

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

**Submitted for:** Action.

**Summary:** This item requests approval of six degree programs at the following public universities:

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

University of Illinois at Chicago

- Master of Science in Architecture in Health Design
- Doctor of Pharmacy

University of Illinois at Urbana-Champaign

- Bachelor of Fine Arts in New Media

Illinois State University

- Bachelor of Science in Renewable Energy

Southern Illinois University Carbondale (off-campus)

- Master of Science in Medical Dosimetry

Western Illinois University

- Master of Liberal Arts and Sciences



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.

University of Illinois at Chicago

- Master of Science in Architecture in Health Design

**Background.** The College of Architecture and the Arts at the University of Illinois at Chicago (UIC) proposes a Master of Science in Architecture in Health Design as a graduate program in the School of Architecture. The proposed program results from multiple discussions among the university and national healthcare faculty and administrators, principals from Chicago's leading healthcare architecture firms and national leaders in healthcare design, including members of the Academy of Architecture for Health of the American Institute of Architects. Rapidly changing conditions and requirements for healthcare services in the United States and around the world suggest a growing demand for trained architectural graduates with specialized knowledge in health design. Currently only two of one hundred fifteen National Architectural Accrediting Board accredited architecture programs in the United States offer discrete healthcare curricula: Texas A&M and Clemson University. The proposed UIC program will serve a regional population of nine million.

***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.* The proposed program will fulfill *The Illinois Commitment* by fostering economic growth in the State of Illinois by providing professional education in health care design as well as by preparing individuals to enter the growing healthcare architecture market. It will prepare graduates to address both the short- and long-term needs for developing health care facilities and planning for future hospitals, assisted living, adult care housing, and other transitional facilities to serve the population of the State of Illinois.

*Goal 4: Increase the number and diversity of citizens completing training and education.* The current graduate program in architecture enrolls students who represent a diverse population in age, gender, and race/ethnicity. In particular, the School of Architecture has demonstrated strength in recruiting and graduating female students. Women represent 44% of the masters group. This is far above the 12 percent of registered architects who are women according to the 2005 Diversity Audit by the American Institute of Architects. The institution anticipates the same diverse student population will be represented in the proposed program.

*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 proposed program will provide a high quality academic experience in healthcare design through a comprehensive curriculum that incorporates a well-rounded, research-oriented learning experience with an internship (preceptorship) track in healthcare related facilities. Assessment will incorporate systematic feedback from healthcare architecture firms, medical administrators, healthcare professionals, and surveys of graduates on satisfaction of instruction and employment. These assessment results will be used continuously to evaluate and improve the quality of the curriculum, instruction, and student learning. The proposed program will prepare a cohort of architects to address complex and fundamental issues of health design and to become a force for change in global health.

*Goal 6: Improve productivity, cost-effectiveness, and accountability.* The proposed program is designed to graduate students in two years, thus maximizing their educational training. Students will be involved in the professional healthcare architecture field through required preceptorships with health design architects and healthcare organizations. Accountability is built into this degree program by way of the preceptorship and capstone project, which will be reviewed by health design professionals, hospital administrators, and other healthcare providers. Accountability will be measured also by tracking the success of graduates receiving certification by the American College of Healthcare Architects, as well as tracking the ACHA certifications of program faculty.

## **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 critical need for healthcare services in the United States and around the world suggests a growing demand for trained architectural graduates with specialized knowledge in health design. The proposed program will serve a regional population of nine million. In addition, UIC has specific advantages including association with the University of Illinois Medical School's School of Public Health and College of Nursing and proximity to state-of-the-art for-profit hospitals as well as world-class architecture firms practicing health design. The proposed program would be the only designated Master of Science in Architecture in Health Design in the United States. There is growing demand among large, regional healthcare firms and service providers for trained architecture graduates with specialized knowledge in healthcare design. The UIC program anticipates providing additional opportunities for part-time students through evening continuing education courses and special summer institutes.

This post-professional program will ensure graduates opportunities for employment in healthcare facility design. Healthcare construction is experiencing an upward trend that is

expected to continue and increase by 34% from \$34 billion in 2005 to \$45.4 billion in 2009. Regional surveys of design and construction activity in Illinois, Indiana, Michigan, Ohio, and Wisconsin have identified a regional value of \$16.6 billion devoted to all healthcare projects. This represents 16% of the total value of construction projects.

**Comparable Programs in Illinois.** No comparable programs exist in Illinois, nor across the nation.

### **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 of Illinois at Chicago's mission statement promotes an important set of objectives for the State of Illinois:

- To create knowledge that transforms our views of the world and, through sharing and application, transforms the world;
- To provide a wide range of students with the educational opportunity only a leading research university can offer;
- To address the challenges and opportunities facing not only Chicago but all Great Cities of the 21st century, as expressed by our Great Cities Commitment;
- To foster scholarship and practices that reflect and respond to the increasing diversity of the U.S. in a rapidly globalizing world; and
- To train professionals in a wide range of public service disciplines, serving Illinois as the principal educator of health science professionals and as a major healthcare provider to underserved communities.

The College of Architecture and the Arts fully supports the mission of the University of Illinois at Chicago.

### **Program Objectives**

The proposed program's mission is to improve the quality of health-focused architecture through professional training with specialized experience and an emphasis on the professional ethics of healthcare architects. The program will prepare graduates for board certification by the American College of Healthcare Architects. The program will respond to larger social, economic, and political changes and will integrate the content areas needed for ACHA certification through the proposed curriculum, portfolio review and continuing education modules. The curriculum is a 53 credit hour post-professional program. Enrollment in the proposed program is open to students with professional degrees in architecture (such as the Bachelor of Architecture or Master of Architecture).

### **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 are considered on an individual basis. In addition to the Graduate College minimum requirements, applicants must hold a first professional degree in architecture (such as the Bachelor of Architecture or Master of Architecture). Applicants must demonstrate a 3.0/4.0 GPA in the final 60 semester (90 quarter) hours of undergraduate study. Applicants whose previous post-secondary work was completed in a country in which English is not the language of instruction must provide a minimum TOEFL score of 550 (paper-based), 213 (computer-based), 80 (internet based), with sub-scores of 19 in Reading, 17 in Listening, 20 in Speaking, and 21 in Writing. Applicants must submit a portfolio with examples of their creative work.

#### Curriculum

The Master of Science in Architecture in Health Design is a 53 credit hour post-professional program. Enrollment in the program is open to students with professional degrees in Architecture. The program is built on the analysis, synthesis, and critique of Best Practices. Candidates learn Best Practices through Core Seminar Courses. They perform Best Practices in their preceptorship. Finally, they critique and advance Best Practices through the Capstone Studio.

The program will capitalize on existing faculty expertise, local professional resources, existing facilities, and research in the field. Full-time students will complete the program in two academic years including a required summer preceptorship between the two years. Part-time students will complete the program in four years with students taking two classes per semester. Coursework is designed to accommodate working students, with most courses offered in the evening.

Following the first year of core courses, students will select one of two tracks of study: Research or Design. The Research curriculum supports students who already have substantial experience in practice and who seek to augment their professional repertoire with specialized knowledge in the area of healthcare through evidence-based research. The Design track supports students who will explore the architectural composition of diverse healthcare environments. This track is designed for recent professional graduates who wish to hone their design skills through the critical analysis of health design best practices.

Candidates for the proposed degree will complete a required 29 hour core, 4 hours of track-specific coursework, 12 hours of electives, and an 8 hour capstone experience.

#### Assessment of Student Learning Outcomes

The proposed program will orient its curriculum on the health design areas that are critical to certification by the American College of Healthcare Architects. Focused health design seminars will build a knowledge base in areas that are essential for architects who design

healthcare facilities. Preceptorships will be utilized each term of the program and serve as a best-practice model, with successful design professionals in architecture firms and health care organizations pairing with students based on each student's interests and career goals.

The capstone studio will serve as the culminating event that will allow an intensive immersion in issues of health design. The capstone class will be studio-based, interdisciplinary, and taught by a team of professionals from architecture, medicine, public health, disability studies, and other related fields of study. Students will be exposed to architectural practitioners and healthcare experts. This professional exposure will benefit them in their exploration of a final project that reflects a critical intervention into an issue of great concern in health design. The option of having a capstone project as either visual or written in nature will promote an innovative approach to problem solving within the context of a design environment. Projects will be presented and defended by students in a traditional jury format as well as subjected to informal faculty and guest critic reviews and rounds. Critical feedback will enrich these projects as well as expose new and innovative health design concepts to the professional healthcare community.

### Program Assessment

The proposed program will prepare graduates in the content areas needed for Board certification for the American College of Healthcare Architects, which certifies architects who practice as healthcare specialists. Assessment of this program involves learning outcomes that insure knowledge and skills of best practices, evidence-based design methods, and the creation of advanced methods in design, research, and integrative design practice in a capstone course that offers the creation of new knowledge and interventions that respond to critical issues in healthcare practice.

### 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 Chicago's 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 on 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 of Architecture facilities located in the Architecture and Arts Building are currently at capacity serving as the primary educational base for approximately 550 students. The majority of this space is occupied by studio classrooms where students have permanent semester-long desk space that is available 24 hours a day. This necessitates the acquisition of additional seminar and studio space for the proposed program within the Architecture and Arts Building. Renovation to the existing facilities will include a state-of-the-art seminar room and studio space for 30. This renovation will necessitate the relocation of the program currently using this space. The college will borrow from the university to pay for the renovations and will pay down the debt from its share of revenue generated by the program.

#### Clinical Sites

The preceptorship will link proposed students with leading healthcare design practitioners further expanding potential research resources to those housed within these professional organizations.

The College of Architecture and the Arts maintains a project lab equipped with the woodworking, metalworking, and plastics tools necessary for architectural modeling. Full color plotting and printing facilities include in-studio 8 ½ x 11 and 11 x 17 printers as well as a separate plotter room equipped with 8 large scale plotters. In addition, the Architecture and Arts building is home to a University Academic Computing and Communications Center Lab. Computers in this lab are equipped with graphics software.

#### Library Resources

Access to three university libraries located on the UIC campus provides sufficient resources to support the proposed program. These libraries include the Daley Library, the Science Library, and the Library of Health Sciences. The Library of Health Sciences resources include 500,000 volumes, 5,100 journals, and online resources serving both UIC and as the Regional Medical Library for ten Midwestern states. Extensive Architecture and Arts resources are housed in the Daley Library.

Wireless Internet capabilities will be built into all proposed facilities further extending the research resources to sites such as the online Library of Health Sciences portion of the University of Illinois Medical Center website.

#### 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 eighteen full-time School of Architecture faculty are committed to assisting in the development and delivery of coursework within the Master of Science in Architecture in Health Design program. Several full-time faculty maintain academic and professional practice foci in low-cost housing, sustainability, air quality issues, and social systems – all areas consistent with the World Health Organization’s Millennium Goals. Program faculty also have expertise in the area of building science, which focuses on the scientific basis for architectural decision-making, an important component of complex architectural decisions common in Health Design. Existing programs in the School of Architecture lack a faculty member with a primary research focus and a grant-writing history. A new faculty line is therefore included in the proposed budget. This key faculty member will bring an increased clarity of vision about Health Design which may illuminate existing faculty strengths that work in support of the proposed program.

Adjunct faculty are a key to the current and future functioning of all School of Architecture programs. For example in AY 06-07, 38 adjunct faculty supported the School’s programs. Adjunct faculty are drawn from a rich pool of Chicago design professionals. As the School seeks Health Care design professionals to serve as adjunct faculty, the program stands to benefit from the School of Architecture’s established relationships within the local design community. Key courses of the program will be taught by adjunct faculty who are deeply embedded in best healthcare practices.

Existing coursework in the School of Public Health, School of Nursing, and the College of Medicine, will be tapped to fulfill elective requirements. Faculty from these units may also be resourced to enrich and augment architecture faculty in Studio settings.

Currently, architecture students are supported by two academic advisors, an associate director of undergraduate studies, and a director of graduate studies. Facilities, Computing, Finances, and Human Resources are supported by four additional staff members. These administrative positions will be maintained and increased with an additional Academic Advisor and part-time support staff member focused on the proposed program. As enrollment grows from 30 students in year one to 75 students in year three, the support staff position may be increased to full-time.

## **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 & Funding Sources**

The institution projects total enrollment in the first year of 30 students (15 full-time, 15 part-time), with enrollment rising to 60 in the second year, 75 in the third year, and leveling at 90 in subsequent years.

## Expenditures

Based on these enrollment projections and current faculty expertise, the School plans to hire a full-time faculty member specializing in Health Design at \$100,000 annual salary in year one. Other instructional resources are projected at three to four adjunct faculty at \$15,000 per course and four to five graduate assistants at 25% effort per semester by year 4. The School will staff the program with a full-time student advisor at \$42,000 annual salary and a 50% program coordinator at \$20,000 annually. The associated expenses will be initially covered through internal reallocation of existing funds available from vacant salary lines. Eventually, these expenses will be covered through tuition income.

The College will reallocate \$75,305 in FY08 and \$82,722 in FY 09 from its general fund for the program. This program will be self supporting from year two. The proposed degree will add to the positive cash flow of the School of Architecture and the College of Architecture and the Arts and will generate an additional income stream for the campus.

With a proposed tuition differential of \$8,000 a year, the program will break even during year three. The tuition differential will be returned to the College with a percentage retained by the campus for overhead.

Renovation to the existing facilities is necessary to accommodate this program. The School has requested a loan from the campus in the amount of \$750,000 in FY2008 to be paid back in five annual installments of \$150,000 each starting year 4 of the program. Renewed facilities will service the Health Design program in the evening with availability for other school and college courses during the day.

The College will pay for the faculty line and facility renovation and pay back the loan from the campus from its share of revenue.

## 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 specialized accreditation is available for this degree. The National Architectural Accrediting Board accredits professional programs, such as the School's Master of Architecture degree. The Master of Science in Architecture in Health Design is a post-professional degree, which indicates students will have received professional architecture degrees prior to acceptance.

**Staff Conclusion.** The staff concludes that the proposed degree program 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 for licensure.

University of Illinois at Chicago

- Doctor of Pharmacy

**Background.** The University of Illinois College of Pharmacy seeks to increase the enrollment within its existing Doctor of Pharmacy degree program. Because of physical limitations at the Chicago campus, and because of the need to educate pharmacists who are willing to serve a wide geographic area within the State, the College proposes to house this additional enrollment on the College of Medicine campus in Rockford, Illinois. This proposed action is in direct response to the continued and anticipated shortage of pharmacists in Illinois, the availability of educational facilities at Rockford, and a recognition that the most cost-effective way to provide more pharmacists to Illinois is to expand an existing program. This expansion will entail a single program with one curriculum and one faculty at two physical locations and equivalency in all aspects of the program between the two sites.

**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.* Rockford Doctor of Pharmacy student enrollment will contribute to the economic growth of Illinois. Educating pharmacists interested in rural practice will strengthen and preserve rural pharmacies throughout Illinois and benefit the economy as a whole, but particularly rural economies, which are often challenged to find diverse sources of income.

*Goal 3: No Illinois citizen will be denied an opportunity for a college education because of financial need.* The College facilitates and provides extensive financial aid for its Doctor of Pharmacy students with nearly \$13 million in aid provided to Doctor of Pharmacy students in 2005. Of this amount, the institution itself provides over a million dollars in direct financial assistance.

*Goal 4: Increase the number and diversity of citizens completing training and education.* The College recently revised its admission process to include a special focus on diversity. As a result, the number of underrepresented individuals within the College has increased from 14% in AY 2006 to nearly 19% among the 2007 entering class.

*Goal 5: Hold students to even higher expectations for learning and be accountable for the quality of academic programs and the assessment of learning.* One measure of the quality of a pharmacology program is the pass rate of graduates who take the North American Pharmacist Licensure Examination (NAPLEX). Successful passage of this examination is required for Doctor of Pharmacy students to obtain an Illinois pharmacist license. Historically, UIC NAPLEX scores are consistently higher than the average among graduates in the Midwest and are also consistently higher than the national NAPLEX pass rates.

## 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 United States is experiencing an ongoing pharmacist shortage. According to a study released in July 2005, there are nearly 6,000 vacancies in chain drugstores nationwide. Research conducted in 2001 by UIC faculty members found an Illinois vacancy rate of 14% for pharmacists as compared to a 6% rate for all healthcare providers combined. Pharmacist vacancies were attributed to existing positions not being filled, but also to the expanded roles for hospital pharmacists who are spending more time in drug therapy monitoring, patient education, patient counseling, and consultations. The survey also indicated the pharmacist shortage has resulted in reduced service levels in Illinois hospitals.

Enrollments in existing Doctor of Pharmacy programs will be insufficient to fill this backlog of positions. The proposed program is necessary to fulfill the need for additional Doctor of Pharmacy graduates as well as to prepare pharmacists to work in rural areas of Illinois.

The demand for admission into the UIC program remains high. The College currently is able to accept only 1 in 9 applicants. Expanding capacity will respond to this demand and will supply pharmacists needed in Illinois.

**Comparable Programs in Illinois.** There are four Doctor of Pharmacy programs currently accepting students in Illinois. The proposed program is an extension of the University of Illinois at Chicago's current program. Midwestern University offers a Doctor of Pharmacy program in Downers Grove that recently increased enrollment to 200 students. The geographic distance between the proposed Rockford program and the Midwestern University program would seem to indicate little or no impact on the Midwestern University program. Southern Illinois University Edwardsville offers a program that is likely to attract students interested in rural pharmacy practice. Given the size of Illinois, the magnitude of the need for additional pharmacists, and the physical distance between the two programs, the proposed program in Rockford would be complementary to the program in Edwardsville. Existing collaborations with the SIU College of Medicine also provide a foundation for additional collaborations between the two pharmacy programs to meet the pharmacy needs of rural Illinois residents. Chicago State University's pharmacy program is committed to recruiting, retaining, and graduating a culturally and economically diverse urban student body and has a strong tradition of serving underrepresented individuals. While it is desirable that the program in Rockford would encourage the recruitment of underrepresented students, the programs are complementary in that they reach different segments of the Illinois population.

### **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 mission of the UIC College of Pharmacy is to provide leadership in education, research, public service, entrepreneurship and business activities, and patient care to guide and serve the pharmaceutical care needs of society. In order to fulfill this mission, the College must excel at creating educational experiences that support the professionalization of its students and prepare them for career adaptability/flexibility in a changing research and practice environment, supporting an infrastructure that encourages and promotes faculty success and vitality in all aspects of their work and fosters ongoing career development, seeking collaborative entrepreneurial relationships to advance learning, science and practice, and building, enhancing, and valuing alliances with its many constituents.

## Program Objectives

The Doctor of Pharmacy degree is the highest level of professional education in pharmacy and has been approved by the Accreditation Council for Pharmacy Education (ACPE) as the sole entry-level degree for the profession.

The curriculum emphasizes a patient-centered course of study and provides a structure that will enable students to develop into reflective practitioners with skills and attitudes to anticipate change, criticize, evaluate, and modify practice in a changing healthcare arena. The curriculum also provides a fundamental core of knowledge, skills, and attitudes, which in composite, promotes the fulfillment of the adopted professional competencies for a generalist practitioner who delivers pharmaceutical care.

The program prepares students to:

- Enter into the practice of pharmacy to serve society as ethical and caring professionals;
- Apply knowledge of drugs and drug therapy to solve problems and make decisions on behalf of their patients;
- Educate, communicate, and collaborate with patients, colleagues, and other health professionals;
- Engage in professional practice as a lifelong learning experience; and
- Practice pharmacy in traditional and nontraditional settings assuming a leadership role in the future direction of the profession.

## 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

The proposed program will have admission and graduation requirements identical to those of the existing program. This acknowledges new ACPE accreditation requirements that call for equivalency between main campus and satellite program academic standards. Applicants must have:

- Completed all pre-pharmacy coursework with a C grade or better by the end of the spring semester of the admission year;
- Achieved cumulative, pre-pharmacy, and science grade-point averages of 2.5/4.0 or better at the time of application;

- Take the Pharmacy College Admissions Test (PCAT scores are considered in conjunction with grades, extra-curricular experiences, and other factors for admissions purposes); and
- Achieve a TOEFL score of 550 (213 computer-based; 80 Internet-based) if a majority of the applicant's college credits were completed in a non-English speaking country.

If selected, applicants must participate in an admissions interview and assessment of written and verbal communication skills.

## Curriculum

The Doctor of Pharmacy degree is an entry-level professional degree. As such, specific prerequisites are required for entry into the program – a minimum of 60 hours of pre-pharmacy coursework. This pre-pharmacy coursework will include 8 semester hours of communication, 3 semester hours of mathematics, 36 semester hours of specified natural and physical sciences, 6 semester hours of social and behavioral sciences, 3 semester hours of humanities and fine arts, and 4 semester hours of elective work. The additional 133 credit hours of pharmacy coursework includes 86 hours in the pharmacy core, 12 hours in professional electives, and 35 hours in advanced pharmacy practice experiences.

The UIC College of Pharmacy curriculum is designed to provide students with essential knowledge of physiological mechanisms and how medications interact with these systems to promote health and reduce the negative effects of disease. The curriculum is grounded in chemistry and the biological sciences. However, given the highly interactive nature of the practice of pharmacy, the curriculum also emphasizes a series of clinical experiential interactions exposing the student to patients and the management of their pharmaceutical needs in a variety of clinical, management, and policy frameworks. Overlaying these two elements of the curriculum is a third theme focusing on the professional roles and responsibilities of pharmacists and the ethical practice of pharmacy in the contemporary environment. The central academic objective of the curriculum is to convey the scientific, societal, and interpersonal skill sets required for program graduates to become pharmacy practitioners and leaders.

*Off-Campus Programs only: The course content, coverage, and standards are consistent with the on-campus program.*

The curriculum design of the Rockford program is identical to that of the Chicago program for all core curricular requirements. The primary difference will be the development of elective coursework that addresses the specific concerns of rural pharmacy practice. These electives are currently being developed.

## Assessment of Student Learning Outcomes

Several types of assessments are utilized throughout the didactic portion of the Doctor of Pharmacy curriculum. Most courses use a combination of quizzes, midterms, and final examinations as the basis for student assessment. Many courses supplement these traditional forms of assessment with special projects, assignments, presentations, and laboratory practical exams. An audience response system is used in some classes to poll students on various topics and to facilitate discussion. During the student's fourth experiential year, rotation evaluation forms, and the Advanced Pharmacy Practice Experience (APPE) Portfolio provide additional means of faculty assessment and student self-assessment. These forms help ensure student

progress throughout their fourth experiential year and promote student self-reflection on their professional growth and improvement. Additionally, a Preceptor Comment Form is completed at the end of each clerkship module to provide comment on student progress outside of the formal evaluation and grade for the clerkship. Preceptors must also comment on the student's achievement of the UIC Clerkship Competencies upon completion of each clerkship module. This serves as a formative evaluation of student achievement and assists preceptors for forthcoming clerkships to tailor educational goals to student-specific needs.

Evaluation of curricular assessment incorporates collaborative input from the Educational Policy Committee (EPC), curriculum team leaders, course coordinators, faculty, and students. The EPC initiates and acts on proposed curricular changes, course content revisions, course coordinator assignments, prerequisites for courses, new elective courses, and makes recommendations to the College's voting faculty for approval. EPC then assumes responsibility for implementation.

Student achievement of the curriculum competencies is being evaluated using an embedded assessment process. This process begins by correlating the "UIC Professional Competencies and Outcome Expectations" to the 2007 ACPE standards. Through the use of existing course objectives, the UIC competencies have been mapped to the professional curriculum. This mapping helps to make sure all competencies are introduced in a sequentially appropriate manner. At the course level, course coordinators are responsible for ensuring course objectives appropriately reflect the core competencies. Furthermore, they are responsible for choosing the most appropriate evaluation tool (e.g. exam questions, term papers, reflective case studies) that adequately reflects the intent of the course objectives. The various evaluation tools assess student achievement of the course objectives. Studying student achievement allows course coordinators to evaluate the course content as well as the effectiveness of the teaching methods associated with each objective. Separate forms have been developed by the Office of Experiential Programs and assess overall competency achievement during the clerkship year of the program.

In addition, fourth-year students complete a Self-Confidence Survey at the beginning, middle, and end of their clerkship year. The purpose of this survey is to self-assess perceived confidence in achieving the curriculum competencies.

Critical thinking skills continue to be evaluated as students move through the curriculum and are assessed via the information gathered from the faculty through embedded assessments. A review of course objectives reveals the higher order thinking skills required of students as they progress through a course and/or the curriculum. This same review shows the manner in which higher order thinking skills are being tested in specific courses. A student's grade in a course provides an indication of a student's ability to think critically. Clerkships provide the final evaluation of a student's critical thinking and problem solving abilities as illustrated by the clerkship evaluations.

## Program Assessment

Program effectiveness will be assessed by:

- The percent pass rate of graduates on end-of-program certification examinations;
- The percent of Doctor of Pharmacy students pursuing joint degrees in conjunction with other academic programs;

- The percent of graduates seeking advanced and specialized residency training and involved in faculty or independent research;
- The percent of graduates employed in the field and a review of the self-reported list of achievements of alumni earned over the last academic year;
- Annual feedback from the National Advisory Board, which includes wide representation of employers from the pharmaceutical industry, chain and independent drug stores, and state and national associations;
- The number of graduates enrolled in residency programs upon graduation;
- The number of companies or agencies attending the College's career fair; and
- Student satisfaction surveys.

*Off-Campus Programs only: The institution has developed systems to assure the credibility of assessment and evaluation of students' learning.*

The mechanisms currently in place to assess student learning outcomes and program effectiveness have been adapted to meet the needs of a program offered at an off-campus site.

### **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 Chicago'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 on 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 Rockford campus has sufficient space within existing and planned facilities to house the proposed program.

## Clinical Sites

The College of Medicine – Rockford has agreements in place with 36 hospital and clinical experiential sites as well as with 37 preceptor and outreach core sites.

## Library Resources

The existing resources of the entire University of Illinois library system will be available to the Rockford students. This will include the existing collection available onsite, remote resources scanned and made available electronically, and all existing electronic library resources. In addition, the College will provide annual supplemental support to insure that existing licenses to pharmacy-specific journals are included at the Rockford site.

*Off-Campus Programs only: Students have appropriate training in the use of technologies for learning and are provided with the necessary training prior to the beginning of the program.*

Extensive computing services will be available to students enrolled in the proposed program. A computer laboratory will be developed that will include access to computerized and online resources identical to those available to students enrolled at the Chicago campus. The current College building is wireless. It is anticipated that the space at Rockford in the new building will also be wireless. The existing building will be retrofitted for wireless access.

## 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.*

## Faculty

Faculty members will be hired through the University of Illinois at Chicago College of Pharmacy and will be full members of their respective departments. They will be subject to current promotion and tenure processes. They will be full faculty members of the College in a manner analogous to members of the Rockford College of Medicine who are full faculty members of the Chicago-based College of Medicine.

## Staff

Existing resources in the Office of Student Affairs, as well as recruitment resources from the Rural Medicine program, will be available to students and potential students in the Rockford program. An additional half-time Student Affairs staff-person will be hired to provide on-site student support at the Rockford site. This position may be increased to full-time after the first three years of the program.

## **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 institution expects the proposed program to be financially self-supporting through a combination of initial philanthropic contributions and reallocated state funds. Additional initial capitalization will consist of a loan from campus. Philanthropic commitments appear sound and are targeted for the second budget year. Student tuition revenue would begin in budget year three and continue for the life of the program. Over time, tuition revenues will cover all debt service and operational costs. The institution anticipates a break-even point to occur during the sixth year of instruction.

## **Enrollments**

The institution projects an initial enrollment of 50 students each year until the program levels out at 200 students across four cohorts.

## **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.*

The Doctor of Pharmacy degree is the highest level of professional education in pharmacy and has been approved by the Accreditation Council for Pharmacy Education as the sole entry-level degree for the profession. The on-campus Doctor of Pharmacy program is fully accredited by ACPE. The Rockford program will be accredited under the Chicago campus. Inclusion of the Rockford program in the UIC program accreditation is not automatic. The institution will need to demonstrate to ACPE that the Rockford campus has sufficient resources and meets all ACPE standards. It is likely that a site visit will be scheduled by ACPE soon after the institution is granted approval from the IBHE to offer this degree at the Rockford campus.

In order to practice pharmacy in the State of Illinois, a student must graduate from a College of Pharmacy and take and pass the NAPLEX examination. Graduates of the UIC Doctor of Pharmacy degree are eligible to sit for the NAPLEX examination.

**Staff Conclusion.** The staff concludes that the proposed degree program 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 for licensure.

University of Illinois at Urbana-Champaign (UIUC)

- Bachelor of Fine Arts in New Media

**Background.** The proposed Bachelor of Fine Arts (BFA) degree in New Media embraces the concept of communication through creative computing. This requires computer and network literacy that is analogous to and as significant as print literacy. Computer literacy is the ability to transfer knowledge between computing environments and people within social, ideological, legal, political, ethical, and ecological contexts. Computer literacy requires a basic understanding of the principles of human-computer interaction and is an essential requirement for responsible creative computing in pervasive digital networks. Within the context of the globalization of computer networking, this program is designed to enable students to communicate and work in media that transcend cultural or physical boundaries while also making students aware of diverse cultural differences by fostering communication.

The UIUC School of Art & Design has gradually introduced the courses necessary for this curriculum as electives for all undergraduate programs. These courses typically have long waiting lists. The courses are also sought out by students in programs outside the school and college such as writing studies, computer science, library science, and architecture. As the school has gradually introduced New Media courses, it has been able to hire the faculty and assemble the equipment and space necessary to offer a formal undergraduate degree program.

The full promise of the New Media program cannot be realized within the confines of artists working in isolation. New partnerships must be explored. New collaborative relationships that cut across traditional disciplinary boundaries must be envisioned and realized. New Media will foster new partnerships on three levels: within the College of Fine and Applied Arts, across the University, and outside the institution.

***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 interdisciplinary creative approaches continue to increase in importance in the realms of commerce, education, and research, the New Media major will uniquely situate graduates for a variety of in-demand public and private sector careers that address major concerns and needs.

*Goal 2: Higher education will join elementary and secondary education to improve teaching and learning at all levels.* The School of Art & Design supports a large Art Education program, and many of those students will take New Media courses. This will have a strong positive effect on the teaching practices of these graduates as they enter their careers as elementary and secondary school teachers in the state.

*Goal 4: Increase the number and diversity of citizens completing training and education.* Diversity has been built in as a primary objective of the school. The school has realized a 15 percent increase in the number of minority students enrolling in current New Media courses when compared to other majors in the School of Art & Design.

*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 New Media major will be built on a foundation in the basic art and design courses acquired through prerequisite courses and reinforced throughout UIUC's curriculum of major courses. Undergraduate majors will acquire

critical and analytical skills in their courses. Students will acquire strong reasoning and communication skills and will be held to high expectations for their personal learning and growth.

*Goal 6: Improve productivity, cost-effectiveness, and accountability.* The New Media program is grounded in the concept of efficiency and, when possible, shared resources. This will be most evident in the use of a shared lab within the School of Art & Design. This lab has up-to-date networking, printing, and computing services that consolidate costs to the school and offset the expenses the individual student would normally shoulder.

## **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.*

Data from the Occupational Employment Projections in Illinois suggests increases in available jobs in the media and communication arenas through 2014. New electronic media are having a growing societal impact and are a powerful globalizing force. Today's citizens interact with, and increasingly create, media everyday, and this will only intensify in the future. New media now interacts and intersects with practically every area of education, research, and commerce: the sciences, business, the humanities, and the arts. A degree program in New Media is thus an essential ingredient for a modern comprehensive university.

**Comparable Programs in Illinois.** Northern Illinois University (NIU) offers a degree in Media Arts, while the University of Illinois at Chicago (UIC) offers a degree program in Electronic Visualization. These two departments differ from the University of Illinois at Urbana-Champaign's program in several ways. The institution expects any impact on the programs at NIU and UIC to be minor, particularly since the demand for arts technology courses is expanding and will likely continue to exceed supply. The greatest impact is expected to be on peer institutions in adjacent states. Many high achieving Illinois high school students interested in the study of art and technology cross state boundaries to attend the excellent programs at the University of Wisconsin-Madison, Purdue University, Ohio State University, the University of Michigan, and Penn State University. These students, therefore, pay out-of-state tuition because the University of Illinois has no equivalent program to offer.

## **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 mission of the proposed B.F.A. in New Media "is to foster speculative research and innovative teaching in emerging forms of communication and technology." The program approaches forms or technologies deemed as "new" by science or commerce as sites of potential creative discourse. Situated within a research university with a strong engineering component, the program's research and teaching carry a special charge. Through practice and critique, students and faculty examine many of the newest technologies to discover their deep potential, assumptions, dangers, possibilities, and politics. This is consistent with UIUC's mission to "transform lives and serve society by educating, creating knowledge, and putting knowledge to work on a large scale and with excellence."

## Program Objectives

Students will be equipped to adapt within a rapidly changing technological space, and to respond critically within a wide range of methodologies. Studio art, design, entertainment, and activism are all likely bases for their creative practice, with cinema, public art, curation, gallery exhibition, performance, radio and television broadcast, and publication in print or web as likely outlets. More generally, the course requirements for the 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, and to develop understanding and attitudes appropriate to a graduate of the University of Illinois. The curriculum in New Media is aimed at preparing the student for the breadth of understanding of art and design practice appropriate to a wide range of career possibilities.

## 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

A portfolio review may be required for placement in any art and design course beyond the entry level of the foundation program. After completing the foundation program, a student who meets or exceeds minimum grade requirements must apply for admission to the Bachelor of Fine Arts in New Media. Faculty select students by portfolio review near the end of the foundation year. Higher than minimum grade point averages may also be required due to the limits of faculty and facilities. The minimum grade point average is 2.25/4.0.

## Curriculum

The B.F.A. in New Media program balances both a fine arts and a design component, while also connecting to other disciplines such as engineering. The philosophical cornerstone of the program is that contemporary practice in New Media draws from multiple realms and that students with broad exposure will have the best chances for leadership, professional impact, and economic success in the field. In addition to 31-34 semester hours of general education requirements, B.F.A. in New Media candidates are required to complete 14 hours in Art History, 14 hours in General Art and Design, 37 hours in New Media, 8-10 hours in General Electives, and 16 hours in Art and Design Electives for a minimum of 122 hours.

## Assessment of Student Learning Outcomes

The Chair will be responsible for evaluating student outcomes while they are at the university. These include grades earned, retention in and attrition from the program, reasons for

attrition when it occurs, student opportunities outside the classroom, and student satisfaction with their education. This data will be reported to the Director.

The Chair will also evaluate student outcomes by tracking alumni through their careers to determine how many remain employed in the field, how they progress in responsibility and achievement, and how many continue their education for higher degrees. The program plans to invite alumni to participate in these evaluations to help serve new generations of students.

The goal of all of these efforts will be to adapt the program to the employment market as new technologies and opportunities emerge in the field, adapt the classes to stay on the cutting edge of new media and technology, and continually improve the program so that it provides the maximum benefits to each generation of new students.

### Program Assessment

Annual program evaluations will occur at two levels. First, written feedback will be requested from current students, faculty, alumni, and employers 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 current students and alumni. The Director of the school, in consultation with the Chair of New Media, 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 questioning the student's knowledge of educational and career opportunities related to the field of new media. The purpose of this survey will be to ensure student awareness of career opportunities and to determine which courses and extracurricular activities were most effective or should be added. Long-term assessment strategies for determining the impact of the New Media major on careers will be conducted through Alumni surveys.

In addition to these annual or long term programmatic reviews, the School will seek "Critical Incident Feedback" to determine the value of special activities incorporated within the New Media program of study. These brief forms will be distributed at the completion of a particular event, such as a workshop, and will ask a few focused questions to help the program's faculty and staff to revise future activities so they have the greatest impact and utility to students. This technique is widely used to get early feedback during a course instruction at the University of Illinois and assessment questionnaires will be prepared in collaboration with the University's Division of Measurement and Evaluation in the Office of Instructional Resources.

### 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 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 of Art & Design has adequate classroom facilities to accommodate classes for the new major. The school maintains an extensive shared computer lab that will also serve the needs of the New Media program, including high-speed network access, industry standard software, and a variety of specialized peripheral equipment for computing and media production. Office space already exists for program faculty and staff.

#### Library Resources

The University of Illinois library is notable as the largest public academic library in the country and for possessing over ten million volumes. The Ricker Art and Architecture Library houses a collection of books and journals relevant to the field of art and design. Many library resources are easily accessible through the University gateway on the World Wide Web. Additionally the College maintains a slide library that is currently transitioning to an all-digital archive, and the College subscribes to ARTstor, a growing repository of nearly 500,000 digital images and media covering the field of art, design, and art history.

### **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.*

Annual evaluations of faculty performance are required by the University of Illinois and are conducted by the program chair. Assistant professors also undergo a rigorous third year review as required by the provost and are evaluated for tenure no later than their sixth year. Associate professors are evaluated for promotion at such time that their record demonstrates

national/international stature and leadership in their field and their teaching demonstrates excellence as measured by a number of metrics.

Course evaluations will be done using methods promoted by the University Center for Teaching Excellence, including use of Instruction and Course Evaluation System surveys, senior faculty visits to courses taught by junior faculty, reviews of faculty teaching portfolios, and informal discussions among faculty concerning course content and coordination of course material. Faculty are also encouraged to attend teaching workshops offered on a regular basis by the University Center for Teaching Excellence.

### **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 & Funding Sources**

The institution projects an initial enrollment of 10 students each year until the program levels out at 40 students across four cohorts.

### **Expenditures**

This program will be offered utilizing existing faculty and facilities. No additional state funds will be required.

### **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.*

The National Association of Schools of Art and Design (NASAD) is the national accrediting body for all schools of art and design in the United States. The School of Art & Design has been accredited by NASAD for over 75 years, longer than the College of Fine and Applied Arts has been in existence. NASAD does not give formal accreditation to programs. However, the New Media program meets all current recommendations of NASAD.

**Staff Conclusion.** The staff concludes that the proposed degree programs 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.

## Illinois State University

- Bachelor of Science in Renewable Energy

**Background.** Illinois State University requests authority to offer the Bachelor of Science (B.S.) in Renewable Energy on campus to prepare students to enter the emerging field of renewable energy. The proposed program is sponsored by the Department of Technology and the College of Applied Science and Technology. The program has a strong interdisciplinary focus and will be supported by courses offered in the departments of agriculture, economics, and technology. The program is unique in Illinois and is one of only a few baccalaureate programs nationwide devoted to renewable energy. Students admitted to the program will specialize in either a technical sequence or an economics/public policy sequence. The development of the program is supported by a \$990,000 grant from the U.S. Department of Energy.

Illinois State University currently offers several degree programs related to the B.S. in Renewable Energy, including bachelors and masters degrees in technology, biological sciences, chemistry, economics, political science, and environmental health. It also offers baccalaureate programs in agriculture and physics. These programs will support the proposed program directly or indirectly.

### 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.*

No specialized accreditation is available for degree programs in renewable energy.

**The Illinois Commitment.** The B.S. in Renewable Energy will address two goals of *The Illinois Commitment*:

*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 university will establish an academic program of the highest quality through the leadership of qualified faculty and the involvement of an advisory committee represented by many professional and industry stakeholders. It will also implement a thorough student learning outcome assessment plan to complement the university's regular program review process.

*Goal 6: Improve productivity, cost-effectiveness, and accountability.* The program will address this goal by using existing resources, including faculty, staff, and laboratories that will be augmented with additional equipment purchased with new grant funds from the U.S. Department of Energy.

### 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.*

## Projected Student Demand.

Illinois State University projects annual enrollments of approximately 50 students by the fifth year of operation, with approximately 10 degrees being awarded each year thereafter.

## Occupational Demand.

As a result of continuing increase in the price of fossil fuels and global political instability, the U.S. has begun to more seriously search for and promote renewable alternatives to fossil fuels. To underscore the mounting energy challenges, President Bush highlighted his national priority for renewable energy development in his State of the Union Address in 2006.

The renewable energy industry itself is growing rapidly. Shell International has estimated that if current trends continue, renewable energy will supply approximately 60 percent of the world's energy by 2060. Many more new workers will be needed to meet this projected growth of the renewable energy industry. For example, there are currently about 114 operating ethanol plants in the U.S. with about 78 more under construction or expansion and an additional 100 plants at various stages of development. U.S. ethanol production has more than doubled in the past four years and now exceeds five billion gallons per year. In Illinois, investments in new ethanol plants are estimated to produce about 800 plant jobs and 4,000 ethanol industry related jobs. According to a University of Illinois at Chicago study, new renewable energy standards for electric utilities will create 7,000 new jobs in wind energy and other renewable energy sectors through 2012. In addition to the occupational demand for the new jobs, the energy sector faces an aging workforce and widespread retirements. According to one study, 70 percent of energy workers are between the ages of 41 and 65, with a large percentage in the 55 to 65 age group.

Graduates of the proposed B.S. in Renewable Energy will be well-positioned to compete for the new and existing jobs.

**Comparable Programs in Illinois.** If approved by the IBHE, the proposed Bachelor of Science in Renewable Energy will be unique in Illinois and will be one of only a few baccalaureate programs nationwide that focus on renewable energy.

## **Mission and Objectives.**

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

The goals and objectives of the proposed program are consistent with Illinois State University's overall mission and its focus to pursue statewide goals and priorities related to an emphasis on developing undergraduate education and subsequent graduate programs that build upon undergraduate strengths. The priority of the proposed program will include extending the university's commitment to supporting student growth and development by delivering innovative programs and services to students.

## Program Objectives.

The B.S. in Renewable Energy is a multi-disciplinary and broad-based program addressing the social, economic, environmental, and technical issues graduates will encounter in this emerging field. Graduates will be prepared for jobs in fields related to renewable alternatives

to fossil fuels, such as bio, wind, and solar energy, or working with regulatory and governmental agencies. Specific objectives of the program include preparing students to competently:

- Describe the physical laws and resources that constrain the nation's energy systems;
- Define the operation of renewable energy systems in terms of basic electrical and physical principles;
- Write and debug programs for control networks;
- Analyze wind data using professional software;
- Explain and defend their position on energy, political, and social issues;
- Apply basic business, economic, and technical management principles in a variety of technical and non-technical contexts;
- Optimize business decision-making using maximization techniques; and
- Develop a business case for a commercial renewable energy project.

### **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**

The B.S. in Renewable Energy program will admit high school graduates and transfer students with appropriate academic backgrounds. The applicant must also meet all university admission requirements, including successfully completing the required university examinations in English, mathematics, and reading. Foreign student applicants must have obtained an acceptable minimum score on the Test of English as a Second Language.

### **Curriculum**

The curriculum for the program consists of a minimum of 120 semester credit hours, including general education coursework, renewable energy core courses, and courses in one of two sequences. Sixty-six credit hours support the academic major, of which 51 hours are required core courses in renewable energy and 15 hours are requirements in one of two sequences. The major core draws from courses in seven academic departments across the university:

- Agriculture: Renewable Energy and Agriculture
- Economics: Principles of Economics  
Economics Reasoning Using Statistics  
Economics of Energy and Public Policy  
Managerial Economics

- Technology: Fundamentals of Power Technology  
Introduction to Renewable Energy Systems  
Managing Technological Systems  
Project Management  
Process Control Networks
- Physics: Fundamentals of Physics  
Energy and Society
- Geography: Earth's Dynamic Weather
- Health Science: Safety Technology
- Psychology: Social Psychology

Each candidate must complete either a 15-hour Technical Sequence or a 15-hour Economics/Public Policy Sequence. The five courses required for the Technical Sequence are Electrical Circuits and Machines, Automated Fluid Power Systems, Materials Technology, Process Control Networks, and Safety Technology or System Safety. The five courses that support the Economics/Public Policy Sequence consist of Agriculture and Environment, Introduction to Environmental and Natural Resources Economics, Economics of Regulation and Antitrust, Global Environmental Issues, and Politics and Public Policy. Each candidate will also complete a semester-long project to demonstrate mastery of the curriculum.

In addition to review and endorsement by department, college, and university curriculum committees, the program curriculum has been reviewed and approved by the program's external advisory committee. Committee membership represents many interest groups and businesses, including the Illinois Department of Commerce and Economic Opportunity, the U.S. Department of Energy, the Environmental Law and Policy Center, Corn Belt Energy, the Illinois Renewable Energy Association, The Nature Conservancy, Pergey Wind Power Company, and Exelon Corporation.

#### Assessment of Student Learning Outcomes

Program faculty members have worked with the University Assessment Office to develop a student learning outcome assessment plan for the B.S. in Renewable Energy. The plan is consistent with the university's requirements for the assessment of student learning outcomes and the University's Assessment Advisory Committee regularly examines each degree program's plans to ensure these meet stated requirements. It includes the following:

- Assessment of student performance in each of the program's required courses, such as the student's written and verbal communication skills, critical thinking abilities, and learning styles;
- Assessment of the student internship through the student's journal, student and employer evaluations, and faculty visits to assess student progress and performance in the chosen area;
- Assessment of capstone course outcomes to evaluate each student's project and presentations, which bring together knowledge and skills from core courses taken in the program;
- Monitoring the number of students who have participated in faculty sponsored research and the number of graduates employed in each aspect of the renewable energy field; and
- Regular examination of each student's grades in program core and periodic examinations of time-to-degree in the program.

## Program Assessment.

Consistent with IBHE policy, if the proposed program is approved, Illinois State University will submit a report summarizing progress made by the program three years after it is established. The program will participate in the university's established eight-year program review cycle. The program review process involves representatives of the department, the college and the university's Academic Planning Committee. The reviewers examine many aspects of the program, including faculty achievements, quality of students admitted, graduation rates, employer feedback, and alumni achievements. A summary of the program review highlighting important review outcomes for the B.S. in Renewable Energy will be submitted to the Illinois Board of Higher Education with summaries of other programs reviewed in the same cycle. The program faculty will be evaluated regularly using the university's established policies and the outcomes of these evaluations will be used for decisions about promotion, tenure, and salary increases.

## 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.*

Four faculty will be responsible for the B.S. in Renewable Energy, including three existing faculty (a full professor from the Department of Agriculture, an associate professor from the Department of Economics, and an assistant professor from the Department of Technology) and one new faculty. A request for a new tenure-track faculty position with expertise in renewable energy has been approved by the Dean of the College of Applied Science and Technology. Appointment of the fourth faculty member will be made by the Department of Technology, which has administrative responsibility for the proposed program.

## Fiscal and Personnel Resources.

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

No new state resources are requested to support the B.S. in Renewable Energy. Some of the \$990,000 grant funds from the U.S. Department of Energy have already been expended in developing the proposed program, and the remaining \$369,459 will be expended during the program's first four years to construct a solar array and a small wind turbine, to develop required laboratory space, and to purchase software to support the program. Illinois State University is

committed to reallocating \$63,000 in the third year and \$64,890 in the fourth year to support the program.

**Facilities (space, equipment, instructional materials).**

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

**Library**

Illinois State University has a strong base of library materials needed to support the B.S. in Renewable Energy. Milner Library has pledged additional funding to improve its collection on renewable energy. A library staff member will be appointed to work with the new program.

Milner Library subscribes to key databases related to the proposed major in renewable energy, including AGRICOLA, Applied Science and Technology Abstracts, EconLit, and Environmental Science Pollution and Management. The library also subscribes to important periodical titles such as *Energy Conservation and Management*, *Environmental Sciences and Technology*, and *The Journal of Energy Development*. Books related to energy policy, renewable energy, water, air, and soil pollution, and other significant titles will be purchased through the use of grant funds from the Department of Energy. In addition, Milner Library has agreed to provide up to \$5,000 for one-time purchases of materials for the proposed program.

**Laboratory Equipment and Facilities.**

All laboratory based courses for the B.S. in Renewable Energy will be offered by the Department of Technology, which has well-equipped laboratories to support electrical and power technology courses. Students who select the technical track in the program will also be served by the automated laboratory newly completed through a major donation from the Caterpillar Foundation. The lab has the latest in fluid power, safety, motor drive, and sensor technology, as well as control and data networks. Students will gain valuable hands-on experiences in these technologies used in wind turbines, manufacturing, power generation, and ethanol plants.

Additional equipment will be purchased from the Department of Energy to strengthen the proposed program. The new equipment will be used to install solar arrays and a small wind turbine, and teach concepts in solar and wind energy. The Department of Technology plans to install utility size wind turbines at the Illinois State University Farm.

**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 Bachelor of Science in Renewable Energy, 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. Comparable information is published in hard copy in the university's Undergraduate Catalog. Similar information is available from the College of Applied Science and Technology upon request.

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

### **Southern Illinois University Carbondale**

- Master of Science in Medical Dosimetry (off-campus)

**Background.** Southern Illinois University Carbondale (SIUC) requests authority to offer the Master of Science (M.S.) in Medical Dosimetry in the Chicago and Central regions. The medical dosimetrist is a member of the radiation oncology team and has the education and expertise necessary to generate radiation dose distributions and dose calculation in collaboration with a medical physicist and a radiation oncologist.

The primary goal of the medical dosimetry program is to provide a high quality program integrating education, including clinical experiences, research, and service to meet the needs of the profession and to improve healthcare in Illinois. Graduates of the program will practice at the entry professional level in medical dosimetry. Only two other accredited medical dosimetry programs are offered by universities: the University of North Carolina Hospitals in Chapel Hill and the University of Texas at Houston. Six universities, two medical clinics, and an institute have submitted applications for accreditation for newly established programs. SIUC M.S. in Medical Dosimetry program, offered at Barnes Jewish Hospital in St. Louis, Missouri, is the third program to undergo a Joint Review Committee on Education in Radiologic Technology site visit for accreditation. The program was accredited in April of 2007.

The university has significant investment in the health sciences and professions, and currently offers 16 health-related degree programs, including baccalaureate and graduate programs in communication disorders, physician assistant, radiologic sciences, rehabilitation sciences, and counseling. The university also operates a School of Medicine.

### **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.*

The Master of Science in Medical Dosimetry program is currently offered in St. Louis, MO, and was accredited in April 2007 by the Joint Review Committee on Education in Radiologic Technology (JRCER) for the maximum initial three year period ending in 2009. Subsequent accreditation is awarded in 8-year increments. Certification for professional practice in the field is awarded by the Medical Dosimetry Certification Board. If the proposed program is approved by the IBHE, the university will apply for the same accreditation for the new program offerings in Springfield and Chicago. It is expected that graduates of the proposed program will obtain certification for professional practice in the occupation because the Certification Board has implemented a new requirement beginning in 2008 that applicants must graduate from an accredited program and take the certification examination within six months after graduation.

*The Illinois Commitment.* The Master of Science in Medical Dosimetry will address three goals of *The Illinois Commitment*:

*Goal 1: Help Illinois business and industry sustain strong economic growth.* The program will increase the number of medical dosimetrists in Illinois, the Midwest, and the nation.

*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 university and the program will strive to establish and maintain high quality for the program by making sure the program meets national standards based on accreditation by the Joint Review Committee on Education in Radiologic Technology and that its graduates are well prepared to meet the requirements of the Medical Dosimetry Certification Board.

*Goal 6: Improve productivity, cost-effectiveness, and accountability.* The proposed program will be cost-effective because it is a cost recovery program funded entirely by tuition and fees. As documented in the 2006 American Association of Medical Dosimetrists, the average salary for medical dosimetrists in the past has been \$70,000 per year for entry level positions. Graduates of the program who take loans to pay for the program should not face much difficulty repaying their loans owing to high demand in the field and their high salaries.

## **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.*

### **Projected Student Demand.**

The university projects enrollment of approximately five to seven students annually by the fifth year of operation. Initially few students will be admitted to the program and more students are expected later because the program will be offered on a cost recovery basis.

The 2002 *Workforce Analysis of Radiation Oncology Workers* documented a national need for an additional 702 dosimetrists, which is over 24 percent of the 2,877 employed in the industry. The increasing demand for dosimetrists is fueled by rapid technological advances in the last few years.

The Illinois Department of Employment Security does not currently collect employment data for medical dosimetrists. However, its projections indicate that employment in the field of

nuclear medicine technology will grow in Illinois from 1,280 to 1,720, an increase of 34.4 percent, between 2004 and 2014.

**Comparable Programs in Illinois.** There is currently no master's program in medical dosimetry offered in Illinois. Only three accredited programs are offered by colleges and universities in the nation, including SIUC's program offered in St. Louis, Missouri.

### **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.*

#### Program Objectives.

The Master of Science in Medical Dosimetry is designed to meet several objectives, including providing (a) the highest quality of academic program and clinical teaching to produce competent medical dosimetrists, (b) didactic and clinical experiences that lead to research in educational, professional, or healthcare issues related to medical dosimetry, (c) clinical and didactic experiences that lead to the development of clinical skills and competencies appropriate for an entry level medical dosimetrist, (d) avenues for students to develop and apply skills in effective communication, analytical and critical thinking, and problem-solving necessary for medical dosimetrists, and (e) an intellectually challenging, yet supportive environment for students, faculty, and staff by insisting on quality in all program goals and objectives.

The stated objectives of the program support the mission of the university.

### **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 Medical Dosimetry an applicant must meet the following requirements:

1. Obtain a baccalaureate degree in radiation therapy from an accredited institution. Consideration will be given to those with bachelor's degrees in physical or biological sciences and those without radiation therapy experiences.
2. Have a minimum cumulative GPA of 2.7/4.0.

3. Submit the Graduate Records Examination (GRE) scores. A high test score will enhance the possibility of admission to the program.
4. Meet all requirements of the Graduate School for admission to master's degree programs.

International students are required to submit acceptable scores on the Test of English as a Foreign Language.

## Curriculum

The curriculum for the off-campus Master of Science in Medical Dosimetry consists of 30 semester hours. The principal teaching centers will be in Springfield, where the university has a School of Medicine, and Chicago, with additional clinical education centers in medical facilities in each surrounding area. The curriculum consists of both didactic and clinical courses.

The curriculum for the program consists of the following courses:

- Simulation and Cross Sectional Anatomy in Medical Dosimetry;
- Medical Dosimetry Clinical I, II, and III;
- The Physics of Medical Dosimetry I, II, and III;
- Seminar in Medical Dosimetry I, II, and III; and
- Independent Study.

The course materials cover subjects in radiation physics, radiation protection, dose calculation, tumor localization, external beam treatment planning, brachytherapy, quality assurance, medical imaging/anatomy, clinical radiation oncology, and radiobiology. Clinical practicum includes external beam treatment planning, brachytherapy treatment, preparation and planning, chart reviews and dose calculations, record and verification system data entry, simulation, treatment aid fabrication, and treatment machine quality assurance. Additionally, special assignments, conference attendance and presentations, journal article reviews, labs, and journal manuscript submissions are part of the curriculum.

The curriculum meets the education guidelines recommended by the American Association of Medical Dosimetrists and the eligibility criteria for the national certification examination following graduation and six months of full-time employment, as required by the Certification Board.

## 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.*

Five faculty members, the Director of the program, who is an associate professor at SIUC, and four lecturers affiliated with the Washington University School of Medicine's Center for Advanced Medicine Siteman Cancer Center, will be responsible for both the program that is currently offered in St. Louis, and the proposed programs in central Illinois and Chicago. The university has contracts with the Department of Radiation Oncology to provide medical dosimetry instruction in radiation physics. In addition, there are currently ten clinical faculty and instructors who are affiliated with Barnes-Jewish Hospital in St. Louis, four cancer centers and clinics and a hospital in Missouri, and two from medical centers in the Chicago suburbs. Most of these are faculty members currently responsible for the accredited program in St. Louis. Furthermore, the program is conducting discussions with the university's two radiation oncology departments to offer instruction for courses related to radiation for the Springfield program. More agreements will be made in the future with other hospitals and clinics in the state to serve student needs.

### **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 Medical Dosimetry program as the program will be offered on a cost recovery basis. This plan will increase cost-effectiveness for the university and the state as no new state funds will be used to support the program. The same program currently offered by the university in St. Louis also operates using student tuition fees.

### **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.*

#### **Clinical Facilities/Resources.**

The university has agreements with nine clinical sites to support the existing program in St. Louis and the proposed program in Central Illinois and Chicago. Of the nine agreements, five are located in Missouri, three in Illinois, and one in Oklahoma. The university has a plan to sign agreements with additional sites in Illinois when the new program is approved.

#### **Library and Online Services.**

The university's library and online resources currently supporting the M.S. in Medical Dosimetry program offered in St. Louis are sufficient to support the proposed program. Students

have access to library resources via the Internet and also at Morris Library, the university's main library.

Morris Library subscribes to three print radiology journals: *Magnetic Resonance Imaging Clinics of North America*, *Radiation Therapist*, the journal of the radiation oncology services, and *Radiologic Technology*. Nearly 70 electronic journals in fields related to medical dosimetry are accessible to students, faculty, and staff.

Morris Library has a free document delivery service for faculty, students, and staff using a two-day courier service to all addresses in the U.S. The services include making photocopies, establishing electronic reserves or obtaining items through the interlibrary loan without additional cost. Faculty may use the library services for instructional support, including web course development, web programming, and WebCT support.

### **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 Master of Science in Medical Dosimetry, 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. Comparable information is published in hard copy in the university's Graduate School Catalog. Similar information is available from the College or the Graduate School upon request.

**Staff Conclusion.** The staff concludes that the Master of Science in Medical Dosimetry program proposed 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 and accreditation or licensure.

### **Western Illinois University**

- Master of Liberal Arts and Sciences

**Background and History.** Western Illinois University requests authority to establish a new Master of Liberal Arts and Sciences with an emphasis on serving the Quad Cities area. Unlike a traditional master's program with a disciplinary focus, the proposed program has a strong multidisciplinary focus encompassing the humanities, physical sciences, biological sciences, and the social and behavioral sciences. It is designed to empower its graduates with the mastery of intellectual and practical skills that are necessary for lifelong learning for a diverse group of students who will contribute to a global society. The curriculum emphasizes reflection, critical thinking, and comparative analysis with a highly flexible content to serve different student interests and needs. The program will build upon a recently established baccalaureate program with an emphasis on liberal arts and sciences and other baccalaureate arts and sciences programs.

Although the degree is planned to serve the students in the Quad Cities, it will be open to any qualified student who may be a resident on the main campus or any area in the Western Region.

Western Illinois University offers over 25 baccalaureate and more than ten master's programs that represent most aspects of the disciplines that comprise the liberal arts and sciences, including the humanities, physical sciences, biological sciences, and the social and behavioral sciences. The program will draw heavily from the curriculum and faculty of the existing master's programs and post-baccalaureate certificates.

### **Accreditation**

There is no specialized or professional accreditation for the proposed multidisciplinary Master of Liberal Arts and Sciences.

***The Illinois Commitment.*** The Master of Liberal Arts and Sciences will address five goals of *The Illinois Commitment*.

*Goal 1: Economic Growth.* The proposed program is designed in response to survey results documenting a strong need for graduates of the program in the Quad Cities area. Students in the program will be educated in a broad range of fields in the liberal arts and sciences to meet the growing needs of business and industry in the Quad Cities area and other parts of the university's service region.

*Goal 3: Affordability.* Western Illinois University has consistently provided high-quality, affordable education to its students through its cost guarantee program, which will be available for students admitted to this program. In addition, the university was the first university in the state to guarantee undergraduate and graduate tuition, fees, and room and board rates for four years.

*Goal 4: Access and Diversity.* The master's in liberal arts and sciences will improve and increase graduate educational opportunities for an under-served population in the western part of Illinois, particularly, the Quad Cities metropolitan area.

*Goal 5: High Quality.* The quality and rigor of this program will be maintained with the resources and curricula of degree programs currently offered by liberal arts and sciences departments in the university. Other means for maintaining the program's quality include the application of a well-established assessment of student learning outcomes conducted by the Office of the Dean, and the university's regular eight-year program review cycle.

*Goal 6: Productivity and Accountability.* The Master of Liberal Arts and Sciences curriculum will selectively combine courses that support existing post-baccalaureate certificate programs and master's degree programs into a multidisciplinary program. Using existing courses and new courses to complete the degree requirements significantly reduces the usual costs of establishing a new degree program. Some students who will be admitted to the program will have already earned credits by completing post-baccalaureate certificates in related areas.

### **Need**

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

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

#### Enrollment and Degree Projections

Western Illinois University has estimated that approximately 16 students will enroll in the program annually by the fifth year of operation. It is expected that about seven students will graduate from the program annually beginning in the fifth year. If many prospective students from other parts of the university's service region are admitted in the program, enrollments and degrees awarded may increase significantly.

#### Occupational Demand

A survey of the Quad Cities' need for college graduates conducted in 2003 by MGT of Tallahassee, Florida, documented significant and growing need for graduates with a generalist and flexible master's degree. Twenty employers representing businesses and non-profit organizations in the area participated in the survey. Because the survey did not seek to estimate the potential number of graduate students who will be specifically interested in the Master of Liberal Arts and Sciences, the scope of occupational demand for the proposed program was not determined. However, the current trend in increasing need for master's degrees from Western Illinois University is substantiated by a 14 percent increase in the number of students enrolled in the university's master degree programs between the 2001 and 2006 fall terms. Upon receiving approval to offer the degree program, the university will implement an intensive marketing plan to showcase the program and increase enrollments.

**Comparable Programs in Illinois.** There are currently seven master's degrees in liberal studies and four somewhat similar programs offered in Illinois. Of the ten colleges and universities offering these programs, only one is a public university – the University of Illinois at Springfield. The curriculum of the proposed program closely resembles the curriculum of the programs offered by North Central College in Naperville and DePaul University in Chicago. There is no similar master's program in liberal arts and sciences in the western part of Illinois.

#### **Mission and Objectives.**

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

The goals and objectives of the Master's in Liberal Arts and Sciences are consistent with Western Illinois University's overall mission and its focus on pursuing statewide goals and priorities. The university's focused mission supports a comprehensive general education curriculum and emphasizes baccalaureate degrees in selected education and professional areas while maintaining strong arts and sciences programs, supports selected graduate programs with high demand at the master's level, sustains a campus environment in which instructional, research, and service activities meet the needs of a diverse student body and workforce, serves the educational and cultural needs of the west-central Illinois, and provides off-campus instruction through the Rock Island Regional Undergraduate Center and the Quad-Cities Graduate Study Center.

The priority of this program is to serve businesses and industry in the Quad Cities metro area, which supports the mission of the university.

## **Curriculum and Assessment.**

*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.*

*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*

### **Program Objectives.**

The Master of Liberal Arts and Sciences is designed to provide advanced general study in the arts and sciences consistent with traditional modes of inquiry in the liberal arts and sciences disciplines. It is a multidisciplinary program that builds on the knowledge acquired at the undergraduate level to guide students through advanced, cross-disciplinary subject matter and analysis. Students will study the contents and modes of inquiry in the natural sciences, mathematics, social sciences, and humanities through the discipline specific foci of the liberal arts and sciences. The curriculum emphasizes critical thought, analysis, and comparison.

### **Curriculum.**

The curriculum consists of 33 semester hours, many drawn from courses offered for master's degrees and post-baccalaureate certificates in the university's College of Arts and Sciences. A student that does not hold a post-baccalaureate certificate can construct an individualized program in consultation with the director of the program. Each student's program of study must be reviewed and approved by the director of the program and the faculty committee responsible for the program.

The curriculum is expected to provide students with the ability to (a) analyze sophisticated theoretical and philosophical writings across the liberal arts and sciences, (b) compare contents across many disciplines, (c) see problems, issues, and human conditions using macro-level analysis, (d) evaluate, critique, and strategize solutions to complex problems, and (e) work in occupations that require broad knowledge and comparison.

### **Core Courses**

Each Master of Liberal Arts and Sciences candidate must complete a 12-hour core. The core courses focus on:

- Tradition and Change with an emphasis on the history and philosophy of sciences;
- Tradition and Change with an emphasis on the social sciences;
- Tradition and Change with an emphasis on the humanities; and

- Integration of the multidiscipline histories and philosophies covered using independent study.

*Emphasis or Option Selected.*

Candidates must complete one of the following three options each of which consists of two 600-level graduate courses:

The Thesis Option consists of two courses: Directed Readings and Thesis for six semester hours. Each student must complete a thesis and formally present it to a thesis committee. The thesis must be approved by the thesis committee and meet all requirements of the Graduates School.

The Internship Option consists of two 600-level courses: Directed Readings and Internship for six semester hours. Students selecting this option must successfully complete a supervised internship. The internship is supervised by the faculty advisor and an executive or supervisor in the business or agency where the student interns. The final internship summary report must be approved by the faculty advisor and the internship committee, which includes the Director of the program.

The Applied Project Option consists of two courses at the 600-level. A student who selects this option must complete two projects, which will typically include a report or a paper and be supervised by the project director. The report or paper will include the project objectives, the methodology employed, and the results of the project. The final decision to accept or reject the report or paper will be based on a consensus of the project committee, which includes the Director of the program.

*Post-Baccalaureate Certificate Courses or Electives.*

Each student in the program may apply toward the Master of Liberal Arts and Sciences requirements up to 15 semester hours of courses completed for an approved post-baccalaureate certificate. The certificate may be: Zoo and Aquarium Studies, Women's Studies, Public and Non-Public Management, Applied Mathematics, and African and African Diaspora World Studies. A student who has not earned an approved post-baccalaureate certificate must complete 15 semester hours from elective courses approved by the Director of the program.

*Admission Requirements.*

All students who have completed undergraduate degrees from Western Illinois University or from an accredited college or university may be admitted to the master's program in liberal arts and sciences.

*Assessment of Student Learning.*

At Western Illinois University, each degree program has a plan for assessment of student learning outcomes. The plan is reviewed annually by the department, college, and the Assistant Provost. Annual assessment reports are also prepared and reviewed for each degree program. The assessment plan for the proposed program will ensure that:

- students understand the modes of inquiry used in the natural sciences, mathematics, social sciences, and the humanities;

- students are capable of comparing and contrasting disciplinary contents across the liberal arts and sciences;
- students will demonstrate effectively their abilities to evaluate, critique, and strategize solutions to complex problems;
- students' completed theses, internships, and applied projects are evaluated to determine any pattern of weaknesses that should be corrected for the benefit of future students; and
- data routinely provided to all academic departments with student grade analysis for graduate level classes, and also student retention and graduation rates, will be reviewed by the program faculty to determine any problem that should be addressed.

Faculty who teach the required core courses will construct a survey instrument to measure student satisfaction in addition to regular student evaluations of courses. The instrument will be administered to students at the end of their internships, the thesis, and applied projects. The results of the survey will be used to identify any necessary improvements.

In addition, surveys of alumni and employers will be conducted at the end of the third year to document the program's strengths and weaknesses. A summary of the report will be submitted to the Illinois Board of Higher Education. Further, the program will participate in the university's established program review process, which operates on an eight year cycle.

### **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.*

### **Library Resources and Technology Support**

Existing library and other resources at the university are sufficient to support the Master of Liberal Arts and Sciences. No increases are anticipated at this time. Distance education resources and equipment currently used by the college and the university are sufficient to support the program. The university is well-equipped with instructional technology and the requisite faculty expertise. The university is a state leader in the application of instructional technology.

### **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.*

Initially, one of the existing staff members in the College of Arts and Sciences Dean's Office will serve as director of the program. Once the program begins to grow and enroll more students, one new faculty will become the director of the program. Since responsibility for the program will be shared across the College of Arts and Sciences, there will be little pressure on individual academic departments to teach the required courses and promote the program.

It has been determined that one faculty member each from the natural sciences, another from the social sciences, and a third from the humanities will be responsible for teaching three of the four required core courses for the program. Five or more other courses in the program will be taught on a case-by-case basis by faculty in the college. Two of the faculty members who will be responsible for implementing the program have been based in the Quad Cities since August 2006. Depending on the extent of future enrollment growth, additional new faculty may be added to support the program.

Student support services, support staff, equipment, and other resources are sufficient to support the proposed program.

#### **Fiscal/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 Master of Liberal Arts and Studies. It is expected that available resources to support the program will grow from \$120,969 in the first year to \$199,737 in the fifth year of operation. Internal resource reallocations of \$21,287 and \$57,481 in the second and third year respectively are included in the total resources indicated above.

#### **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 Western Illinois University's Master of Liberal Arts and Sciences, including a detailed description of the curriculum, admission and graduation requirements, tuition, fees, and other cost information, as well as, university and graduate school policies, is published on the university's website. Comparable information will be periodically published in

hard copy in the university's Graduate Catalog. Copies of similar information will be available from the College of Arts and Sciences and the Graduate School upon request.

**Staff Conclusion.** The staff concludes that the Master of Liberal Arts and Sciences program proposed by Western Illinois University meets the criteria to implement the Board of Higher Education Act (110 ILCS 205/et.seq.) as set forth in the 23 Illinois Administrative Code, Ch. II, Section 1050.30, and the Illinois Board of Higher Education policies pertaining to assessment and accreditation or licensure.

The staff recommends adoption of the following resolutions:

*The Illinois Board of Higher Education hereby grants to the University of Illinois at Chicago Authorization to Grant the Master of Science in Architecture in Health Design in Region 10, the Chicago Region, 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 Chicago, Authorization to Grant the Doctor of Pharmacy in Region 2, the Fox Valley Region, 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 Fine Arts in New Media in Region 7, the Prairie Region, 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 Illinois State University Authorization to Grant the Bachelor of Science in Renewable Energy in Region 5, the Central Region, 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 Grant the Master of Science in Medical Dosimetry in Region 9, the Southern Region, 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 Western Illinois University Authorization to Grant the Master of Liberal Arts and Sciences in Region 4, the Western Region, 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.*

