

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

Submitted for: Action.

Summary: This item requests approval of two degree programs, two centers, and two schools at the following public universities:

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

Northern Illinois University

- Master of Science in Family and Consumer Sciences

Southern Illinois University at Carbondale

- Center for Workforce Development

University of Illinois at Urbana-Champaign

- Bachelor of Science in Liberal Arts and Sciences in Earth System, Environment, and Society
- School of Earth, Society, and Environment
- School of Literatures, Cultures and Linguistics
- Technology Entrepreneur Center

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 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 Commitment* that set forth new priorities to guide Illinois higher education in the first decade of the new millennium. Staff recommendations are based on analyses of application materials and responses to staff questions, and for a few programs, recommendations of external consultants.

Northern Illinois University

- M.S. in Family and Consumer Sciences

Background. Northern Illinois University requests authority to offer the Master of Science (M.S.) in Family and Consumer Sciences, on-campus, to meet the growing occupational need for graduates with master's degrees in fields related to family and consumer sciences. Graduates will be prepared to teach in middle and secondary schools or work in the apparel industry. The university currently offers two bachelor's programs related to family and consumer sciences, the B.S. in Family and Child Studies and the B.S. in Textiles, Apparel, and Merchandising, which enrolled 150 and 144 majors, respectively, in fall 2006. It is expected that many graduates of the two programs, as well as those of similar programs in the university's region and across the state, will seek admission to the proposed program. The 2006-2007 *Occupational Outlook Handbook* has indicated that the demand for graduates of programs in areas related to family and consumer sciences is expected to vary from good to excellent in the next decade.

The Illinois Commitment. The Master of Science in Family and Consumer Sciences will address all six goals of *The Illinois Commitment*:

Goal 1: Higher Education will help Illinois business and industry sustain economic growth. No public university in northern Illinois offers a similar program. The program will provide opportunities for individuals to develop professionally and to become productive employees in high demand occupations in the region.

Goal 2: Higher education will join elementary and secondary education to improve teaching and learning at all levels. The program will participate in the university's P-20 partnership with middle schools and high schools in northern Illinois. Its curriculum will support

existing teachers through professional development, particularly in fields related to family and consumer sciences which serve ever-changing client needs.

Goal 3: No Illinois citizen will be denied an opportunity for a college education because of financial need. The proposed program will address this goal by providing some students with stipends for graduate assistantships and tuition waivers. Tuition for the program will be comparatively lower than tuition at private institutions offering similar programs in the state.

Goal 4: Illinois will increase the number and diversity of citizens completing training and education. The new program will educate students from diverse ethnic, social and economic backgrounds, including women, minorities, and students with disabilities.

Goal 5: Illinois colleges and universities will hold students to even higher expectations for learning. The program's curriculum is designed to promote advanced analytical thinking, and includes the research and communication skills necessary for either higher-level industry and educational positions or doctoral study.

Goal 6: Illinois colleges and universities will continually improve productivity, cost-effectiveness, and accountability. The M.S. in Family and Consumer Sciences will address this goal through annual faculty evaluations relative to teaching, research, and public service, and faculty productivity will be tied to merit salary increases, tenure, and promotion. The program will apply cost-effective practices such as resource sharing with other programs in the college.

Comparable Programs in Illinois. Seven master's degree programs are currently offered in Illinois in fields related to family and consumer sciences. Three of the programs are offered by public universities located in central and southern Illinois (Eastern Illinois University, Illinois State University, Southern Illinois University Carbondale), and four are offered by private institutions (Benedictine University, Erickson Institute of Technology, Loyola University, Northwestern University). Northern Illinois University indicates that none of the four programs offered by private schools in the Chicago area is closely similar to the proposed program. In addition, it is expected that Northern Illinois University's lower tuition rate will make its program more accessible to students from low and middle income families.

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.

Northern Illinois University's mission includes: (a) offering a full-range of undergraduate programs, master's, specialist, and doctoral programs at on-campus and off-campus sites throughout its region and the adjacent regions; (b) meeting a regional need for a well prepared workforce, and continuing professional development; and (c) serving as a regional resource for new knowledge, cultural enrichment, and solutions to contemporary problems through appropriate research, instructional, and public service initiatives. The goals and objectives of the M.S. in Family and Consumer Sciences are consistent with this mission, as well as those of the School of Family, Consumer, and Nutrition Sciences, and the College of Health and Human Sciences.

The program, which is designed to provide students with advanced education and training in family and consumer sciences, includes two specializations: (a) family and consumer sciences;

and (b) apparel studies. The specialization in family and consumer sciences will provide professional development preparation for middle school and secondary school teachers needing to maintain their state certification. The apparel studies specialization will prepare students for either professional advancement in the industry or teaching. Every student in the program is required to complete a thesis, which will provide them with experience in the research and writing process, as well as provide a foundation for those who wish to pursue doctoral studies.

Curriculum and Assessment.

1050.30(b)(1) [applicable only to units of instruction]: A) The caliber and content to the curriculum assure that the objectives of the unit of instruction will be achieved; B) The breadth and depth of the curriculum are consistent with what the title of the unit of instruction implies; C) The admission and graduation requirements for the unit of instruction are consistent with the stated objectives of the unit of instruction; D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

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 M.S. in Family and Consumer Sciences an applicant must:

- Earn a baccalaureate degree in the same or a closely related field to the family and consumer sciences program with a minimum G.P.A. of 2.75 out of 4.00 from an accredited college or university;
- Submit letters of recommendations; and
- Earn an acceptable score on the Graduate Record Examination (GRE).

Admission to the specialization in Family and Consumer Sciences Education requires that the applicant hold a bachelor's degree in the field or a major closely related to family and consumer sciences. The specialization in apparel studies also requires completion of a minimum of nine credit hours of undergraduate coursework in a textiles and apparel-related curriculum and completion of at least a three credit upper-division level course.

The Graduate School requires that all deficiencies in a graduate program must be completed with at least a B grade. A student who is not a native English speaker must earn a minimum Test of English as a Foreign Language (TOEFL) score of 213.

Projected Student Demand

Northern Illinois University projects that the proposed program will enroll 25 students annually in the fifth year of operation and beyond. The university expects that three students will complete the program in the third year, nine in the fourth year, and 12 in the fifth year of operation.

Curriculum.

The proposed program consists of 30 semester hours and completion of a thesis. Every graduate must complete a set of core coursework consisting of 12 semester hours in courses in educational statistics, research methods, and the thesis. The remaining 18 credit hours focus on the student's selected specialization.

Students selecting the specialization in family and consumer sciences education must complete a minimum of nine credit hours in graduate courses such as: Curriculum in Consumer Sciences Education; Evaluation in Family and Consumer Sciences Education; Administration and Supervision in Family and Consumer Sciences Education; Workshop in Family, Consumer, and Nutrition Sciences; and Problems in Family, Consumer, and Nutrition Sciences. Nine hours of elective courses in family and child studies, apparel studies, or nutrition and dietetics must also be completed with the approval of the student's academic advisor.

Students who select the apparel studies specialization must complete a seminar in textiles and clothing or a course in readings in textiles, apparel, and merchandising. Nine hours must be completed from eight courses, including: Economics of the Apparel and Textile Industries; Consumer Behavior Related to Apparel; Issues of Eating Disorders and Obesity; Workshop in Family, Consumer, Nutrition Sciences; Fashion Process Analyses; and Problems in Family, and Consumer, and Nutrition Sciences. In addition, six hours must be completed from two courses approved by the academic advisor.

To graduate from the program, each student must complete a thesis and defend it orally under the supervision of his or her advisor and the thesis committee.

Upon completion of the M.S. in Family and Consumer Sciences, graduates will be able to apply relevant theoretical frameworks to understanding consumer behavior or student learning in family and consumer sciences. Each graduate will have a broad knowledge of research practices and findings, as well as current issues in his or her specialization. Each graduate should be able to demonstrate the ability to formulate a research question or hypothesis, design and carry out a research plan, interpret his or her research findings, and integrate the findings with literature in the discipline.

Assessment of Student Learning Outcomes.

A comprehensive assessment of student learning outcomes for the M.S. in Family and Consumer Sciences will be developed and implemented systematically to demonstrate students' attainment of learning outcomes for the program. The assessment plan will include a combination of multiple direct and indirect measures, including end-of-program assessment, and course embedded assessment. Finally, the plan will draw on current best practices in the college's existing baccalaureate and graduate programs.

The end-of-program assessment will consist primarily of the quality of the student's thesis, including thesis development, relevant research tools, and written and oral presentations. Depending on the thesis subject, the thesis committee will use pre-established rubrics for evaluating each student's performance. In addition, a faculty member from the school that is not represented on the student's thesis committee will evaluate the thesis using pre-established rubrics.

Measures of student learning embedded in core courses will provide a common basis from which to assess individual student learning outcomes. Examples of these measures are: a written research proposal; written critiques of research studies; and oral reports on the student's research.

Each student will be assigned a faculty advisor who will meet with the student regularly and monitor the student's progress toward graduation. In addition, each student must select a thesis director with the requisite expertise to guide the thesis process together with the student's thesis committee.

Periodic surveys of the program's alumni and their employers will provide feedback about the competence and career advancement of graduates, including enrollment in and completion of doctoral studies.

Program Assessment.

Northern Illinois University's Academic Planning Council conducts a systemic and comprehensive review of all degree programs on an eight-year cycle, as stipulated by the Illinois Board of Higher Education. The program review process includes an administrative and peer evaluation of effective practices, resources, trends in costs, enrollments, and degrees awarded. Additional components of the review are: survey of alumni achievements, faculty scholarly and artistic productivity, and outcomes of actions taken to improve each program based on the previous program review. Follow-up reports are mandated by the Planning Council as needed. Each program review may lead to such actions as: recommendations to address identified limitations; a suspension of the program; or elimination of the program. A summary of each program review, including program strengths and weaknesses, and recommended steps to improve the program is annually reported to the university's Board of Trustees and the Illinois Board of Higher Education.

The university's Constitution and Bylaws mandate an annual evaluation of all tenured and tenure-track faculty members. Faculty responsible for the M.S. in Family and Consumer Sciences will be evaluated using a peer-review process and an administrative review that examine accomplishments in the areas of teaching, scholarly and creative activities, and public service. Each faculty teaching graduate level courses and/or supervising theses and dissertations must be approved by the university's Graduate School based on criteria for each program established by the Graduate Council. Students' evaluations of teaching effectiveness are also included in the assessment.

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.

Northern Illinois University indicates that the M.S. in Family and Consumer Sciences program will be adequately supported by existing classrooms, laboratories, equipment, and

instructional materials. In recent years the School of Family, Consumer, and Nutritional Sciences has made significant strides in establishing a facility for storing and studying garments of educational value, in particular by providing the necessary funding support in 2004. In recognition of the School's accomplishments, the Fashion Institute of Technology Museum in New York has donated many valuable de-accession items from its collection. The items, along with the university's existing collection, will be an important resource for graduate students interested in apparel studies, including the historic costume area.

Library.

The university's Founders Memorial Library holds a collection of more than two million books, as well as online journals, electronic reserves and other electronic resources such as the Education Resources Information Center (ERIC) and Cinahl Information Systems. All electronic resources are accessible via the Internet. The library also provides instruction, mediated searches, interlibrary loans, and document delivery.

Founders Memorial Library has a large collection of resources to support the proposed program's two specializations. The resources were accumulated in support of the university's long-standing baccalaureate programs in Textile, Apparel, and Merchandising, and Family and Child studies, as well as coursework for teacher certification in Family and Consumer Sciences.

Technology and Instructional Resources.

Northern Illinois University maintains 14 on-campus computer laboratories and provides all faculty, students, and staff with e-mail accounts and services. The School of Family, Consumer, and Nutritional Sciences maintains specialized laboratories with computers and software to meet the instructional needs of faculty. All faculty offices are equipped with computer access to the Internet.

Blackboard is a course management electronic system that is accessible to all faculty and students. The system supports a variety of course-related functions, including allowing faculty to post materials, deliver tests and surveys, and hold online discussions. The Faculty Development and Instructional Design Center provides regular programming for faculty on various instructional design techniques, including Blackboard features and smart classroom technologies.

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; 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; D) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, which 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.

Faculty

The proposed program will be well supported by five existing faculty members who hold earned doctoral degrees in Family and Consumer Sciences or Apparel Studies. Three of the five faculty members are tenured associate professors and two are tenure-track assistant professors.

Staff

Current staff for programs in the School of Family, Consumer, and Nutrition Sciences will provide support for the M.S. in Family and Consumer Sciences. No additional staff are required.

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.

No new state resources are requested to establish the M.S. in Family and Consumer Sciences. In its first year of operation, the program will be funded with \$98,259 from existing resources and from internal resource reallocation. It is projected that total funding for the program will be \$107,369 in the fifth year of operation.

Accreditation and Licensure.

1050.30(b)(3) [applicable only to units of instruction]: Appropriate steps have been 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 professional or specialized accreditation for degree programs in family and consumer sciences. Northern Illinois University is accredited by the Higher Learning Commission and it is a member of the North Central Association. The university's accreditation is specified for degrees including those at the baccalaureate, masters, and doctoral levels.

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.

A graduate degree in family and consumer sciences is directly related to career advancement in middle, secondary, and post-secondary education. Middle and high school teachers are required to continue their education on an ongoing basis. Earning a master's degree in the field usually leads to a salary increase and improved opportunities for leadership positions within the school or school district. For those not wishing to teach, a master's degree is essential for advancement to many top-level managerial positions in the apparel industry.

The *Occupational Outlook Handbook* indicates that employment opportunities in kindergarten through secondary level teaching courses in family and consumer sciences will vary from good to excellent in the next decade. The Illinois State Board of Education's 2006 *Educator Supply and Demand in Illinois* publication does not provide specific projections for those teaching courses in family and consumer sciences. The projected growth in occupational demand will result from increases in student enrollments as well as expected retirement of teachers and faculty members in the next ten years.

Program Information

1050.30(b)(2) [applicable only to units of instruction]: The information which the institution provides for students and the public accurately describes the unit of instruction, including its objectives, length, residency requirements if any, schedule of tuition, fees, and all other charges and expenses necessary for completion of the unit of instruction, cancellation and refund policies, student rights and responsibilities, and such other material facts concerning the institution and the unit of instruction as are likely to affect the decision of the student to enroll. Such information shall be available to prospective students prior to enrollment.

Information about the M.S. in Family and Consumer Sciences, including a detailed description of the curriculum, admission requirements, tuition, fees, and other cost information, as well as university and graduate school policies, are published on the university's website, www.niu.edu. Comparable information is published in hard copy in the university's Graduate School Catalog. Similar information is available from the College of Health and Human Sciences which will administer the program and also from the Graduate School upon request.

Staff Conclusion. The staff concludes that the M.S. in Family and Consumer Sciences 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 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

- Center for Workforce Development

Background. Southern Illinois University Carbondale (SIUC) requests permanent approval for the Center for Workforce Development, established on a temporary basis in 2001. The Center's accomplishments to date include: (a) a funding history of over \$14 million; (b) hiring a nationally respected Director; (c) significant partnerships with a variety of organizations, including the Coalition for Citizens with Disabilities, the Illinois Department of Commerce and Economic Opportunity, the Illinois Workforce Investment Board, and the Illinois State Board of Education; (d) acting as the premier resource for research, education, and training for workforce development at the university and in the region; and (e) managing the Illinois workNet, the state's online resource that provides career, education, and occupational information for Illinois residents and businesses.

The Illinois Commitment. The proposed center will address five goals of *The Illinois Commitment*, as summarized below.

Goal 1: Help Illinois business and industry sustain strong economic growth through active partnerships and collaboration by providing needed training, research and public service.

Goal 2: Higher education will join elementary and secondary education to improve teaching and learning at all levels through the training of teachers and other school personnel.

Goal 4: Increase the number and diversity of citizens completing training and education by providing workforce education and training to students and clients, including minorities, women, students with disabilities, and other underrepresented groups.

Goal 5: Hold students to even higher expectations for learning and be accountable for the quality of academic programs and the assessment of learning by providing opportunities for research, internships, and other hands-on experiences that strengthen their education.

Goal 6: Improve productivity, cost-effectiveness, and accountability by addressing the need for dissemination of best practice curricular and instructional materials useful for promoting work-related education and training.

Comparable Centers in Illinois. Currently, no Illinois public university has a workforce development center. Three urban economic development centers that are tangentially related to workforce development are located at the University of Illinois at Chicago, University of Illinois Champaign-Urbana, and Northern Illinois University.

Mission and Objectives

Criterion 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 Center's goals are consistent with Southern Illinois University Carbondale's mission, which includes (a) supporting the economic, social, and cultural development of southern Illinois through appropriate undergraduate, graduate, and professional education, research, and public service; (b) developing partnerships with communities, businesses, and other colleges and universities to maximize the utilization of telecommunication technologies; (c) cultivating and sustaining a commitment to research, teaching, and public service, including solving problems and policy issues related to the southern Illinois and the state's natural resources and environment; and (d) meeting the health care needs of central and southern Illinois through appropriate health-related programs, services, and public health policy.

Program Objectives

The Center is designed to respond to state and regional needs for a well-trained workforce through partnership and collaboration with other entities in the state by:

- Acting as the premier resource for research, education and training for workforce development among Illinois higher education institutions and some state agencies such as the Illinois Department of Commerce and Economic Opportunity;
- Creating a favorable climate for service as well as theoretical and applied research by faculty, staff, and students and to link education, business, industry, and labor with human resource needs; and
- Expanding the capability of SIU-Carbondale to concentrate on employment and training needs in a focused and visible location on campus and other parts of the state.

In addition to these broad objectives, the Center will focus on:

- *Research and Development:* by addressing a broad array of issues and topics affecting the needs and the nature of workforce and workplace;
- *Education and Training:* by addressing development and delivery of customized workforce education and training programs or coursework in collaboration with a variety of agencies and organizations in the public and private sectors; and
- *Information and Product Dissemination:* by addressing the need for dissemination of curricula and instructional resources, and best practices for promoting work-related education and training.

Outcomes and Assessment

During its five-year existence, the Center has had 77 grant projects funded for a total of over \$14 million. These projects covered a variety of topics such as: (a) serving as fiscal agent for the nationally recognized Illinois Office of Educational Services located at Lincoln Land Community College's Workforce Development Center; (b) developing a master plan for the reuse of Parks College in Cahokia, IL; (c) managing the operation of Illinois State Information System for career and technical education on behalf of the Illinois State Board of Education; (d) developing materials for the Illinois Learning Standards in career and technical education for the Illinois State Board of Education; (e) developing career cluster materials for transportation, distribution, and logistics occupations; and (f) operating the statewide Tech Prep Resource Center funded with federal dollars to serve high school and college students pursuing technical and professional careers. Other projects have included: (a) the development of online instruction and certification of career transition specialists; and (b) program administration of the Illinois workNet, the state's internet hub for linking workforce information from state agencies and non-public entities to serve employers, those looking for employment or educational training, and service providers.

To enhance its effectiveness, relevance, and long-range mission, the Center has created an Advisory Committee consisting of nine members from diverse backgrounds, including three community college presidents; a representative of the U.S. Department of Labor, Education and Training Administration; a regional school superintendent; and a director of an economic and regional development office.

Facilities (space, equipment, instructional materials)

Criterion 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 Center is housed in two physical facilities located in Carbondale. These consist of a 550 square foot office space in Carbondale which houses the Director and staff, and a 10,000 square foot office space in the Illinois Office of Educational Services, located in Springfield on the Lincoln Land Community College campus. The Springfield facility includes a reception area, offices for 23 staff, a computer training classroom, a web cast studio, a library for workforce and

career resources, two conference areas, and a large classroom that accommodates up to 50 people. Equipment in this facility includes multiple servers, office computers for staff, twenty computers in a computer classroom, and a set of twenty laptops used for training. The five projects currently located in the Springfield facility serve the Illinois State Curriculum Center, the Illinois State Resource Center for Nontraditional Careers, the Illinois Student Information System, the Department of Commerce and Economic Opportunity Computer Training Lab, and the Illinois workNet.

Fiscal Resources

Criterion 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.

Fiscal Resources

No new state funds are requested to support a permanent Center. The university reports that the Center's current budget from federal and state grants and contracts is \$3.7 million. Funding from these sources is projected to increase to \$4.2 million in the next five years. Total funds currently available from non-governmental sources are \$35,000, an amount projected to reach \$49,500 in five years.

Personnel Resources

The Center's key staff consists of the Director, who is also the Chair of the Department of Workforce Education and Development at the university, a director of the Springfield office, who reports to the Director, and an individual who works part-time directing the Illinois workNet grant project sponsored by the Department of Commerce and Economic Opportunity. In addition, although the number of people working for the Center fluctuates over time depending on the number and the size of active projects, about two dozen people are usually employed or serve as consultants, including faculty, staff, and students working on research and training projects in Carbondale and Springfield.

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 or research or public service meets a need that is not currently met by existing institutions and units of instruction, research or public service.

No other Illinois public university currently operates a center for workforce development. The need for such a center is demonstrated by its numerous funded grant projects from such state agencies as the Illinois Department of Commerce and Economic Opportunity, the Illinois State Board of Education, as well as grant funds from federal sources and non-governmental entities. As noted above, in its five-year history, the Center has been funded by over \$14 million from grants and contracts. Judging from the Center's history, the need for its services will grow significantly in the near future. Its contributions are essential to the state's efforts to address current and projected workforce shortages in critical occupations.

Staff Conclusion. The staff concludes that the proposed Center for Workforce Development by Southern Illinois University 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, accreditation and licensure.

University of Illinois at Urbana-Champaign

- Bachelor of Science in Liberal Arts and Sciences in Earth System, Environment, and Society

Background. Over the past two decades, a new paradigm has emerged within natural and social science research related to the Earth, the environment, and society's place in it. This paradigm understands the Earth as a complex system in which the solid planet, the oceans, the atmosphere, and life interact in myriad ways. Despite the growing prominence of this cross-disciplinary approach at the cutting edge of Earth Sciences and environmental research, traditional undergraduate degree programs have yet to bring this paradigm to the forefront in the training of the next generation of scholars and professionals.

To meet these needs, the University of Illinois at Urbana-Champaign is developing a new interdisciplinary and multidisciplinary undergraduate major entitled Earth System, Environment, and Society (ESES). This undergraduate major integrates aspects of the physical sciences, biological sciences, social sciences, and humanities into a holistic, systems-focused approach to studying the Earth. Programs such as this are vital in order to push beyond the disciplinary boundaries that currently bracket our understanding of the science and human dimensions of the Earth System across all levels of formal education. The undergraduate years provide an ideal opportunity to begin developing this interdisciplinary approach as well as to begin preparing the next generation of academics, professionals, and educators with an understanding of the technical aspects of the Earth System and how they influence and are influenced by the actions of human societies.

The Illinois Commitment. The proposed program will meet several goals of *The Illinois Commitment*, as summarized below.

Goal 1: Help Illinois business and industry sustain strong economic growth. As environmental and Earth system issues continue to increase in public awareness, this program will situate graduates for a variety of in-demand public and private sector careers, bringing much needed perspectives on interconnectedness and sustainability to government and industry. In addition, the graduates of this program will value and benefit greatly from a better awareness and knowledge of the natural environment and of the stewardship required of our planet.

Goal 4: Increase the number and diversity of citizens completing training and education. Diversity has been built in as a primary objective of this program through active coordination with the University of Illinois at Champaign-Urbana Office of Minority Student Affairs, with a goal to recruit at least 10% of the program majors from underrepresented minority populations each year. In addition, the number of women entering into the study of Earth Sciences has greatly increased in recent years, and the institution expects women to account for a large number of the students in the ESES major.

Goal 5: Hold students to even higher expectations for learning and be accountable for the quality of academic programs and the assessment of learning. By following innovative

research trends in the natural and social sciences, this program has been designed to provide students with a comprehensive and rigorous undergraduate training in either the science or the human dimensions of the Earth System.

Goal 6: Improve productivity, cost-effectiveness, and accountability. By drawing upon and bringing together existing research and coursework currently divided across disciplinary boundaries, this program represents a cost-effective innovation to undergraduate education.

Comparable Programs in Illinois. Institution of this program would place the University of Illinois at Urbana-Champaign at the vanguard of a new and exciting intellectual and educational movement. In addition to being the only program of its kind in the State of Illinois, it would be one of only a handful of programs throughout the country dedicated to bringing together the physical, biological, and social dimensions in the study of the Earth System.

The substantive emphasis in Earth System science draws heavily from the disciplines of atmospheric science, geology, and physical geography. Currently in the state of Illinois there are fifteen undergraduate degree programs in geography,¹ eleven in geology,² and two in meteorology.³ However, the integrative systems approach brings together elements of each to form a distinct course of study and scientific foundation that distinguishes this program from these single disciplinary programs. Given the nature of this program, the impact on programs in any given disciplinary field should be minimal.

There also exist many interdisciplinary programs in the state that emphasize alternatively the physical and social aspects of environmental issues. There are fourteen undergraduate degree programs in Earth/environmental science,⁴ twelve in environmental studies or management,⁵ and two in forestry.⁶ The proposed ESES major, however, is unique in that it casts an even wider net than either an environmental science or environmental studies program, coupling social and human dimensions of the environment with curriculum in the geophysical science of the Earth. Also, rather than focusing on the intersection of physical and social processes in the area of environmental management and conservation, this major emphasizes the understanding of

¹ Geography Programs- Public: Chicago State University, Eastern Illinois University, Illinois State University, Northeastern Illinois University, Northern Illinois University, Southern Illinois University at Carbondale, Southern Illinois University at Edwardsville, University of Illinois at Urbana-Champaign, Western Illinois University; Independent NFP: Augustana College, Concordia University, DePaul University, Elmhurst College, Northwestern University, University of Chicago

²Geology Programs- Public: Eastern Illinois University, Illinois State University, Northern Illinois University, Southern Illinois University at Carbondale, University of Illinois at Urbana-Champaign, Western Illinois University; Independent NFP: Augustana College, Bradley University, Northwestern University, Olivet Nazarene University, Wheaton College

³ Meteorology- Public: Northern Illinois University and Western Illinois University

⁴ Earth/Environmental Science Programs- Public: Northeastern Illinois University, University of Illinois at Chicago, Western Illinois University; Independent NFP: Benedictine University, Bradley University, Concordia University, DePaul University, Dominican University, Eureka College, Lewis University, Monmouth College, Northwestern University, Roosevelt University, University of St. Francis

⁵ Environmental Studies Program- Public: Northeastern Illinois University; Independent NFP: Dominican University, Elmhurst College, Illinois Wesleyan University, Knox College, Lake Forest College, Loyola University of Chicago, Northwestern University, Principia College, Roosevelt University, Wheaton College, University of Chicago

⁶ Forestry- Public: Southern Illinois University- Carbondale and University of Illinois at Urbana-Champaign

environmental issues as the products of complex, dynamic interactions of physical and social systems.

Mission and Objectives

Criterion 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 recently completed Strategic Plan of the University of Illinois at Urbana-Champaign declares that the Mission of the University is to transform lives and serve society by educating, creating knowledge, and putting this knowledge to work on a large scale with excellence. The Vision is that the University will be a recognized leader in teaching and scholarship, research, creative endeavors, engagement, and economic development that will compete forcefully and favorably with the best universities of the world. The ESES major embodies all of these dimensions, bringing together outstanding faculty with excellent research credentials across a variety of disciplines in the sciences, social sciences, and humanities to offer a unique educational opportunity focused on the increasingly salient issues of the Earth System. Currently, an array of teaching and research related to the Earth System is being carried out across campus. However, these perspectives are spread out and generally disconnected within various departments, particularly within the College of Liberal Arts and Sciences (LAS). This program offers students and faculty an opportunity to bring these different threads together to construct a cohesive, integrative program of study.

Program Objectives

This undergraduate major integrates aspects of the physical sciences, biological sciences, social sciences, and humanities into a holistic, systems-focused approach to studying the Earth and its environment. The proposed major will provide students with a broad understanding of our planet, incorporating the solid Earth, atmosphere, oceans, and biosphere within the context of human socio-cultural, political, and economic activities. Specialization at the upper level will provide students with rigorous training in either the geophysical science of the Earth or the socio-cultural dimensions of environmental problems.

In order to accommodate students with relatively focused interests, the institution has left open the possibility of providing specialized curriculum options within both the Science of the Earth System (SES) and Society and the Environment (SAE) concentrations. Students will work with a faculty advisor to put together a focused program of study in a specific area, such as atmospheric science, hydrology, environmental sociology, or political ecology.

Beyond the substantive focus on the Earth system, the ESES program provides students with important skills in the areas of analysis and research; integrative/systems thinking; and writing and communication.

Independent research and data analysis are promoted throughout the ESES curriculum. All students are required to take a minimum of one course in statistics and one course in geographic information systems (GIS), providing a foundation for data analysis skills in a variety of fields. In addition to these analytic components that run throughout the liberal arts curriculum, the capstone requirement provides students with an advanced-level research project tailored to each student's individual interests and abilities, providing students with valuable experience before they enter the job market.

The curriculum of the proposed program is structured to emphasize an integrative perspective in the study of complex scientific and social issues. Exposure to the physical, ecological, social, political, and economic dimensions of the Earth System encourages students to think about environmental problems in terms of the complex interactions of dynamic systems. Bringing these diverse perspectives together makes students particularly well suited to recognize and understand complex problems.

In addition to the institution's general education requirements in writing, the curriculum emphasizes the ability to communicate complex problems effectively across a variety of audiences. Through participation in the colloquium and capstone experiences, students with varied interests and specializations are brought together to communicate their particular perspectives to an audience with different competencies, highlighting the need to communicate effectively across fields and to lay audiences.

Curriculum and Assessment

Criterion 1050.30(b)(1) [applicable only to units of instruction]: A) The caliber and content to the curriculum assure that the objectives of the unit of instruction will be achieved; B) The breadth and depth of the curriculum are consistent with what the title of the unit of instruction implies; C) The admission and graduation requirements for the unit of instruction are consistent with the stated objectives of the unit of instruction; D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record-keeping.

Criterion 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

Applicants to the ESES program will have to meet the admission requirements of the University of Illinois at Urbana-Champaign (UIUC) and the College of Liberal Arts and Sciences (LAS).

Curriculum

The Bachelor of Science in Liberal Arts and Sciences in Earth Systems, Environment, and Society requires the completion of the College of Liberal Arts and Sciences general education core and a minimum of 50 semester hours in the major and supporting courses with a minimum of 120 hours for the degree. The LAS General Education requirements are set up so that students automatically complete the Campus General Education requirements. The Earth System, Environment, and Society (ESES) major transcends traditional disciplinary boundaries to explore the complexities and interconnectedness of society and the physical environment. The program's primary mission is to facilitate a comprehensive interdisciplinary liberal arts education that provides students with the knowledge and skills to contribute to Earth System science, the capability to understand the interactions between society and the environment, and the foundation to make informed policy choices.

In order to achieve these goals, the curriculum begins with a foundational survey of the basic physical and social sciences. Through specialization within advanced coursework, participation in an ESES colloquium series, and completion of a capstone course or project,

students will receive the depth of training necessary to qualify them for a variety of career and further academic paths. In order to appeal to a broad base of students interested in issues of the Earth system and environment, the program offers two concentrations: the Science of the Earth System (SES) Concentration and the Society and the Environment (SAE) Concentration. After completing an introductory sequence of courses and a 200-level interdisciplinary colloquium on issues of the Earth System, students will select one of these concentrations to focus either in the sciences or the social sciences and humanities. Students will be exposed to upper level courses from both areas so that their skills and knowledge base are broadened at both the introductory and upper levels of their coursework. The proposed curriculum also leaves open the opportunity for students to further tailor their coursework into a more focused specialization within either of the two tracks.

Assessment of Student Learning

The requirements for satisfying the B.S. in Liberal Arts and Sciences in Earth System, Environment, and Society are developed to satisfy all of the guidelines for undergraduate education at the University of Illinois. The course requirements for this undergraduate major are designed to develop the students intellectually in their ability to read and listen, to write and speak, to observe and respond critically, to think clearly, critically, and creatively, to think quantitatively and qualitatively, and to develop understanding and attitudes appropriate to a graduate of an institution of higher learning. The curriculum is aimed at achieving the breadth of understanding of fundamental physical and social sciences appropriate to a wide range of career possibilities.

Program Assessment

The ESES Oversight Committee, consisting of representatives of all the affiliated departments, will implement the evaluation and assessment procedures for the major, consisting primarily of annual program evaluations and critical incident feedback opportunities.

Annual program evaluations will occur at two levels. First, written feedback will be requested from participants, both student and faculty, on an annual basis. These surveys will be modeled after existing evaluation forms for individual courses to determine how well the program is meeting participant needs, particularly those of students. The Oversight Committee will review these surveys and develop strategies for responding to concerns and fine-tuning the program design.

An additional survey will be administered pre- and post- matriculation to each student that will ask questions about the student's knowledge of educational and career opportunities related to the Earth System and environment. The purpose of these surveys will be to demonstrate student awareness of career opportunities and to determine which workshops and extracurricular activities were most effective or should be added. Long-term assessment strategies for the impact of the ESES major on career choices will be designed as the first class approaches graduation.

In addition to these annual or long term programmatic reviews, the Oversight Committee will also seek Critical Incident Feedback to determine the value of special activities incorporated within the ESES program of study. These brief forms will be distributed at the completion of a particular event, such as a workshop or seminar, and will ask a few focused questions to help revise future activities to have the greatest impact and utility to students. This technique is widely used to get early feedback during course instruction at the University of Illinois and the

program's assessment questionnaires will be prepared in collaboration with the University's Division of Measurement and Evaluation, Office of Instructional Resources.

Facilities (space, equipment, instructional materials)

Criterion 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.

General Facilities

The new School of Earth, Society, and Environment, and its three member Departments (Atmospheric Sciences, Geography, Geology) have sufficient facilities and equipment to maintain the quality of the program on an ongoing basis. These departments supply office space and computer services for students in the program.

Library Resources

Current library resources are considered sufficient at this time.

Faculty and Staff

Criterion 1050.30(a)(3): A) The academic preparation and experience of faculty and staff to 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; 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; D) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, which 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 Oversight Committee will be composed of faculty of the member departments in the major. Day-to-day operations will be overseen by the Associate Director for Academic Affairs of the School of Earth, Society, and Environment. Faculty on the Oversight Committee will be selected by a vote of the faculty of each department and serve for three years. The Oversight Committee will coordinate with the Associate Director for Academic Affairs to ensure that all operations and quality assurance aspects of the major are maintained.

Fiscal Resources

Criterion 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.

Student Enrollment and Funding Sources

The program anticipates awarding 30 degrees in the fourth year, and 50 degrees per year in subsequent years. Total enrollment headcount in the fifth year is anticipated at 150 students.

Expenditures

The staff will be coordinated between the departments involved within LAS and departments outside of LAS such that no new positions need to be created. Primary administrative responsibility will be shared between the Departments of Atmospheric Sciences, Geography, and Geology. As enrollment demands grow beyond the resources of the core departments, it may be necessary in the future to create a full time advising position and an admissions/secretarial position. Initially, this can be handled through existing staff in the departments involved in the major. Depending on the size of the major, additional instructional resources might be necessary to maintain lab sections, an introductory course to geographic information systems.

Accreditation and Licensure

Criterion 1050.30(b)(3) [applicable only to units of instruction]: Appropriate steps have been 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.

Programs in which state licensure requires specialized accreditation for students to obtain professional licensure, but which have not yet achieved accreditation, will undergo full review and report to IBHE every three years until accreditation is achieved.

No programmatic accreditation is available. The program will fall under the regional accreditation of the University.

Need

Criterion 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 ESES program has been designed to provide a unique academic experience and to train scientists and professionals to deal with the physical and human dimensions of complex Earth system and environmental problems. The aim is to develop students that are well educated in either the physical or the social aspects of the Earth Sciences, but who have a breadth of knowledge in the alternative area and are also well prepared for a wide range of possible career paths. Students who graduate from this program will be uniquely situated for a variety of career paths in either the private or the public sector, as well as for graduate study in a number of disciplinary and interdisciplinary fields.

Program Information

Criterion 1050.30(b)(2) [applicable only to units of instruction]: The information which the institution provides for students and the public accurately describes the unit of instruction, including its objectives, length, residency requirements (if any), schedule of tuition, fees, and all other charges and expenses necessary for completion of the unit of instruction, cancellation and refund policies, student rights and responsibilities, and such other material facts concerning the institution and the unit of instruction as are likely to affect the decision of the student to enroll. Such information shall be available to prospective students prior to enrollment.

The University of Illinois at Urbana-Champaign's text for its catalog and website provides accurate descriptions of the degree program offered; program objectives and requirements; schedules of tuition, fees, and other expenses necessary for the proposed course of study; and procedures governing faculty and student affairs. The institution's cancellation and refund policies are reasonable and fair, and its publications include accurate statements about its accreditation and transferability of earned credits to other institutions.

Staff Conclusion. The staff concludes that the University of Illinois at Urbana-Champaign and its proposed degree program 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 for licensure.

University of Illinois at Urbana-Champaign

- School of Earth, Society, and Environment

Background. The School of Earth, Society, and Environment (SESE) will include the existing Departments of Atmospheric Sciences, Geography, and Geology at the University. The overarching goal of SESE is to become an internationally visible research and teaching entity that covers the broad disciplines of Atmospheric Science, Geography, and Geology. The School will serve two primary purposes. First, it will provide a setting within which interdisciplinary collaborations and synergies among the departments and between the departments and other campus units are encouraged and can thrive. The School will be an anchor for interdisciplinary research programs and centers, for interdisciplinary curricula at the undergraduate and graduate levels, and for interdisciplinary outreach to the public. It will serve as a focus for the study of environment-related issues from a liberal arts perspective. Second, the School will provide a foundation for amplifying the strength of individual member departments. This will be done through efficiencies in management and the leveraging of resource acquisition. Emergence of a strong School requires that its size and resources be sufficient to enhance the capacity of its departments and interdisciplinary programs to compete successfully for external funding, for high-quality faculty and students, and for University resources. The drive to start SESE comes from the assumption that member departments will become more vibrant and productive intellectual entities than could occur in isolation.

SESE has the potential to greatly improve the University's stature and performance in research and teaching related to the Earth Sciences and their interactions with society and the environment. SESE aspires to be a premier program that maintains strengths in core disciplines of the member departments, yet at the same time forms bridges among these disciplines to tackle new problems that pertain to the Earth System and its human dimensions. As such, the School will serve as an intellectual focus for research and education in environmental studies and policy

within the College of Liberal Arts and Sciences (LAS), and will help foster productive collaborations concerning these topics with units in other Colleges on the campus. The School will maintain both physical science and social science components and thus will be able to anchor a flexible, interdisciplinary undergraduate and graduate curriculum that meets the needs of a diverse student body in LAS. At the same time, the School will ensure that students will be able to specialize in core disciplines of the departments comprising the School, both at the undergraduate and graduate level. Finally, the School will serve as an anchor for discipline-based and interdisciplinary research centers and programs that will provide the flexibility and critical mass to address evolving research directions.

Comparable Programs in Illinois. The School of Earth, Society, and Environment will be unique, both because of the specific mix of disciplines—including physical and social science—that it will incorporate, and because of its leadership in multidisciplinary research both within and outside the University.

The Illinois Commitment. The proposed program will meet several goals of *The Illinois Commitment*, as summarized below.

Goal 1: Help Illinois business and industry sustain strong economic growth. As environmental and earth system issues continue to increase in public salience, the strong disciplinary and interdisciplinary education programs within the School will uniquely situate graduates for a variety of in-demand public and private sector careers, bringing much needed perspectives on interconnectedness and sustainability to government and industry. The School brings about an interdisciplinary strength not found in normal disciplinary programs. In addition, the graduates of the programs within the School will value and benefit greatly from better awareness and knowledge of the natural environment and of the stewardship required of the planet. The research activities within the School are aimed at better understanding of the planet (including the physics and chemistry of the air, water, and land masses and their relationship to biology, including human dimensions) and to the relationship of human activities to the environment. This research is expected to have strong ramifications on the economic growth of the state of Illinois.

Goal 2: Higher education will join elementary and secondary education to improve teaching and learning at all levels. The Department of Geology currently has a Secondary Education Earth Science undergraduate program that will be transferred to and adapted as part of the new Earth System, Environment, and Society undergraduate major. The Atmospheric Sciences department maintains up-to-date weather information and educational tools on its website that are used by many schools. Various faculty members in all three departments are actively involved in programs that help elementary and secondary education.

Goal 3: No Illinois citizen will be denied an opportunity for a college education because of financial need. The School will actively work with the development office to develop endowments for fellowships and scholarships.

Goal 4: Increase the number and diversity of citizens completing training and education. The ESES undergraduate major within the School is aimed at a broad range of students at the University and will provide new opportunities to introduce minorities and women to the study of the environment and to the Earth Sciences.

Goal 5: Hold students to even higher expectations for learning and be accountable for the quality of academic programs and the assessment of learning. By following innovative

research trends in the natural and social sciences, the various programs within the School will provide students with a comprehensive and rigorous undergraduate training in either the scientific or human dimensions of the Earth System. The interdisciplinary orientation of the School adds further to these programs.

Goal 6: Improve productivity, cost-effectiveness, and accountability. Because of the School, productivity in both the research (new interdisciplinary research programs and research centers) and academic programs (new undergraduate majors and interdisciplinary graduate program possibilities) of the three departments is likely to increase. At the same time, by combining the business operations of the three small departments, a much more efficient and professional operation is being developed.

Need

Criterion 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 School of Earth, Society, and Environment will not only serve the students and research clients (state, federal, and industry) of its existing disciplinary oriented departments, but will be developing new opportunities for interdisciplinary education at both the undergraduate (e.g., through the Earth System, Environment, and Society major) and graduate levels, and new opportunities for interdisciplinary research (such as the new science community-wide activity in hydrological synthesis recently funded by the National Science Foundation and leadership in a new assessment of the potential impacts of climate change on the city of Chicago).

With 61 departments and other units, the College of Liberal Arts and Science has found the formulation of Schools to be a powerful means to enhance related research and academic programs and to increase interactions amongst faculty while at the same time reducing the overall administrative burden of the College. The School of Earth, Society, and Environment will be the fifth School within the College.

Mission and Objectives

Criterion 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 University's vision is that the School of Earth, Society, and Environment will become a recognized national and international leader in both disciplinary and interdisciplinary studies of the Earth System and the earth's societal and environmental components and interactions, while serving the University's mission of excellence in research, education, and public engagement.

The strategic themes of the SESE mesh well with the University's Strategic Plan. As part of this, the SESE will be poised to play a key role in the Illinois Sustainable Energy and the Environment Initiative, one of the key themes in the new strategic plan of the University.

The School will encompass three academic departments, each of which hosts undergraduate and graduate programs, as well as research centers. Each department will continue

to administer its own academic programs, but the School will anchor an interdisciplinary undergraduate major for LAS students, a program for teacher training in Earth Science, and outreach activities. Business and technical operations are to be managed at the School level. Thus, the School will provide a setting within which interdisciplinary collaborations and synergies between and among the departments and other campus units are encouraged and can thrive.

Curriculum and Assessment

Criterion 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.

Program Assessment

A number of indicators will be used to assess the programs anchored in the School:

- Expected research and/or public service products;
- Ratio of external to internal funding for the unit;
- Impact of the unit on national, state, regional, and local area organizations, businesses, or communities; and
- Collaborative research product that promotes the Illinois economy.

Program Information

Criterion 1050.30(b)(2) [applicable only to units of instruction]: The information which the institution provides for students and the public accurately describes the unit of instruction, including its objectives, length, residency requirements (if any), schedule of tuition, fees, and all other charges and expenses necessary for completion of the unit of instruction, cancellation and refund policies, student rights and responsibilities, and such other material facts concerning the institution and the unit of instruction as are likely to affect the decision of the student to enroll. Such information shall be available to prospective students prior to enrollment.

The University of Illinois at Urbana-Champaign's text for its catalog and website provides accurate descriptions of the proposed school; programs offered through the school; program objectives and requirements; schedules of tuition, fees, and other expenses necessary for the proposed courses of study; and procedures governing faculty and student affairs. The institution's cancellation and refund policies are reasonable and fair, and its publications include accurate statements about its accreditation and about transferability of earned credits to other institutions.

Facilities (space, equipment, instructional materials)

Criterion 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.

General Facilities

The School currently has temporary administrative space located in the Natural History Building (NHB), which includes a suite of seven offices. This space supports the Executive Coordinator, Associate Director of Academic Affairs, Operations Manager, and Business Affairs staff. The Natural History Building is undergoing assessment for a renovation plan that will allow the School and the Departments of Atmospheric Sciences, Geography, and Geology to all be located together. Once renovations occur, the School administration will be relocated to a permanent space in NHB.

The Department of Geology is currently housed in NHB, while the Department of Atmospheric Sciences is housed in the Atmospheric Sciences Building and two other Annexes. The Department of Geography is located in Davenport Hall.

The School and its departments currently have combined space of approximately 60,000 square feet, comprised of 27,800 square feet in offices and other administrative space, 11,400 square feet in classrooms and class laboratories, and 18,700 square feet in non-classroom or research laboratories.

The departments each have office space allocated to administration, faculty, lecturers, emeritus faculty, academic professionals, visiting scholars, and other visitors. The dedicated classrooms include lecture rooms, computer labs, and wet labs. As part of the renovation plan these classrooms and labs would be upgraded and/or re-established to become, in some cases, shared space for addressing the relative instructional needs of the School's departments.

In addition to Atmospheric Sciences' Visualization Laboratory for research, Geology has twenty-one research laboratories with various research capabilities, including Geomicrobiology, Cathodoluminescence, Laser Crystallography, Brillion Scattering, Nuclear Magnetic Resonance Spectrometry, Inductively Coupled Plasma Mass Spectrometry, Thermal Ionization Mass Spectrometry, Scanned Electron Microscopy, and others. Geography has a truck, ATVs, and a boat for conducting field work as part of their research program. These are stored in a shared garage with Civil and Environmental Engineering, along with electronic and other field equipment.

Library Resources

The School's libraries include the "Geology Library" located in NHB, the "Map and Geography Library" located in the Main Library, and the "Atmospheric Sciences Library", which has just been consolidated with the Geology Library. Additional consolidation of the libraries is included in the renovation plan for the NHB.

Faculty and Staff

Criterion 1050.30(a)(3): A) The academic preparation and experience of faculty and staff to 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; 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; D) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, which 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 School consists of a Director, school-based staff, an Executive Committee, and the member departments, which currently include the Department of Atmospheric Sciences, the Department of Geography, and the Department of Geology. The Director is the chief executive officer of the School with responsibilities and duties as outlined in the University Statutes. The Director is appointed upon recommendation by the Dean of the College of Liberal Arts & Sciences. The performance of the Director will be formally evaluated at least every five years. The Dean will solicit input from the School's Department Heads and Faculty for the appointment and review of the Director.

In consultation with the Executive Committee and with the Dean of the College, the Director will appoint Associate Directors and other positions of responsibility in the School, namely, the Associate Director for Academic Affairs and the Operations Manager. These individuals report to the Director and will coordinate the activities of departments. Other such staff may be added as need arises, contingent on agreement between the Dean of LAS and the Director of the School. The Executive Committee will consist of: (1) the Heads of departments in the School; (2) a representative from each department elected by members of that department. Elected members of the Executive Committee shall be at the rank of Associate or Full Professor, and must be faculty with line or joint appointments in the School; and (3) if deemed appropriate, one additional member of the committee who may be appointed by the Director to represent Research Centers or other interdepartmental programs contained within the School. Representatives from departments should make every attempt to represent the diverse viewpoints of the members of that department. The term of office for elected representatives will be three years with terms staggered so that no more than two new representatives are added in any one year.

Research centers or programs are expected to be a key element in furthering the School's educational and research goals. Centers or programs will be organized and administered by faculty members with primary appointments in the School's departments. Centers or programs, which can consist of faculty from one department or from more than one department, will determine their own internal organization and will select their own director. Members of a center or program must be faculty or staff members in the School. A center or program can also have affiliates that are faculty or staff members at UIUC, but whose primary affiliation is outside of the School. Center or program directors will report to the Director of the School. Centers or programs will be evaluated at least once every five years according to the same procedures as those used for a department.

Fiscal Resources

Criterion 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.

Student Enrollment and Funding Sources

The School of Earth, Society, and Environment will serve the existing undergraduate and graduate student programs in the three member departments, plus the new undergraduate major in the Earth System, Environment, and Society. The three departments currently serve 101 undergraduate and 114 graduate students. The ESES major is expected to have 200 or more students within four years of operation. In addition, the Department of Atmospheric Sciences is developing a new undergraduate major that is expected to have about 50-100 students within the first four years. The faculty within the School will be actively involved in all of these programs.

Expenditures

The primary cost of creating the School is the summer salary and annual stipend that LAS provides to the Director of the School. In addition, the Associate Director for Academic Affairs, a position required to lead the new School-wide ESES undergraduate major, would have existed to support that major whether the School existed or not. The School is responsible for one third of the Associate Director's salary. The Operations Manager is a position aimed at increasing efficiency in all business and other operations within the School. The additional resources that will result from the research developments within the School are expected to offset the additional costs. Eventually, there may be savings in staff costs because of a more efficient business operation compared to the cost of maintaining three relatively small departments.

Accreditation and Licensure

Criterion 1050.30(b)(3) [applicable only to units of instruction]: Appropriate steps have been 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.

Programs in which state licensure requires specialized accreditation for students to obtain professional licensure, but which have not yet achieved accreditation, will undergo full review and report to IBHE every three years until accreditation is achieved.

No programmatic accreditation is available. The program will fall under the regional accreditation of the University.

Staff Conclusion. The staff concludes that the University of Illinois at Urbana-Champaign and its proposed School of Earth, Society, and Environment 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 for licensure.

University of Illinois at Urbana-Champaign

- School of Literatures, Cultures and Linguistics

Background. The School of Literatures, Cultures, and Linguistics brings under one administrative umbrella the departments of Classics; East Asian Languages and Cultures; French; Germanic Languages and Literatures; Linguistics; Slavic Languages and Literatures; and Spanish, Italian and Portuguese; the Comparative and World Literature Program; the Study of

Religion Program; the Division of English as an International Language; and the Unit for Cinema Studies.

The formation of the School reshapes the administrative structure of the study of language, literature and culture in the College of Liberal Arts and Sciences to allow these units to advance their educational and research missions more effectively. The creation of the School provides increased opportunities for synergy between and among the departments and programs, including more effective hiring of new faculty that will have an impact in multiple departments and cross-departmental initiatives such as conferences and curricular development.

The Illinois Commitment. The proposed unit will meet several goals of *The Illinois Commitment*, as summarized below.

Goal 1: Help Illinois business and industry sustain strong economic growth. The School will foster the development of cross-departmental programs that increase the competitiveness of students, and thereby of the state, in the international marketplace. Specifically the translation program and the programs in language for specific purposes (e.g., business) will create professionals ready to meet the needs of our corporations doing business overseas.

Goal 2: Higher education will join elementary and secondary education to improve teaching and learning at all levels. The School will create new K-12 teachers in a number of languages, including Chinese and Japanese.

Goal 3: No Illinois citizen will be denied an opportunity for a college education because of financial need. The School will actively work with the development office to develop endowments for fellowships and scholarships.

Goal 4: Increase the number and diversity of citizens completing training and education. The School will attract students from around the world and teach students from all backgrounds to respect diversity of language, culture and religion.

Goal 5: Hold students to even higher expectations for learning and be accountable for the quality of academic programs and the assessment of learning. The School will actively develop study abroad opportunities to bring students to higher levels of proficiency in language and greater cultural understanding.

Goal 6: Improve productivity, cost-effectiveness, and accountability. The School will streamline services to do more with less. In addition to the administrative efficiencies resulting from unit consolidation and alignment, online educational practices have been developed to double the productivity of teaching assistants in some units where demand is particularly high.

Need

Criterion 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 School will prepare students to be global citizens and competitive actors in the global marketplace. Large numbers of undergraduates are preparing double majors, combining the linguistic and cultural studies of the School's units with specialized training in other fields, most

notably Business Administration. For example, in French, fully half of the undergraduate majors are specializing in Commercial French Studies.

The units of the School teach more than thirty languages and the literatures and cultures associated with them, as well as comparative studies of literature, religion, cinema, and linguistics. There are currently 669 undergraduate majors and 345 graduate students in the School's units. The School is the sole provider of General Education courses in languages and one of the primary providers in humanities, the arts, and non-western cultures. In 2005-2006, the School's units provided 91,958 instructional units to undergraduate and graduate students. The units of the School also train more K-12 teachers in the language areas than all the other institutions of higher education in the state combined.

Mission and Objectives

Criterion 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 units provide original research on literary, cultural and linguistic theories and practices and instruction in those areas as well as in the many languages covered. The units are the primary source of research and instruction presenting the non-English-speaking world to the campus and the English language to international students. The formation of the School is a means to promote and facilitate contact between the units involved, including cross-listed courses, collaborative research projects, and programmatic initiatives.

Facilities (space, equipment, instructional materials)

Criterion 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.

General Facilities

The units of the School are all housed in the Foreign Languages Building. In addition to classroom and office space, there are several computer laboratories for use by students and an audio laboratory to work on the acquisition of speaking skills. Three research laboratories support faculty and graduate student research (Phonetics Laboratory, Conversational Analysis Laboratory, and a Psycholinguistics Laboratory currently under development). Some of the individual departments have libraries of specialized resources. Most library services are provided by the main University Library.

Office space is cramped, but managed effectively and efficiently by the School through annual reallocations according to specific needs of individual units. This process, a model for space allocation elsewhere on campus, has been developed and perfected over the past seven years.

Faculty and Staff

Criterion 1050.30(a)(3): A) The academic preparation and experience of faculty and staff to 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; 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; D) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, which 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 unit will have a Director and an Executive Committee. The Director serves as a liaison between the School and the Dean of the College of Liberal Arts and Sciences, and with other administrative units of the University. The Director serves as chair of the Executive Committee and appoints members of other standing and ad hoc committees within the School. The Director organizes and chairs regular meetings of the Executive Officers of the constituent units. The Director recommends faculty appointments, non-reappointments, promotions, rollbacks, leaves of absence, and sabbatical leaves based on advice from the Executive Committee. The Executive Committee also reviews third-year evaluations of probationary faculty. The Director oversees the School's budget and the non-academic staff. The Director oversees the allocation and reallocation of space in the Foreign Languages Building.

The constituent units retain control over their individual departmental budgets and make recommendations to the Director concerning faculty appointments, non-reappointments, promotions, rollbacks, leaves of absence, and sabbatical leaves.

Fiscal Resources

Criterion 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.

Student Enrollment and Funding Sources

The units of the School in 2005-2006 had 345 graduate students and 669 undergraduate majors. They generated 91,958 instructional units, including all the courses that count toward the university's language requirement (except American Sign Language) and a substantial portion of courses fulfilling general education requirements in the Humanities and Non-Western Cultures. In 2005-2006, 17 students completed Ph.D.s in the eight units that offer this degree, and 23 students completed teacher certification for work in K-12 schools. The combined resources in language teaching are making possible teacher certification in new strategic languages such as Chinese and Arabic.

The School projects \$1,043,755 in annual expenditures, including \$695,629 for staff \$51,126 for personnel, \$25,000 for materials and supplies, \$155,000 for Academic Initiatives, and

\$117,000 for graduate fellowships. This entire projected budget will be funded through the reallocation of funds from existing programs that will be moved into this unit. No new state funds will be required as a result of the creation of this new unit.

Staff Conclusion. The staff concludes that the University of Illinois at Urbana-Champaign and its proposed School of Literatures, Cultures, and Linguistics, 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 for licensure.

University of Illinois at Urbana-Champaign

- Technology Entrepreneur Center

Background. The University of Illinois at Urbana-Champaign seeks permanent status for its Technology Entrepreneur Center, which has been operating under temporary authority granted by the Illinois Board of Higher Education. The State of Illinois has made economic development and job creation one of its foremost priorities. Entrepreneurship and job creation are closely interrelated. Small businesses account for nearly half of the nation's private sector jobs. As the economy continues to rely more on small businesses for economic development, entrepreneurship and instilling an entrepreneurial spirit in young adults is going to become increasingly important. The Technology Entrepreneur Center (TEC) is administering courses, events, competitions, and other programs that are preparing the state's next generation of entrepreneurs – the engineering students at the University of Illinois – for this economic climate. For example, the TEC administers the V. Dale Cozad Business Plan Competition in which it awards \$50,000 in cash and service resources to teams who have created businesses around the innovations they have discovered through their coursework at the University. Several of those businesses, in addition to others emanating from the University, are housed at EnterpriseWorks, the business incubator in the University's Research Park. Several College of Engineering faculty have also started companies in the area, furthering the state's economic development goal.

The Center also serves as an enabling organization for technology transfer at the University of Illinois, by assisting the Office of Technology Management (OTM), whose mission is identifying, evaluating, protecting, marketing, and licensing intellectual property developed at the University. The OTM currently has a goal to increase the number of technology disclosures and licensing revenue to a level that is competitive with peer institutions. The students involved with the Technology Entrepreneur Center will be a likely source of these technologies as they work with faculty in the many research laboratories within the University.

The Illinois Commitment. The proposed program will meet several goals of *The Illinois Commitment*, as summarized below.

Goal 2: Higher education will join elementary and secondary education to improve teaching and learning at all levels. Center staff is working to implement programs in high schools across Illinois. For instance, the Lemelson-Illinois Student Prize winner, who has demonstrated outstanding innovation and invention, travels to high schools in Illinois to discuss the award-winning work and how the University of Illinois has provided support to this work. The Center is also working with a team at University High School to submit a proposal to the Lemelson-MIT InvenTeams program, which encourages invention among high school students. Center staff has expressed serious interest in implementing a similar state-wide program, wherein high schools in Illinois could compete for grants to develop their invention ideas. Additionally,

one Center faculty member taught an intersession course at the Illinois Math and Science Academy in 2006. Center staff hopes to perpetuate this involvement with IMSA.

Goal 4: Increase the number and diversity of citizens completing training and education. Many of the Center’s courses are offered online, providing access to time and place bound students and expanding educational outreach.

Goal 6: Improve productivity, cost-effectiveness, and accountability. As an entrepreneurial center, TEC showcases the entrepreneurial spirit, especially as it relates to productivity and cost-effectiveness. The Center has a relatively modest budget, but is able to offer many curricular and extra-curricular activities. In addition, the Center is continually applying for external funding in order to broaden its offerings.

Comparable Programs in Illinois. While several programs in Illinois focus on entrepreneurship, and specifically, technology entrepreneurship, none shares the precise mission of the TEC, focusing on engineering students.

For example, some universities—such as Bradley, Northwestern, and Southern Illinois University-Carbondale—have relationships with the Illinois Technology Enterprise Centers (ITEC) through the Department of Commerce and Equal Opportunity (DCEO). These Centers provide financing programs, training in technical and managerial skills, assistance with new product development, and marketing to entrepreneurs in the regions in which they are located. While the TEC partners with such organizations where possible, it is independent, and geared directly toward students and faculty, with programs that reach out to the surrounding community where appropriate.

Likewise, several colleges and universities in the state have entrepreneurship centers, but these are generally located in a business program, not an engineering or technology program. Therefore, their scope is broader and can include things such as family businesses, franchising, and other areas in which the TEC does not focus its energies. Examples of these types of programs are:

Southern Illinois University-Edwardsville	College of Business Entrepreneurship Center
University of Illinois at Chicago	College of Business Administration Institute for Entrepreneurial Studies
Western Illinois University	Entrepreneurship Center
Northwestern University	Kellogg School of Management Levy Institute for Entrepreneurial Practice

While these types of programs do not share TEC’s exact mission, the Center does try to partner with them where possible and appropriate. For example, TEC recently hosted a day-long workshop sponsored by the National Collegiate Inventors and Innovators Alliance, which included participation by students from the centers mentioned above.

Similarly, there are other entrepreneurship programs at the University of Illinois at Urbana-Champaign, including the Academy for Entrepreneurial Leadership (College of Business) and Initiative for the Development of Entrepreneurs in Agriculture (IDEA) (College of ACES/Extension). The missions of these organizations differ from that of TEC, with the Academy’s being campus-wide and having more of a focus on the community, and IDEA’s being community-based, rather than campus-focused.

In order to minimize duplication of efforts among entrepreneurship-focused entities on campus and in the community, TEC has implemented the Illini Entrepreneurship Connection. With the Illini Entrepreneurship Connection, representatives from entrepreneurship-focused units and organizations gather bi-monthly to discuss what each is doing. The intent is to minimize duplication of efforts and to identify areas in which development of programs or activities is needed.

Mission and Objectives

Criterion 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 Technology Entrepreneur Center administers programs that exemplify several areas of the University's mission, vision and strategic plan. Specifically, TEC programs directly serve the education and economic development factors of the University's mission. The TEC serves as an enabling agency for those students and faculty pursuing commercializing technology by offering courses and resources to aid in the process.

Relative to education, the TEC offers eleven undergraduate- and graduate-level courses in topics that prepare students for issues they will face in starting a venture. The Center also provides support to graduate students in the Department of Industrial and Enterprise Systems Engineering (IESE)'s M.S. and Ph.D. programs in Systems and Entrepreneurial Engineering. The Center's courses are offered online, through the Office of Continuing Engineering Education, to those engineers who are already in the workforce, but would like further knowledge and training in the area of technology entrepreneurship. The College of Engineering also offers two certificate programs through the TEC: the undergraduate Certificate in Technology Commercialization covers principles and practices of technology commercialization and management and is open to undergraduate engineering students; and the graduate/professional Strategic Technology Management (STM) Certificate program is designed to provide a multiplier effect on the value of an engineering degree by offering students the opportunity to explore the ways that technological innovations are created and adopted throughout the modern world. The required courses for the STM certificate integrate concepts of business strategy and the entrepreneurial process of innovation. Electives for the certificate are intended to allow students to choose one or more focus areas in order to develop strengths in legal, finance, design, or leadership issues and to complement the main focus of technology strategy. Current and future TEC courses will serve as electives for completion of the campus-wide entrepreneurship minor, which is currently being created.

Complementary to education in the classroom, the Center houses the Student Entrepreneur Learning Lab (SELL) which is intended to provide the equipment that engineering students need in order to pursue their own product innovations, and provide hands-on learning experiences. Students have access to the laboratory through the Center's courses and other activities, and are able to use it in order to apply the knowledge they have acquired in their engineering courses to product development. A laboratory like the SELL that is college-wide provides an additional path to technology commercialization for students. Additionally, the TEC is administering the \$30,000 Lemelson-Illinois Prize, in conjunction with the Lemelson-MIT Program. The prize is a campus-wide initiative, open to all undergraduate and graduate students at Illinois. The program is meant to recognize and reward a current student of the University of Illinois at Urbana-Champaign for outstanding innovation and creativity; and to generate

excitement about innovation and entrepreneurship in students by showcasing role models in engineering and science.

With respect to economic development, the TEC administers several programs which serve the University's guiding principle to speed the transfer of knowledge from academia to the public. The TEC created an Illini-TEC Forum in Chicago and St. Louis and plans to expand to additional markets. The events attract an audience of Illinois alumni and entrepreneurs. The sponsor of the event, who is generally an expert in an area of entrepreneurship, gives a presentation that addresses this area. This speaker is followed by a student group who showcase an innovation/business idea that they have developed, and receives feedback from the audience members. These programs allow the Center an opportunity to present students' ideas and a snapshot of what is happening in innovation in Illinois to a broader audience. Another program that the Center administers is the annual V. Dale Cozad Business Plan Competition, which is designed to encourage students of all disciplines, researchers, and community members to create new sustainable businesses in the Champaign-Urbana area. Contestants are invited to create a business plan around an idea of their choice. Assistance is available in the form of mentors, workshops, and courses to guide contestants through the phases of business plan creation. Finalist teams compete for \$50,000 in cash and service prizes which are donated annually to the TEC by outside benefactors. The Lemelson-Illinois Prize also serves the goal of economic development by allowing the University to showcase its students' innovations on a national and global stage. The winner of the Lemelson-Illinois Prize visits high schools, presenting the winning invention and promoting the University's engineering and science programs, in order to generate excitement about science and engineering in youth and encourage more students to enter these fields. Lastly, the TEC composes and distributes a newsletter to over 20,000 alumni and other individuals interested in technology commercialization at Illinois. The Center continually updates and expands its courses and other activities to meet the growing and changing needs of the college's students and faculty in the area of technology commercialization.

Facilities (space, equipment, instructional materials)

Criterion 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.

General Facilities

The Technology Entrepreneur Center is located on the third and fourth floor of the Ceramics Building on the Engineering Campus. The Center's space houses offices for faculty, staff and graduate students as well as the Student Entrepreneur Learning Laboratory. The Center's courses are offered in classrooms throughout the engineering campus.

The Center's equipment and instructional resources are funded through its existing budget and, where possible, grants or donations from outside sources. Whenever possible, the Center uses funds earned through its programs to reinvest in course development and materials, equipment for the Student Entrepreneurial Learning Laboratory, and other resources needed to maintain its quality program offerings. The Center houses a library of resources for students and

faculty interested in entrepreneurship in its facilities. In addition, there are many resources available online at the Center's web site.

Faculty and Staff

Criterion 1050.30(a)(3): A) The academic preparation and experience of faculty and staff to 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; 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; D) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, which 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 Technology Entrepreneur Center is a unit in the College of Engineering at the University of Illinois at Urbana-Champaign. The Center has a 50% FTE Director who reports to the dean of engineering. A 100% FTE Assistant Director reports to and works with the Director to develop and implement the Center's programs and oversees all external relations for, and the day-to-day operation of, the Center. A 50% FTE Communications Specialist reports to the Assistant Director and develops, writes, and edits TEC public information materials for a variety of audiences and assists in the coordination of public relations for meetings and other special events. A 50% FTE Web/Multimedia Specialist reports to the Assistant Director and designs and implements the Center's online presence in regard to layout and graphic design. Several faculty (currently, a 75% FTE Visiting Associate Professor; a 50% Adjunct Lecturer; and three 40% Visiting Lecturers; with the goal of involving more full-time, tenured faculty throughout the college) teach the Center's courses and are assisted by three 50% FTE Graduate Assistants. The Center's faculty and staff are supported by a 100% FTE Administrative Secretary. The Center's operations are overseen by a board of advisors composed of University faculty, alumni and administrators, and community members interested in technology entrepreneurship at Illinois.

Fiscal Resources

Criterion 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 Center has been successful in attracting external funding in the form of grants, sponsorships, gifts and corporate partnerships.

- The V. Dale Cozad Business Plan Competition awards are solely supported by area businesses and external units such as Fox Development Corporation and Illinois Ventures. In addition, several area law firms, accounting offices, and other professionals that start-up companies offer their services to the winners free of charge.
- The Illini-TEC Forums are sponsored by companies and individuals who are interested in speaking at these events.

- National Instruments is providing the Center with software and hardware to enhance the SELL laboratory.
- The Center continues to pursue additional grant funding opportunities to expand its program offerings to students and faculty, and to add to and enhance its laboratory equipment.

Need

Criterion 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 Center has awarded over forty professional development certificates in technology commercialization to undergraduate and graduate students as well as engineering professionals. In addition, enrollment in courses that are administered through the Center is close to 1,000 students per year, which is a significant increase from the Center's inaugural year, when less than 100 students were enrolled in TEC courses. Since the TEC was founded, over 3,500 seats have been filled in courses offered. While the vast majority of students enrolled in the courses offered by the TEC are in the College of Engineering, students in the colleges of Business, Fine and Applied Arts, Liberal Arts and Sciences as well as the graduate schools of Law and Business have taken these courses. It is the Center's goal to continually increase enrollment in the current courses, as well as expand the course offerings to continue to meet the demands of the entrepreneurially-minded students at Illinois.

The center currently offers coursework in coordination with the Department of Industrial and Enterprise Systems Engineering. The TEC has also received approval for a "TE" rubric wherein TEC courses will be specifically identified. This will allow the Center to offer more courses throughout the College of Engineering and the Illinois campus. TE courses will also be offered in the proposed campus-wide entrepreneurship minor. In addition to the course enrollments, the Center's V. Dale Cozad Business Plan Competition has had over 140 teams, encompassing nearly 500 students; compete over the past six years. These teams consist of students and faculty throughout the University of Illinois at Urbana-Champaign. Events sponsored and hosted by the Center are well-attended by students, faculty, alumni, and other parties interested in furthering entrepreneurship at Illinois.

Staff Conclusion. The staff concludes that the University of Illinois at Urbana-Champaign and its Technology Entrepreneur Center 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 for licensure.

The staff recommends adoption of the following resolutions:

The Illinois Board of Higher Education hereby grants to the Northern Illinois University, Authorization to Grant the Master of Science in Family and Consumer Sciences, subject to the institution's 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 at Carbondale, Authorization to create the Center for Workforce Development, subject to the

institution's 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 the University of Illinois at Urbana-Champaign, Authorization to Grant the Bachelor of Science in Liberal Arts and Sciences in Earth System, Environment and Society, subject to the institution's 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 the University of Illinois at Urbana-Champaign, Authorization to create the new units identified below, subject to the institution's maintenance of the conditions that were presented in its application and that form the basis upon which this authorization is granted:

- *School of Earth, Society, and Environment*
- *School of Literatures, Cultures and Linguistics*
- *Technology Entrepreneur Center*

