

FY 2010 Awards

Author(s)	Barry, Kelly, Department of Biological Sciences Brugam, Richard, Department of Biological Sciences and Abusharbain, Elaine, Department of Biological Sciences
Title	Biology I and Biology II Curriculum Development
Award	\$9,894
Abstract	<p>Animal Systems (Biol 120) and Plant Systems (Biol 121) are the first courses that Biological Sciences majors take at SIUE. These courses are being replaced with Biology I (Biol 150) and Biology II (Biol 151) in order to offer a course sequence that comprehensively introduces students to the major concepts in biology. This change will follow the recommendations of the Illinois Articulation Initiative will include an increased emphasis on ecology, evolution, and molecular biology. Biol 150 is scheduled for introduction Fall 2010 and Biol 151 will be offered in Spring 2011..</p> <p>We are requesting funds for the development of this new course series. Course syllabi are in place and tentative labs have been identified. This funding will allow us to identify modify existing labs for the new courses, identify and revise lab exercises for new labs, and assemble a lab manual.</p> <p>We anticipate that the revised curriculum will increase student academic performance in these revised courses as well as subsequent core courses (Genetics, Cell and Molecular Biology). This course series change will also aid the transition of transfer students to SIUE.</p>

Author(s)	Butler, Lakesha, Department of Pharmacy Practice Devraj, Radhika, Department of Pharmaceutical Sciences and Santanello, Cathy, Department of Pharmaceutical Sciences
Title	Instructional video design for health literacy course in the pharmacy curriculum
Award	\$2,420
Abstract	<p>This proposal is requesting EUE funds to assist with development and design of an educational video case series to aid in health literacy instruction of pharmacy students. Currently the School of Pharmacy has a 3-hour required course entitled "Health Literacy and Promotion" that addresses the health literacy problem by encompassing the scope of the problem, discussing ways to identify low literacy patients, providing tips on counseling patients with low literacy, and discussing how to tailor written materials for low literacy patients. Active learning strategies are used in addition to viewing a video developed by the American Medical Association (AMA) Foundation for medical students and physicians. This video does not adequately address health literacy from the pharmacists' perspective, nor does it provide crucial patient-pharmacist vignettes that clearly explain how to identify and tailor counseling to low literacy patients. Consequently, it fails to meet the needs of pharmacy faculty for effectively conveying to student pharmacists the pharmacists' role in improving health literacy. Therefore a critical need exist for the development of a video tailored to the situations pharmacists and student pharmacists face. This will greatly augment the health literacy training for pharmacy students and enhance the learning experience. The proposed project is to create an instructional 15-20 minute video that includes approximately five case studies that</p>

	illustrate the problem of health literacy and how pharmacists can effectively address this problem in the pharmacy setting. Real pharmacists will be featured interacting with the actors posing as patients challenged by limited health literacy in an actual pharmacy. This health literacy video is expected to help teach pharmacy students how to establish a patient-friendly environment that will maximize patient understanding, improve patient compliance and reduce health care costs.
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Author(s)	Chen, Jen-Shiun, Department of Electrical and Computer Engineering
Title	Computer Simulation Experiments for Signals and Systems
Award	\$3,000
Abstract	Signals and Systems (ECE 351) is a required and fundamental undergraduate course for students in the electrical and computer engineering (ECE) programs. The proposed project will develop computer simulation experiments for selected, important topics in the course. The experiments will serve three purposes: 1. They will help the students to better understand the concepts and theories, including the underlying mathematical equations and the interaction and effects of the variables and parameters. 2. They will illustrate how practical signals and systems can be designed and implemented. 3. They will introduce the students to the concepts and techniques of computer simulation in Signals and Systems. New teaching materials on computer simulation in Signals and Systems will be developed. Computer Simulation as a topic will be added to the course. Course materials for ECE 351 will be revised to incorporate the computer simulation experiments' results

Author(s)	Cho, Sohyung, Industrial and Manufacturing Engineering Program and Lee, H. Felix, Industrial and Manufacturing Engineering Program
Title	Curriculum Renovation using Product Life Cycle Engineering
Award	\$10,896
Abstract	<p>While the employment of advanced technologies enhanced flexibility of manufacturing enterprises to produce highly customized products with short lead-time, design and operation requirement have become more complex.</p> <p>This has resulted in increased emphasis on product life cycle engineering where various engineering activities such as design, manufacturing and service work together. Product life cycle engineering (PLCE) is considered as one of the most significant tools for manufacturing enterprises to survive in today's fierce competition. Therefore, there is an urgent need for SIUE to bring its educational focus on the PLCE. The PDs of this EUE proposal plan to establish a unique and state-of-the-art educational platform using internal and external grants in the near future, with which student can practice the PLCE. As an initial step to establish the educational platform, we first propose to renovate the IME curriculum by including the main topic of the PLCE. If successful, this EUE project will offer the following benefit to engineering students:</p> <ul style="list-style-type: none"> Enhanced understanding of PLCE from design and manufacturing to retail process. Top-class hands-on experience that deals with advanced technologies such as RFID and Web Server.

	<ul style="list-style-type: none"> Improved exposition to manufacturing design and automation using the state-of-the-art hardware and software resources, which will be a significant advantage for students to be highly competitive engineers. Managerial insight on effective operations of manufacturing facility, which is coordinated by application of PLCE.
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Author(s)	DeSpain Jessica, Department of English Language & Literature
Title	Rare Books and Manuscripts in Undergraduate Education
Award	\$4,141
Abstract	Rare and archival materials have become a hallmark of effective undergraduate research programs across the country. These primary sources give students a hands-on experience with history and broaden their understanding beyond the canonical authors presented uniformly in their class anthologies. Although SIUE has stellar primary sources available for undergraduate use in the Lovejoy Library, as yet, the English Department has not incorporated them into its curriculum. This project proposes 1) an evaluation of the resources available in Lovejoy Library and the surrounding area that will be valuable to all of the University's humanities departments as they prepare to add rare materials into their syllabi , 2) the creation of a senior assignment course in the English Department that teaches students how to use rare books and manuscripts in their research, as well as how these rare materials correlate with new digital technologies, 3) the design of a website and library exhibit that raises awareness of SIUE's Special Collections and their innovative use in the classroom.

Author(s)	Fries ,Ryan, Department of Civil Engineering and Zhou, Huaguo, Department of Civil Engineering
Title	Civil Engineering Traffic Signal Education
Award	\$9,324
Abstract	Traffic signals are a key device to transportation engineers. As students learn about these tools, a tragic signals lab is proposed to offer hands-on experience. The focus of this proposal is to seek funding to support student participation in installing a traffic signal lab and evaluating the impact on undergraduate learning. During the project, undergraduate students in civil and electrical engineering will create simple circuit boards that mimic the logic of existing traffic signals. In the civil engineering curriculum, six undergraduate courses are offered in the transportation engineering field, four of which can directly benefit from this project. Using the traffic signal lab during these four courses is expected to impact approximately 90 undergraduate students per academic year. It is anticipated that these students will gain a better understanding of the operation of traffic signals when taking a hands-on approach using the proposed traffic signals lab.

Author(s)	Glassman, Jack, Department of Physics and Foster, Thomas M., Department of Physics
Title	Development of a curriculum and manual for a new Physics course
Award	\$7,7933
Abstract	To develop a curriculum and write the manual for a new laboratory-based Physics course.

Author(s)	Gordon, Chris, Department of Construction
Title	Creation of Sustainable Construction course
Award	\$7,000
Abstract	Currently, there is great demand for knowledge of design and construction practices that reduce the social and environmental impact of the built environment. This demand is being reflected in rising standards of what constitutes a "green building" and more formal expectations of knowledge of these practices. The emergence of an updated LEED 2009 requirement for green building professionals, as explained below, requires green building experience or documented educational preparation to attain accreditation as a green building professional. This educational preparation is not formally available in the Dept. of Construction's curriculum. Hence, the PI is proposing initiation of a new course in Sustainable Construction to prepare students to enter this emerging field.

Author(s)	Hanson, Laura, Department of Theater & Dance
Title	The Theatre Experience
Award	\$1,500
Abstract	This project would supply professional theatre experiences to the members of the five New Freshman Seminar sections of THEA 111: "The Dramatic Experience," scheduled for fall 2009. This course introduces students to the nature of live theatre, enabling them to become more astute and appreciative audience members, to increase aesthetic awareness of theatre as an art form, and appreciate the role of the arts in human history. Since theatre is a live performing art form, it is essential that those studying it experience theatre firsthand; this is truly student involved learning. Professional theatre is of an entirely different caliber than those these students may have seen on the high school or even college level. Members of the class will discuss and write critiques of productions viewed, using material they have learned in class to evaluate. Since many students come from smaller communities without access to the arts, especially live professional theatre, this program offers an opportunity to enrich their college experience and introduce them to the cultural resources of the St. Louis area. These funds would finance theatre tickets for a production at the Fox Theatre and a campus visit by a theatre company of disabled artists to nearly 100 students in these sections of New Freshman Seminar: THEA 111.

Author(s)	Hershberger, Edmund, Department of Management & Marketing
Title	2010 AMA International Collegiate Conference Case Competition and Exhibit
Award	\$6,420
Abstract	Spring 2010 semester will be the fifth year for the SIUE Marketing Association's participation in a marketing case competition sponsored by the American Marketing Association, an internationally recognized organization of marketing practitioners, educators and students. The case competition tasks each participating university with the challenge of a solving the sponsoring firm's marketing problem. Past clients have included high profile clients such as Krispy Kreme, Michelin, Kwik Trip, the City of New Orleans, and most recently Kodak Gallery. At the International Collegiate Conference, the top eight case submissions present their

	marketing solution to the client as well as a panel of judges to be assessed and winners selected. At the 2008 Conference, the student Case Competition team was selected as a top eight finalist, giving the students a boost of confidence, and motivating them to work even harder in preparation for the 2009 Conference. While 2009 finalists have not yet been announced, I feel confident that the 2009 team put in a fantastic effort during the Fall semester to generate a case submission that the faculty can be proud of. In addition to the case competition, we will also be participating for the third year in the AMA Exhibit Session, a trade show featuring AMA collegiate chapters from around the world. Our representation at this exhibit session will provide immeasurable exposure for the school and the university.
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Author(s)	Hildebrandt, Kristine A., Department of English Language and Literature
Title	Expanding Interdisciplinary Connections in the Teaching of Linguistics at SIUE: Two New Courses
Award	\$5,050
Abstract	This project focuses on the creation of two new Linguistics courses to be offered through the Department of English Language and Literature at Southern Illinois University Edwardsville (SIUE) during the 2010-2011 academic year: Language and Ethnicity (to be cross-listed with the Black Studies program) and Language Endangerment and Death (to be structured with collaboration from faculty in multiple departments in the College of Arts and Sciences). The goals of these new courses are two-fold: First, they will promote interdisciplinary pedagogy in the form of Linguistics courses that will actively reach into domains of socio- cultural, political, economic and geographical thought, allowing for collaboration between faculty in different departments, and appealing to a wide range of students from diverse undergraduate backgrounds. Second, these courses will include an innovative, interactive and publicly attractive form of student assessment in the form of webpage and poster projects, that will promote the courses to the wider university and local community, and build up the rest of the Linguistics program, particularly the undergraduate component, at SIUE.

Author(s)	Hildebrandt, Mark L., Department of Geography
Title	To Establish a Climatology Minor at SIUE
Award	\$6,118
Abstract	<p>The Department of Geography currently has approximately 130 undergraduate majors, many of whom have expressed an interest in Minor in Climatology. At present, no such minor exists even though many courses are already in place towards such a minor.</p> <p>This project aims to establish an actual Minor in Climatology, including the altering of a pair of courses already on the books and the development of a new course: Climate Change that will expose our students to the issue of past as well as contemporary climate change. This minor will provide our students with the tools to address future issues of climate change.</p>

Author(s)	Jarosz, Krzysztof, Department of Mathematics & Statistics
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Title	Math 120 & Math 125 Students manuals
Award	\$2,520
Abstract	The two biggest classes offered by the department are Math 120 (College Algebra) and Math 1 25 (Precalculus). Last year we offered total of 56 sections of these classes taken by nearly 2,000 students. Tenured or tenured track faculty members taught only two sections; instructors, lecturers, and Teaching Assistants taught the remaining 54 sections. In this setting it is crucial to establish clear and uniform standards for all of the sections. I plan to prepare Students Manuals for both classes. The manuals, approximately 70-80 pages each, will include a sample quiz/test with solutions for each section in the textbook, typical homework assignments, as well as extra problems, class rules, a sample of a final exam, and other information. The Manuals will be sold to students in our Bookstore or available on-line. I ask for one course release time from teaching to work on this project.

Author(s)	Jarrell, Calvin, Department of Theater & Dance
Title	Guest Artists fromm Cuba
Award	\$3,463
Abstract	In this proposal I am requesting \$30,278.00 to bring Maestro Juan Miguel Mas, and the Danza Voluminsa Dance Company from Havana, Cuba, to SIUE to teach, choreograph, and perform in the fall semester of 2009. Juan Miguel will be teaching dance classes, choreographing on students, visiting Spanish classes in the Foreign Language Department to talk about Cuba, and hopefully, doing interviews for SIUE's "Global Village" as well as in St. Louis for local television stations. He will also be available to visit other classes requested. This project will provide SIUE dance students (as well as the SIUE indent body at large) with one of the most unique dance experiences that they may ever encounter. It will give them unique information about the history of Cuba (cultural, political, and geographical), the dance history of Cuba, its role in Carnaval, and Cuba's current dance movement. Plus, it will challenge the biases that individuals may have toward the human body and the traditional view of dance aesthetics. This proposal meets, and succeeds, the EUE component of globalization of the curricula.

Author(s)	Kaplan, David H., Department of Physics and Foster, Thomas M. Department of Physics
Title	Continuation of Development of Waves Physics Curriculum and Learning Materials
Award	\$8,473
Abstract	Waves and wave motion are pervasive throughout the Universe and throughout an extremely wide range of physical phenomena and technological applications, including for example, all modern communications technologies. Thus, success in upper division physics and engineering courses now depends on a solid foundation in wave physics. For this reason, it is now widely recognized that a special course dedicated to the unified study of wave phenomena early in the undergraduate physics sequence offers major pedagogical advantages as well as significant advantages for addressing a recent, but entrenched national

	<p>issue in retaining physics students.</p> <p>Recognizing the need for more extensive training in this important area, the University has approved, and the SIUE Physics department plans to offer regularly, beginning in Spring 2010, a new expanded 4 crh course on the physics of waves. This new course will be required of all SIUE physics majors. As there is no text suitable for such a course currently on the market, with EUE support, the author has developed detailed modular text and learning materials for it. This proposal is for funding to allow the author to continue this work during Summer 2009. With an anticipated sabbatical leave during the Fall of 2009, this will allow remaining needed detailed source text and learning modules to be ready for the first offering of the new SIUE Waves Physics course.</p>
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Author(s)	Karacal, S. Cem, Industrial & Manufacturing Engineering Program
Title	SIUE Engineering Summer Course inn Istanbul Technicall University
Award	\$13,000
Abstract	<p>In 2007, SIUE Industrial and Manufacturing Engineering program started a dual-diploma program in Industrial Engineering with Istanbul Technical University (ITU). At present time, the flow of students is one way from ITU to SIUE. The engineering students at SIUE do not take advantage of this strong alliance with ITU by visiting their campus to gain valuable international experience. The dual-diploma program is a successful reflection of the technological globalization idea. By exposing students to technical education in two separate institutions and expanding their perspective not only in academics, but also in life style, language, and culture, we are hoping to produce graduates who have global perspective on technical issues and familiar with systems and peoples other than their own. To provide a similar opportunity to SIUE students, I would like to take about 10 of our engineering students to ITU for a summer course. The Managing Engineering and Technology course, IME 430, is a popular technical elective enrolled by all engineering disciplines and offered only in summer semesters. Together with a colleague at ITU, I am planning to offer the course at ITU in summer of 2009. Since our student population won't be able to afford the travel and living expenses by themselves, EUE support is sought for this endeavor. The project is expected to have a lasting impact on participating student's world view and professional perspective.</p>

Author(s)	Liebl, Faith L. W., Department of Biological Sciences
Title	The Impact of the Laboratory Experience on Student Outcomes in Neurobiology
Award	\$3,840
Abstract	<p>Neurobiology (BIOL 444) is a course that examines how the nervous system functions. The course is divided into a lecture (BIOL 444a, 3 credits) and an optional lab (BIOL 444b, 1 credit) portion. I have developed the laboratory with the following objectives: 1) to allow students to conduct a hypothesis- driven experiment to perforce how science is discovered, 2) to develop the student's ability to analyze and integrate new information, and 3) to enhance his/her critical thinking and writing skills.</p>

	Therefore, I would like to implement a novel experiment to give students the opportunity to discover the relationship between olfactory memory in the fruit fly, <i>Drosophila melanogaster</i> , and the proteins that partly mediate memory in mammals, glutamate receptors. It is hoped that by taking the laboratory portion of the course, student outcomes will improve. That is, students will better understand the lecture and lab material and further develop writing and critical thinking skills. This will be assessed by comparing student course grades (between students who take lecture only versus students who take both lecture and lab), comparing student pre- and post- tests, and evaluating summative student evaluations.
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Author(s)	Mann, J. Debbie, Department of Foreign Languages and Literature
Title	Angers Travel-Study Summer 2009
Award	\$4,040
Abstract	This EUE grant requests support to reduce costs for seven students and one faculty member participating in an international travel-study program in Angers, France. The Angers Travel-Study will involve a five-week program—the equivalent of two weeks of on-campus preparatory course work at SIUE and three weeks of cultural and linguistic immersion in France during summer 2009. Participating students will take three hours of SIUE course work in culture/civilization taught by the Foreign Languages faculty member directing the program. Additionally, they will participate in the delivery of a language workshop at the English-language library in Angers which will afford them intensive oral practice and cultural interaction (for three more hours of SIUE credit under SIUE faculty supervision). The program will end with three days of study in Paris under the guidance of the program director at cultural sites relevant to the context of the course taken in Angers. The program will thus afford a rigorous academic experience in both language and culture as well as a substantial international experience.

Author(s)	Nwacha, Barbara JK, Department of Art & Design
Title	AIGA Biennial Design Conference
Award	\$2,000
Abstract	AIGA (American Institute Graphic Arts-the professional design association) will hold its biennial conference October Thursday 8—Sunday 11, 2009, at the Memphis Cook Convention Center in Memphis, TN. Most often this biennial conference is held on the coasts and transportation, as well as registration fees makes attending cost prohibitive for students. This year the conference is within driving distance from SIUE. This is a unique, once in an academic lifetime opportunity for the AIGA student group from SIUE to attend and participate in this national, professional, graphic design conference. "This year's conference, Make/Think, will explore the ways that designers focus both on making beautiful things and thinking about problems strategically, and how those two roles interact." The conference offers students the opportunity to participate in round table discussions with nationally recognized designers; take part in portfolio reviews with professional designers, go on studio tours; attend break-out sessions on current design related topics, and go to main stage presentations by some the some of the top designers in the U.S. and abroad. Attending this conference will give SIUE graphic design students the opportunity to

	broaden their academic experiences and connect their educational work with the professional design world. It will enrich them as they prepare to enter the profession of graphic design. Students document their experiences through personal poster project and do presentation after the conference.
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Author(s)	Panico, James, Department of Special Education and Communication Disorders
Title	FRIENDS and Family Day Workshop: Families, Professionals, and Friends Working Together
Award	\$2,100
Abstract	<p>Undergraduate students majoring in the field of speech-language pathology spend a significant amount of time in the classroom learning basic concepts and fundamental information regarding various speech and language disorders. Specifically, three of the relevant courses they are enrolled in are SPPA 442 (Voice and Fluency Disorders), SPPA 446 (Clinical Methods and Observation), and SPPA 452 (Assessment Procedures). However, it is not until the second semester of their senior year that they get an opportunity to work hands-on with clients in a clinical setting. Instead, much of the clinical information I provide to these students is through personal experiences, video clips, and occasional guest speakers.</p> <p>FRIENDS, the National Association of Young People who Stutter, is a non-profit organization created to provide a network of support for children and teenagers who stutter, their families and the professionals who work with them. This organization holds an annual one-day workshop rotating through various universities around the country, most recently being held on the campuses of University of Iowa and Fontbonne University in St. Louis. FRIENDS is currently looking for a campus location to hold its 2010 annual one-day workshop.</p> <p>Therefore, having this workshop on the campus of SIUE would provide our undergraduate students with a unique and innovative experience of learning from and working with children who stutter and their families. Ultimately, this proposal would affect approximately 70 undergraduate students who are enrolled within our program.</p>

Author(s)	Rigdon, Steven E., Department of Mathematics and Statistics and Kniepkamp, Barbara, Department of Mathematics and Statistics
Title	Testing Center for Mathematics and Statistics
Award	\$12,895
Abstract	<p>Most books in mathematics and statistics now come with on-line testing/quizzing/homework software. For the books we use in MATH 120, 125, and all three semesters of calculus (MATH 150, 152, 250), the software is called MathXL. To use this technology to the fullest extent, we need a math testing center where students can come and sign in and take tests or quizzes in a proctored environment. This will allow us to continue the use of readiness skills tests for MATH 120 and 125 that was begun in Fall 2006, and to use the quizzing software in MATH 120, 125, 150, 1 12a and 1 12b. These are some of the largest courses taught in the Department of Mathematics and Statistics, and some of the largest courses</p>

	<p>taught at SIUE. In Fall 2008, MATH 120, 125, and 150 had a combined enrollment of over 1500.</p> <p>This is the second year of the three year project.</p>
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Author(s)	Rocha, Carolina, Department of Foreign Languages and Literature
Title	Buenos Aires Study Abroad
Award	\$12,000
Abstract	<p>This summer travel study project requests funds to support 10 students and 1 faculty in Buenos Aires, Argentina. It offers two study courses in the department of Foreign Languages & Literature. These courses will provide students with a unique opportunity to immerse themselves in a different culture and improve their linguistic competency in Spanish. The value of this experience will result in the development of intercultural awareness as well as improve their mastery of Spanish.</p>

Author(s)	Schapman, Marc, Department of Music
Title	Sony – 5.0MP Handycam High-Definition Camcorder
Award	\$1,300
Abstract	<p>The purpose of this proposal is to purchase a Sony High-Definition Camcorder to be used in all SIUE voice program's applied lesson, voice performance class, voice studio class, and SIUE Opera Theater's opera production. The camcorder will allow students to receive visual feedback on their vocal technique and interpretation outside of the classroom environment. The aural and visual feedback gained from this camcorder will aid instructors in creating singers capable of competing in the world of vocal performance, and this equipment will greatly enhance the state of these courses. In addition, the camcorder will also be used to create recordings of quality to promote the voice areas efforts and support recruitment.</p>

Author(s)	Richardson, Shane, Department of Civil Engineering
Title	Formation of Engineers Without Borders student chapter: Travel to Honduras 2010
Award	\$3,555
Abstract	<p>This proposal is requesting EUE funds to assist with the cost of travel/accommodations for engineering students to participate in an Engineers Without Borders project in Pimienta, Honduras. This trip is scheduled for the third week of May, 2010. Engineers Without Borders (EWB) - is a non-profit humanitarian organization established to partner with developing communities worldwide in order to improve their quality of life. This partnership involves the implementation of sustainable engineering projects, while involving and training internationally responsible engineers and engineering students. In May 2009 Engineers Without Borders SIUE will travel to Pimienta on an initial trip. Ten students are scheduled to travel along with ten Professional engineers from the St Louis chapter of EWB. Presently EWB-SIUE is in its infancy, but anticipates a greater number of students getting involved next year. The project offers a great experience for engineering and construction management students. Due to the nature and remote location of this project students must exercise sound engineering judgment that reinforces skills and knowledge</p>

	gained in prerequisite engineering courses.
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Author(s)	Schmidt, Geoff, Department of English Language and Literature
Title	The Writer-in-Residence Program
Award	\$7,000
Abstract	The "writer-in-residence" project will bring one prominent writer to campus during the academic year 2009-2010. This residence will last for two weeks. While we would love to have a visiting writer stay for a longer period - a month, or a semester - we feel that our best chance of attracting an important writer to campus is to establish a shorter stay that can more easily fit into that writer's schedule. During that time, the writer will be responsible for meeting with all interested undergraduate creative writing students in intensive, one-on-one tutorial sessions. The writer will lead at least one workshop at the undergraduate level, and will conduct one seminar on matters of craft, open to the public. The writer will give two public readings, one to be held at the university, and one to be held at a local library, thereby strengthening our ties with the community and serving as an effective recruiting tool. The public reading will also generate local interest in co-sponsoring a continuing reading series in years to come.

Author(s)	Shaul, Kerry, Department of Theater & Dance
Title	American College Dance Festival - 2010
Award	\$4,000
Abstract	The American College Dance Festival (ACDF) is "the" yearly event in the United States for interacting with dance educators and dance students from other universities. It gives students and faculty alike the opportunity to take classes with each other, gain information on what is being taught at other universities, and learn about new areas in dance research (such as dance science). In addition, we will be attending a significant number of daily dance concerts. These concerts usually include a professional dance company, a faculty dance concert, adjudicated concerts of works from universities around the country, and a gala of dances selected by the adjudicators. SIUE students and faculty often submit an original piece of choreography, performed by SIUE students, for adjudication by recognized professional choreographers and dance educators. ACDF substantially contributes to excellence in undergraduate education by providing students with an intensive four day immersion in dance. This is very important because our students do not get enough experimental exposure to what is happening with dance nationally. Attending the American College Dance Festival is a tremendous educational and motivational experience for our dance students.

Author(s)	Sol, Diane, Department of Theater & Dance
Title	Native American Performer Gerard Rancourt Tsonakwa
Award	\$2,984
Abstract	This project would bring in Native American performer, artist, and historian Gerard Rancourt Tsonakwa to SIUE in November of 2009 to provide performances, workshops and lectures for majors and minors (113, fall 2008) in the Department of Theater and Dance , as well as the general education students who take THEA 111, The Dramatic Experience (365

	students, fall 2008). The role of cultural performance in theatre studies has gained momentum in recent years. While recorded images and audio tapings are helpful in understanding and appreciating performance and global culture, theatre is best experienced in a live setting. Additionally, Tsonakwa would be able to instruct and guide the students in the various aspects of storytelling, masks, impersonation, and Native American sign language in performance. Tsonakwa has agreed to provide choreography for a piece using his art work for projections for Dance in Concert during the fall semester. Students would be able to experience physically and emotionally the impact their participation has on the audience in this venue. The students in general theatre education would be able to apply critical thinking skills during the lectures and performances, as well as increase their knowledge of theatre and cultural performances.
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Author(s)	Theodorakis, Christopher, Department of Biological Sciences/ Environmental Sciences Program
Title	Enriching the senior colloquium with contact and seminars from scientists outside SIUE
Award	\$8,928
Abstract	Students trained in biological sciences often go on to serve in professions with high importance to society (e.g., doctors, dentists, pharmacists). Thus providing a quality laboratory learning experience is of high merit. As part of the teaching of science, all senior undergraduate students are required to enroll in either BIOL 492 or BIOL 497. Typically, students in the Genetic Engineering and Ecology, Environment and Evolution degree tracks enroll in BIOL 492, which require a capstone oral research presentation. This promotes engagement because students have the opportunity to design and/or interpret experimental findings. Biology 492- Colloquium in Biological Sciences - is a two-semester course. In both semesters, seminar speakers from outside (preferably) SIUE or from SIUE faculty give oral presentations on their research for the first 8-12 weeks of the course. However, because there is currently limited funding available to pay for the travel of seminar speakers, the number of institutions from which speakers can be invited is limited to local universities and other research institutions. Such an opportunity would serve biology major seniors. There a typically 20-25 students enrolled in BIOL 492 per semester. The specific aim is to invite colloquium speakers from outside the St. Louis regional area. This is significant, because this will provide more opportunities for exposure of SIUE students to research of outstanding scientists. It will also enhance SIUE's national recognition by exposing scientists outside of the St. Louis area to SIUE. Potential outside speakers will be identified by the instructors of Biology 492. The instructors of BIOL 492 will arrange accommodations (1-2 nights, depending on the preference of the speaker) and travel for the speaker. We will also pay for up to five students to have lunch or dinner with the speaker, to promote interactions with students and enhance the student's learning experience.

Author(s)	Thomas, Reginald, Department of Music
Title	New Music Premiere
Award	\$5,000
Abstract	The jazz program at SIUE has become well respected in the educational

	<p>area. SIUE jazz faculty members teach and perform throughout the country and are associated with quality organizations such as Jazz at Lincoln Center in New York. Graduates of the jazz performance degree program have gone on to further studies at such prestigious programs as the Eastman School of Music and are performing throughout the world in locales such as New York and Berlin. The focus of our jazz performance degree, however, has focused primarily on performance but not necessarily composition. This proposal seeks to enhance our program by exposing students to the entire process of creating new music. With the funding from this proposal, two respected jazz composers/performers/educators and a choreographer will come to campus to work with Professor Thomas on his new three movement jazz suite/ballet and on original compositions of their own, give clinics and master classes to SIUE students in composition and performance, and perform a concert premiering new music.</p>
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Author(s)	Traub, Cindy, Department of Mathematics and Statistics Weyhaupt, Adam, Department of Mathematics and Statistics
Title	Implementing Webwork: an online homework and assessment tool
Award	\$16,653
Abstract	<p>The learning of mathematics requires that students become both proficient in the mechanics of using a new idea as well as fluent in the conceptual framework for when and why that idea is necessary. For large section math courses, the regular collection and assessment of hand-written homework problems requires too much time to be feasibly completed by the course instructor. The lack of a mechanism to provide students with ample, timely feedback on mechanics forces many of those teaching mathematics to assess mechanics during class time. This reduces the amount of class time available to measure student understanding of deeper conceptual ideas.</p> <p>We seek to implement the Webwork online homework system to provide instant feedback and assessment of student work in large section mathematics courses. The pilot implementation will occur in Math 112A (Mathematics for Elementary Teaching: Number Sense and Algebra) and Math 150 (Calculus 1). Webwork will provide our students an opportunity to practice the mechanical calculation-based tasks, and receive immediate feedback on their performance. This will, in turn, allow faculty members to assess deeper concepts via in-class assessments.</p> <p>The impact of implementing a Webwork system at SIUE is potentially widespread. Over 850 students per academic year take Calculus I, while approximately 180 students take Math for Elementary Teaching. In Math 112A, we estimate that 2-4 class periods per semester can be recovered for instructional time by changing the method of assessing computational skills.</p>

Author(s)	Voss, Eric J., Department of Chemistry and Wiediger, Susan D., Department of Chemistry
Title	Laboratory Manual of Experiments for CHEM 135: Engineering Chemistry Lab
Award	\$13,000
Abstract	The Engineering Chemistry Laboratory (CHEM 135) is a first-year course that focuses on the principles of chemistry for students planning careers in

	<p>engineering fields. Due to the specialized nature of the course, there is no commercially available Laboratory Manual of Experiments (and it is unlikely there ever will be). Instructional materials for thirteen of the eighteen experiments currently performed have been developed over the past few years by the Project Directors (some with EUE support) and have been distributed to students piece-by-piece throughout each semester. This proposal requests support to write instructional materials for five new experiments, to revise all experiments into a common format, and to compile them into a bound Laboratory Manual of Experiments for CHEM 135. Proposed new experiments are 1) graphing data using computers, 2) molecular shapes, 3) thermochemistry, 4) intermolecular forces, and 5) equilibrium. Having one laboratory resource for all experiments will certainly improve the quality of the education of students taking the Engineering Chemistry Laboratory course. This project also includes the development of electronic "pre-lab" materials that will lead to better student preparation and increased safety. This project will enhance the experience of more than 200 students during 2009-10, as well as many more students in future years.</p>
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Author(s)	Wei, Chin-Chuan, Department of Chemistry and Dixon, Robert P., Department of Chemistry
Title	Computational Biochemistry for Undergraduate Chemistry and Biochemistry Courses
Award	\$6,366
Abstract	<p>Biochemistry has advanced rapidly over the past few decades. To equip our students with up to date skills and knowledge, we propose the integration of computational biochemistry in our current undergraduate biochemistry curriculum. Computational biochemistry is an emerging field that is an indispensable tool for budding biochemist. Individual modules will be carefully selected and embedded into lectures and laboratory sessions. Students will benefit from these modules, which are design primarily to aid the learning process. We plan to develop a comprehensive set of computational modules that is multifaceted and can be applied to biochemical, medicinal and pharmaceutical chemistry. We will take advantage of free online resource and Linux-based computation to allow deployments of these modules and provide easy access for our students.</p> <p>This developing effort will benefit students taking biochemistry lecture courses (CHEM 451, 459), biochemistry laboratory (CHEM 455), and general courses like introductory chemistry for Nursing students (CHEM 120n&b and 124n&b).</p>

Author(s)	Wolff, Laura, Department of Economics and Finance
Title	Demonstrating Competence and Enhancing Knowledge and Skills for International Trade
Award	\$4,625
Abstract	<p>In Spring 2010, the Economics and Finance department will offer a seminar focused on developing the specific knowledge and skills necessary for students to sit for a credential in international business, called the Certified Global Business Professional (CGBP). The knowledge and skills area assessed in this credential were developed by a nationwide process funded</p>

	<p>partially by the Department of Education. Area businesses are facing increasingly complex supply chains, distribution networks, and complications in financing trade at the same time that concerns about security and global terrorism are raising the costs and consequences of complying with new regulations facing both exports and imports. This proposal will allow the students in the course to get real world experience by attending a top U.S. trade show, meeting with and shadowing executives, international buyers, sales directors and manufacturers. It will allow us to use state of the art training materials developed by the global leader in trade training, curriculum that is mapped to both the U.S. and the world standards. It will allow us to administer the CGBP practice exam as an assessment device. Students majoring in international business and students with foreign language, political science or engineering programs interested in working in international business or for government agencies are expected to benefit from this course.</p>
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Author(s)	Zhang, Judy, Department of Chemistry/Environmental Sciences Program
Title	Development of a New Course in Environmental Chemistry
Award	\$13,8322
Abstract	<p>Environmental Chemistry is an interdisciplinary subject that has found many important applications in environmental sciences and engineering and other aspects of human life. Despite its relevance to chemistry, environmental sciences, and civil engineering, currently there is no course offered at SIUE to teach fundamental principles in this subject area. The purpose of this EUE project is to develop an undergraduate course teaching environmental chemistry; eight modules will be developed along with representative experiments. Upon successful completion of this course, students from Chemistry, Environmental Sciences, and Civil Engineering will learn fundamental principles that govern chemical processes in natural and engineered systems and will be able to employ quantitative approaches to solving environmental problems including water quality modeling, environmental risk assessment, contaminant remediation, and water and wastewater treatment. Given many job and research opportunities in the area of environmental studies, this course will make our students more competitive in their future careers in either getting an industrial job or continuing their higher education.</p>

Author(s)	Zhou, Huaguo, Department of Civil Engineering Fries, Ryan, Department of Civil Engineering
Title	Development of Traffic Simulation and Animation Modules for Transportation Engineering Undergraduate Courses
Award	\$8,600
Abstract	<p>The practice of transportation engineering and planning has evolved substantially over the past several decades. A new paradigm for transportation engineering education is required to better deliver knowledge and latest practice in the area of traffic and transportation engineering. Conveying complex transportation concepts can be effectively achieved by exploring them through computer simulation and visualization techniques. Visualization techniques are particularly valuable in transportation education because most transportation policies and strategies in the real world take years to implement with a prohibitively</p>

	<p>high cost. Despite the advantages, visualization techniques, however, have not been widely adopted in the education of transportation engineering. The Department of Civil Engineering owns the licenses of three traffic simulation software: Highway Capacity Software (HCS), SYNCHRO, and TSIS. They are going to be used to develop a suite of simulation and animation modules. These modules will be incorporated in the undergraduate transportation courses: CE 376</p> <p>Introduction of Transportation Engineering, CE 474 Computer Simulation in Traffic Engineering, CE 475 Transportation Planning, etc. With the hands-on nature of visualization techniques, we expect to improve students' understanding of critical concepts and theories in transportation engineering.</p>
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