP in the coming decades, the importance of the interactions between business and government will continue to grow. These issues are highly relevant to the state of Illinois: as one example, several of the Center's research associates have been active informal advisers to various state officials on issues related to public pension reform.

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 objectives of the CBPP are consistent with the mission of the University and focus around the areas of research, teaching, and public engagement.

Research: To ensure that the Center is creating and sustaining a research environment that supports the CBPP's research associates in conducting research in areas relevant to the CBPP mission, the Center will regularly monitor:

- *Productivity*, which will be measured by the number and quality of publications in leading peer-reviewed outlets, with an expectation that it be consistent with the standards of economists at top 20 business schools;
- *Impact*, which will be measured by citation counts as well as other standard quantitative and qualitative factors; and

- *Mentoring* of junior faculty affiliated with the Center, which will be measured by the Center's track record at helping junior faculty generate tenure-worthy records by the end of their probationary period in their home units.

Teaching: To ensure the Center is contributing to the delivery of high-value educational opportunities for College of Business students, the Center will work with the academic departments of the research Associates to monitor:

- *Enrollment in the graduate concentration*, which after the initial transition is expected to be approximately 30 MAS students per year; and
- *The value of the content provided to students*, which will be measured by regular curriculum and classroom evaluations.

Public Engagement: To ensure that the Center continues to deliver public engagement activities, the Center will monitor:

- *The frequency of public lectures* that the Center organizes (with a goal of at least two major events per year);
- The level of *attendance* at these events;
- The *frequency* with which faculty are invited to appear in international, national, state and local public forums; and
- The frequency of *press citations*.

Accomplishments of the Center

The Business and Public Policy Center is involved in research, teaching, and public engagement, and the number of individuals served by the Center varies across each of these dimensions. On the research side, the work of the associates is disseminated through academic and industry conference, as well as peer-reviewed journals and other publications. The Master's concentration in Business and Public Policy being offered by Center faculty through the Department of Finance will serve several hundred students per year. Nine distinct courses are offered and in most cases two sections are available, or about 15 sections annually going forward. With an average expected enrollment of 35 students per course per year, this would amount to over 500 students per year across all courses and programs.

Public engagement is a central component of the CBPP's mission. The Center supports faculty members who are engaged in national and international events and organizes and hosts public engagement activities at the University and for Chicago-area alumni. The Center also has gained national and international visibility. A few examples of the public engagement activities of the Center's research associates since the formation of the Center in 2007 include:

- Serving by Presidential appointment on the U.S. Social Security Advisory Board;
- Testifying before the U.S. Senate;
- Testifying before the Government Accounting Standard Board;
- Testifying before the Congressional Long-Term Care Commission;
- Presenting the keynote address at a meeting of the European Union's 27 Finance Ministers;
- Serving on the Board of Trustees of TIAA CREF;

- Co-organizing panels and conferences on topics ranging from promoting longer working lives to the effect of high-skilled immigration on the U.S. economy to the interaction of environmental policy and health; and
- Co-authoring several proposals to reform the State Universities Retirement System and testifying before the Illinois pension commission.

Locally, the Center has held numerous public events to expose Illinois students, faculty, staff, and community members to high-profile policymakers and influencers from across a broad range of the ideological and political spectrum, including:

- Peter Orszag, Director of the Congressional Budget Office and later Director of the Office of Management and Budget under President Obama;
- Kevin Warsh, former Governor of the Federal Reserve System and former White House Special Assistant to the President for Economic Policy;
- Peter Diamond, 2010 Nobel Laureate in Economics and President Obama's nominee to the Federal Reserve Board;
- Stephen Moore, Senior Economics Writer of *The Wall Street Journal* and University Alumnus;
- Douglas Holtz-Eakin, Former Director of the Congressional Budget Office and Chief Economist of the President's Council of Economic Advisers;
- Global Warming Climate Panels;
- Health Care Debate Panels;
- Financial Regulation Panels; and
- Environmental Regulation Panels.

These types of events have provided important opportunities for students and alumni to gain insight into a wide variety of topics. In addition, small group meetings between students and speakers, which were organized by the Center, have allowed for further dialogue and insights. The activities hosted by the CBPP have also served to build and expand relationships with the corporate and government community. For example, some of the Center's events have been co-sponsored and/or funded by corporate partners, including State Farm, Busey Bank, and Carle Foundation Hospital. Conservatively estimated, the Center's public engagement activities have reached several thousand individuals thus far, including many important decision-makers.

Assessment of Student Learning Outcomes

The Director of the Center reports to the Dean of the College of Business, who in turn is advised by an executive committee comprised of six senior faculty members in the College. The Director will be held accountable to the Dean and the executive committee for meeting the outcomes outlined for the center pertaining to research, teaching, and public engagement. The Dean will also control resource allocation for the College, including the Center. In addition, the individual faculty and members who are affiliated with the Center will go through annual evaluations from their home units.

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 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 CBPP is housed in the Business Instructional Facility, which is the home of the College of Business. The Center has a pod of adjacent offices on the fourth floor that includes the Director's office, the Associate Director's office, and the offices of several CBPP research associates who also hold appointments in the College. For any other activities (meetings, events, etc.), the CBPP makes use of shared College of Business facilities.

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.

CBPP is housed in the College of Business. The CBPP Director, a tenured professor in the Department of Finance, is responsible for the CBPP's overall mission, activities, and budget. The director reports directly to the Dean of the College of Business on these and related matters. The executive committee of the College of Business (comprised of and elected by faculty) serves as the primary advisory committee to the Dean on all budget and policy issues, including the CBPP and other centers in the College. All CBPP research associates have tenure-line academic appointments that are 100 percent within existing academic departments (or, in a few cases, partial appointments in the University's Institute for Government and Public Affairs). All personnel matters are conducted through home units and are subject to standard campus and university procedures.

The current director is a full professor in the Department of Finance. It is anticipated that future directors will also be full professors in the College of Business. The director will administer and oversee the operations of all aspects of the Center. The director will be responsible for advocating the Center's agenda and for advancing its progress. The associate director is an academic professional within the College of Business. This individual assists with all aspects of running the CBPP, including budget, event planning, oversight of internal and external communication, and more. The associate director has a dual-reporting structure. This position reports to the Director on matters related to the CBPP's mission and activities and to the Director of Administration for the Department of Finance for all administrative matters. Research Associates are drawn from departments inside and outside the College of Business.

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 upon supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

No new state appropriations are sought for the Center's operations. The historical and proposed budget for the Center is \$120,000 annually. Center-affiliated faculty are paid through their home departments rather than through the Center. When the Center was initially formed in 2007, the College of Business and the Office of the Provost made a strategic investment in this

area by agreeing to provide salary support through home departments of affiliated faculty. Because of this, the direct expenses of the Center are limited to support personnel (the associate director of the Center and research assistants) and for expenses associated with various public engagement events.

The CBPP has been successful at raising external funds to support public engagement activities in each of the last four fiscal years. Examples of external funding include a gift from State Farm (\$60,000) to host a four-part series of public panel discussions on regulation during Fall 2010 and a gift from Busey Bank (\$20,000) to host a former Governor of the Federal Reserve System during Spring 2012. The CBPP has also received two generous non-restricted gifts totaling \$93,251 from alumni of the College of Business. Although these sources of revenue are non-recurring, the CBPP solicits funding on an ongoing basis to support its public engagement activities.

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.

1050.50(a)(1): Three years after approval of a new program, the institution shall provide a program progress report to the Board as part of the institution's annual report. The third year progress report shall describe the institution's performance in meeting program objectives and show where any improvements are necessary. The placement of a program in voluntary temporary suspension will not negate the requirement of submitting a third year progress report.

1050.50(a)(2)(C): Requirement for Programs in which State Licensure is Required for Employment in the Field: In the case of a program in which State licensure is required for employment in the field, a program can be found to be in good standing if the institution is able to provide evidence that program graduates are eligible to take the appropriate licensure examination and pass rates are maintained as specified in the objectives of the unit of instruction. If there is no such evidence, the institution shall report the program as flagged for review.

The College of Business is accredited by the Association to Advance Collegiate Schools of Business (AACSB), a global, nonprofit membership organization of educational institutions, businesses, and other entities devoted to the advancement of management education. While the Center for Business and Public Policy is not accredited separately, it is an integral part of the College satisfying standard two of the AACSB accreditation guidelines, which states: “The school produces high-quality intellectual contributions that are consistent with its mission, expected outcomes, and strategies and that impact the theory, practice, and teaching of business and management.”

Program Information

1050.30(b)(2)(A): The information the institution provides for students and the public...(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 University of Illinois at Urbana-Champaign’s Center for Business and Public Policy, including a summary description of the mission and objectives, structure and leadership, and assessment activities, will be published on the University’s website. Comparable

information about the Center will be published in the University's Graduate catalog and similar information about the Center may be available from the College of Business upon request.

Staff Conclusion. The staff concludes that the Center for Business and Public Policy 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 the Board of Higher Education administrative rules (23 Ill. Adm. Code 1050.30), and the Illinois Board of Higher Education policies pertaining to assessment and accreditation for licensure.

The staff recommends adoption of the following resolutions:

The Illinois Board of Higher Education hereby grants to Northern Illinois University authorization to establish the Master of Science in Integrated Systems Engineering in the Fox Valley and West Suburban Regions subject to the institution's implementation and maintenance of the conditions that were presented in its applications and that form the basis upon which these authorizations are granted.

The Illinois Board of Higher Education hereby grants to University of Illinois at Urbana-Champaign authorization to establish the Bachelor of Science in Learning and Education Studies and the Center for Business and Public Policy in the Prairie Region subject to the institution's implementation and maintenance of the conditions that were presented in its applications and that form the basis upon which these authorizations are granted.