

## Affiliated Research Centers

### Applied Research Center (ARC)

<http://www.arc.fiu.edu>



ARC is an applied research and technology development center at Florida International University. Its multidisciplinary, industry-experienced team of scientists and engineers develops next-generation of integrated solutions to environmental, energy, and information technology challenges delivering the quality and value of a top-ranked research university to clients in government, business, and industry.

### International Hurricane Research Center (IHRC)

<http://www.ihrc.fiu.edu/>



The International Hurricane Research Center (IHRC) is a multidisciplinary center focused on the mitigation of hurricane damage to people, their property, and the built and natural environments. To adequately assess these diverse yet inherently related topics the center is comprised of four research laboratories:

- \* Laboratory for coastal research
- \* Laboratory for social science research
- \* Laboratory for insurance, financial & economic research
- \* Laboratory for wind engineering research

### Southeast Environmental Research Center (SERC)

<http://serc.fiu.edu/>



The Southeast Environmental Research Center (SERC) conducts environmental research with emphasis on the southeastern United States and the wider Caribbean region, and promotes academic excellence in the environmental sciences. Additionally, SERC provides an organizational structure for regional environmental initiatives and coordination of interdisciplinary environmental investigations in the region.

## Degree Programs

### Undergraduate Degree in Environmental Engineering

The Environmental Engineering program provides a comprehensive curriculum for students interested in pursuing a career in the environmental field. The BS Degree in Environmental Engineering requires 126 credit hours. The curriculum is designed to provide the students with a comprehensive foundation necessary to work at a variety of jobs related to environmental protection in different career settings in industry and government.

### Graduate Degrees in Environmental or Water Resources Engineering

The department offers the following post Baccalaureate degrees:

- \* Master of Science (MS) in Environmental Engineering;
- \* Master of Science (MS) in Environmental and Urban Systems;
- \* Master of Science (MS) in Civil Engineering with focus on water resources engineering; and
- \* Ph.D. degree in Civil Engineering with focus on either Environmental Engineering or Water Resources Engineering or both.

The MS degree requires a minimum of 30 credits. Both thesis and non-thesis options are available. The thesis option includes a minimum of 6 credits for a research thesis. The Ph.D. degree requires a total of 90 credits beyond the Baccalaureate degree, including a minimum of 24 credits for dissertation. Assistantships are available for qualified applicants. For more information on admission, assistantships, and degree requirements, please visit the department website.

### Department Contact Information

Civil and Environmental Engineering  
Florida International University  
10555 W. Flagler Street, EC 3680  
Miami, FL 33174, USA  
Tel: (305) 348-6875 or (305) 348-2824  
Fax: 305-348-2802  
URL: <http://www.eng.fiu.edu/cee>

# Environmental and Water Resources Engineering



# FIU

FLORIDA INTERNATIONAL UNIVERSITY  
COLLEGE OF ENGINEERING AND COMPUTING

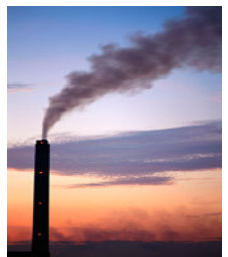
Department of Civil  
and Environmental Engineering

## ENVIRONMENTAL ENGINEERING

Environmental engineering is concerned with the protection of the human population from the effects of adverse environmental factors; natural and urban environments both local and global; potentially deleterious effects of human activity; and the improvement of environmental quality for people's health and well-being within sustainable development schemes. Environmental engineers play a major part in the design of systems to provide safe drinking water, pollution control of surface and groundwater, air quality management, pollution prevention, recovery and containment of solid, hazardous and radioactive wastes, contamination characterization, impact analysis, and site clean-up.

## WATER RESOURCES ENGINEERING

Water resources are highly regarded as “the commodity” of the 21st century. Water resources engineers are trained to handle a highly dynamic and fragile balance between competing needs in water supply, environmental quality and urban development. This field involves the analysis of qualitative and quantitative water issues and the search for appropriate solutions. Both pure and applied research in the fields of water management, hydrology, and hydraulics of surface, ground and atmospheric waters, benefit water managers and engineers in their decisions at international to local levels. Water resources engineers also play a vital role in providing technical expertise on many policy issues of this increasingly scarce resource.



## FACULTY



**Dr. Hector R. Fuentes, P.E., D.E.E**

*Professor*

*Ph.D., Vanderbilt University, 1982*

*E-mail: fuentes@fiu.edu*

**Research areas:** Water resources, water quality, sustainable engineering, pollution prevention and control, water and wastewater reclamation, experimental and modeling applications.



**Dr. Shonali Laha, P.E.**

*Associate Professor*

*Ph.D., Carnegie Mellon University, 1992*

*E-mail: lahas@fiu.edu*

**Research areas:** Physicochemical and microbial processes, fate of contaminants, hazardous waste treatment technologies, and environmental protection in developing countries.



**Dr. Fernando Miralles-Wilhelm, P.E.**

*Associate Professor*

*Ph.D., Massachusetts Institute of Technology, 1992*

*E-mail: miralles@fiu.edu*

**Research areas:** Hydrologic modeling; simulation of physical, chemical and biological processes in aquatic environments; wetland, stream, lake, soil and aquifer cleanup.



**Dr. Wolfgang F. Rogge, P.E.**

*Associate Professor*

*Ph. D., California Institute of Technology, 1993*

*E-mail: roggew@fiu.edu*

**Research areas:** Air pollution monitoring and modeling; release, transport, transformation, and fate of submicron particles; source specific molecular marker determination.



**Dr. Walter Tang, P.E.**

*Associate Professor*

*Ph.D., University of Delaware, 1993*

*E-mail: tangz@fiu.edu*

**Research areas:** Physicochemical treatment, advanced oxidation processes, quantitative structure and activity relationships, health risk assessment, ecosystem restoration.



**Dr. Berrin Tansel, P.E.**

*Associate Professor*

*Ph.D., University of Wisconsin– Madison, 1985*

*E-mail: tanselb@fiu.edu*

**Research areas:** Hazardous and industrial waste management, site remediation, membrane processes, contaminant-surface interactions, fate and transport modeling.

## Student Organizations

All students are encouraged to participate in the professional societies which provide both student and professional links to a career in environmental engineering. The active student organizations include Tau Chi Alpha (National Environmental Engineering Honorary), Water Environment Federation (WEF), and American Society of Civil Engineers (ASCE).

## Internships and Co-Op Programs

Internships and Coops provide students with a great opportunity to gain real-world experience while still in school. The Department of Civil and Environmental Engineering offers co-op and internship programs for students studying Environmental Engineering with local consulting companies and environmental agencies.