

As a member of one of the country's top-tier research universities, the **College of Engineering & Computing (CEC)** is actively engaged in cutting-edge studies and education and is home to top-level research laboratories and facilities. CEC has two schools — Moss School of Construction, Infrastructure and Sustainability; and the School of Computing and Information Sciences — and four departments — Biomedical Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, and Mechanical and Materials Engineering.

By the Numbers



BIOMEDICAL ENGINEERING

FIU Engineering & Computing

engineering.fiu.edu
Florida International University
10555 West Flagler Street | Miami, FL 33174



FIU_CEC



FIUEngineeringAndComputing



FIU_CEC

For more information contact:
Email: iadmiss@fiu.edu
Whatsapp: 786-702-0031

FIU Engineering & Computing

FIU's Department of Biomedical Engineering (BME) is a nationally recognized resource for biomedical engineering education, training and research in Florida, and is a model for servicing the needs of the clinical medicine and biomedical industries through workforce and technology development.

As a part of the College of Engineering & Computing, students enjoy experiential learning opportunities and close interaction with **WorldsAhead** faculty. Through internship opportunities in the industry and hands-on research activities in cutting-edge laboratories, graduates are prepared to hit the ground running in their chosen careers.

RESEARCH

The Department of Biomedical Engineering (BME), endowed by the Wallace H. Coulter Foundation, is home to world-class faculty and pioneering research laboratories. Research conducted by members of the department is clustered into three areas – basic research in engineering tissue model systems, diagnostic bioimaging and sensor systems, and therapeutic and reparative neurotechnology. Research and entrepreneurship permeate our academic curriculum and are among the department's keys to success. FIU BME is ranked among the top 50 schools providing the best value to students. Students in biomedical engineering gain valuable interdisciplinary experience in clinical and industrial environments, making them top choices for employment with local industry partners.

FACULTY

Ranu Jung's neural investigational implant device received FDA approval for first-in-human trials and DARPA funding to restore sensation to amputees. Jung, as P.I., receives up to \$1.8 million in support of this trial. In biophotonics, Shuliang Jiao's biophotonic devices for retinal degenerative disorders secured \$2 million from the National Institutes of Health (NIH). Jessica Ramella-Roman and Anuradha Godavarty have biophotonic devices in clinical trials, Ramella-Roman for pre-mature labor and cervical cancer, and Godavarty for wound care. Zachary Danziger obtained Nielsen Foundation funding for understanding bladder control after spinal cord injury, and Jacob McPherson received NIH funding to develop new treatments for neuropathic pain after spinal cord injury. Joshua Hutcheson received American Heart Association (AHA) funding for understanding cardiac disease mechanisms.

PARTNERSHIPS

The Department of Biomedical Engineering is involved in a number of multi-university and industrial partnerships, among them, two National Science Foundation (NSF) Engineering Research Centers (ERC). The NSF ERCs are the Precise Advanced Technologies and Health Systems for Underserved Populations (PATHS-UP) and the Nanosystems Engineering Research Center for Cellular Metamaterials (CELL-MET). Other research projects receive funding from NIH, DARPA/ ARO, AHA and others. BME also counts numerous industrial partnerships with local companies such as Entopsis, Stryker, and OrthoPro, and collaborations with hospitals including Nicklaus Children's Hospital and Baptist Health South Florida. Close to 90 percent of BME's senior design projects are sponsored by industry partners.



GRADUATE DEGREES OFFERED

- M.S. Biomedical Engineering
- M.S. Biomedical Engineering: Orthotics and Prosthetics
- Ph.D. Biomedical Engineering

COMBINED BACHELOR'S AND MASTER'S DEGREE (4+1) PROGRAM

The combined B.S. & M.S. Degree Program is an accelerated program designed for outstanding undergraduate students currently enrolled in the college who wish to pursue their M.S. degree while completing in the college their B.S. degree.

RESEARCH HIGHLIGHTS

- 60+ patents
- Translational research
- Bedside to bench to bedside
- Over 70 percent of faculty collaborating directly with clinical partners on research projects

GRADUATE RESEARCH OPPORTUNITIES

15 research-active faculty each with their own labs

- Engineering tissue model systems
- Diagnostic bioimaging and sensor systems
- Therapeutic and reparative neurotechnology

FACILITIES

Cell Culture and Molecular Biology Core Facility: Equipment for sterile cell culture, isolation and analysis of nucleic acids and proteins, gene expression studies, creation of bacterial and viral vectors, and cellular cryopreservation and storage; mycoplasma testing services for all cell lines

Optical Microscopy Core Facility: Raman microscopy, fluorescence microscopy, and confocal microscopy

Neurotechnology: Pre-clinical assessments for novel device development

POINTS
OF PRIDE

1
NAI Fellow

1
AIMBE Fellow

2
AHA Fellows

Home to cutting-edge research, award-winning faculty, remarkable students and groundbreaking laboratories, BME meets medical needs with engineering expertise to produce valuable innovations that enhance health care and hold the promise of greatly improving people's lives.