

## University of Florida

### Florida Institute for Sustainable Energy - Energy Tech Incubator

Web Site Link: [http://www.energy.ufl.edu/index.php?src=technology\\_incubator](http://www.energy.ufl.edu/index.php?src=technology_incubator)

#### Contact Information

Dr. Luisa **Amelia** Dempere, *Director*

Major Analytical Instrumentation Center (MAIC) & FISE Technology Incubator

Associate Engineer, Research Service Centers, College of Engineering, University of Florida

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#### Description

Florida Institute for Sustainable Energy (FISE) at UF brings together the broad research capabilities of UF under one umbrella to develop energy efficient technologies, sustainable practices, policy analyses, and provide energy education to assist the government, utility and energy companies. FISE Energy Technology Incubator is the commercialization arm of the institute. It is established with \$4.5 million Center of Excellence award from the State of Florida. This energy technology incubator is used to transition energy research to commercial products and processes. The FISE Energy Technology Incubator includes a Prototype Development & Demonstration Laboratory and Biofuel Pilot Plant.

#### Fee Schedule:

Facility use is negotiated on a per-proposal basis.

### UF Biofuel Pilot Plant, Gainesville FL

Web Site Link: <http://fcrc.ifas.ufl.edu/pilotplant/>

#### Contact Information

Dr. Shelia Gomez

Email: [spgomez@ufl.edu](mailto:spgomez@ufl.edu) Phone: (352) 392-0237 Fax: (352)392-5922

Address: Bldg. 981 Museum Road, Gainesville FL, 32611-0700

#### Description

The Biofuel Pilot Plant serves as a platform to accelerate successful commercialization of bioethanol. The pilot plant is used to develop and improve production processes, test production feasibility from various plant substrates and residues available in Florida, and demonstrate all unit operations needed for commercialization. It is a 4,000 sqft facility with state of the art equipment including biomass processing equipment, biomass reactor, fermenters, centrifuge, distillation column, testing equipment.



The pilot plant is a testimony of the more than two decades of research efforts done at the Florida Center for Renewable Chemicals and Fuels to convert biomass such as bagasse, forestry and wood wastes, and other organic materials to ethanol. The technology used in the conversion process uses genetically engineered E. coli bacteria that target the sugars in the cellulosic component of the biomass materials.

Fee Schedule:

Facility use is negotiated on a per-proposal basis.

**UF Biofuel Pilot Plant, Perry FL (COMING SOON)**

Web Site Link: *Coming Soon*

Contact Information

Dr. Shelia Gomez

Email: [spgomez@ufl.edu](mailto:spgomez@ufl.edu) Phone: (352) 392-0237 Fax: (352)392-5922

State funded (\$20M) Research/Demonstration pilot plant to provide a platform for research and improvements and for design engineering to construct full scale plants of 20-50 million gallons of ethanol per year is in construction phase in Perry FL. Energy crops, agricultural residues and forestry residues, and municipal green waste could support over 200 such plants in Florida, creating employment, improving the environment, and ensuring that Florida is doing its part to promote energy independence.



Fee Schedule:

Facility use is negotiated on a per-proposal basis.

**Nanoscience Institute for Medical & Engineering Technologies (NIMET) and Nanoscale Research Facility (NRF)**

Web Site Link: <http://nimet.ufl.edu/> and <http://nrf.aux.eng.ufl.edu/>

Contact Information

NIMET: David Arnold ([darnold@ufl.edu](mailto:darnold@ufl.edu)) Phone: (352) 392-4931

NRF: Brent Gila ([bgila@ufl.edu](mailto:bgila@ufl.edu)) Phone: (352) 273 2245

Address: UF-NIMET 100 Center Drive, Gainesville, FL 32611

Description

Nanoscience Institute for Medical and Engineering Technologies (NIMET) and the Nanoscale Research Facility (NRF) at UF provide support for major research center initiatives in the areas of nano-and-micro-scale science and technology (NMS&T). Facility is open to all faculty, staff, and collaborators. It provides state-of-the-art equipment for research, education, nanofabrication, and prototype development of nano-materials, MEMS and NEMS devices, and sensors in NMS&T.

NIMET was created to focus and coordinate research and educational activities at the University of Florida in the fields of nanoscale science and nanotechnology (NS&T). Research in nanoscience and



related fields at UF has developed in several colleges and now involves the research of over eighty faculty and staff in physics, chemistry, biology, medicine, engineering, and materials science.

The NRF is a two story building with seven functional areas:

- A Class 100-1000 cleanroom facility for nanofabrication and bio processing
- Advanced electron, optical, and surface imaging laboratories
- Core research laboratories for synthesis, processing, characterization, assembly, and testing of nanoscale materials, devices and sensors
- General laboratory space for interdisciplinary research collaborations
- Offices for faculty, staff and users
- Interactive spaces for conferences, informal gatherings, user administration, and surroundings conducive to multidisciplinary interactions
- Building support and utility handling areas.

The NRF resource and equipment list is given at : <https://nrf.aux.eng.ufl.edu/resources/default.asp>

#### Fee Schedule:

Facility use is negotiated on a per-proposal basis.

#### Wayne K. and Lyla L. Masur HVAC Laboratory

Web Site Link: <http://plaza.ufl.edu/sasherif/HVACLaboratory.htm>

#### Contact Information

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Founding Director Wayne K. and Lyla L. Masur HVAC Laboratory,  
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<http://www.mae.ufl.edu/facultylist/ShowData.php?ID=57>



### Description

The Wayne K. and Lyla L. Masur HVAC Laboratory was inaugurated in February 1995 in a ceremony attended by dignitaries from the University of Florida and the local, regional, and national American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) community. The Laboratory was founded by Dr. S.A.Sherif, Professor of Mechanical and Aerospace Engineering, employing a significant cash donation from the Masur family. Wayne Masur is a successful alumnus of the Mechanical Engineering Department at UF. The Laboratory serves both an instructional and a research mission. Among its research capabilities is a unique experimental facility designed to study frost and ice formation on industrial freezer coils under ice foggy conditions. The Laboratory also includes an air-conditioning demonstration facility, a cooling tower simulator, an air-water heat pump system, and a chilled-water system with an artificial load simulator. Currently there is an effort to install a system with multi-air handling units and variable flow control capability for air conditioning applications. Most recently, experimental research was completed for the US Air Force to develop deployable heat pump units employing rotary vane expanders. Over 50 different investigations have been conducted in the Laboratory and hundreds of students have taken part in different instructional and research activities since its creation in 1995. The Laboratory is housed in Room 110 of the Mechanical and Aerospace Engineering Building B on Gayle Lemerand Drive. For laboratory tours contact Dr. Sherif at (352) 392-7821.

### Fee Schedule:

Negotiated on a case-by-case basis (project based).

### Major Analytical Instrumentation Center

Web Site Link: <https://maic.aux.eng.ufl.edu/about.asp>

### Contact Information

Dr. Luisa **Amelia** Dempere, *Director*

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### Description

The Major Analytical Instrumentation Center (MAIC) is a materials characterization and analysis facility established to provide analytical support for Florida's scientific and engineering community in meeting the challenge of technology development. MAIC is a user oriented facility that provides service to the university system and the industrial & commercial community.

The equipment list includes Scanning Electron Microscope, Auger Spectroscopy, Electron Probe Microanalysis, Direct Write (nScrypt), Electron Probe Microanalysis, ESCA/XPS, Focused Ion Beam, Mass Spectrometer, X-Ray Diffraction, Screen Printer, Spin Coater, Surface Metrology, Tape Caster, furnaces, wire bonder, viscometer, and Potentiostat & FRA. The complete list is given at <https://maic.aux.eng.ufl.edu/resources/default.asp>.

MAIC offers Membership Program that is intended to provide a more complete and efficient service to industrial and commercial users of the facilities at the MAIC. This program allows companies and industry to obtain preferred use-rates, priority in use of MAIC facilities, data analysis and interpretation, priority/lower rates or free registration for MAIC short courses and workshops, instrumentation appointments through the internet, access to remote operation of MAIC electron

microscopes, current information regarding MAIC activities, new services, instrumentation and techniques, the MAIC Newsletter, and recognition as a MAIC affiliate in MAIC publications, brochures, and presentations.

Fee Schedule:

The facility user rates are posted at <https://maic.aux.eng.ufl.edu/exsetup.asp>

**Particle Engineering Research Center (PERC)**

Web Site Link: <http://perc.ufl.edu/sc/about.asp>

Contact Information

Gary Scheiffele at 352-846-1733

Kevin Powers at 352-846-3554

Email: [percsc@perc.ufl.edu](mailto:percsc@perc.ufl.edu)

Reach PERC by filling out the Inquiry Form at: <https://perc.ufl.edu/ccb/sc/inquiry.asp?id=new>

Description

PERC at UF is an integral part of the Particle Engineering Research Center at the University of Florida. It includes state-of-the-art instrumentation for particle characterization and analysis. The 17,000 square foot space includes six analytical laboratories, two processing labs, and a 5000 square foot testbed with a high bay area, a two-ton crane, a loading dock, compressed air, and other necessities required to conduct pilot scale experiments. The testbed and laboratories house equipment for assisting research groups with routine measurements as well as validation and demonstration of process and product ideas developed by research teams and the PERC's Industrial Partners. The Research & Development Facility creates the centerpiece of a world-class operation in particle science and technology.

Fee Schedule

Inquiry form is requested from each applicant describing the service(s) needed. The fee will be determined based on the service needs.