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Supplemental Report

Profiles of Selected University Centers and Institutes

Report No. 07-36 August 2007

Office of Program Policy Analysis & Government Accountability
an office of the Florida Legislature

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Project supervised by David D. Summers (850/487-9257)
Project conducted by Pat Dallet and Mark Frederick (850/487-9251)
Jane Fletcher, Education Policy Area Staff Director
Gary R. VanLandingham, Ph.D., OPPAGA Director

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Supplemental Report: Profiles of Selected University Centers and Institutes

at a glance

This report is a companion to OPPAGA's Report No. 07-35, *University Centers and Institutes Report Many Benefits; the Oversight Process Needs to Be Strengthened*. As directed by the Legislature, this report provides detailed information on 30 university centers and institutes by profiling each center and institute, including their purpose, activities, resources, and reported accomplishments.

Background

Florida's public universities support a wide range of centers and institutes from support organizations such as the University Press of Florida to medical treatment and research organizations such as the Diabetes Center at the University of South Florida. In contrast to research conducted by individual faculty and departments, which often focuses on issues within their particular discipline (such as chemistry, physics, or psychology), centers and institutes generally bring together faculty from multiple disciplines to address large-scale, complex issues. While most centers and institutes focus on research activities, some also perform teaching and public service activities.

For Fiscal Year 2005-06 (the most current year for which complete data is available), the Board of Governors reported that there were 554 centers and institutes at 10 of the state's 11 public universities. [1] Approximately 73% (403) of these centers and institutes reported expenditures in 2005-06; these expenditures totaled $447 million. This report provides detailed information on a sample of 30 centers and institutes at 6 of the state's 11 public universities. [2] Collectively, these 30 centers and institutes represent 39% of the reported state funds expended at all reported centers and institutes between Fiscal Years 2000-01 and 2004-05. [3]

The centers and institutes we examined work on a broad array of issues. As shown in Exhibit 1, one-third (10) of these centers and institutes primarily focused on social science or education-related issues including urban and regional planning, Latin American studies, women's studies, criminology, and charter schools. Examples of centers and institutes whose work involves social science related issues include Learning Systems Institute at the Florida State University, which specializes in the fields of human performance, expertise, leadership, reading research, learning, educational technology, and complex cognitive skills, and the Center for Urban and Environmental Solutions at the Florida Atlantic University, which conducts research and public service related to the environmental and growth challenges facing South Florida and the state through partnerships, education, and research.

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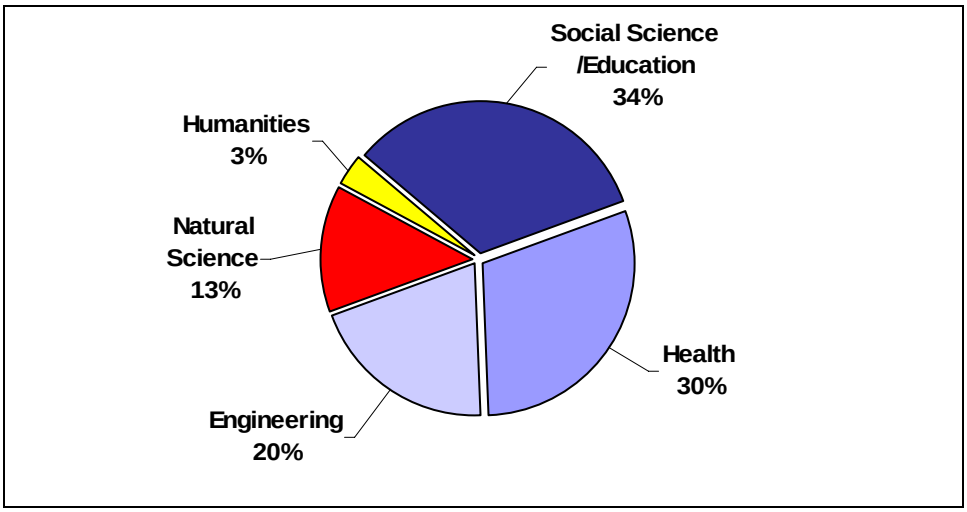
[1] New College of Florida had no centers or institutes as of Fiscal Year 2005-06.

[2] The six universities are Florida Agricultural and Mechanical University, Florida Atlantic University, Florida State University, the University of Florida, the University of Central Florida, and the University of South Florida.

[3] Our sample consisted of centers and institutes with the largest state-funded expenditures in each of the top five disciplines at 6 of the state's 11 universities. We selected these universities based on their size and geographic location.

Exhibit 1
Centers and Institutes' Work Often Related to Social and Health Issues



Source: OPPAGA analysis of center and institute assigned classification of instructional program codes.

About one-third (9) of the 30 centers and institutes primarily focused on health-related issues such as diabetes research, biotechnology, public health, and neuroscience. These centers and institutes include the Diabetes Center at the University of South Florida, the Center of Excellence in Biomedical and Marine Biotechnology at Florida Atlantic University, which fosters collaboration involving the disciplines of ocean engineering, marine biotechnology, functional genomics, and bioinformatics in a synergistic fashion with the overall goal of discovering and developing new medicines, the Center of Excellence for Regenerative Health Biotechnology at the University of Florida which is working to stimulate promising research and facilitate commercialization of technologies that will provide treatments and cures for human diseases, as well as create new companies and high-wage jobs for Florida, and the Center for Complex Systems and Brain Sciences at Florida Atlantic University, which focuses on research and training to prepare a new generation of mathematically and biologically literate scientists who can participate in multi-disciplinary research to understand the interactions performed by genes, cells, and brains.

Approximately one-fifth (6) of the centers and institutes we examined focus on engineer-related issues such as nanotechnology, renewable energy, and optics and lasers. For example, the Nanomaterials and Nanomanufacturing Research Center at the University of South Florida provides state-of-the art equipment, professional support personnel, and infrastructure to enable multidisciplinary research in nanomaterials and nanomanufacturing leading to smaller fast computers, and stronger building materials that may be used to support a space elevator. In addition to its solar energy research efforts, the Florida Solar Energy Center at the University of Central Florida is working on developing a carbon dioxide-free process to split water into hydrogen and oxygen as a renewable energy resource to fuel the NASA space program and provide an alternative fuel source for Florida citizens.

Four centers we examined focus on natural sciences issues that included oceanography, forensic science, and agriculture. For example, the Institute of Oceanography at the University of South Florida provides the research vessels, marine laboratories, and monitoring systems for the Florida Keys to support the research efforts of educators, scientists, and agencies responding to issues such as red tide and the protection of reef systems. Finally, one institute we examined focuses on the creation, exhibition, and publishing of visual arts. The Institute for Research in Art at the University of South Florida attracts preeminent artists from around the world to produce visual art exhibits and develop new art-making techniques.

The profiles in this report contain detailed information about each center and institute in our sample. We developed these profiles based on information provided by the centers and institute as well as information collected during site visits to each facility. Each profile contains an overview of the center's/institute's purpose, activities, resources, and reported accomplishments. In addition, the profiles contain contact information for each center and institute.

Florida Agricultural and Mechanical University Center for Environmental Equity and Justice

Purpose

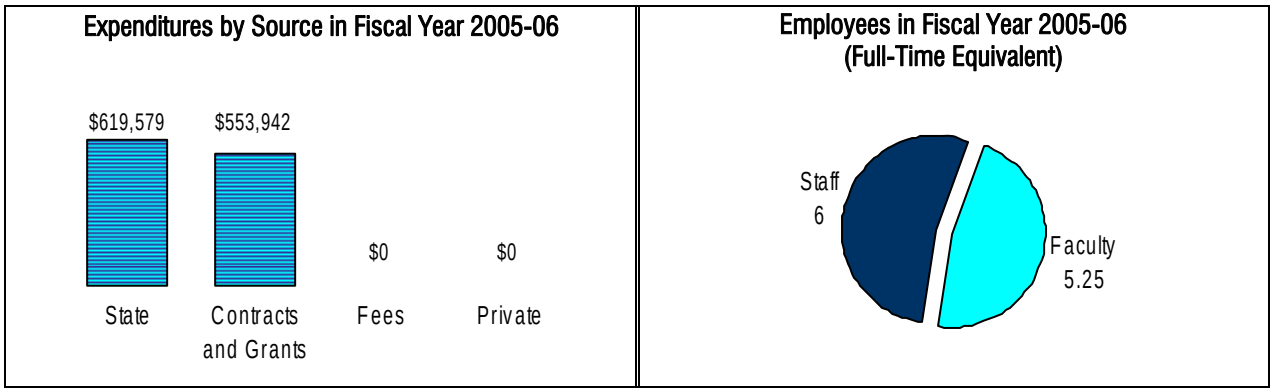
The Florida Legislature established the center in 1998 (Ch. 98-304, *Laws of Florida)* to conduct and facilitate research, develop policies, and engage in education, training, and community outreach on environmental equity and justice issues. The center was established at the recommendation of the 1997 statewide Environmental Equity and Justice Commission. The legislation also authorized the Brownfield Rehabilitation Program, the Community Environmental Health Program, and the Florida Birth Defects Registry based on recommendations from the Environmental Equity and Justice Commission.

Activities

- Serves as a statewide environmental justice technical and public information resource and addresses concerns regarding the impact of environmental hazards on low-income and minority populations as well as the general public
- Works with the Florida Agricultural and Mechanical University (FAMU) College of Pharmacy to validate the impact of contaminants on the incidence of prostate cancer
- Collaborates with the School of Allied Health Sciences, the Institute of Public Health, and the Harvard School of Public Health on a National Institutes of Health project related to links between environmental lead and hypertension
- Sponsors student interns at the departments of Health, Environmental Protection, and Community Affairs
- Produces Environmental Science BS, MS, and PhD professionals for the Florida workforce

Resources

In Fiscal Year 2005-06, support for center activities came from both state and external sources including research grants from the National Institute of Environmental Health Sciences (dependent prostate cell growth - $179,000), the National Institutes of Health (social and environmental determinants of hypertension - $883,840), and the National Oceanographic and Atmospheric Administration (Environmental Cooperative Science Center - $7,486,343). The center uses state funds primarily for center faculty and staff salaries and benefits.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Sponsoring professional publications and giving invited presentations that have addressed topics including environmental lead as a risk factor for hypertension in African Americans; the presence and effects of persistent organic pollutants in aquatic ecosystems; protecting Florida's water as natural and economic development resources; and the role of environmental pollutants in health disparities
- Providing support for seven to nine paid graduate students per year who assist in conducting research and other work of the center
- Contributing to the production of Environmental Science BS, MS, and PhD professionals for the workforce - eight graduate and five undergraduate degrees were awarded in Fiscal Year 2005-06

For More Information

Contact: Dr. Richard Gragg, Associate Director, Center for Environmental Equity and Justice (850) 599-8193
Email: richard.gragg@famu.edu
Website: www.famu.edu/environmentalscience/CEEJ

Florida Agricultural and Mechanical University Learning Development and Evaluation Center

Purpose

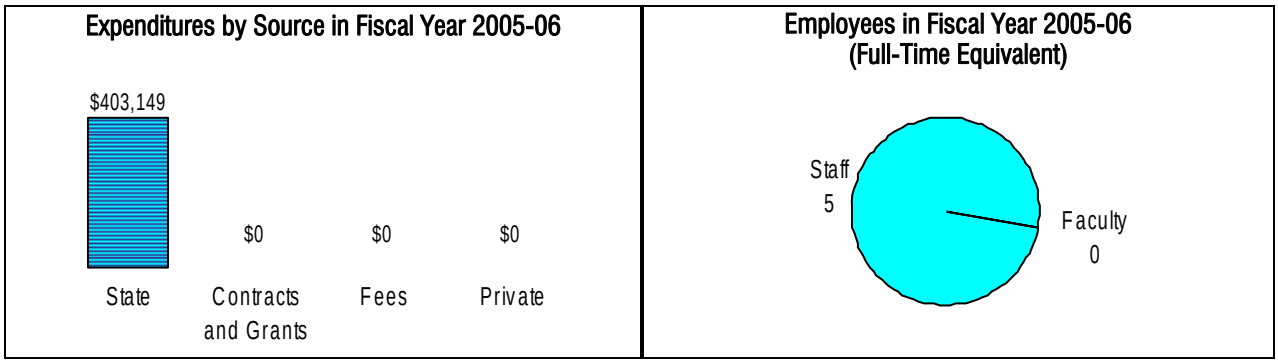
The Florida Legislature established the center in 1986 (Ch. 86-225, *Laws of Florida,* and s. 1004.54, *Florida Statutes)* to aid learning disabled students in building their self-acceptance and-esteem and faculty acceptance. The center is charged with designing and implementing model programs for learning disabled students in cooperation with public school districts, community colleges, and career education centers. The center provides supportive service to individuals who have learning and physical disabilities and are pursuing a postsecondary education. In practice, the center's mission and activities have evolved from those originally specified in Florida law; the center is now solely dedicated to providing support services to Florida Agricultural and Mechanical University (FAMU) students. [4] The 2007 Legislature repealed the statutory authority for the center (Senate Bill 1270) which will not preclude the university from continuing to operate it.

Activities

- Provides support services to incoming students with disabilities including a summer transition program – the College Study Skills Institute; academic advisement; personal and career counseling; academic tutorial services; technology, web-based math courses; and, class accommodations
- Provides a community outreach program that includes parent workshops to promote awareness of available services and participation in Disability Mentoring Day where center participants shadow a mentor in an occupation or major of interest

Resources

Center activities have been solely funded by state resources. The center uses the state funds primarily to pay salaries and benefits for center faculty and staff.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Serving several hundred students with learning disabilities who have gone on to receive undergraduate and graduate degrees from FAMU and other institutions since 1985. In 2004-05, the center served 37 students with a declared disability who requested services; 11 center participants graduated in that year. In 2005-06, the center served over 200 students including approximately 25 with physical disabilities.
- Collaborating with the Computer Information Systems Department and Auburn University on the benefits of voice commands in programming for students with learning disabilities who choose to pursue this field as a vocation

For More Information

Contact: Dr. Nathaniel Holmes, Director, Learning Development and Evaluation Center, (850) 599-3180
Email: nathaniel.holmes@famu.edu
Website: None

[4] When interviewed for this report, university administration and center staff said they did not think the center should continue to be included in the BOG list of approved centers and institutes due to this shift in focus. They also did not anticipate any negative consequence resulting from repealing the statutory authority for this center, if that were to occur, because sufficient authority for its support and operation resides with the board of trustees and the Florida Board of Governors.

Florida Agricultural and Mechanical University Institute of Public Health

Purpose

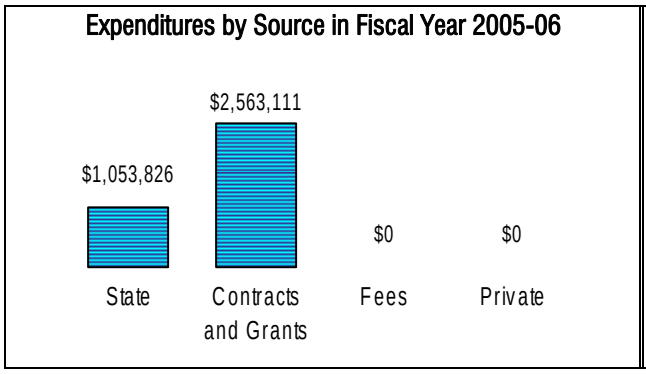
The Board of Regents, the University, and a $100,000 line item legislative appropriation (Specific Appropriation 199, Ch. 95-429, *Laws of Florida*) established the institute in 1995. The institute's mission is to improve the health status of the poor and underserved through graduate training, research and service. Special emphasis is placed on the provision of graduate training and research on diseases and health problems that disproportionately affect educationally and economically disadvantaged individuals.

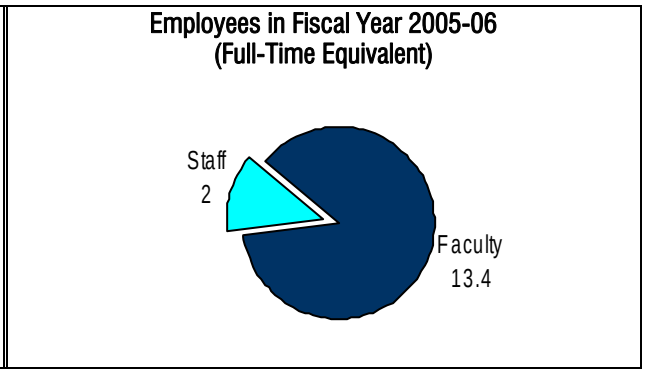
Activities

- Addresses health care disparities in rural and urban communities in collaboration with the Harvard School of Public Health.
- Cooperates with the University of South Florida's College of Public Health to identify environmental and other factors related to the high incidence of death from cancers among African Americans residing in Florida
- Examines factors contributing to the disproportionate amount of HIV/AIDS among racial/ethnic minority populations
- Provides public health education at the master's and PhD level
- Provides public service opportunities to convey research results to industry, the public, educational institutions, and government
- Provides community seminars on topics such as domestic violence prevention and lupus

Resources

External support exceeds state funding for this center. The institute has received research grants from the National Institutes of Health (NIH), the Centers for Disease Control and Prevention, and the Florida Department of Health. Notable individual grants include a five-year $3.3 million grant from NIH to address minority health care disparities and a three-year $1.5 million grant from the Florida Department of Health for disaster preparedness training. The center uses state funds, not from contracts and grants, primarily to pay salaries and benefits for center faculty and staff.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Obtaining contract and grant funding at rates approximately double the level of state education and general support
- Assisted in the establishment of the Florida Birth Defects Registry which is designed to alert health officials to potentially hazardous areas or conditions
- Creating a toxicology curriculum for local communities to promote better understanding among lay persons concerning environmental contaminants and hazards
- Participating in 40 formal affiliations with national, state, local and community-based organizations
- Produced 158 Master of Public Health graduates since 1999. Over 60% of these public health graduates have obtained employment in Florida.
- Providing the only Doctor of Public Health degree in Florida
- Receiving full reaccreditation for seven years (2005-2012) with no interim reports required

For More Information

Contact: Dr. Cynthia M. Harris, Director, Institute for Public Health, (850) 599-8655
Email: Cynthia.harris@famu.edu
Website: http://pharmacy.famu.edu/InstitutePublicHealth.asp

Florida Agricultural and Mechanical University Institute on Urban Policy and Commerce

Purpose

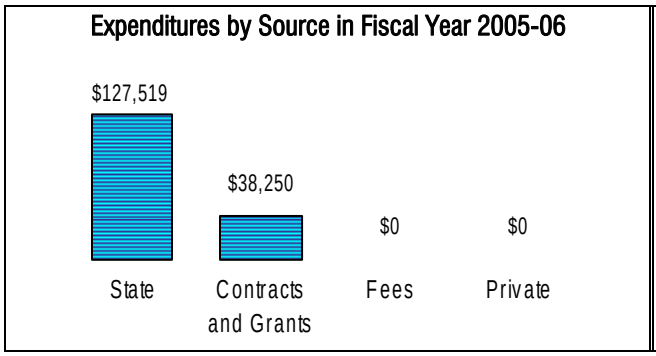
The Florida Legislature established the institute in 1999 (s. 88, Ch. 99-251, *Laws of Florida,* s. 1004.50, *Florida Statutes)* to improve the quality of life in urban communities through research, teaching, and outreach activities. The institute's specific purposes include pursuing basic and applied research on urban policy issues confronting the state's inner-city areas and neighborhoods; influencing the equitable allocation and stewardship of financial resources; and training civic leaders and university students interested in approaches to community planning and design.

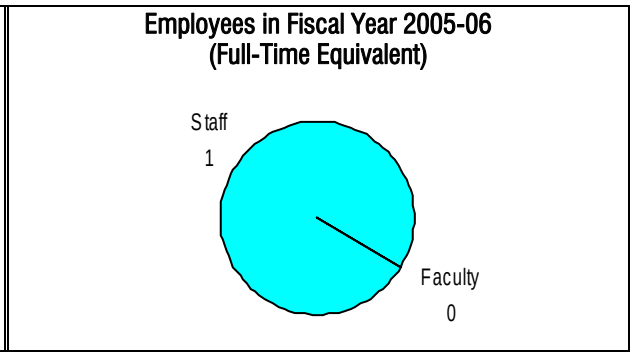
Activities

- Trains students to consider business development options and related employment options through an entrepreneurship initiative available through business and related disciplines at the undergraduate and graduate levels
- Offers a small business and computer literacy training program to Southside Tallahassee residents through the Community Outreach Partnership Center in cooperation with the Florida State University
- Participates on local, state, and regional boards and committees including Florida's Great Northwest, Enterprise Florida Urban Working Group, and the Tallahassee Economic Development Council
- Provides compiled listings of foundations and private sources currently providing grants in Florida to support local level community and economic development initiatives in the state's urban core areas

Resources

State funds provide the majority of support for institute activities. In addition, the institute has received research grants from the Department of Housing and Urban Development, the Florida Department of Education, and the Agency for Workforce Innovation. The institute uses the state funds, not from contracts and grants, primarily to pay salaries and benefits for center faculty and staff. [5]





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Counseling or training approximately 100 students in a small business and computer literacy training program in 2005-06. This is intended to serve as a training model for distressed area residents to assist in establishing "homegrown" businesses and improve job skills.
- Publishing *The State of Unmet Needs in Florida's Urban Communities* (January, 2006) - the institute's most recent annual report to the Legislature. The report is the most comprehensive to date and is intended to be a consistent source of data for addressing the urban challenges confronting Florida. The institute's 2007 annual report allows practitioners to view demographic and business data across Florida's urban areas.

For More Information

Contact: Robert Nixon, Director, Institute on Urban Policy and Commerce, (850) 561-2393
Email: robert.nixon@famu.edu
Website: None

[5] An audit of the institute conducted by the inspector general in the Executive Office of the Governor in April 2002 found that internal controls were inadequate and ineffective. In July 2005, an internal audit of the institute resulted in the termination of all but one employee. The current director was assigned in May 2006.

Florida Agricultural and Mechanical University Center for Viticulture Science and Small Fruit Research

Purpose

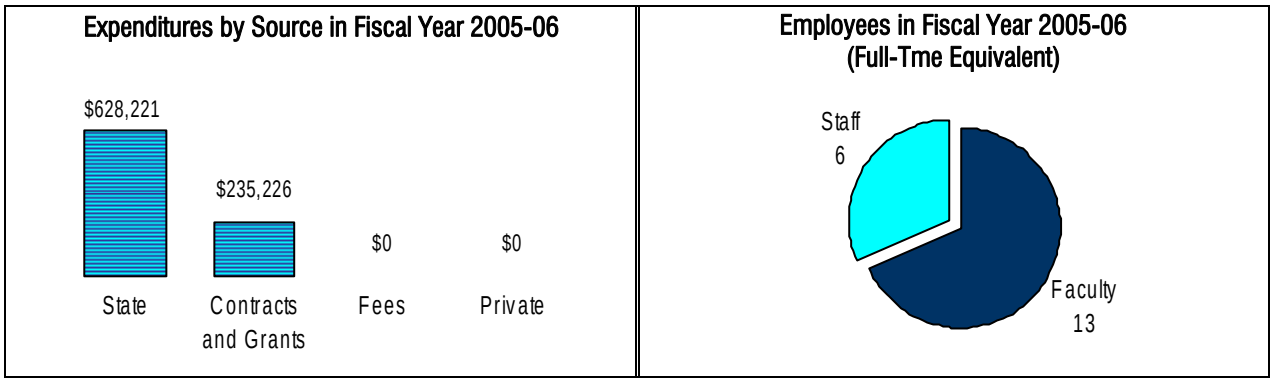
The Florida Legislature established the center in 1978 at the Florida Agricultural and Mechanical University (FAMU) with funding in the General Appropriations Act. In 1984, the Florida Viticulture Policy Act created the Viticulture Advisory Council (s. 599.002, *Florida Statutes*) within the Department of Agriculture and Consumer Services and referenced the FAMU Viticultural Science program (s. 1, Ch. 84-295, *Laws of Florida*). The original mission of the center was to conduct research and provide service and support that would help the viticulture industry become viable and promote the economic development of small and limited resource farms in Florida. The mission and name of the center were modified in the late 1990s to include other small fruit (e.g., raspberries, blackberries, plums, and figs) research.

Activities

- Conducts research and outreach related to genomics, bioinformatics, proteomics, biotechnology, small fruit improvement, and vineyard management. Research projects have involved the College of Pharmacy as well as the Biology and Chemistry Departments in the College of Arts and Sciences. Research focuses on genetic enhancement of traits that contribute to the development of muscadine and bunch grapes with superior characteristics as well as identification of genes and genetic markers for disease resistance and desirable fruit characteristics.
- Produces and evaluates between 3,000 and 5,000 hybrid seedlings annually
- Provides internships to graduate students (5 in 2006-07) to conduct thesis research using center resources
- Supports international scholar exchanges and collaborative research with universities in Germany, Austria, Italy, India, China, and Korea
- Works with commercial and private growers and the Florida Grape Growers Association to identify and evaluate production and management practices to increase productivity and fruit quality
- Provides workshops and seminars for grape growers and processors to share information and assist in the training of technical support personnel
- Provides vineyard and small fruit tours for farmers and high school honors students
- Hosts two annual field days and demonstrations for the general public and commercial growers

Resources

A combination of state funds and research grants have supported center activities including grants from the US Department of Agriculture (USDA) ($4.561 million), and the Florida Viticulture Advisory Council (ranging from $55,000 in 2002 to $162,913 in 2006). The center uses in-house state funds primarily to pay salaries and benefits for some center faculty and staff. Other notable resources include a 30-acre research vineyard, a 2.5-acre small fruit research plot, and a 12,500-square-foot research center with labs for genetics, biotechnology, genomics analysis, a scanning electron microscope, entomology and plant diagnostics, viticulture and small fruit. There is also a 7,200-square-foot research greenhouse.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Identifying gene markers and disease resistant genes for grapes with USDA/Fort Pierce
- Identifying grape metabolites with anticancer properties with the FAMU College of Pharmacy
- Establishing a small fruit lab and improvement program for raspberry and blackberry production with USDA/Corvallis, Oregon
- Publishing, on average, over 14 books and periodical articles annually - 9 publications were reported in Fiscal Year 2005-06
- Presenting at professional meetings averaging 29 per year
- Supporting 1-6 graduate students and 4-10 undergraduates annually
- Filing two patent applications
- Providing student research opportunities. Twenty-three graduate students have completed their thesis research in the center since its inception and 5 are currently involved in such areas as marker development for disease and insect resistant genes, genetically tailored seedless grapes, and the identification of Pierce's Disease-tolerant genes, all of which will benefit Florida's grape growers.
- Developing production techniques for Florida hybrid bunch grapes that are helping Florida grape growers produce quality wine grapes
- Expanding the number of Florida wineries. When the center began in 1978 there were three commercial wineries in Florida. There are now 14 Florida farm wineries.
- Establishing 27 grape demonstration projects in 1995-96 to promote grape growing. Seven of these projects increased their acreage and are still in operation, and three have become Florida farm wineries.

For More Information

Contact: Dr. Stephen Leong, Director, Center for Viticulture Science and Small Fruit Research, (850) 599-3996
Email: STEPHEN.LEONG@famu.edu
Website: www.famu.edu/oldsite/ACAD/COLLEGES/cesta/vit_sciences.html

Florida Atlantic University
Center for Complex Systems and Brain Sciences

Purpose

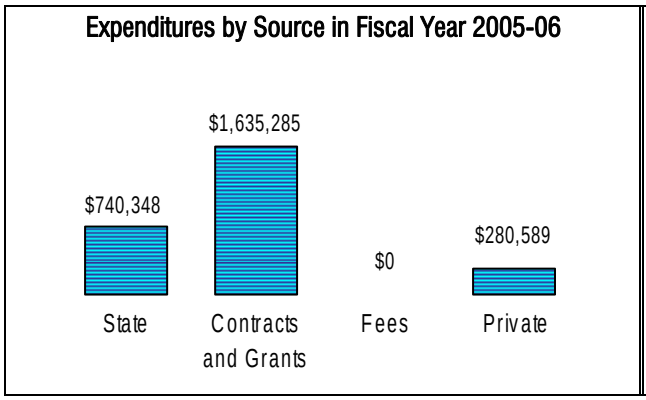
Florida Atlantic University (FAU) established the center in 1985 to support multi-disciplinary research and instruction related to complex systems and behaviors at all levels; from molecules to people and their interactions.

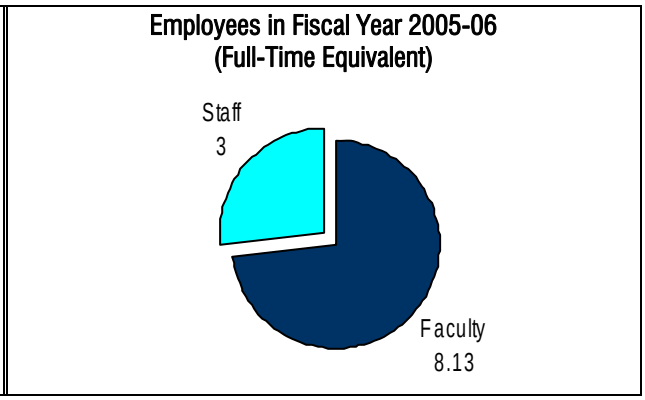
Activities

- Conducts research and provides instruction related to complex systems relevant to emerging natural science and medical and computer technologies identified in the State University System Strategic Plan
- Collaborates with scientists from multiple fields including psychologists, laboratory biologists, theoretical physicists, and applied mathematicians in research and instruction related to complex systems such as genes, cells, and brains
- Collaborates externally with the Brain Center at the University of Florida, the Department of Neuroscience at the University of Miami, and centers in France and Germany that do similar work
- Designs and performs computational models and medical imaging to understand how parts of the brain are connected and how they work together. For example, the center is examining how the brain recovers function after a stroke and how different brain areas are affected by Alzheimer's and other diseases of mental and behavioral function.
- Researches questions such as: How do genes work together to form a cell? What happens when a nerve is damaged? How do we respond to what we see? How do we control our movement? How do we understand speech?
- Supports an internationally known PhD program in Complex Systems and Brain Sciences

Resources

A combination of state and external dollars has supported center activities. Major external fund sources include the National Institute of Mental Health ($327,082), the National Science Foundation (three grants totaling $314,509), the National Institute of Neurological Disorders and Stroke ($225,000), and the National Institutes of Health ($125,000). The center uses its state funds primarily to pay salaries and benefits for center faculty and staff. Other notable resources include a 32,000-square-foot facility on the FAU campus which merges laboratories for behavioral testing and assessment of auditory, visual, motor and cognitive performance (including human learning) with state-of-the-art computational laboratories for image processing, analysis and scientific visualization. The center has access to a 1.5 Tesla Magnetic Resonance Imager through a relationship with GE Medical and University MRI.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Receiving national recognition for its work and contributions in the areas of research, scholarly publications, and educating students
- Housing the National Institute of Mental Health National Training Program in Complex Systems and Brain Sciences since 1989. This support is recognition of the center's ability to train a new generation of mathematically and biologically literate scientists who can participate in multi-disciplinary research to understand the interactions performed by genes, cells, and brains. These students have the potential to develop new technologies in health care that will improve the health and lives of Floridians.

- Publishing, on average, 73 scholarly articles annually over the past five years. These publications document the scientific progress made in understanding the basic science of the brain and genetic systems; information that is needed for the development of improved medical care.
- Supporting 19 graduate students with full stipends. When they graduate, these students serve as an educated workforce to further the development of the biotechnology industry in Florida.

NOTE: The center received a positive internal institutional review in 2005 which included a recommendation that collaboration with organizations outside FAU be increased. The center responded by collaborating with other scientific institutions and research laboratories. In addition, a 2005 external review panel identified the center as one of the strongest research units at FAU. However, it recommended greater collaboration between center researchers and students and other graduate programs at the institution. The center responded by increasing interactions with the FAU Colleges of Science, Biomedical Science, and Engineering and participation in the development of a Neuroscience Institute at FAU.

For More Information

Contact: Dr. Larry Liebovitch, Director, Center for Complex Systems and Brain Sciences, (561) 297-2239
Email: liebovitch@ccs.fau.edu
Website: http://walt.ccs.fau.edu

Florida Atlantic University
Center of Excellence in Biomedical and Marine Biotechnology

Purpose

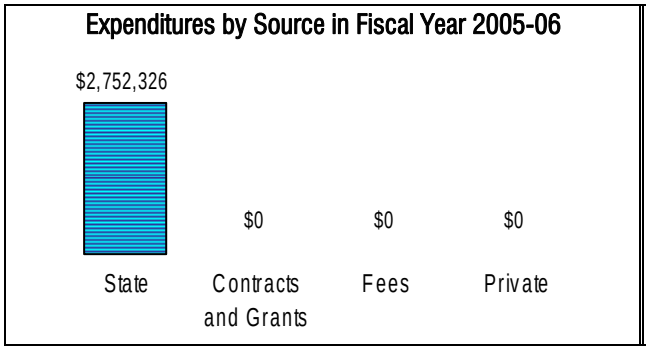
A competitive center of excellence process authorized by the Legislature established the center in 2003, (s.1, Ch. 2002-265, *Laws of Florida*). The purpose of the center is to bring together groups with established expertise in ocean engineering, marine biotechnology, functional genomics, and bioinformatics in a synergistic fashion with the overall goal of discovering and developing new medicines.

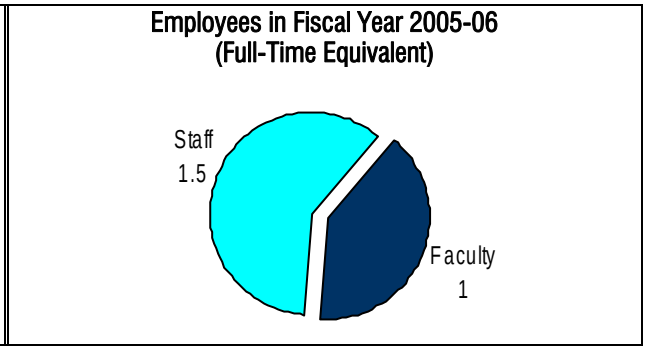
Activities

- Conducts and coordinates research and provides instruction related to biomedical and marine biotechnology. These fields are part of the life sciences sector identified by Enterprise Florida as key for Florida's economic growth as well as emerging technologies identified in the current State University System Strategic Plan.
- Establishes core laboratories with capabilities in genomics and proteomics, the studies of genes and proteins and their functions
- Creates training programs at the pre-doctoral and post-doctoral levels
- Sponsors a seminar program involving eminent scientists in the field of marine biotechnology
- Collaborates within the university and with external academic, corporate, and community partners on technology transfer including Tequesta Marine Biosciences (developing anti-inflammatories), Nautilus Biosciences (new production methods of marine biopharmaceuticals), Edgetech (sonar systems), and Custom Synthesis (producing synthetic compounds for academic and industry labs) as well as organizations such as the Enterprise Development Corporation of South Florida and the Business Development Board of Palm Beach County
- Conducts outreach activities involving over 2,400 area public school students and their teachers including a Medicines from the Sea teacher workshop and presentation to students
- Administers the Bioengineering Graduate Certificate Program

Resources

Since the center's inception, major state support for its activities has come from the 2003 Center of Excellence grant of $10 million. External sources of support for the center in its first two years included NASA, the Office of Naval Research, and the National Institutes of Health. In its third year, (2005-06) the center used the state funds it received to pay center faculty and staff salaries and benefits and to cover costs related to student support and equipment and facility needs.





Note: Figures in the above charts were adjusted based on updated information provided by the center.
Source: Board of Governors, Institutes and Centers Fiscal Information and the Center of Excellence in Biomedical and Marine Biotechnology.

Reported Accomplishments Include

- Leveraging funds beyond the original Center of Excellence $10 million grant with an additional $26,335,947; this includes $19.8 million in federal support
- Filing 25 patent applications - 23 were issued, including 11 related to an underwater color video camera system
- Licensing 20 new technologies and therapies including a treatment for actinic keratosis - pre-cancerous lesions occurring on parts of the body exposed to the sun; and working with Panavision on the application of digital video technology applicable to military coastline security. Initial reported annual revenues from this project were $50,000.

For More Information

Contact: Dr. Larry Lemanski, Vice President for Research and Graduate Studies, Center of Excellence in Biomedical and Marine Biotechnology, (561) 297-0267
Email: Lemanski@fau.edu
Website: www.floridabiotech.org/

Florida Atlantic University
Center for Electronic Communication

Purpose

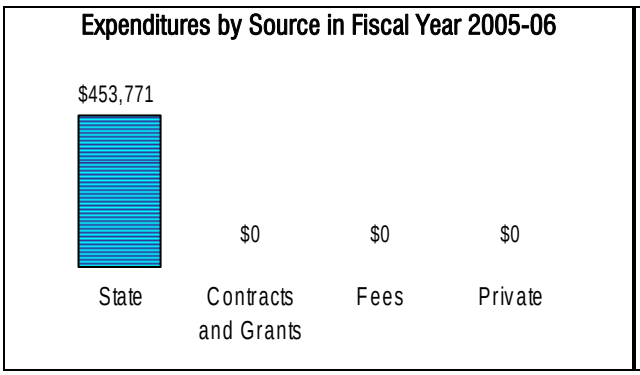
Florida International University (FIU) established the center in 1973 as the International Institute for Creative Communications. In 1990, the Board of Regents authorized renaming the entity as the Center for Telecommunications and moving it from FIU to the Florida Atlantic University (FAU) with a charge to coordinate telecommunications technology among the nine state universities and other public and private entities. The name changed again in the early 1990s to its present title. The current purpose of the center is to support state-of-the-art research and development in communications, visualization, and computer imaging.

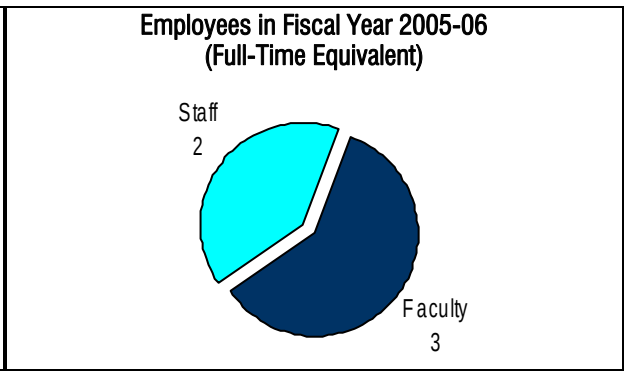
Activities

- Conducts research, creates art, and provides instruction in computer animation and related fields of animated visualization in response to both the individual university's and overall university system's strategic goal of providing high skill/high wage employment opportunities in emerging technologies
- Participates in research, sponsors events, and offers opportunities to faculty, students and local industry and schools
  - Collaborates with gaming and software companies including EA, Konami, Epic games, and Bungee Software, to provide internship opportunities, beta testing, and job placement
  - Sponsors an annual film festival in partnership with the Broward County Schools Broadcast Arts and Media Magnet Program
  - Produces visualization and simulation projects in collaboration with external organizations such as the Caratabia for an Archaeological Visualization Project intended for display at the Museo Civico Tamburello Merlini of Mineo, Sicily
  - Collaborates with other FAU colleges such as the College of Computer Science and Engineering to establish a $5 million Center of Excellence in Ocean Engineering Technology in fall 2006
  - Offers seminars with presenters from Pixar, Disney, Digital Domain and other industry experts in digital media production to local artists and others in the field of computer animation as well as to the Broadcast Arts Magnet Middle and High Schools in Broward County
  - Provides paid and unpaid research opportunities for students and faculty including an exchange program with Silla University in Korea
  - Contributes to the production of skilled graduates in the computer graphics field, a component of Florida's information technology sector. Although the center does not award degrees, all of the Bachelor and Master of Fine Arts students at the university have an opportunity to work with the center.

Resources

State dollars are the primary source of support for center activities. There has been limited external funding. In 2004-05, the center received a $25,000 grant from the International Hurricane Research Center at Florida International University to create a scientific visualization of the trajectory of roof tiles during a hurricane. Center faculty and staff have cultivated ties with leading computer animation software companies. The center has received grants of discounted software from companies such as Alias/Wavefront, a 3-D graphics technology company, making it possible for the center to keep up to date in this rapidly changing technological environment. The center uses the state funds to pay its faculty and staff salaries and benefits and graduate teaching assistantships.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Bringing resources to the university and the region. Students and faculty affiliated with the center as well as its high-definition video production equipment and facility have been successful in attracting external support from both academic and industry sources including FIU grant and internship opportunities in gaming and software companies.
- Winning several awards including the National Classic Gold Telly Award (2000), the US International Film and Video Gold Camera Award (First Place in 2000), and the Videographer Crystal Award of Excellence (2002). Some of these awards were broadcast on public television in Florida and elsewhere throughout the world.
- Producing Master of Fine Arts graduates who worked at the center and went on to be employed at major companies (EA, Konami, Epic games, and Bungee Software – owned by Microsoft) as well as universities in Florida, California, Texas, Puerto Rico, Argentina, Budapest, Hong Kong and Dubai.

NOTE: The center's internal institutional review in 2005 recommended more collaboration with other entities at FAU.

For More Information

Contact: James Novak, Interim Director, Center for Electronic Communication, (954) 762-5135
Email: jnovak@fau.edu
Website: www.animasters.com/

Florida Atlantic University
Institute for Ocean and Systems Engineering

Purpose

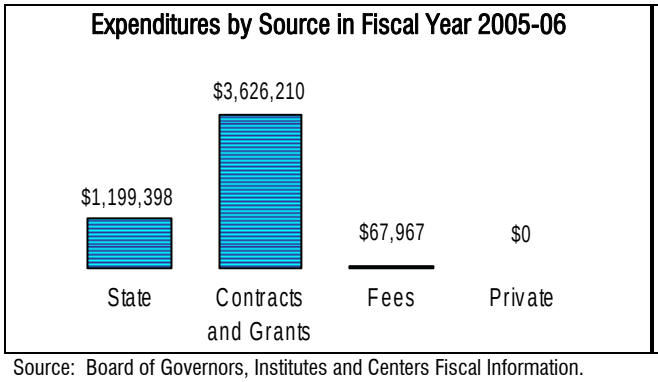
The Board of Regents established the institute, also called SeaTech, with funding from the 1997 Legislature (Specific Appropriation 173, Ch. 97-152, *Laws of Florida*), as well as an additional $1.5 million appropriation for facilities renovation from the 1996 Legislature (Specific Appropriation 64, Ch. 96-424, *Laws of Florida*). The institute's mission is to provide an environment for advanced engineering research and technology development aimed at solving problems in the ocean. It builds on and complements the academic programs of Florida Atlantic University's Department of Ocean Engineering and forms the means for technology advancement, collaboration with academia, industry, and government, and transition of research products to applications.

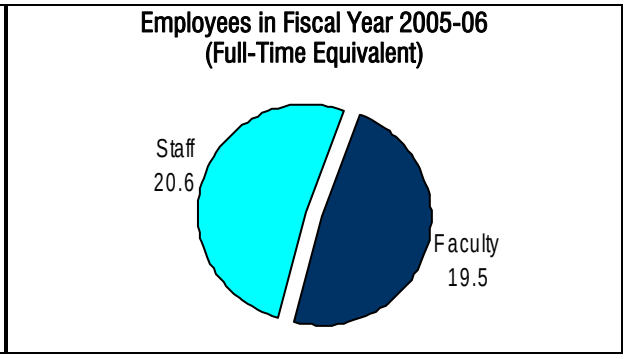
Activities

- Conducts research and provides instruction related to the application of ocean engineering solutions to environmental, security, and military applications. The institute makes its facilities and ships available to the University of South Florida, the University of Miami, Nova Southeastern University, the University of Southampton, and Woods Hole Oceanographic Institution.
- Conducts federally funded research and development projects including
  - o sonar systems on autonomous underwater vehicles that are unmanned and un-tethered
  - o air-deployable buoys to support monitoring /tracking devices for security and defense applications
  - o durability of composite materials
  - o nano-composites
  - o coastline security technologies
- Conducts basic research in underwater acoustic transmission, flow noise, hydrodynamics, physical oceanography, and corrosion affecting marine material and structures such as bridges
- Participates in an Office of Naval Research-funded program under a national naval initiative for the training and development of a new generation of naval laboratory employees
- Collaborates with the Center of Excellence in Biomedical and Marine Biotechnology at Florida Atlantic University (FAU) and Harbor Branch Oceanographic Institute in sea floor photography to assist in the identification of chemical compounds beneficial to cancer research
- Investigates new research opportunities in the areas of ocean and acoustic observatories, including SeaBasing (the further transfer of functions traditionally performed on land to the sea-based environment, expanding the capabilities of expeditionary naval forces), advanced acoustic systems, and systems for harnessing ocean energy

Resources

Institute activities have been funded primarily through research grants from the Office of Naval Research, the National Science Foundation, and the Florida Department of Transportation. The institute uses state funds, not from contracts and grants, primarily to pay institute faculty and staff salaries and benefits. Its notable resources include a 50,000-square-foot oceanfront research facility that houses laboratories for materials and structure (mechanics, fatigue, corrosion), acoustics and vibrations (deep water tank, data acquisition systems, sonar), hydrodynamics and physical oceanography (wind tunnel, large and small wave tanks, turbulence measurement platform, 3-D Stereoscopic Particle Image Velocimetry System), and three 8-foot Ocean Explorer autonomous underwater vehicle; as well as two research vessels, 34 and 65 feet in length.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Receiving a $5 million grant in November 2006 from the Florida Technology Research and Scholarship Board to establish a Center of Excellence in Ocean Energy that will be housed at the institute
- Receiving patents for Retrofit Cathodic Protection Systems for Marine Pipelines to prevent adverse effects on operations and the environment and Deployable and Autonomous Mooring System which have security and defense applications. The institute has applied for a patent for a Modular Docking System for an Autonomous Underwater Vehicle that will enable the vehicle to renew its power supply without surfacing or returning to its ship or land base.
- Obtaining a license for digital down conversion technology for sonar systems and a license for a buried object scanning sonar, which can penetrate the sea floor by three meters and allows for multi-aspect imaging
- Publishing 42 scholarly articles in Fiscal Year 2004-05 on issues ranging from deepwater corrosion protection to the effects of ocean noise on marine mammals
- Awarding 21 bachelor's, 10 master's, and 1 PhD in Ocean Engineering in Fiscal Year 2004-05

NOTE: The institute had a positive internal university review in 2004-05. However, the review noted that the distinction between institute and departmental research activities has not been clarified.

For More Information

Contact: Dr. Manhar Dhanak, Director, Institute for Systems and Ocean Engineering, (954) 924-7242
Email: manhar@oe.fau.edu
Website: www.oe.fau.edu/oegeneral/seatech.html

Florida Atlantic University
Center for Urban and Environmental Solutions

Purpose

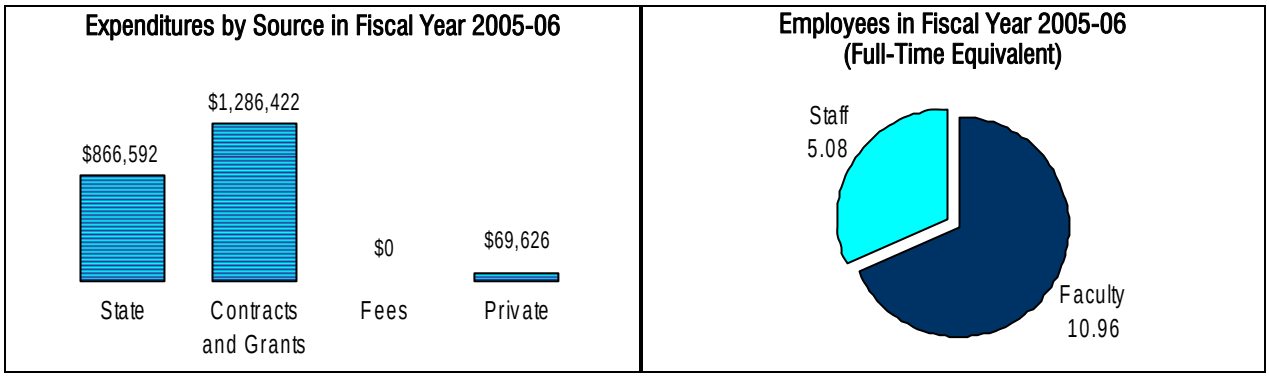
The center was established in 1972 by Florida Atlantic and Florida International University with an appropriation of $247,000 from the Florida Legislature. The purpose of the center, originally named the Joint Center for Environmental and Urban Problems, is to support research and public service related to the environmental and growth challenges facing South Florida and the state through partnerships, education, and research.

Activities

- Produces reports such as *Charting The Course, Where is South Florida Heading?* which provide information on indicators of the demographic, environmental, and economic conditions of the region; identifies trends and critical issues; and, demonstrates the interconnectedness of the affected counties. The report is intended to raise community awareness and stimulate innovative regional solutions.
- Addresses demographic, economic, social, and environmental issues in partnership with a number of entities including Florida International University (Hurricane Center, Asian Studies, and Metropolitan Center), the Florida Institute of Oceanography (Ocean Alliance), the Collins Center for Public Policy (South Florida Regional Resource Center), Indian River Community College (Committee for a Sustainable Treasure Coast), the University of Miami (Department of Political Science and Rosenstiel School of Marine and Atmospheric Science) and the Florida Department of Environmental Protection (Economics of Beach Restoration)
- Staffs the Committee for a Sustainable Treasure Coast which reviewed, evaluated, and made recommendations for the long-term improvement in the interconnected natural, constructed, social, and economic systems of the Treasure Coast. The committee continues to be supported through the newly formed Institute for a Sustainable Treasure Coast housed at the center with the purpose of tracking and advancing progress toward fulfilling the committee recommendations.
- Researches best practices and models for transportation planning under contract with the Florida Department of Transportation
- Hosts the Florida Public Officials Design Institutes at Abacoa to work with elected officials to explore different design options and tools to address specific community problems and to integrate social, economic, and environmental concerns into city plans
- Studies the relationship between land use policy and hazard vulnerability on the barrier islands of the Treasure Coast sub-region through a special National Oceanographic and Atmospheric Administration grant awarded to the Florida Hurricane Mitigation Alliance, a multi-university consortium of which the center is a member
- Co-sponsors joint seminars with the Florida Association of Realtors on smart growth and new urbanism
- Co-sponsors the Annual Environmental Ethics Conference. The conference, now in its sixth year, is a collaborative regional effort to link educational institutions, governmental agencies, nongovernmental agencies, advocacy groups, and communities

Resources

The majority of funding for center activities has come from external contract and grant sources such as the MacArthur Foundation, the Florida Department of Transportation, and the Florida Department of Environmental Protection. The center primarily uses the state funds it receives to pay center faculty and staff salaries and benefits.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Contributing to the improvement of the human and natural environment in South Florida and elsewhere. For instance, the center participated with other governmental agencies to produce an environmental feasibility study to address the future transportation needs and environmental issues in the Greater Ocala National Forest.
- Tracking key demographic, social, environmental, and economic trends in South Florida since 2000 to identify regional strengths and areas that need improvement. Through support of the MacArthur Foundation, three indicator reports have been published. The reports are meant to stimulate a dialogue among regional leaders and citizens and to provide a basis for action to improve South Florida and the quality of life of its residents.
- Assisting Palm Beach County's Economic Development Office in facilitating economic stakeholders to assess the county's strengths, opportunities, weaknesses, and threats culminating in the Palm Beach County Economic Summit. The summit was followed by the development of the county's Strategic Economic Development Plan which sets the economic development goals, objectives, outcomes. and work plans for the next five years.
- Receiving a grant from the MacArthur Foundation to adapt the Chicago Regional Learning Game (Metro Joe) to Southeast Florida. The game, called Sustainable Sam, was developed to help Treasure Coast residents understand the need for a regional perspective, solutions, and actions and to produce a broader and more informed constituency that is willing to push for a change in current practices and policies.
- Producing a brief to the US Supreme Court in a key eminent domain case, *Kelo v. City of New London*
- Supporting the establishment of The Florida Ocean Alliance, a nonpartisan organization dedicated to bringing together government, academic, and private sectors in Florida to protect and enhance Florida's coastal and ocean resources for continued social and economic benefits
- Developing a master plan for the Marine Industries Association of South Florida, in conjunction with the Urban Harbors Institute at the University of Massachusetts-Boston and the FAU Center for Visual Planning Technology. The master plan is intended to provide a comprehensive and coherent strategy to guide Broward County marine industry growth
- Developing the Palm Beach County Manatee Protection Plan in 2005.

NOTE: The center's internal institutional review in 2005 was positive overall but called for an increase in empirically based research publications.

For More Information

Contact: James F. Murley, Esq., Director, Center for Urban and Environmental Solutions, (954) 762-5255
Email: jmurley@fau.edu
Website: www.cuesfau.org

Florida State University
Florida Institute of Government

Purpose

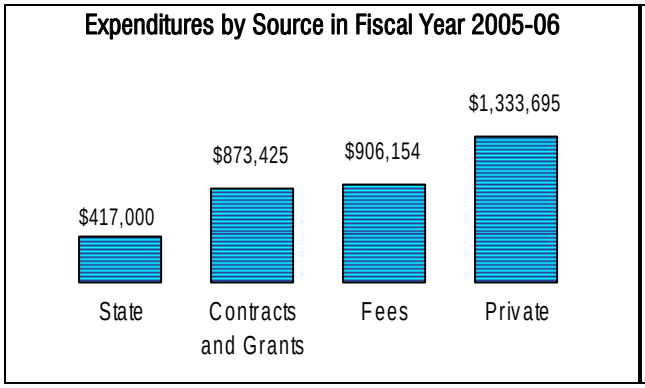
In 1981, the Board of Regents established the institute with a $1,000,000 line item legislative appropriation (Specific Appropriation 370B, Ch. 81-206, *Laws of Florida*). The institute's purpose is to enhance the capacity of Florida's governments to effectively serve their communities through training and education, applied research, technical assistance, and public service.

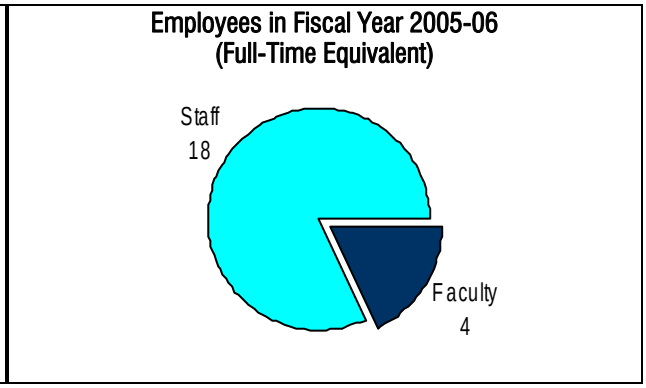
Activities

- Provides research, training, and technical assistance to state and local governments and related professional associations. Through its statewide network of an executive office (at Florida State University (FSU)) and five affiliate offices (at the University of Florida, the University of Central Florida, the University of South Florida, Florida Gulf Coast University, and Florida Atlantic University), the institute is able to work closely with local, regional and statewide constituent groups to plan and implement a unique selection of services relevant to the needs of public service organizations
- Offers a range of training and professional development opportunities, from basic skill building workshops to certification programs for elected and appointed officials and employees
- Works with faculty and private sector experts to provide technical assistance to governmental agencies on almost any subject matter including land use planning, performance management, customer satisfaction surveys, geographical information systems, and other technology services

Resources

The institute's activities are primarily funded by private contracts, fees collected for services provided, and federal and state contracts and grants. The institute uses the state funds primarily to cover base operational costs for its FSU executive office and its five affiliate offices. Approximately 40% of the state funds received by FSU are redistributed to the five affiliate offices. The state funds allow the institute to operate its projects on a cost recovery basis and provide resources for the institute to engage faculty and students in technical assistance and applied research projects.





Note: Figures in the above charts were adjusted based on updated information provided by the institute.
Source: Board of Governors, Institutes and Centers Fiscal Information and the Florida Institute of Government.

Reported Accomplishments Include

- Conducting over 1,400 workshops and conferences for over 29,000 participants statewide in Fiscal Year 2005-2006
- Managing 137 technical assistance projects statewide
- Producing several publications including the second edition of *Politics in Florida*, the textbook on state and local government
- Initiating a new, statewide center for local government management by leveraging its own resources and relationships. The Florida Partnership for Excellence in Local Government will provide a graduate degree in local government management, student internships, and ongoing research, learning, and professional development opportunities for faculty, students, and local government managers.

- Developing and coordinating certification programs to enhance the professionalism of various sectors of public service. The institute's certification programs for municipal clerks, public technology managers, and information officers are nationally recognized models that are being replicated in other states.
- Received the Florida Center for Local Public Management Excellence award, a statewide center whose mission is to recruit, educate, and train the next generation of public service managers; provide advanced leadership capacity building for current managers; develop and implement intergovernmental public policy discussion forums on emerging issues in Florida; and develop a web portal that serves as the primary data, research, and information repository for local government in Florida
- Developing four training programs that were selected for use statewide by the Executive Office of the Governor and several state agencies
- Developing a plan used by the United States Geological Survey as a model to establish a statewide collaborative committee to coordinate and share Geological Information System data among state agencies in Florida and between Florida and federal agencies

For More Information

Contact: Jeff Hendry, Director, Florida Institute of Government, (850) 487-1870
Email: jhendry@iog.fsu.edu
Website: http://iog.fsu.edu/

Florida State University
Florida Resources and Environmental Analysis Center

Purpose

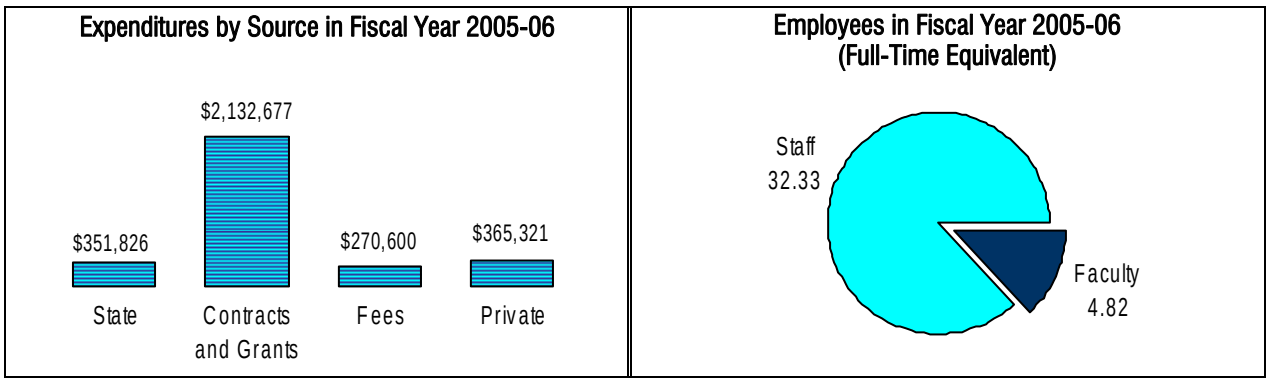
Florida State University (FSU) established the center in 1969 as the first of several centers that now comprise the Institute of Science and Public Affairs. The center's mission is to provide support to other university centers and departments as well as conducting its own research activities in the general areas of resource management and environmental analysis.

Activities

- Completes projects dealing with resource management, environmental analysis, data analysis and formatting, and provides technical support to other university researchers using staff members skilled in cartography, geographic information systems, multimedia programming, web design, and desktop publishing
- Maintains a large inventory of digital data that is available to government agencies and the private sector to use in improving regional planning and growth management
- Trains university students by providing real-world project experience
- Supports state agencies with research and analysis that might otherwise be difficult and costly for each agency to obtain
- Houses the Energy & Environmental Alliance, which provides comprehensive energy and environmental education programs for Florida teachers and their students and the Florida Natural Areas Inventory that is conducting plant and animal inventories and developing and maintaining the conservation lands database to support the Florida Forever land acquisition program
- Offers several map sets for Florida and provides advice on how to access map and photo information from state and federal agencies

Resources

Center activities have primarily been funded through research contracts and grants from a variety of federal and state agencies including the US Department of Defense, the Florida Department of Environmental Protection, the Florida Department of Transportation, the Florida Fish and Wildlife Conservation Commission, and the Florida Department of Agriculture and Consumer Services. The center uses the state funds primarily to pay its faculty and staff salaries and benefits and to support its technology infrastructure. The center is equipped with state-of–the-art computer systems suited for intelligent mapping, spatial analysis, and other work associated with geographic information systems and database development.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Receiving funding from the Florida Department of Environmental Protection for the Land Boundary Information System (LABINS), one of the largest collections of downloadable survey and mapping data available on the Internet. The website began in 1984 as a means for distributing state and federal survey data to the general surveying community for use in regional planning and growth management. Currently LABINS is available over the Internet and has been enhanced by mapping components and the addition of digital images of many of the original documents that support the textual data bases.

- Producing an annual inventory of all state-owned lands including an analysis and mapping of the parcels using ad valorem tax roll databases under contract with the Department of Environmental Protection. Section 253.03(8)(a), *Florida Statutes,* requires this inventory annually.
- Providing scientific support to the Florida Department of Environmental Protection for Florida Forever, the nation's largest environmental land acquisition program through The Florida Natural Areas Inventory. The inventory contributes in two key ways: scientific review of newly proposed land acquisition projects and comprehensive natural resource analysis and scoring of all Florida Forever projects using the conservation needs assessment and Florida Forever tool for efficient resource acquisition.
- Producing several atlases including the *Atlas of Florida* (1981, 1992, and 1996) and the *Water Resources Atlas of Florida* (1984 and 1998)
- Producing about 50 reports annually
- Consulting on about 560 projects annually

For More Information

Contact: James R Anderson, Director, Florida Resources and Environmental Analysis Center, (850) 644-2007
Email: JAnderson@admin.fsu.edu
Website: www.freac.fsu.edu

Florida State University
Institute of Molecular Biophysics

Purpose

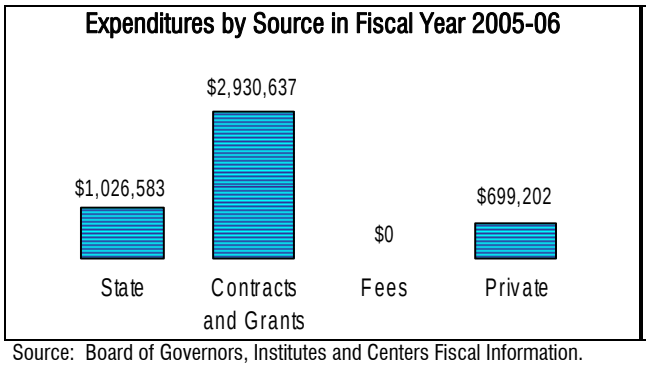
Florida State University (FSU) established the institute in 1960 after a group of chemists, biologists, physicists, and psychologists attracted $3 million from the Atomic Energy Commission for a multi-disciplinary approach to molecular biology. In 1962, with matching funding from the National Institutes of Health and the state of Florida, a permanent 50,500-square-foot research facility was built to house the institute at the FSU science center. The institute's mission is to provide a multi-disciplinary environment to conduct research and train undergraduate and graduate students in the use of biophysical, biochemical, and computational tools to study macromolecules and macromolecular assemblages of biological and biomedical importance.

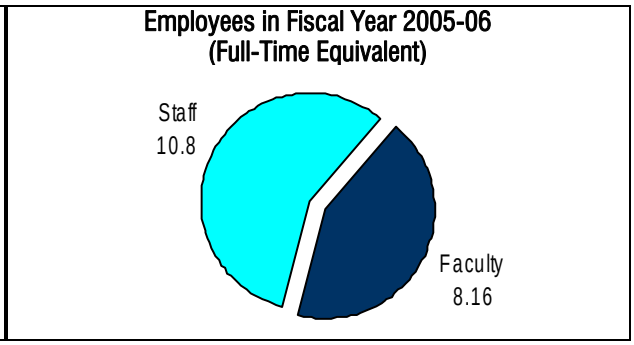
Activities

- Administers the molecular biophysics doctoral program and provides research and office space for faculty who direct post-doctoral research associates and graduate and undergraduate students
- Researches using molecular biophysics to investigate protein and RNA folding, visualizing complex macromolecular structures, developing new biophysical theories, and engineering novel biomedical devices
- Houses a center of excellence program to bridge experimental structural biology and high-performance computing
- Researching structural biology using a Markey Foundation grant combined with state funding. Structural biology uses interdisciplinary approaches and state-of-the-art technology to investigate the structural basis for biological function and dynamics including proteins, nucleic acids, membrane proteins, and macromolecular assemblies, and applying techniques including crystallography, nuclear magnetic resonance, electron paramagnetic resonance, electron microscopy, mass spectrometry and computation
- Sponsors a biannual, international symposium hosted by FSU biologists

Resources

Institute activities have primarily been funded through research contracts and grants from the National Institutes of Health, the National Science Foundation, and the American Heart Association. The institute uses state funds primarily to pay salaries and benefits for institute faculty, support scientists, technical engineers, and fiscal staff. The institute includes a 50,500-square-foot building with offices and laboratories that was recently renovated using National Institutes of Health funding.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Publishing articles in *Science* and *Nature* magazines. The articles include findings that could lead the way to development of a vaccine for Acquired Immune Deficiency Syndrome (AIDS).
- Supplying Florida's growing economic sector with trained professionals. In 2005-06, the institute awarded five molecular biophysics doctorate degrees with four additional doctoral degrees conferred in 2007. Since 1968, the institute has awarded nearly 100 doctoral degrees.
- Hosting roughly bi-annual three-day workshops that attract approximately 100 visitors to Tallahassee. The workshops focus on important areas of research and highlight institute faculty research. The most recent workshop was held in February 2007 and focused on Quantitative Computational Biophysics.

For More Information

Contact: Dr. Timothy M. Logan, Director, Institute of Molecular Biophysics, (850) 644-8979
Email: logan@sb.fsu.edu
Website: www.sb.fsu.edu/

Florida State University
Learning Systems Institute

Purpose

Florida State University (FSU) established the institute in 1969 (originally named the Center for Educational Technology) to administer a grant for technology development in the Korean school system. Since that time, the institute has grown into a large umbrella organization consisting of several centers. The institute's mission is to conduct research and apply theory to measurably improve the learning and performance of individuals and organizations through the use of multi-disciplinary, scientifically based methods and innovative, systems-oriented approaches.

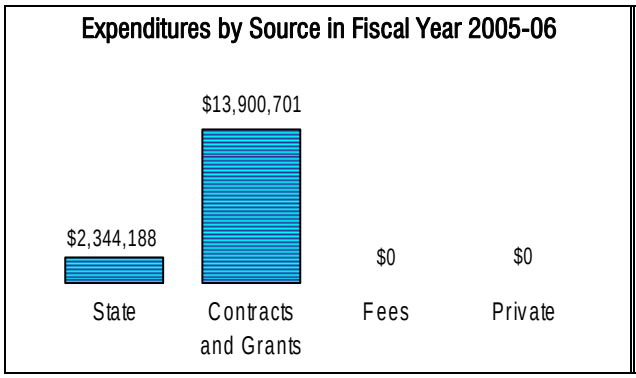
Activities

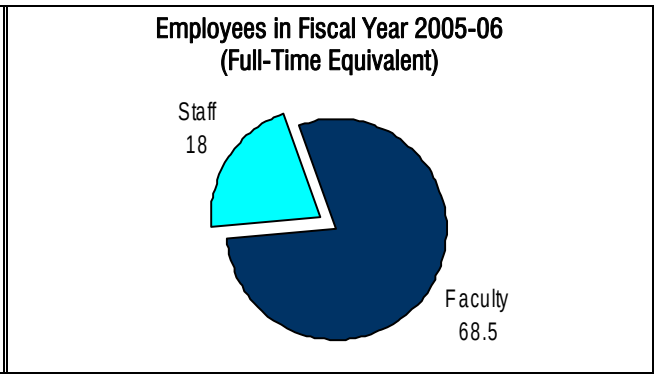
The institute specializes in the fields of human performance, expertise, leadership, reading research, learning, educational technology, and complex cognitive skills. The institute currently consists of eight research groups and centers described below.

- The Florida Center for Reading Research (s. 1004.645, *Florida Statutes*) conducts basic and applied research on reading that contributes to the scientific knowledge base about reading, reading development, reading assessment, and individual differences in reading growth.
- The Research of Innovative Technologies for Learning facilitates interdisciplinary research in the areas of instructional technology, human-computer interaction, communications, computer science, and psychology.
- The Center for Research in School Reform and Leadership conducts educational policy research and provides analysis and support to Florida's education policymaking community with a particular focus on state-level decision making.
- The Center for International Studies - Education Research and Development helps build local capacity in educational research and development that will enable policymakers, researchers, and educators in developing countries to sustain current projects and pursue future objectives.
- The Knowledge Communities and Research Group is a multidisciplinary team focused on methods and tools that facilitate the creative construction, sharing, and reuse of knowledge among diverse groups of people.
- The International Center for Learning Education and Performance Systems conducts research in the area of human performance with the goal of developing a general theory of human performance and to apply that theory in a variety of settings, including K-12 education, higher education, business, industry, and government.
- The Center for National Security Training and Research conducts basic and applied research aimed at understanding and improving learning and performance.
- The Center for Expert Performance Research focuses on the study of expert performance in real-world domains such as law enforcement and nursing to identify reproducible and superior expert performance.

Resources

Primary sources of support for institute activities include research contracts and grants from the Florida Department of Education, the US Department of Education, US military agencies, and the US Department of Homeland Security. The institute uses state funds primarily to pay institute faculty and staff salaries and benefits. The institute has about 49,000 square feet of office and laboratory space with the capacity for 25-site video conferencing. The institute has four laboratories including the complex cognitive skills acquisition and transfer research laboratory, the human factors laboratory, the human performance laboratory, and the pedagogical agents learning systems laboratory.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Housing the *Performance Improvement Quarterly Journal* and editing the *Educational Technology Research and Development Journal*. The institute is currently developing a tracking system for its publications.
- Supporting the Reading First initiative by providing direct training and technical assistance to districts and schools in the implementation of Florida's Reading First Assessment Plan and developing and implementing a statewide web-based system for monitoring and reporting on student progress for K-3 classrooms to provide information that helps researchers and educators manage and improve instruction
- Developing national performance standards and training curriculum for port security and other personnel to prevent, deter and respond to terrorist acts
- Studying expert police officers responding to simulated life-threatening scenarios. The study was conducted in the state-of-the-art Human Performance Laboratory within the Center for Expert Performance Research and was completed as part of an overarching goal to enhance the state's law enforcement services. Florida's Pat Thomas Law Enforcement Academy assisted in the study.
- Receiving a three-year Department of Education Comprehensive School Reform grant to investigate technology integration in rural K-8 schools in the southeast, including studies in eight schools in Alabama, Florida, and Georgia

For More Information

Contact: Dr. Laura Lang, Director, Learning Systems Institute, (850) 645-1179
Email: llang@mailer.fsu.edu
Website: www.lsi.fsu.edu/

Florida State University
Center for Materials Research and Technology

Purpose

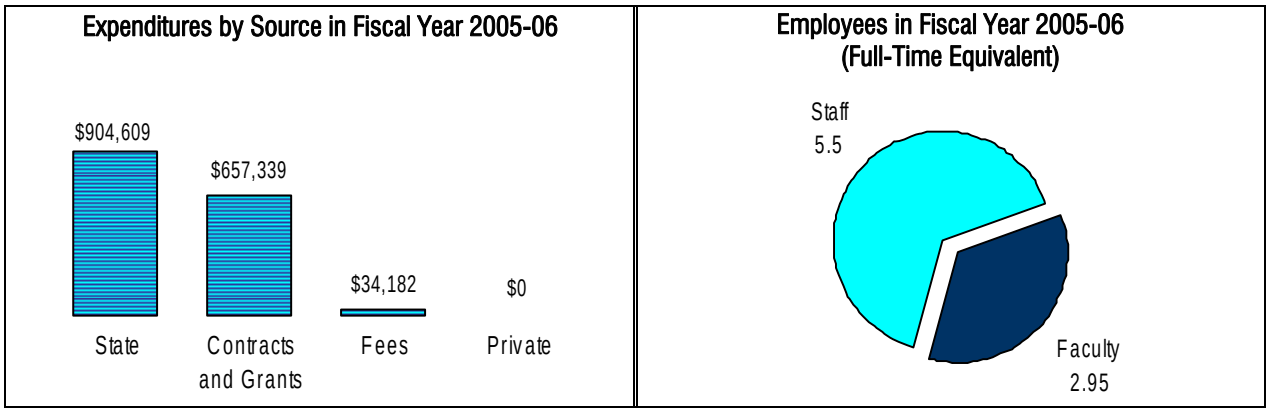
Florida State University (FSU) established the center, called MARTECH, in 1985. The center's mission is to train scientists and engineers in emerging technologies through a strong commitment to graduate and undergraduate education; to continue building a world-class center of excellence for research in materials science; to strengthen graduate research and international cooperative research by aggressively pursuing external funding sources; and to provide the mechanism for collaboration in materials science among FSU departments and interdisciplinary programs.

Activities

- Provides instruments and nanotechnology that faculty and student teams can use to probe the properties of new material areas such as thin films, semiconductors, magnetic, polymers, ceramics, metal alloys, superconductors, liquid crystals and biomaterials
- Facilitates discoveries in materials science by supporting research within the biology, chemistry, engineering, and physics departments
- Recognized nationally for research in magnetic, biological and hybrid micro and nanotechnologies in the field of small scale device technology
- Leading educational and support resource for the local commercial research community that shares analytic instrumentation, technical support staff, and its knowledge base

Resources

State funds are the primary source of support for center activities, but the center also receives research contracts and grants from the National Science Foundation, the Office of Naval Research, and the Defense Advance Research Projects Agency. The center uses the state funds it receives primarily to pay its faculty and staff salaries and benefits and general expenses.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Recognition in a peer review for achievements including hybrid-bio-nanosystems where researchers were able to take careful measurements of molecular motors and produced novel polymers for specific attachment to molecules and cells for small-scale fabrication to carry out biological studies that lay the foundation for applications in tissue engineering and drug delivery
- Supporting between 20 and 24 graduate students as well as an average of two post-doctoral fellows per year who work with center faculty on federally funded projects

For More Information

Contact: Dr. Stephan von Molnar, Director, Center for Materials Research and Technology, (850) 644-2830
Email: molnar@martech.fsu.edu
Website: www.martech.fsu.edu/

University of Central Florida
Advanced Materials Processing and Analysis Center

Purpose

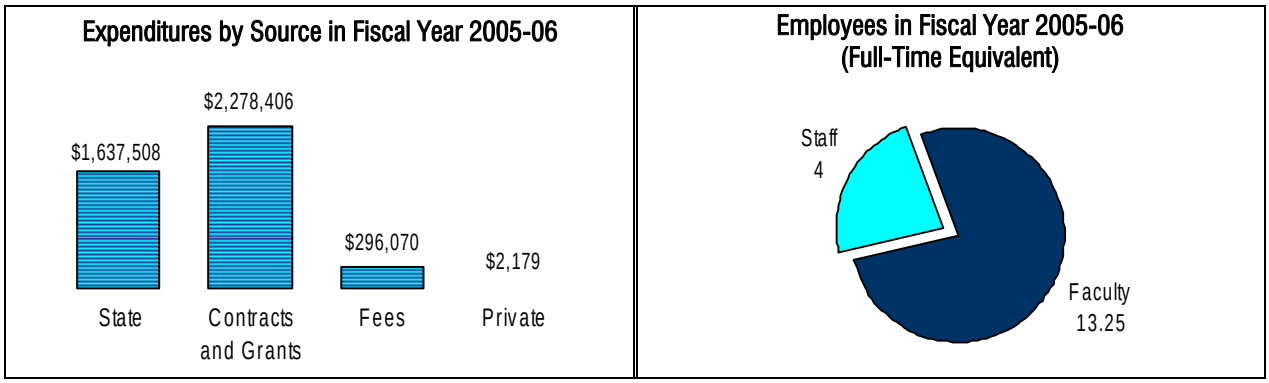
The University of Central Florida (UCF) established the center, called AMPAC, in 1998 to increase U.S. competitiveness in the global market, enhance economic growth and industrial development in central Florida, and achieve national prominence in targeted research areas. The center's mission is to stimulate in-depth research and education in the interdisciplinary field of materials science and engineering, particularly in applications for energy, microelectronics, nanotechnology, optics/photonics, and bioengineering fields thereby enhancing scientific understanding and enabling high-technology job formation, particularly by Florida companies.

Activities

- Helps faculty and students conduct fundamental and applied research and trains faculty and students to use state-of-the art equipment focusing on a variety of applications for energy, microelectronics, nanotechnology, optics/photonics, and bioengineering
- Collaborates with industry partners to share expertise, provide access to specialized equipment, and to facilitate communication between industry, government organizations, and the university
- Supports its industry clusters through educational short courses, seminars, training ,and use of its facility
- Administers masters and doctoral degree programs in materials science and engineering

Resources

The National Science Foundation and private companies including Siemens-Westinghouse, Solar Turbines, and General Electric have been the primary sources of center support. The center uses state funds primarily to pay salaries and benefits for its faculty, technical engineers, and administrative staff. The center occupies 24,000 square feet of office and laboratory space.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Filing five patent disclosures in Fiscal Year 2005-06 and supporting the creation of a spin-off company called NanoSpective which specializes in advanced materials characterization using cutting-edge technology and state-of-the-art equipment to perform nanoscale and macroscopic property evaluation of materials serving markets in semiconductor, aerospace, civil engineering, optics, biomedical, intellectual property, and defense
- Assuming primary education responsibility for the master's and doctoral degrees in materials science and engineering within the mechanical, materials, and aerospace engineering department and awarding 25 PhD and 56 master's degrees since its inception
- Providing stipends to approximately 55 graduate students through external contracts and grants. An additional 11 students work on center projects but are supported by other departments in the Materials Science and Engineering program
- Providing ongoing leadership within UCF in providing multi-user facilities. During 2006, the Materials Characterization Facility of AMPAC had 149 internal UCF users and 19 external users (14 companies and 5 universities), and the Advanced Microfabrication Facility served 34 students, 11 faculty members, and 11 companies.

For More Information

Contact: Dr. Jim Pearson, Interim Director, Advanced Materials Processing and Analysis Center, (407) 882-1455
Email: jpearson@creol.ucf.edu
Website: www.ampac.ucf.edu

University of Central Florida
Biomolecular Science Center

Purpose

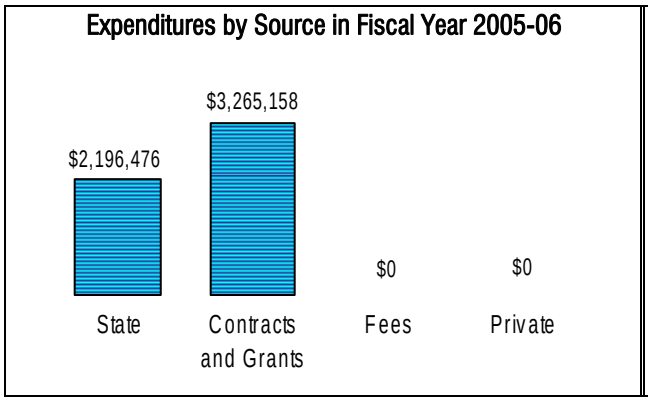
The University of Central Florida (UCF) established the center in 1998 to achieve prominence in areas of research that would produce new drugs and diagnostic procedures. Renamed the Biomolecular Science Center in 2003, it is located with the Department of Molecular Biology and Microbiology in the newly established Burnett College of Biomedical Sciences. The center's mission is to establish research and training programs under the general theme, "Molecular and Genomic Bases of Diseases and Therapeutics," with research focused in four areas: cancer, cardiovascular disease, infectious disease, and neurodegenerative disease.

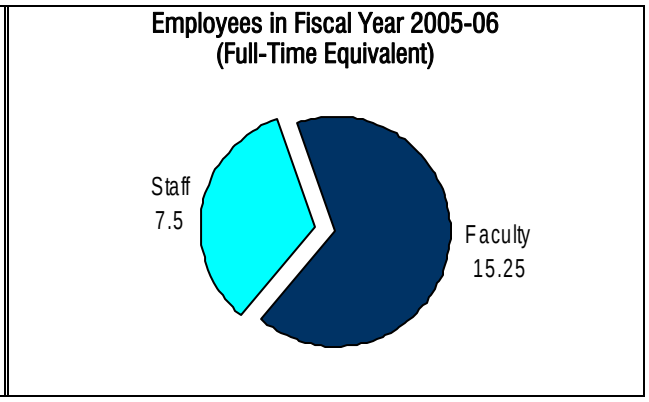
Activities

- Works on projects to advance the understanding of human disease and develop innovative methods of treatment. Center faculty are engaged in research on the most prevalent and serious health problems, including cancer, cardiovascular, infectious, and neurodegenerative diseases
- Administers an interdisciplinary doctoral biomedical science program. The UCF College of Sciences and the Burnett College of Biomedical Sciences currently support the program with major participants from the departments of molecular biology, microbiology, biology, chemistry, and the Nanoscience Technology Center

Resources

Research contracts and grants from the National Institutes of Heath and the National Science Foundation have been the primary source of support for center activities. The center uses state funds primarily to pay its faculty and staff salaries and benefits. The center currently includes 29,900 square feet of office and laboratory space on the main campus. The center will be relocated and housed at the healthcare campus and medical school at Lake Nona in Orlando, Florida. where construction of a new 103,000-square-foot Burnett Biomedical Science building is planned.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Publishing 52 peer-reviewed journal articles and scholarly books expanding knowledge in a variety of areas. For instance, in 2005, *Nano Letters* published the findings from center research that hold promise for the repeated long-term treatment of chronic diseases. [6]
- Discovering a protein that limits the invasion of prostate and breast cancer cells. The center is currently assessing the protein's ability to stop metastasis in animal models and how the protein functions. Some of the findings are being patented and may provide the basis for a new method to detect and treat invasive cancers.
- Discovering that individuals who are unable to resist nasal staphylococcus infections have a defect in their nasal fluid. The center is conducting studies to identify proteins associated with the defect.

[6] Khaled, A., Guo, S., Li, F. ,Guo, P., (2005). "Controllable Self-Assembly of Nanoparticles for Specific Delivery of Multiple Therapeutic Molecules to Cancer Cells Using RNA Nanotechnology." *Nano Letters*, Vol. 5, No. 9, 1797-1808.

- Studying programmed cell death, a biological process that eliminates abnormal cells in healthy tissue. When this process is disrupted, abnormal cells proliferate and result in cancer. The center is trying to understand how changes in cell signals cause this disruption. This research is expanding understanding of the origins of cancer and may lead to novel treatments and methods for early detection.
- Awarding five biomedical science doctoral degrees since 2001
- Filing several patent applications and spinning-off two companies in the areas of cancer and neurodegenerative diseases

For More Information

Contact: Dr. Pappachan E. Kolattukudy, Director, Bimolecular Science Center, (407) 823-1206
Email: pk@mail.ucf.edu
Website: www.biomed.ucf.edu

University of Central Florida
Center for Forensic Science

Purpose

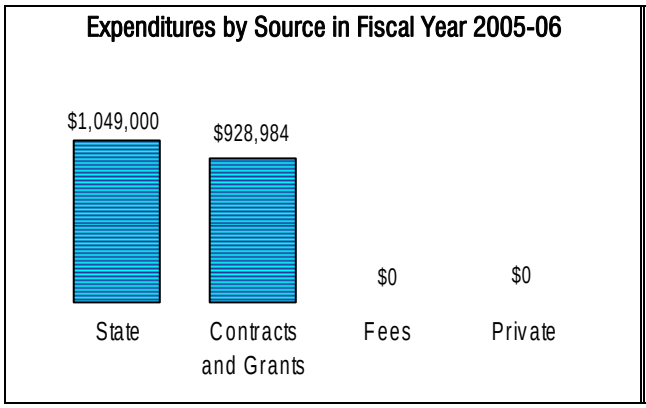
The University of Central Florida (UCF), working with the National Institute of Justice (NIJ), established the center in 1997 and it is currently part of the NIJ's Forensic Resource Network. The Board of Regents approved the center to make it eligible for state funding. The purpose of the center is to improve the identification and scientific validity of evidence and thereby continually improve justice and public safety. The center also provides research, training and technical support to enhance the capabilities of forensic scientists and Florida law enforcement and nationally through NIJ.

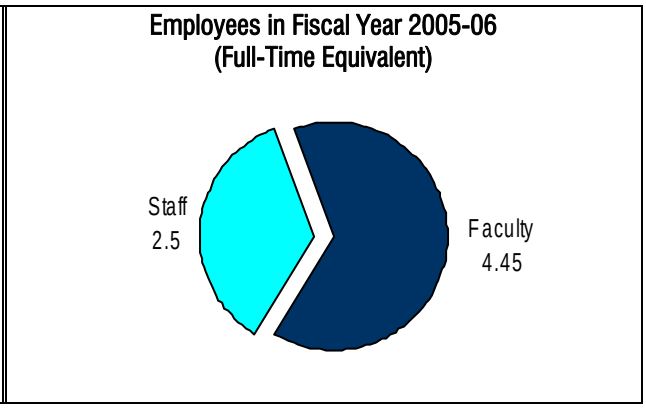
Activities

- Analyzes trace evidence such as ignitable liquids, explosives, fiber evidence, glass, etc., in the physical evidence section. The physical evidence research group, in collaboration with members from the Technical Working Group on Fire and Explosion, an organization comprising fire and explosives investigators and laboratory analysts, is responsible for developing and maintaining the on-line searchable Ignitable Liquids Reference Collection database to aid crime scene investigators.
- Conducts basic and applied research in the biological evidence section in forensic molecular genetics and biochemistry, validates methods and technologies to facilitate transfer of these technologies to crime scene investigators in the field, and provides operational support through on-line databases of genetic markers used to profile suspects. The center also repairs damaged DNA for forensic analysis.
- Assists state and local law enforcement through the digital evidence section with computer crime investigations by conducting basic and applied research on digital evidence. Digital forensics involves the identification, collection, preservation, examination, and analysis of digital evidence. The center has collaborated with the FBI and US Secret Service to assist state and local investigators in learning new investigative techniques and software to work cases. In addition, the center's faculty is developing classes in digital evidence.
- Offers graduate research to educational and professional development programs at UCF including courses leading to a bachelor's degree and master's degree in forensic science and a PhD in forensic molecular biology. The graduate students do their own research at the center funded by grants.

Resources

State funds and research contracts and grants from the NIJ have been the primary sources of support for center activities. The center uses the state funds to pay graduate students to perform research and to pay its faculty and staff salaries and benefits. The center consists of about 25,000 square feet of conference rooms, office, and laboratory space in a recently constructed Public Safety, Forensic Science, and Security Building that was funded with over $9 million appropriated by the Florida Legislature.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Publishing 38 articles and making 95 professional presentations in Fiscal Year 2005-06. To assist public safety officials in emergencies, the center has produced publications for the community such as *A Guide for Explosion and Bombing Scene Investigation; Fire and Arson Scene Evidence: A Guide for Public Safety Personnel;* and *Electronic Crime Scene Investigation Guide: a Guide for First Responders*. In Fiscal Year, 2005-06 NIJ publications assisted by the center were *Forensic Examination of Digital Evidence: A Guide for Law Enforcement; Education and Training in Forensic Science: A Guide for Forensic Science Laboratories, Educational Institutions and Students;* and *Mass Fatality Incidents: A Guide for Human Forensic Identification*. In 2005-06, the center assisted NIJ in publishing *Lesson Learned From 9-11: DNA Identification in Mass Fatality Incidences* and *Digital Evidence in the Courtroom*. The center's assistant director of biological evidence consulted on the 9/11 investigation.
- Advancing methods used to detect explosive agents used in crimes to aid in crime scene investigations. These methods are advancing the way that forensic laboratories analyze explosives.
- Assisting the State Fire Marshal's fire investigators and the Orlando Fire Department in calibrating their scene detectors for the accurate identification of hazards at scenes
- Teaching over 200 forensic chemists Basic and Advanced Fire Debris Analysis so they can be more effective in their identifications of arson accelerants for investigative leads
- Developing on-line searchable forensic databases, such as the Ignitable Liquids Reference Collection, where chemists can look for a similar chromatograph instead of buying numerous containers of ignitable liquids for testing and bringing them into their labs, resulting in a fire hazard. The database is also used to train chemists to recognize the chromatograms of ignitable liquids.
- Advancing the methods used in sex crime investigations by making it possible to create a male suspect's profile from evidence collected up to four days after intercourse; repairing sun damaged DNA evidence left at outdoor crime scenes; and, utilizing the genetic characteristics of the male Y chromosome left at a scene or on a victim, which can be a "last chance" identification. The center is taking the lead to develop a national Y chromosome database for on-line searching.
- Developing a website where family members can eventually search for their missing loved ones on-line, working with members of the Florida Association of Medical Examiners, the National Association of Medical Examiners, and National Coroners
- Graduating 67 students from the Graduate Certificate in Computer Forensics program, thereby expanding the expertise in central Florida and elsewhere

For More Information

Contact: Carrie Morgan Whitcomb, Director, Center for Forensic Science, (407) 823-6469
Email: whitcomb@mail.ucf.edu
Website: http://ncfs.ucf.edu

University of Central Florida College of Optics and Photonics: Center for Research and Education in Optics and Lasers and Florida Photonics Center of Excellence

Purpose

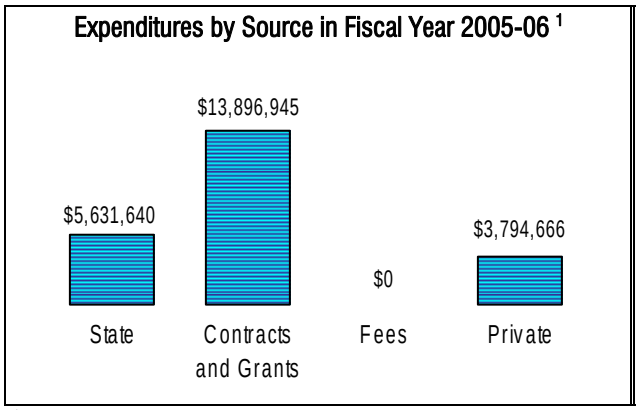
The Board of Regents established the center, called CREOL, in 1985 in response to a recommendation by the Florida High Technology and Industry Council. The council identified seven technology areas (including light wave technology) that had high promise and were critical for diversifying Florida's economy. The center evolved into the School of Optics in 1998 adding the Florida Photonics Center of Excellence in 2003 and then grew into the College of Optics and Photonics in 2004. The college's vision is to be the nation's leader in education, research, and scholarship in optical science and engineering. The center's mission is to provide the highest quality graduate education in optical science and engineering; enhance optics education at all levels; conduct fundamental and applied research upon which future knowledge-based industries can be built; and aid in the development of state and national technology-based industries.

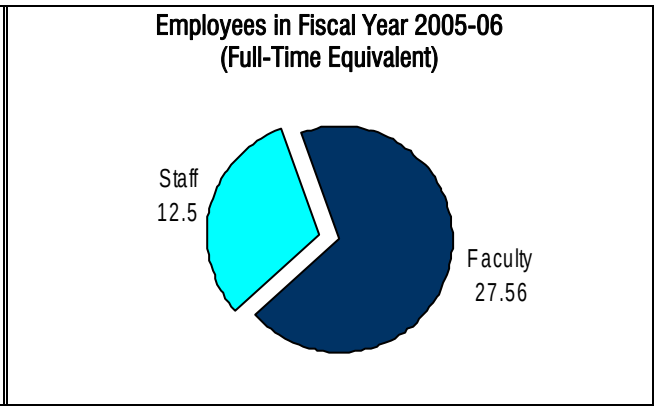
Activities

- Researches all aspects of optics, photonics, and lasers from basic science to prototype development to expand the field of optics and lasers
- Provides interdisciplinary graduate programs leading to masters and doctoral degrees in optics and participates with other departments such as electrical engineering to allow their students to specialize in optics

Resources

Research contracts and grants from the National Science Foundation, the Florida High Tech Corridor Council, private donations, and UCF matching dollars have been the primary sources of support for center activities. The center uses state funds in a variety of ways including expanding facilities, attracting eminent scholars, providing funds for research equipment, and paying its staff salaries and benefits. The center includes over 100,000 square feet of laboratories and offices located on the main campus that have over $40 million in state-of-the-art equipment.





[1] These expenditures do not include all costs to operate the college such as state support for student FTE.

Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Establishing the first full college of optics in the United States in 2004: The College of Optics and Photonics
- Awarding 11 master's degrees and 16 doctoral degrees in Fiscal Year 2005-06
- Submitting 49 patent disclosures in Fiscal Year 2005-06
- Supporting five new start-up companies creating 25 new high-wage and high-skill jobs in the area enabled by optics and photonics technologies
- Developing, in collaboration with the College of Engineering and Computer Science and the College of Business, a small business incubator, intended to support the survival of new businesses, located in the Research Park. The incubator was rated the country's No.1 high-tech business incubator in 2004 by the National Business Incubator Association. This UCF

Technology Incubator is a collaboration between UCF's College of Engineering and Computer Science, the College of Business, CREOL, and the city, county, and other economic development agencies. In the first seven years of existence, the incubator has served more than 90 companies. There are currently 52 companies in the incubator and 21 companies have graduated from the program. These companies have created more than 800 high-paying jobs, raised more than $200 million in investment, and generated revenues in excess of $150 million.

- Completing an addition to the CREOL building with new laboratory and office space that is part of the UCF Incubator, enabling companies to easily access the college's equipment and facilities and to work side-by-side with the faculty and students in developing new products and transferring technology to commercial use
- Funding 24 Florida Photonics Center of Excellence Partnership Projects and generating new funding with 20 of the companies involved in the projects. During Fiscal Year 2005-06, a total of $6.8 million of new private funding was obtained with $5.3 million in matching funds to the Partnership Projects coming from the companies. Five Florida universities are participating in the Partnership Projects.
- Recruiting 57 members into the college's Industrial Affiliates Program in Fiscal Year 2005-06 (48 in the previous year) and bringing in $60,500 along with approximately $153,000 of in-kind support and $163,000 of discounts

For More Information

Contact: Dr. Eric Van Stryland, Dean, College of Optics and Photonics: Center for Research and Education in Optics and Lasers and Florida Photonics Center of Excellence, (407) 823-6800
Email: director@creol.ucf.edu
Website: www.creol.ucf.edu/

University of Central Florida
Florida Solar Energy Center

Purpose

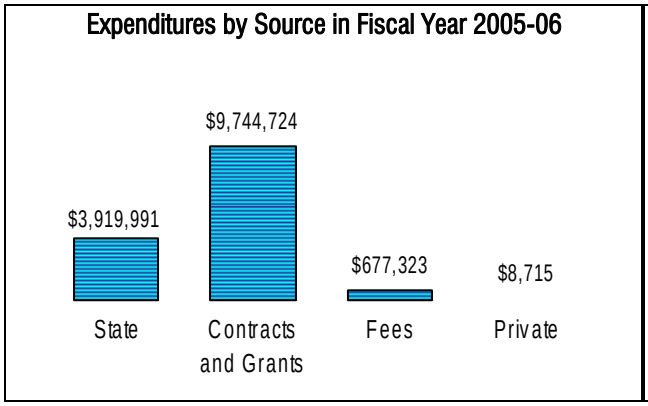
The Legislature established the center as part of the Solar Energy Standards Act of 1976 (Ch. 74-185 and sections 1-4, Ch. 76-246, *Laws of Florida*). The center was intended to help develop new sources of energy and expand existing sources, particularly solar energy. The center's primary purpose is to set standards to ensure that solar energy systems manufactured or sold within the state are effective and have high quality materials, workmanship, and design.

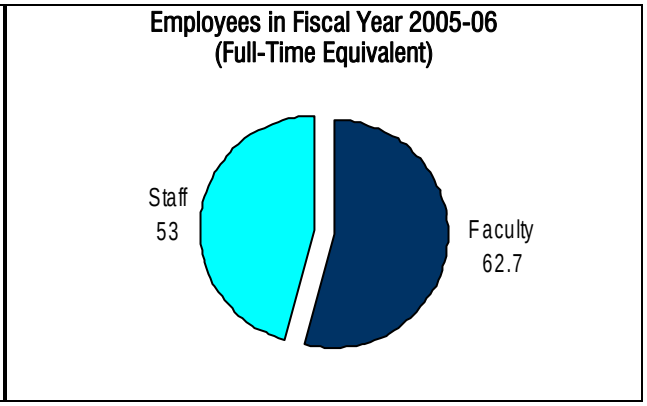
Activities

- Conducts research, tests, and evaluates solar equipment and provides education to a variety of groups
- Studies hydrogen energy systems, efficient buildings, photovoltaics (solar power technology), alternative fuels and fuel cells, solar thermal systems, and pollutant detoxification
- Tests, evaluates, and certifies solar energy equipment using a full-sized solar thermal simulator
- Provides continuing education programs for teachers, students, industry, government, and the general public
- Provides distance education courses for international audiences
- Develops K-12 science curricula for public schools

Resources

Research contracts and grants from the US Department of Energy, the National Aeronautics and Space Administration, the US Department of Defense, the Sandia National Laboratory, the National Renewable Energy Laboratory, the Florida Energy Office, and the Florida Department of Community Affairs have been the primary sources of support for center activities. The center uses state funds primarily to pay its faculty and staff salaries and benefits. The center includes a 20-acre research complex on Florida's Space Coast adjacent to UCF's Cocoa Campus.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Saving state residents more than $2.2 billion in energy costs or $150 million annually through the building research program
- Installing more than 250,000 solar water heating systems in Florida, saving homeowners $30 million annually
- Training more than 15,000 industry professionals, government officials, and others in efficient energy use
- Accelerating a market now growing 30% annually in the use of photovoltaic (solar power)

For More Information

Contact: Dr. James M. Fenton, Director, Florida Solar Energy Center, (321) 638-1000
Email: jfenton@fsec.ucf.edu
Website: www.fsec.ucf.edu/

University of Florida
Interdisciplinary Center for Biotechnology Research

Purpose

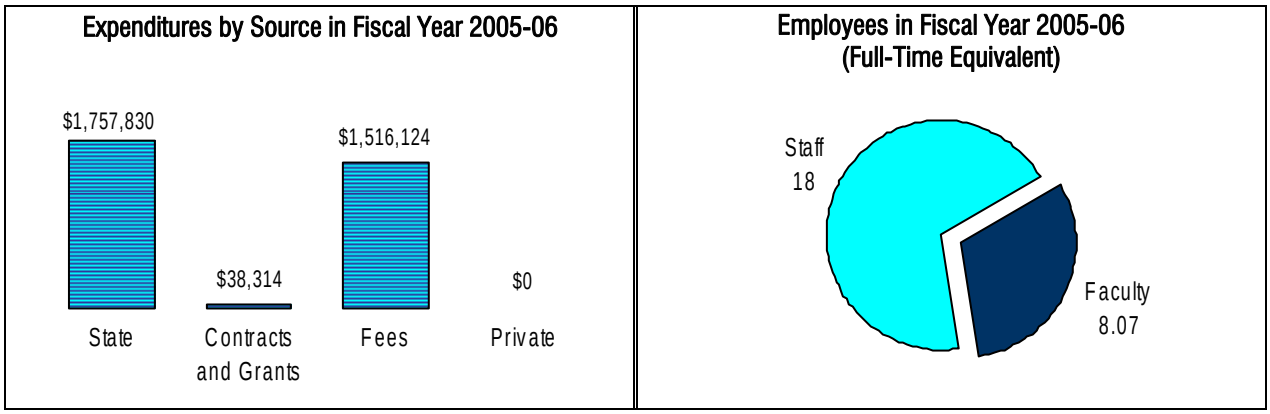
The University of Florida (UF) established the center in 1987 with financial support from the Florida Legislature. The center's mission is to coordinate and enhance biotechnology research across multiple disciplines and to be a biotechnology resource to Florida's universities and emerging biotechnology corporations within Florida.

Activities

- Staffs and maintains a system of core research laboratories to support its own biotechnology research as well as faculty in 98 departments at UF, seven other state universities, 28 Florida companies, and 65 non-profit organizations during 2005-06. The center concentrates on four research areas.
  - Genomics, the study of genes and their function, whose applications include genome sequencing and gene expression diagnostic tests for endangered wildlife, agriculture, and medical applications
  - Cellomics, the examination of chemical and molecular interrelationships of cellular components, with applications related to basic biology as well as medical and agricultural applications including vaccine development, bio-terrorism defense, and wildlife pathology
  - Proteomics, the study of proteins and their functions, involving molecular biomarkers, mass spectrometry and protein chemistry
  - Bioinformatics, the management and analysis of biological research data using advanced computing techniques. The center is the primary entity on campus providing large scale bioinformatics as a service. Applications supported in this area include research related to glaucoma and other opthamological conditions.
- Offers faculty and students a series of seminars and workshops on topics ranging from specific applications to general laboratory techniques. The workshops target graduate students and faculty members who are interested in applying molecular biology methodology to their research but do not have the necessary experience or background to appreciate the potentials and limitations of the techniques. Over 70 UF faculty members from more than 25 different departments have either lectured or assisted in experimental design and laboratory instruction.
- Offers an introductory biotechnology graduate credit course to all interdisciplinary graduate students each year (169 students in 2004-05)

Resources

State funds and fees provide the primary support for center activities. The center uses state funds to pay its faculty and staff salaries and benefits and to acquire and maintain research equipment and supplies. Other notable resources include a 22,000-square-foot campus laboratory facility that was completed in 2006.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Conducting and supporting research that has advanced knowledge in a variety of areas including vaccine development, bio-terrorism defense, wildlife pathology, and glaucoma and other vision related conditions. The center's assistance to other faculty and researchers has led to other promising initiatives. For example, the Center of Excellence for Regenerative Health Biotechnology was a spin-off from the center in 2003.
- Providing materials and services at a fraction of the cost in the commercial market. For example, monoclonal antibodies, used in cancer research, organ rejection prevention, and other health applications are produced at one-tenth the commercial cost. Most state universities, as well as Nova Southeastern, Eckerd, and other independent institutions benefit from such efficiencies as well as from access to the center's costly facilities and equipment on a fee basis. Other entities that work with the center include the Kennedy Space Center, the Fish and Wildlife Commission, SeaWorld, the Shands and Moffett Cancer Centers, the US Department of Agriculture, the Department of Defense, and the Institute of Food and Agricultural Sciences.
- Supporting the interdisciplinary training of students and faculty using seminars and workshops in biotechnology and related fields important to Florida's well being and economic development

For More Information

Contact: Dr. Robert Ferl, Director, Interdisciplinary Center for Biotechnology Research, (352) 273-8030
Email: robferl@biotech.ufl.edu
Website: www.biotech.ufl.edu/

University of Florida
Center of Excellence for Regenerative Health Biotechnology

Purpose

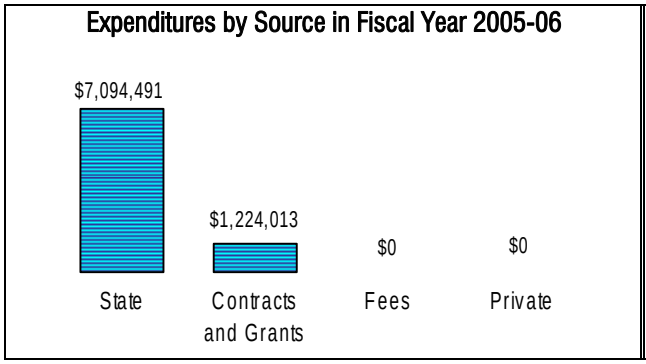
The Board of Governors and the University of Florida (UF) established the center in 2003 through a competitive center of excellence process authorized by the Legislature (s.1, Ch. 2002-265, *Laws of Florida*). The center's mission is to stimulate promising research and facilitate commercialization of technologies that will provide treatments and cures for human diseases, as well as create new companies and high-wage jobs for Florida. By extending the university's existing research capacity and collaborating with the biotechnology industry, the center intends to build Florida's position in biotechnology to address the prevention, cure, and rehabilitation of chronic, genetic, and degenerative diseases, as well as traumatic injuries, microbial infections, and cancer using breakthrough technologies.

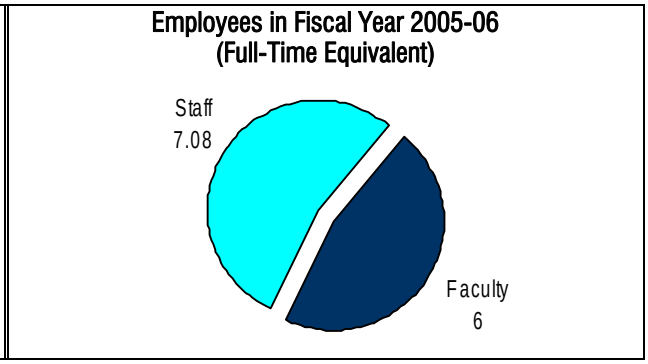
Activities

- Expanding the clinical biopharmaceutical production and testing capacity of the biotechnology industry through Florida Biologix, the center's biopharmaceutical manufacturing and testing services operation which provides current Good Manufacturing Practices (standards of the US Food and Drug Administration) for process development, clinical trial material production, and related support services
- Implementing training programs for faculty to deliver curricula at the high school and college level to attract and train students and those currently in the workforce for entry and mid-level careers in the biotechnology industry
- Fostering regenerative health research through the UF Division of Cellular and Molecular Therapy that is now housed in the Center's Research and Education Building. In addition, the center serves as a strategic partner in proposals submitted for translational research (the clinical application of scientific medical research), such as the National Institutes of Health (NIH) Cardiovascular Cell Therapy Research Network, the NIH Translational Sciences Award, and Nanomedical (involves the use of molecular machine systems to address medical problems) Science and Engineering Graduate Studies via a National Science Foundation grant.
- Collaborating with the Powell Gene Therapy Center to develop gene therapies to treat genetic and acquired diseases including alpha-one anti-trypsin deficiency, blindness, and muscular dystrophy. Other collaborators include the UF College of Medicine and two French biomedical institutes—the Institute National de la Sante et de la Recherche Medicale, the French equivalent of the National Institutes of Health, and the Etablissement Francais Du Sang pays De Loire, the French national blood bank, which have signed a four-year agreement with the center to bring new therapies to clinical trials and support biotechnology industry growth through product and workforce development.

Resources

The initial Center of Excellence grant of $10 million in 2003 and $10 million of institutional matching funds have been the primary source of state support for center activities This funding has been leveraged with external resources. External funding since inception includes a $2 million US Department of Commerce renovation grant, a $599,997 National Science Foundation grant for training community college and high school students and teachers, a $500,000 Workforce Florida career and technical training grant, and revenues generated by Florida Biologix. The center has used the state center of excellence funds for facility construction and remodeling (two buildings comprising a total of 44,800 square feet), faculty and staff salaries and benefits, and other start-up costs. Other notable resources include a 23,800-square-foot, state-owned facility that includes 11,000 square feet of unidirectional clean rooms and production support space, and 5,000 square feet of process development laboratories.





Note: Figures in the above charts were adjusted based on updated information provided by the center.
Source: Board of Governors, Institutes and Centers Fiscal Information and the Center of Excellence in Regenerative Health Biotechnology.

Reported Accomplishments Include

- Completing renovations for its research and educational facilities which are fully occupied. Construction of the Florida Biologix facility is complete and commissioned, equipment has been installed, and the facility is operational. The center launched its manufacturing and product testing operation in October 2006.
- Executing an agreement with the Applied Genetic Technologies Corporation, a Florida-based clinical stage start up company, that is a key link in the pharmaceutical testing and development chain, is supported by a $24-million venture capital investment, and will be housed in the center's Research and Education Building. The corporation's director reported that without this space, it might have relocated outside the state.
- Attracting over $5.8 million in additional grants from international, federal, and private sources since its inception in 2003
- Establishing several active and completed manufacturing contracts through the Florida Biologix manufacturing operation launched in October 2006. Client sponsors include international, domestic private and public, and in-state companies. An active multi-media marketing program has been implemented to attract clients.
- Developing a new high school course in biotechnology using grant funding received in February 2006. The course has been accepted by the Department of Education for Career and Technical Education or Science credit which could serve as a major, help develop courses at the community college level, or help to develop certificate courses that will contribute to the need for trained technicians and scientists in the field.
- Hosting 18 group events, two one-week courses for 40 middle school and high school teachers, and giving classes to 476 high school students from around Florida
- Establishing three internships
- Conducting industry focus groups and a needs assessment to determine the current and future workforce needs of companies from around the state
- Establishing an active support and participation network. The network has 27 companies including large, small, device, biotech, and agritech organizations such as BioFlorida, Scripps Research Institute, Enterprise Florida, the Florida Association of Science Teachers, the Florida Association of Community Colleges, the Florida Association of Science Supervisors, the Florida Research Consortium, the UF Economic Development Administration Center, the UF Biotechnology Incubator, the UF Center for Precollegiate Education and Training, the UF College of Medicine, professional societies, regional economic development agencies, chambers of commerce, material and equipment suppliers, four community colleges, three school districts, three international institutes, and regional workforce boards.

For More Information

Contact: Dr. Richard O. Snyder, Director, Center of Excellence in Regenerative Health Biotechnology, (386) 418-1642
Email: rsnyder@cerhb.ufl.edu
Website: http://cerhb.rgp.ufl.edu/

University of Florida
Center for Studies in Criminology and Law

Purpose

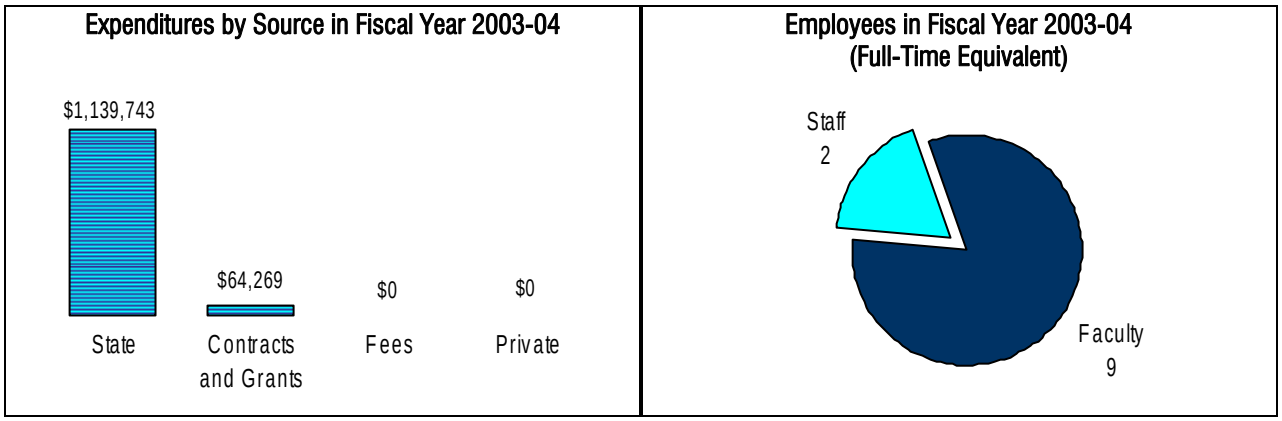
The University of Florida (UF) established the center in 1985 with four primary mandates: (1) support an interdisciplinary teaching program in criminology and law and society for both graduate and undergraduate students; (2) support the university's broad commitment to its general education program; (3) pursue research and analysis in criminology, law and society; and (4) contribute to the university's strategic plan, especially regarding teaching and research relevant to children and families. The center evolved into the UF Department of Criminology, Law and Society in 2002-03, and since 2003-04, no longer functions as a center.

Activities

- Provides instruction and research in criminology and related fields. These activities have carried over to the department status.
- Supports the largest interdisciplinary degree program at UF. The criminology major is intended to introduce students to the study of criminal behavior, criminal justice systems, and law from a multidisciplinary, liberal arts perspective.
- Offers graduate study leading to an MA degree, a PhD degree, and a Joint JD/MA degree through the Department of Criminology, Law and Society at UF. Graduate education typically involves training in both crime and justice and law and society. Center graduate students may also obtain interdisciplinary training leading to certification through programs offered by the Center of Latin American Studies, the Center for Gerontological Studies, and the Center for Women's Studies and Gender Research. Students with a particular interest in research methodology may also obtain the Social Science Methodology Graduate Certificate.

Resources

State funds were the primary source of support for the center's activities and were used to support its faculty and staff and related expenses. The last year that this entity was funded as a center was in Fiscal Year 2003-04.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Ranking 11th in the nation among all graduate programs in criminology and criminal justice (*U.S. News and World Report,* 2005)
- Establishing one of the largest majors (approximately 650 undergraduates) in the College of Liberal Arts and Sciences, with strong degree production, particularly at the undergraduate level. In 2004-05, one graduate and 160 undergraduate degrees were awarded. In 2005-06, nine graduate and 216 undergraduate degrees were awarded.

For More Information

Contact: Dr. Lonn Lanza-Kaduce, Chair, Department of Criminology, Law and Society, (352) 392-1025 ext. 222
Email: llkkll@crim.ufl.edu
Website: http://web.crim.ufl.edu/

University of Florida
Center for Latin American Studies

Purpose

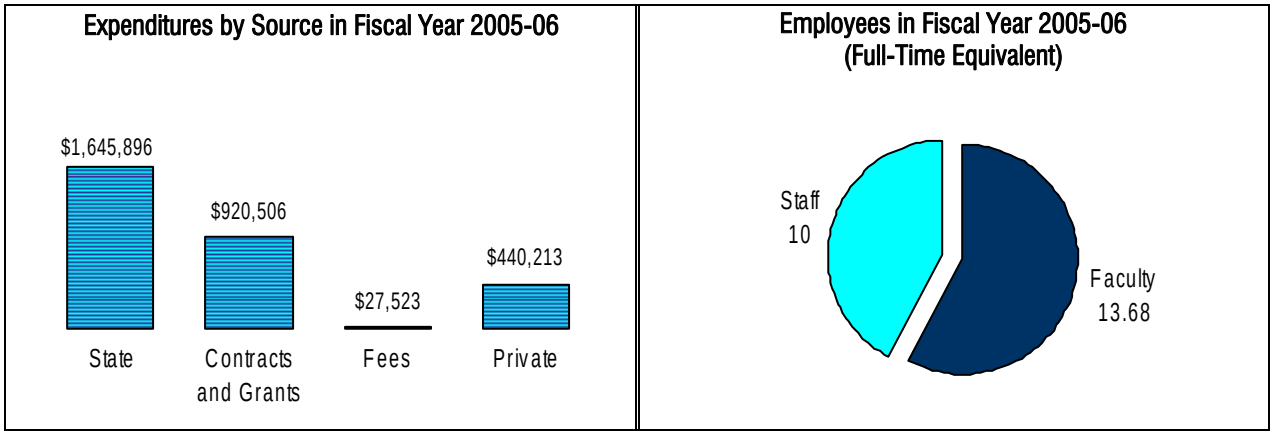
The University of Florida (UF) established the institute in 1930. Upon becoming one of the first US Department of Education, Title VI National Resource Centers in 1963, the Institute for Inter-American Affairs changed its name to the Center for Latin American Studies. The center's mission is to advance knowledge about Latin America and the Caribbean and its peoples throughout the hemisphere, and to enhance the scope and quality of research, teaching, and outreach in Latin American, Caribbean, and Latino Studies at UF.

Activities

- Administers an interdisciplinary graduate and undergraduate academic program in Latin American Studies and offers the following credentials:
  - undergraduate minor and Certificate in Latin American Studies;
  - undergraduate and graduate Certificate in Translation Studies;
  - graduate Certificate in Latin American Studies;
  - Tropical Conservation and Development Graduate Certificate and Concentration; and
  - master's degree in Latin American Studies (MALAS & MALAS/JD).
- Funds student fellowships and interdisciplinary research
  - Organizes interdisciplinary graduate research and training programs in collaboration with a number of UF colleges
  - Monitors business in and trade with Latin America, an important segment of the Florida economy
  - Organizes faculty and student exchanges between UF and institutions in Latin America and the Caribbean
  - Co-administers the Florida/Brazil Linkage Institute with UF and Miami Dade College
  - Sponsors study abroad programs in Latin America for language, culture, and business
  - Organizes conferences, workshops, and discussions on Latin America and the Caribbean
  - Administers the Out-of-State Tuition Exemption Program which awards out-of-state tuition exemptions for qualified Brazilians studying at Florida's public institutions of higher education
  - Hosts distinguished scholars and artists through the Bacardi Family Eminent Chair in Latin American Studies since 1992. The first Bacardi Scholar was Oscar Arias, former President of Costa Rica and recipient of the Nobel Peace Prize. The 2006-07 Bacardi Scholar is Dr. Jorge Duany, chair of the Department of Sociology and Anthropology at the University of Puerto Rico.

Resources

State funds and external grants are the primary support for center activities. The center also receives support from $5.9 million in private endowment funds. The center uses the state funds primarily to pay its faculty and staff salaries and benefits.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Receiving continuous funding from the US Department of Education Title VI Program since being designated a National Resource Center in Latin American Area Studies in 1961
- Monitoring the economic, social, and political events that affect business in Latin America through the Latin American Business Environment Program housed in the center. The program is partially supported by the Center for International Business Education and Research funded by a federal grant to UF's Warrington College of Business Administration. The program publishes an annual Latin American Business Environment Report which is widely disseminated across the state.
- Completing a three-year Ford Foundation-funded research project focusing on religious life among Brazilian, Guatemalan, and Mexican immigrants in Florida. The project began January 1, 2003, and the Ford Foundation has funded a second phase, beginning in January 2007.
- Receiving a three-year $1.9 million grant in 2005 from the Gordon and Betty Moore Foundation to build in-country institutional capacity in the Andes-Amazon region and provide graduate training in natural resource management and conservation through the Center's Tropical Conservation and Development Program and the School of Forest Resources and Conservation
- Awarding 11 master's degrees in Latin American Studies in Fiscal Year 2005-06 and 13 master's degrees the previous year
- Conducting internal program evaluations. Recent examples include a 2005 review of the master's in Latin American Studies program that resulted in changes to core courses and the adoption of a student evaluation process that requires all graduates to complete an exit questionnaire. The center conducted a student evaluation of its Tropical Conservation and Development Program in 2005 as well. The evaluation resulted in curriculum changes to provide greater emphasis on research design and to teach students how to prepare and publish academic articles.

For More Information

Contact: Dr. Carmen Diana Deere, Director, Center for Latin American Studies, (352) 392-0375
Email: deere@latam.ufl.edu
Website: www.latam.ufl.edu/

University of Florida
Center for Women's Studies and Gender Research

Purpose

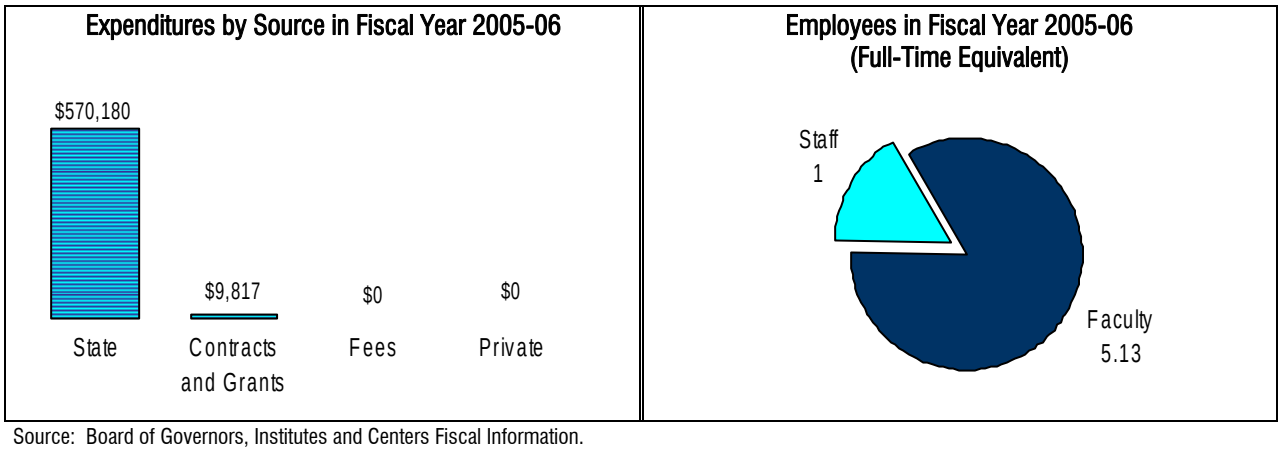
The University of Florida (UF) established the center in 1994 to offer UF students a broad-based, interdisciplinary approach to the study of gender; to stimulate individual and collaborative research on gender; to contribute to the understanding of gender issues and multicultural diversity; to furnish services related to gender issues to the local community as well as to the state; to increase equity and efficiency in the university; and to enhance UF's national and international reputation.

Activities

- Offers three areas of concentration within the BA program: General Concentration, Concentration in Theories and Politics of Sexuality, and Concentration in Gender and International Development
- Offers a minor in Women's Studies and a minor in Theories and Politics of Sexuality
- Offers master's and doctoral students a graduate certificate in Women's Studies in conjunction with other degree programs, for example, a joint MA/JD with the College of Law. Graduate students may choose Master of Arts (thesis) or Master of Women's Studies (non-thesis) degrees.
- Offers a PhD concentration in Women and Gender Studies
- Administers the graduate certificates in Gender and Development for the Gender, Environment and Agriculture Participation (GEAP) Program in the Department of Agricultural Education and Communications. GEAP aims to promote gender and development issues among students, faculty, and administrators at UF.
  - Sponsors monthly "Gender Conversations" - research in progress presentations
  - Participates in faculty exchanges with the University of Dar Es Salaam in Tanzania and the UF Center for African Studies
  - Supports community outreach through service learning opportunities and research projects involving public schools, nursing homes, centers for at-risk youth, and other entities

Resources

State funds almost solely support center activities. The center uses the state funds primarily to pay its faculty and staff salaries and benefits.



Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Publishing, on average, two articles per year. Publications in Fiscal Year 2005-06 related to the relationship between Hispanic churches and community development and women and corporate leadership.
- Providing release time for teaching center faculty using the Lockhart Fellowship
- Supporting a distinguished scholar in woman and gender studies using the Yeomans Endowed Chair. The program focuses on Peru and Nicaragua and has helped to create a link with the Center for Latin American Studies.
- Establishing the only free-standing campus building in the US devoted to Women's Studies, benefiting the students and faculty affiliated with the center

- Educating students including 32 undergraduates and five graduate students majoring in Women's Studies and 51 students with a minor in the field in Fiscal Year 2005-06. The center awarded nine bachelor's, and two master's degrees in Fiscal Year 2005-06, and five bachelor's and one master's in the previous year.

For More Information

Contact: Dr. Milagros Pena, Director, Center for Women's Studies and Gender Research, (352) 392-3365
Email: mpena@soc.ufl.edu
Website: http:// web.wst.ufl.edu/

University of South Florida
Diabetes Center

Purpose

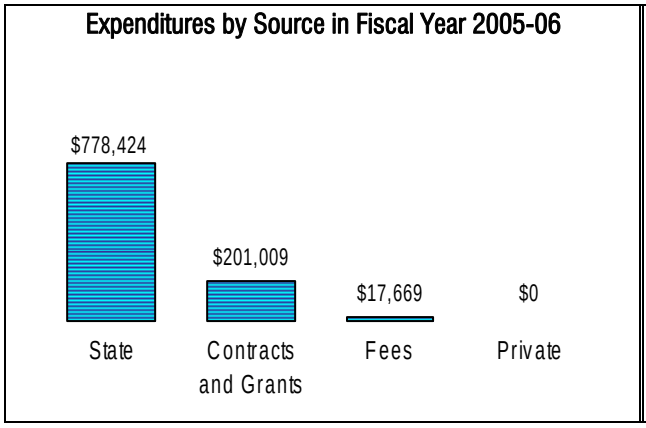
In 1976, the Legislature authorized the establishment of three diabetes centers for education, treatment, and research with one center to be located at each of the medical schools in the state (Ch. 76-53, *Laws of Florida*). The legislative intent was to establish diabetes centers to train medical students and healthcare professionals in the care and management of patients with diabetes mellitus; to educate diabetic patients, relatives, and the public; to provide inpatient and outpatient facilities for treatment of diabetic patients; and, to conduct research in diabetes mellitus. The center's mission is to provide professional, student, and patient education to improve the health of individuals who have diabetes mellitus and to conduct investigations into solutions for the many problems associated with diabetes mellitus.

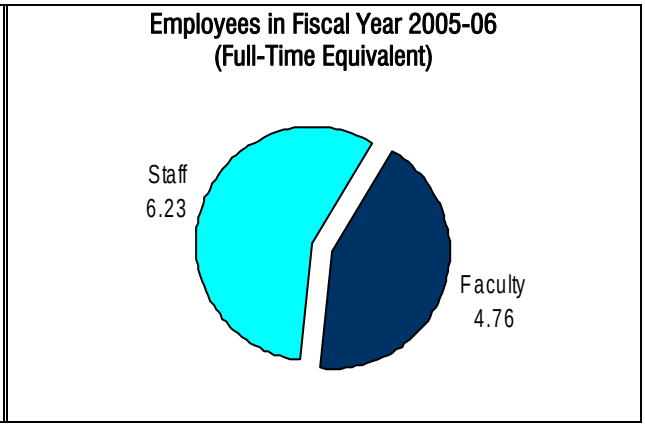
Activities

- Provides adult diabetes education through patient education classes including a 10-hour, comprehensive diabetes self-management course; shorter topic-driven courses such as insulin initiation and monitoring; and a variety of manuals and videos, including low literacy education materials
- Provides pediatric diabetes education in short class and family group sessions
- Developed diabetes education computer games in collaboration with the College of Engineering Computer Science Division to help children learn to manage their diabetes
- Provides diabetes nutrition education through individual consultations and small group classes
- Provides medical school student education through a variety of classes, clinical rotations, and research projects
- Provides nursing school student education through a patient education practicum and classroom education
- Provides professional development for healthcare professionals through continuing education courses, a semi-annual basic diabetes education course, an annual nutrition update program for dietitians, a dietetic internship program, and a train-the-trainer program for county health department clinical staff
- Provides community service education through participation at a variety of health fairs, insulin pump fairs, and support groups
- Conducts a variety of research designed to solve many problems of diabetes mellitus. For instance, the center is participating in a long-term National Institutes of Heath study designed to determine the relationship between diabetes control and complications of diabetes mellitus; evaluating the effects of hyperglycemia upon the developing brain; evaluating the effect of drugs (rosiglitazone and glyburide) as therapy in type 2 diabetes; evaluating the effect of inhaled insulin in patients with asthma and chronic lung disease; and, identifying potential indicators for type 1 diabetes and effective strategies for avoiding type 1 diabetes.

Resources

State funds have been the primary source of support for center activities, but it also received research contracts and grants from the National Institutes of Health, the American Heart Association, the Juvenile Diabetes Research Foundation, and pharmaceutical companies. The center uses state funds primarily to pay its faculty and staff salaries and benefits.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Participating in the National Institutes of Health diabetes control and complications trial which concluded in 1993 after demonstrating conclusively that intensive treatment works. The study fundamentally improved diabetes treatment by showing that keeping blood glucose levels as close to normal as possible slows the onset and progression of eye, kidney, and nerve diseases caused by diabetes.
- Conducting clinical trials that helped establish new effective agents for the current treatment of diabetes
- Conducting research to increase understanding of the basic mechanisms of diabetes and its complications

For More Information

Contacts: Dr. John I. Malone, Co-Director, Diabetes Center, (813) 974-5777, and Dr. Anthony D. Morrison, Co-Director, Diabetes Center, (813) 974-5766
Email: jmalone@hsc.usf.edu and amorriso@health.usf.edu
Website: www.hsc.usf.edu/medicine/diabetes/index.html

University of South Florida
Florida Institute of Oceanography

Purpose

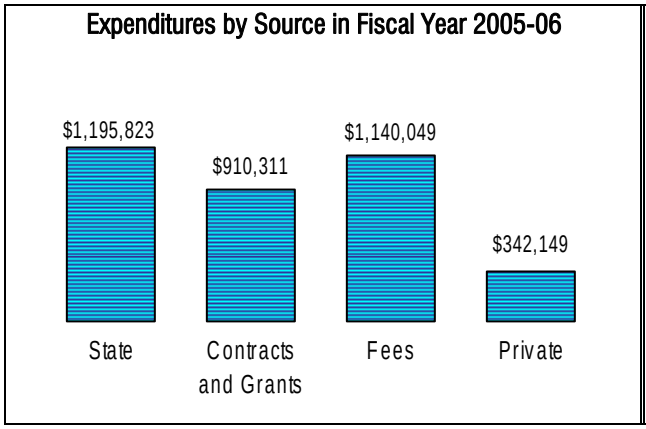
The Board of Regents established the institute in 1970 to provide centralized, shared-use infrastructure and administration to support the state's ocean science education, research, and resource management programs. The institute's purpose is to minimize the expensive duplication of facilities and equipment that academic institutions and state agencies need to conduct their work. The institute consortium currently has 21 members including all of Florida's public and most of its private academic institutions and state environmental agencies that maintain ocean programs and require ocean access.

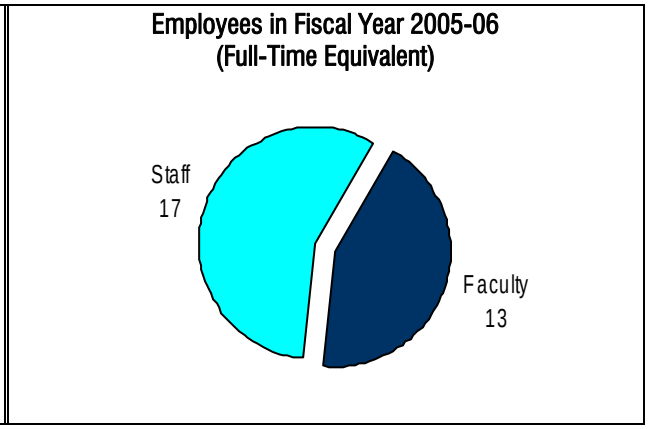
Activities

- Operates two ships and a marine laboratory for use by public and private university faculty and students, state agencies, and other marine science research entities
- Maintains and operates two state research vessels for oceanographic and coastal marine education and research. The institute operates a 71-foot ship designed to work in Florida's estuarine and near-shore waters and is the primary academic vessel supporting training cruises, dissertation research, and near-shore projects of students and faculties of the institute's consortium members.
- Operates a 110-foot ship for coastal ocean research with the capacity to accommodate 12 scientists
- Operates a marine laboratory located on Long Key in the Florida Keys through a partnership between the institute and the Florida Fish and Wildlife Conservation Commission. Since 1989, the Keys Marine Laboratory is the only residential, full-service, tropical marine laboratory in the continental US. The laboratory serves a wide range of programs including agency experimental research; student and in-service teacher education; ecosystem management studies; Florida coastal zone monitoring and projection; marine bio-products and health research; and coordinated regional and international environmental research.
- Raises funds and administers multi-institutional grants and contracts to initiate new educational and research programs in all fields of the marine sciences on behalf of its members and the state

Resources

State funds, fees paid by institute facility users, and research contract and grant overhead funding have been the primary sources of support for institute activities. The institute uses the state funds primarily to pay institute faculty and staff salaries and benefits and to provide competitive grants of ship time to its members for education and research. The institute is co-located with the Florida Marine Research Institute, the USF College of Marine Sciences, and the US Geological Survey at the Port of St. Petersburg and includes office space and ship support facilities. The Keys Marine Laboratory on Long Key includes dormitories, laboratories, a flow-through sea water system, and three boats each under 30 feet.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Minimizing duplication of state resources by providing entities engaged in marine education, research, and resource management access to sea-going research vessels at rates below market rate (or actual costs)
- Partnering with the Florida Fish and Wildlife Conservation Commission to minimize duplication of state resources and provide the research community affordable access to the state's only tropical marine laboratory facilities with residential housing, wet and dry labs, and classroom units
- Obtaining over $15 million in grants and contracts over the past five years to support research and education programs on behalf of its members
- Acting as the administrative center and providing management services for the Florida Coastal Ocean Observing System Consortium, a network that provides information critical for effective coastal emergency management efforts; recreational and commercial fisheries; red tide monitoring and prediction; mitigation of effects of natural hazards; maritime safety; and, several other important coastal programs
- Providing a forum for important input about the development of state and national ocean policies through regular meetings of institute members. These meetings focus on issues confronting marine science education, research, and resources management.

For More Information

Contact: Dr. John C Ogden, Director, Florida Institute of Oceanography, (727) 553-1100
Email: jogden@marine.usf.edu
Website: www.marine.usf.edu/FIO/

University of South Florida
Institute for At-Risk Infants, Children and Youth, and Their Families

Purpose

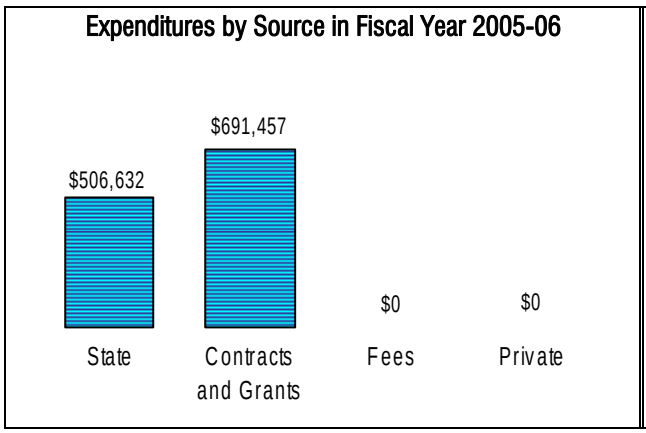
In 1989, with funding from Legislative appropriation (Ch. 89-253, *Laws of Florida*), the University of South Florida (USF) established the institute. The institute was intended to conduct research on at-risk populations to identify the most effective prevention and early intervention strategies to provide a healthy start for children to excel in school. Risk factors include being in a single-parent family, receiving welfare, and not speaking English at home. The institute's mission is to develop policy and conduct research and training to identify the characteristics of and strategies needed to meet the educational needs of at-risk infants, children, youth, and their families.

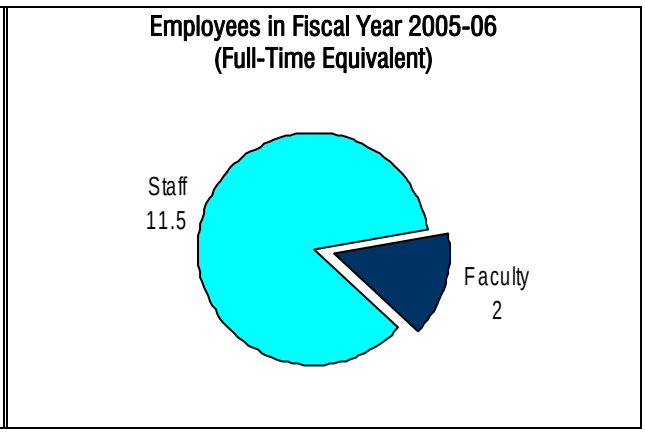
Activities

- Collaborates with the David C. Anchin Center for the Advancement of Teaching at USF to address the severe shortage of quality teachers and principals in west-central Florida by employing innovative, non-traditional recruitment, training, and retention strategies and by developing expandable, adaptable models for the state and nation. Strategies include mentoring new principals in Title I schools; development of executive leaders; teacher retention and recruitment at the college level; and support for new teachers in the first three years in the profession. Special emphasis has been placed on the critical need to develop and retain teachers for the at-risk school population.
- Collaborates with the Pasco County School District on needs- and research-based innovative programs to support the recruitment, training, placement, retention, and evaluation of highly-qualified, mid-career professionals, recent graduates, under-represented groups, and current out-of-field teacher into K-12 teaching positions
- Contracts with the Florida Department of Education to provide ongoing technical assistance and resources in the areas of student outcomes, curriculum and instruction, special education, and at-risk populations in charter schools
- Provides training to charter school and district administrators, teachers, and personnel in the areas of special education legal and compliance issues and best practices, and operates a clearinghouse and preview center for charter school information available for public use

Resources

Research contracts and grants from the US Department of Education, US Aid, and the Florida Department of Education have been the primary sources of support for institute activities. The institute uses the state funds primarily to pay its faculty and staff salaries and benefits.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Establishing and administering the first university-operated charter school in 1998. The institute was involved in every aspect of designing, implementing, and operating the school.
- Assisting in the establishment of the Florida Charter School Resource Center within the institute to provide assistance to other charter schools in the state
- Assisting in the development of guidelines for school districts, schools of education, and state departments of education seeking to improve services to at-risk populations. More than 30 national professional organizations (such as American

Association of School Administrators, American Federation of Teachers, Children's Defense Fund, National Education Associations, and the Parent Teacher Association) developed the guidelines in cooperation with the U.S. Department of Education's Office of Research and Improvement and the National Center for Research on Educational Accountability and Teacher Evaluation at Western Michigan University.

- Conducting several evaluations over the last several years including statewide evaluations for two federally funded parent involvement resource center grants, an evaluation of a state-funded regional literacy program, and an evaluation of Florida's full-service schools. The institute also evaluated Florida's childcare services and developed social indicators of the quality of life of Florida's children.
- Financing 8 to 10 graduate assistants each year. The majority of these students are in the special education department and the school psychology program.

For More Information

Contact: Dr. JoEllen Carlson, Director, Institute for At-Risk Infants, Children, Youth and Their Families, (813) 974-3808
Email: JVCarlson@iirp.usf.edu
Website: http://ari.iirp.usf.edu/institutes/ari-default.aspx

University of South Florida
Institute for Research in Art

Purpose

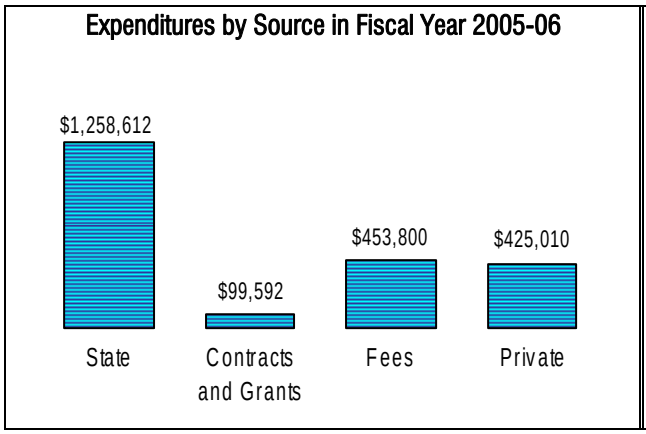
The University of South Florida (USF) created the institute in 1989 to bring together two long-established organizations: the Art Galleries Program/Contemporary Art Museum founded in 1961 and the Graphicstudio founded in 1968. The institute's mission is to provide education, service, and research relative to exhibiting, creating, and publishing visual arts. In addition to bringing together the galleries/art museum and Graphicstudio, the institute also manages the Public Art program at USF. The institute involves all these entities, as well as USF's School of Art and Art History, to make the best possible use of artist residencies, available resources, and facilities that directly benefit students and serve the community.

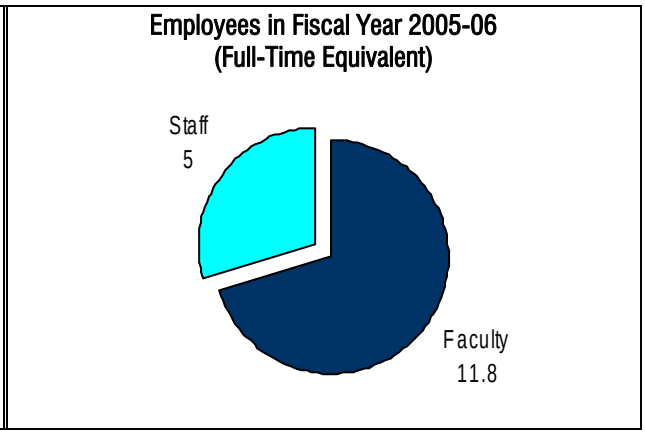
Activities

- Established the Graphicstudio as an experimental collaborative workshop for world-renowned contemporary artists to work with the institute's faculty and staff to research the application of traditional and new techniques for the production of limited edition prints and sculpture multiples. The Graphicstudio offers an array of educational programs and opportunities for art students, art professionals, and the public including graduate assistantships through the USF Art Department, student internships, and credit courses in printmaking history and techniques.
- Presents numerous significant exhibitions of contemporary art from Florida, the United States, and around the world, including Africa, Europe, and Latin America. These exhibitions are displayed at The Contemporary Art Museum. Changing exhibitions are designed to introduce students, faculty, and the community to current cultural trends. The museum maintains the university's art collection which is comprised of more than 5,000 original art works including graphics and sculptures by internationally acclaimed artists such as Roy Lichtenstein, Robert Rauschenberg, and James Rosenquist, who all worked at USF's Graphicstudio. Contemporary photography and African art are also important areas of the collection.
- Operates a public art program at USF that acquires artwork to be placed in and around new facilities. Florida's Art in State Buildings Program allows the institute an opportunity to work with many of the nation's most prominent public artists to develop projects that enhance the aesthetics of the USF campus and enrich the cultural life of its students, faculty, staff, and visitors.

Resources

State funds, fees collected from the sale of art, subscriptions to the institutes publications, and private donations have been the primary sources of support for institute activities. The institute uses state funds primarily to pay its faculty and staff salaries and benefits. The institute has the 12,000 square foot Graphicstudio, which includes office space; an art gallery; an etching, lithography, and photogravure studio with a variety of etching and printing equipment; and a vault for art storage. The Contemporary Art Museum is a free-standing 11,030 square foot building near the center of the main USF campus.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Creating more than 600 limited-edition fine art works at Graphicstudio from over 100 leading international contemporary artists
- Developing new processes and treatments of traditional methods using the ongoing research of Graphicstudio's printers and artisans. For example, the woodcut process, unchanged since the 9th century, has been transformed by using photographically generated stencils that allow for extremely fine detail.
- Completing major public art projects for the institute by such premier artists as Alice Aycock, Dale Eldred, Richard Fleischner, Doug Hollis, Nancy Holt, Tim Rollins and K.O.S., James Rosenquist, Ned Smyth, and Elyn Zimmerman
- Receiving recognition, the National Gallery of Art in Washington, D.C., in 1986 established an archive for Graphicstudio works; the only university-based workshop to be so honored thereby increasing the reputation of the university. In 1990, the national gallery hosted an exhibition and catalogue, Graphicstudio: Contemporary Art from the Collaborative Workshop at the University of South Florida. Further collaborations with museums and publications of the studio tour nationally.
- Presenting numerous significant and investigative exhibitions of contemporary art from Florida in the USF Contemporary Art Museum, the US, and around the world, including Africa, Europe, and Latin America. The exhibits broaden and increase the cultural experience of university faculty, students, and surrounding communities.

For More Information

Contact: Dr. Margaret A. Miller, Director, Institute for Research in Art, (813) 974-3503
Email: mmiller@arts.usf.edu
Website: www.cam.usf.edu/index.html

University of South Florida
Nanomaterials and Nanomanufacturing Research Center

Purpose

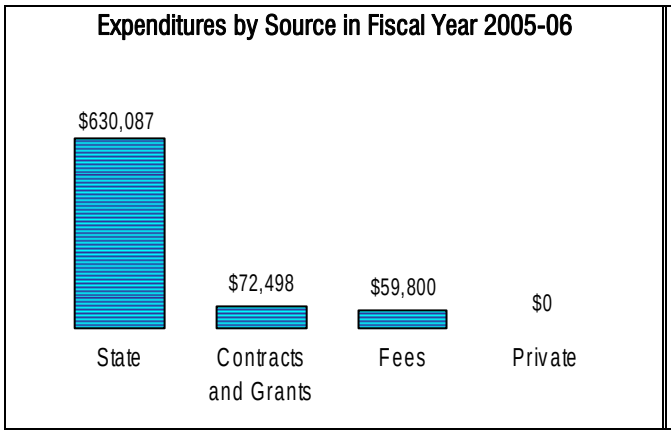
The center began in 1983 when the University of South Florida (USF) first established the Center for Engineering Development and Research in cooperation with Honeywell, Inc. Honeywell, Inc., provided seed money and laboratory and research space to build a stronger microelectronics program in the college of engineering at USF and to produce more engineers. This center helped formalize links between the university and local industries in microelectronics. In 1986, as part of the Florida High Technology and Industry Council, the Legislature provided a specific line-item appropriation to fund a more focused Microelectronics Design and Testing Center (Ch. 86-167, *Laws of Florida*). The name of the center was changed in 1988 to the Center for Microelectronics Research. In 2001, the center changed its name to the Nanomaterials and Nanomanufacturing Research Center to broaden its focus and shift from the micro to nano scale. The center's mission is to support university-wide, multidisciplinary research in nanomaterials and nanomanufacturing methods related to fundamental materials science, sensors, actuators, electronics, bio-systems, medical products, and optics and integrated nano-scale systems. It does this by providing university and local commercial researchers with state-of-the-art fabrication and measurement equipment and professional support personnel.

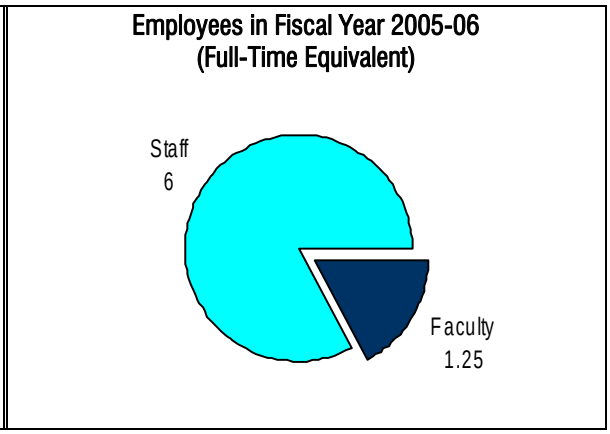
Activities

- Manages and maintains the Nanotech1 facility to minimize duplication of facilities and equipment across USF's colleges, departments, and programs
- Supports research projects of faculty, graduates students, undergraduates, and industrial researchers. In 2005, there were 258 registered users of the Nanotech1 facility including faculty and students from physics, biology, chemistry, medicine, public health, and engineering.
- Provides training sessions and workshops on the use of the facility and its equipment

Resources

State appropriations have been the primary sources of support for center activities. The center uses state funds primarily to pay its faculty and staff salaries and benefits. The center includes a new (2005) Nanotech1 building (made possible by private, industrial funding of a company in the Florida High Technology Corridor) that is 15,000 square feet of office and laboratory space on the USF main campus. The Nanotech1 building and equipment was funded using $5 million in 2001 from the center's industry partner Lucent (Agere) Technologies. Nanotech1 houses high tech equipment valued at over $15 million.





Source: Board of Governors, Institutes and Centers Fiscal Information.

Reported Accomplishments Include

- Providing the facilities and equipment necessary for cutting edge research that enables USF faculty in the College of Engineering and the H. Lee Moffitt Cancer Center and Research Institute bring in over $12 million annually in research contracts from the National Institutes of Health and the National Science Foundation
- Supporting three of the four students with outstanding thesis/dissertation awards given by the College of Engineering

- Supporting the National Science Foundation Integrated Graduate Education and Research Traineeship program at USF. Approximately 10 students from various departments made use of Nanotech1 facilities in their research.
- Serving as the coordinator of several major proposals to the National Institutes of Health, the National Science Foundation, and the State of Florida. These proposals were jointly sponsored by the College of Engineering, the Moffitt Cancer Research Center, and the College of Medicine.
- Maintaining and operating equipment with professional staff whose expertise facilitates quick and innovative solutions to researcher's problems
- Providing intensive training to hundreds of researchers, enabling the faculty and students to become independent, certified users of the equipment. The center has over 20 training sessions available to students, faculty, and industrial users. The center provides over 80 trainings annually. Students from seven university departments (Electrical Engineering, Chemical Engineering, Civil and Environmental Engineering, Mechanical Engineering, Physics, Chemistry, and the College of Medicine) are trained as certified users who make use of the facility in the course of their master's and doctoral research projects.

For More Information

Contact: Robert W. Tufts, Jr., Director, Nanomaterials and Nanomanufacturing Research Center, (813) 974-5274
Email: tufts@eng.usf.edu
Website: http://nnrc.eng.usf.edu