

Fund for the Improvement of Postsecondary Education (FIPSE)

EU-U.S. Cooperation Program in Higher Education
and Vocational Education and Training
Project Abstracts - FY 2004 Awards

P116J040044

Buckeye Community Hope Foundation (OH)

Title: “Building Bridges in ConCert (Construction Certifications)”

Partners: American Youthworks, TX; Comprehensive Community Solutions, Inc., IL; Zukunftsbau GmbH., DE; Young Builders Trust, UK; Lempäälän Kunta, FI.

Subject Areas: Vocational Education

Youthbuild (U.S.) and Youthbuilding (EU) are programs for socially excluded youth that combine secondary education, life skills, and construction training. The construction certifications that graduates earn are generally recognized only within their own countries, limiting opportunities for foreign employment. In this three-year consortium implementation project, operators of three U.S. Youthbuild programs will exchange graduates and staff with operators of three EU youth building programs. Students will study in the areas of construction management, carpentry-joinery, bricklaying, painting, and decorating. One of the main objectives of the ConCert Program is to improve the quality of transatlantic mobility in the construction field by promoting transparency, mutual recognition of periods of training, and portability of vocational credits. The ConCert Program therefore includes, as strategic partners, construction skills credentialing bodies on both sides of the Atlantic that will use the student exchanges as a laboratory to undertake assessments of foreign construction certifications in the chosen skill areas to establish systems of reference. Articulation agreements recognizing extra-national vocational credentials are anticipated.

FY 2004 Award: \$51,047

Total Funding Estimate: 3 years, \$215,307

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P116J040009

California State University, Chico (CA)

Title: “U.S.E-eNET: U.S.-Europe e-Learning NETwork in Science and Engineering”

Partners: University of Nebraska-Lincoln, NE; University of Alabama, Huntsville, AL; University of Hamburg, DE; University of Glasgow, UK; Budapest University of Technology and Economics, HU; University of Aarhus, DK

Subject Areas: Engineering, Computer Science/ Information Technology

Student exchanges and curriculum development constitute the core of collaborative programs since they alone can provide the breadth and depth of intercultural and international technical experience. This two-year complementary activities project aims to build on an earlier collaboration involving curriculum development and student exchanges in order to broaden the basis of student participation, in effect establishing a pyramid of participation with physical exchange at the apex. A Web-based system will be developed that supports international collaborative projects based on computer simulations. The intention is to allow students to work in international teams on simulation-based projects. These projects could, for example, involve the development of a model of a system under study, or experimentation on established simulations in order to gain understanding of the system on which it is based. This approach has the potential to enhance many programs in a wide range of disciplines. Key goals and activities of the project are to develop a prototype e-learning and simulation environment that meets the needs of a wide range of disciplines and prototype course modules that include the operation of transatlantic student team projects.

The partner campuses have expertise in the design of simulation systems, Web-based instruction, and the application of simulation techniques to several disciplines. In particular, the project will focus on the use of simulation in medical and transportation systems, both of which are well represented by team members from both the United States and the European Union. Project goals and activities and their outcomes will be presented at Project Directors’ meetings and published through conferences and professional journals.

FY 2004 Award: \$44,943

Total Funding Estimate: 2 years, \$85,376

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P116J040052
Daemen College (NY)

Title: “Biotechnology in Healthcare (BIHC)”

Partners: Pitzer College , CA; New College of Florida, FL; Athlone Institute of Technology, IR; Fachhochschule Trier, DE; and Central Ostrobothnia Polytechnic, FI.

Subject Areas: Health and Medicine

The consortia implementation program will develop a model for an exchange involving students taking coursework in traditional areas of science coupled with the study of related areas of biotechnology within the context of wound care management. Wound care management is a pressing international problem from both societal and economic viewpoints that present difficult and varied scientific problems. It utilizes knowledge of cells, biochemistry, molecular biology, materials chemistry, and bioengineering, along with methods of clinical practice. With this unifying health care issue, the project partners will promote the understanding of the diverse scientific and international approaches to health care in their students. Through the joint course, chosen scientific coursework, and participation in undergraduate biotechnological research projects, students in the program will apply basic science principles from the standard curriculum to an international healthcare issue while still progressing towards their degree. Students will take courses in the local history or language of the host country to add to their cultural perspective. Students will construct an electronic learning portfolio of their experience that will serve as both a learning tool for the integration of the cultural and scientific perspectives and an assessment tool. The joint course will then be offered electronically from the lead institutions each semester but will also utilize a biweekly chat room and laboratory exercises at the host institution.

FY 2004 Award: \$66,012
Total Funding Estimate: 3 years, \$214,596

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P116J040029
Florida Institute of Technology (FL)

Title: “Open International Curriculum: Remote Sensing Systems, Robotics and Risk Assessment for Humanitarian De-mining and UXO Detection (OIC-R³-D²)”

Partners: Cornell University, NY; University of Michigan, MI; Budapest University of Technology and Economics, HU; Royal Military Academy, BE; University of Leeds, UK

Subject Areas: Engineering

There is no international interdisciplinary curriculum that directly focuses on remote sensing systems, moving robotic (mechatronic) platforms, and system risks or uncertainties associated with the detection of unexploded ordnance (UXO) and humanitarian de-mining. This project will develop, through complementary meeting activities, accredited curricula that will include e-learning and distance learning curricula for use at transatlantic higher educational institutions and by vocational and public and private institutions.

The two-year project includes the development a curriculum with accredited credit exchange and the sustainability of the curriculum at the member institutions. This complementary activities project will help to develop the international and interdisciplinary talent that is necessary today, as well as in the future, to meet the needs of securing sustainable safe environments which will foster future international mobility. The proposed curriculum development will be developed in keeping with ABET standards. The curriculum will challenge students to integrate knowledge that cannot be obtained in any one institutional curriculum anywhere in the world.

FY 2004 Award: \$45,000

Total Funding Estimate: 2 years, \$85,000

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P116J040038

Howard University (DC)

Title: “Race, Ethnicity, and Migration Studies”

Partners: University of New Mexico, NM; University of Texas at El Paso, TX; Universiteit Utrecht, NL, Central European University, HU; Universidade Coimbra, PT; University of Edinburgh, UK.

Subject Areas: Social Sciences

Both the United States and the European Community are in the midst of a demographic transformation that is driven in part by the economic success, and in part, by the greater individual freedoms available in both regions. This is the phenomenon of migration, particularly from the South: in the case of the United States, primarily from the Spanish-speaking countries of Mexico and Central America, and the English-, Spanish- and French-speaking countries of the Caribbean; and in the case of the European Union, from countries in North Africa, the Caribbean, Southeast Asia, as well as, more recently, from the former Eastern European block. In many cases, this new wave of immigration is giving rise to political tensions in both the United States and in the European Community.

In our studies we will not only focus on cross-border migration but also on inter-ethnic relations. Native Americans, Hispanics and Black-White relations in the United States are relevant social issues to study. This makes both the University of Texas at El Paso and the University of New Mexico appropriate choices as U.S. partners. In Europe issues of multiculturalism and integration of ethnic minorities in mainstream societies, as well as ethnic prejudice, xenophobia and nationalism are also of major concern for research and policy. This project will provide opportunities for joint curriculum development, student exchanges, and research among the participant universities in a multidisciplinary approach. Students who participate in this exchange will have the opportunity, in addition to their regular field of study, to obtain a Graduate Certificate in Race, Ethnicity, and Migration Studies.

FY 2004 Award: \$45,520

Total Funding Estimate: 3 years, \$215,400

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P116J040039

Miami University (OH)

Title: “Intergero: Implementation of an International Interdisciplinary Program in Gerontology”

Partners: Oregon State University, OR; San Francisco State University, CA; Universidad de Salamanca, ES; Vrije Universiteit Amsterdam, NL; Ruprecht-Karls-Universität Heidelberg, DE

Subject Areas: Health and Medicine

As the world's population ages rapidly, an increasing number of gerontology specialists will be needed to meet this unprecedented demographic challenge. Health care systems and social service programs are among the social institutions most significantly affected by aging. Over the course of the three-year project, the consortium will develop a curriculum for the comparative study of health and social services for older people. The curriculum will include classroom modules, teaching resources, Web-based components, and guidelines for agency-based experiences. The curriculum will be valid for both U.S. and European academic credit systems. Several faculty members from all six institutions will be involved in various phases of the project, including the development of the curriculum, student mobility planning, classroom teaching, supervision of work-place experiences, and evaluation of the project. The Association for Gerontology in Higher Education will evaluate all aspects of the project and will work with the International Association of Gerontology to disseminate the curriculum, the student and faculty outcomes from the project, and a paper on the collaborative model used for the project.

FY 2004 Award: \$44,546

Total Funding Estimate: 3 years, \$215,400

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P116J040032

Pennsylvania State University (PA)

Title: "Managing Global Value Chains"

Partners: Arizona State University, AZ; University of Wisconsin, WI; Agrocampus. ENSA Rennes, FR; Christian-Albrechts-Universität Kiel, DE; Czech University of Agriculture, CZ

Subject Areas: Business and Economics

This consortia implementation project responds to a new paradigm that recognizes today's economy as global in scope and composed of myriad value chains. A value chain is more than a series of enterprises that takes inputs through production, processing, distribution, marketing, and on to the consumer. A value chain is a fabric of voluntary alliances and relationships that enables participants to manage and optimize both their individual interests and their joint

interests. An important implication of the information and technology revolutions that are reshaping today's economy is an expansion of the geographic scale and scope of business to deliver what the consumers want, across the diversity of global markets. In contrast to the old view of independent firms struggling to "go global" through foreign trade, today's business is no longer international but global. This setting demands that today's students be prepared to participate as citizens of this new global fabric, pursuing lifelong careers in the global economy.

This project develops sustainable models for new curriculum development and regular exchange of upper-level undergraduate and graduate students as elements of a student-industry learning strategy. As a laboratory for experiential learning, the project chooses the food system as a focal point that provides a rich setting to develop an understanding of the motivation for the global scope of value chains and networks, their function, and their imperatives for the new package of skills, perspectives, and experience that are prerequisites for lifelong careers in this new economic environment. The food system offers substantial career opportunities that are not currently accessible to students trained in a traditional "agribusiness" curriculum that focuses on enterprise management and marketing. Interrelated lesson modules will incorporate a variety of appropriate student-based learning activities to develop both skills and background. The palette for student learning will incorporate the curriculum, language and cultural development, and student exchanges between U.S. and EU partners.

FY 2004 Award: \$48,342

Total Funding Estimate: 3 years, \$215,000

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P116J040030

University of Arkansas (AR)

Title: "Renewable Resources and Clean Technology"

Partners: Iowa State University, IA; University of Washington, WA; Universiteit Gent, BE; Karl-Franzens Universität Graz, AU; Institut National Polytechnique de Toulouse, FR

Subject Areas: Environmental Sciences, Engineering

One of the major changes in the economic development at the beginning of the 21st century with respect to energy, production of goods, and materials has been the increasing awareness that resources will be limited due to the environmental impact of current technologies. Therefore, industrial production is becoming more focused on development of products with a “green” image that are dependent on renewable resources and clean technology development.

The consortia implementation project will develop a transatlantic graduate course entitled “Renewable Resources and Clean Technology” containing modules dealing with primary bio-production; unit operations in clean technology; renewable resources from carbohydrates, wood, lipids, and proteins; bio-fuels; bio-energy; high value-added products; and socioeconomic concerns. No comparable course is currently offered in the European Union or the United States. Student mobility will help provide the necessary international training in the rapidly changing area of renewable resources, “green” products, and clean technology.

FY 2004 Award: \$34,430

Total Funding Estimate: 3 years, \$215,265

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P116J040047

University of California at Davis (CA)

Title: “International Curriculum on Post-Harvest Technology of Horticultural Crops”

Partners: University of Florida, FL; Texas A&M University, TX; Università degli Studi di Foggia, IT; Universidad de Cordoba, ES; University of Thessaly, GR

Subject Areas: Agriculture

The aim of the three-year consortia implementation program is to develop an international curriculum focused on increasing professional skills of graduate students in the post-harvest technology of horticultural crops, including fresh-cut produce. The curriculum will cover aspects related to post-harvest biology, physiology, and pathology of horticultural crops, quality assessment, food safety assurance, equipment engineering, logistics and technology of perishable transportation, marketing aspects related to fruit and vegetables, and international legislation.

The U.S. and EU collaborators will work together to transform key courses into Web-based presentations that can be accessed by students interested in post-harvest biology and the technology of horticultural perishables. The emphasis of the certificate program will be on laboratory activities in an international context, with original research activities carried out by students at both their home and host institutions. Improvement of foreign language skills for participating students will also be an important objective both before and during the visits.

FY 2004 Award: \$52,280

Total Funding Estimate: 3 years, \$215,000

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P116J040005

University of Georgia (GA)

Title: “Precision Agriculture: Technology for More Sustainable Agriculture and Greater Food Safety”

Partners: Iowa State University, IA; Auburn University, AL; Panepistimio Thessalias, GR; Università degli Studi di Padova, IT; and Technischen Universität München, DE.

Subject Areas: Agriculture

The goal of this implementation project is to provide permanent integrated linkages between the six academic institutions in the United States and the European Union participating in the Transatlantic Precision Agriculture Consortium (TAPAC). Precision agriculture is our vehicle for achieving this goal and also the means by which we will attempt to enhance agriculture and food safety in the United States and the European Union.

This project addresses the critical need of providing the necessary training to rising agricultural professionals on both sides of the Atlantic through the development of three Web-based educational modules and student experiential learning on the engineering, agronomic, and food safety applications of precision agriculture. In addition to providing technical expertise, the proposed education and student exchange program will promote mutual understanding, recognition of common problems, and highlight the comparative strengths of the partner institutions. The key to the success of the program will be the students’ understanding that the global economy is infusing new realities and demands into the world’s food production system.

These realities and demands must be successfully incorporated into the cultural basis of any country in order to remain competitive in this vital sector. The program is open to upper division undergraduate students and graduate students. Students will progress through three semester-long phases of learning that will require approximately one year to complete. The three phases will consist of technical training, cultural training, and the application of skills learned. The first two phases will be completed at the home institution while the third phase will be completed at the host institution.

FY 2004 Award: \$45,511

Total Funding Estimate: 3 years, \$212,064

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P116J040055

University of Georgia (GA)

Title: “Comparing U.S. and EU Biotechnology, Food Safety and Regulatory Policies”

Partners: Florida A&M University, FL; University of Minnesota Twin Cities, MN; Universität für Bodenkultur, AT; Università degli Studi di Udine, IT; Universität Hohenheim, DE

Subject Areas: Environmental Sciences, Law

This implementation project exposes participants to the use of biotechnology in agricultural food production, consumption of foods containing biotechnologically enhanced products, and regulatory policies governing these products. U.S. consumers are generally accepting of genetically modified organisms, believing European concerns are overly cautious. European consumers appear willing to pay more for what they consider environmentally friendly food products. Neither trusts regulatory agencies to insure food safety. Biotechnology issues transect the global response to feeding the world’s burgeoning population. Although biotechnology may have the potential to increase food production while protecting the environment, differences of opinion over the safety of biotechnology hamper the search for solutions. Such conflicting perspectives have created a costly non-tariff trade dispute between the United States and the European Union.

This project promotes mutual understanding of biotechnology, genetically modified organisms, food safety, and international trade issues between EU and U.S. populations. Through student and faculty exchanges, curriculum development, internships, and cultural experiences,

participants will understand the regulatory and policy environments in the European Union and the United States with respect to biotechnology and food safety. This project will enhance partnerships between educational institutions, professional associations, agribusinesses, and other stakeholders, enhancing EU and U.S. transatlantic cooperation in higher education and vocational training in the agricultural, food and biotechnology sectors.

FY 2004 Award: \$47,679

Total Funding Estimate: 3 years, \$215,000

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P116J040018

University of Maine (ME)

Title: “Transatlantic Alliance for Creating a New Social Services Practice Model (TRANSPRAC)”

Partners: Barry University, FL; Providence College, RI; International Learning Exchange, ME; Plantijn Hogeschool, BE; Peter Sabroe Seminarier, DK; Universitat Ramon Llull, ES

Subject Areas: Social Sciences

The three-year TRANPRAC consortium will develop, implement, evaluate, and institutionalize a new and innovative curriculum aimed at synthesizing the strengths of the EU social education and the U.S. social work models into a new social services practice model. The project addresses critical training needs both in the United States and the European Union for a new social service practitioner who can deliver complex social services in direct care settings with children and youth. The TRANSPRAC curriculum will consist of EU-U.S. semester-long exchanges, teacher exchanges, fieldwork internships in social service agencies, and classroom and web-based coursework. Year one project activities will include developing the model curriculum and language and cultural programs, finalizing memoranda of understanding among the six educational institutions, selecting students, and developing field internship sites. Years two and three will involve implementation of the model curriculum, and student and faculty exchanges. Process and outcome evaluation activities will occur throughout the project. Dissemination activities will comprise presentations at national and international conferences and distribution of the model curriculum materials to U.S. social work and EU social education programs.

FY 2004 Award: \$41,184
Total Funding Estimate: 3 years, \$214,995

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P116J040049
University of Michigan (MI)

Title: “EC-U.S. Graduate Curriculum on Electronic Devices and Micro-Electro-Mechanical-Systems for Biological/Biomedical Applications”

Partners: University of Illinois at Urbana-Champaign, IL; Georgia Institute of Technology, GA; Technische Universität Darmstadt, DE; Université des Sciences et Technologies de Lille, FR; Imperial College London, London, UK.

Subject Areas: Engineering, Natural Sciences

A consortium of three European and three U.S. universities will implement a project on transatlantic educational experience that involves teaching and research exposure to the field of electronic devices and micro-electro-mechanical-systems for biological and biomedical applications. The students involved are primarily graduate students at the Master of Science level, but undergraduate seniors with interest in pursuing graduate studies can be included. The objective of the consortium is to create an educational program that allows understanding beyond the electronic and optoelectronic components addressed in traditional electrical engineering degrees. Topics of this type are traditionally addressed in the disciplines of biology and biomedicine and are not therefore directly accessible to engineering students. On the other hand, the tremendous advances in electronic engineering involving sensors and modern characterization techniques and in biology and biomedicine involving recent discoveries on the effects underlying human and animal functions necessitate stronger interaction between these two fields.

FY 2004 Award: \$53,520
Total Funding Estimate: 3 years, \$215,671

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