



FLORIDA ATLANTIC UNIVERSITY

Department of Civil,
Environmental and
Geomatics Engineering
College of Engineering &
Computer Science

STRATEGIC PLAN (2024-2028)

We Innovate to Change the World



Department of Civil, Environmental and Geomatics Engineering
Florida Atlantic University
April 8, 2024

This strategic plan will guide the Civil Environmental and Geomatics Engineering Department (CEGE) in the coming years, focus our efforts on key strategic priorities, help demonstrate continuing commitment to excellence, and ensure we support the College of Computer Science and Engineering at FAU mission and the goals in the courageously forward strategic plan.

This strategic plan was developed by the faculty of the CEGE. It represents more than a year of collaborative effort and incorporates input from students, staff, faculty, the Advisory Board and Alumni members. The Department developed the framework for this plan while the broader academic community helped refine the plan and add detail based on our vision.

Vision

To be one of the top 100 engineering programs of its kind in the nation. We will lead the development of Engineering Innovations and the Delivery of complete solutions that promote a vibrant future of the State of Florida and beyond.

The world is rapidly evolving and faces many challenges as we look to 2028 and beyond, including:

- Securing our supply chain and the ability to manufacture numerous products
- Improving food security and our water resources
- Ensuring the ethical use of artificial intelligence and machine learning
- Transitioning to more sustainable energy sources
- Rebuilding and/or maintaining our infrastructure
- Intelligent Transportation and Smart Cities
- Improving healthcare in a time of pressing global health issues
- Ensuring that we provide fair access to engineering education for our community

Mission

To provide our engineering students with a high-quality education on fundamental theories and engineering design, and to conduct cutting-edge research in urban mobility/infrastructure and water resources/environmental sustainability in state-of-the-art learning environments to benefit communities in Florida and beyond; and promote partnerships that amplify our impact.

Listed Strategic Priorities (2024) will be revisited and revised, as necessary on a biannual basis. Measures of success will be collected and reported annually.

Strategic Priority 1 – Nationally Recognized for High-Quality Research, Discovery, Innovation and Impact

Objective 1.1 – Maintain a sustainable funding level and enhance the utilization and sharing of space and infrastructure across the Department

- **Strategy** – Implement research incentive program and increase research productivity
- **Strategy** – Recruit additional faculty to strengthen emerging areas of potential research funding

Objective 1.2 – Support existing centers in the Department and develop new externally funded research centers

- **Strategy** – Evaluate existing research centers in the Department and develop a plan to enhance productivity and visibility

Objective 1.3 – Increase output of scholarly activities

- **Strategy** – Recognize departmental scholarly work

Objective 1.4 – Provide state-of-the-art research laboratories and facilities

- **Strategy** – Develop laboratory improvement plan

Objective 1.5 – Raise the visibility of the Department in the local and national stages

- **Strategy** – Disseminate faculty research success
- **Strategy** – Encourage faculty to serve on national and international level of technical committees

Strategic Priority 2 – Be Nationally Recognized for High-Quality Education and Reimagine Teaching to Enhance Learning

Objective 2.1 – Modernize curricula to prepare students for careers in engineering and competitive work environment while training them to address the challenges of the community

- **Strategy** – Improve FTIC student retention rate and graduation rate

- **Strategy** – Improve outcomes on the licensing exams (FE/FS)
- **Strategy** – Provide state-of-the-art learning environments and laboratories, and reinforce links between the classrooms
- **Strategy** – Improve teaching assistant performance
- **Strategy** – Increase graduate job placement or continuing education in engineering-related fields

Strategic Priority 3 – Be Recognized by the Community and Built Partnerships to Enhance our Impact

Objective 3.1 – Grown partnerships that enhance our impact on communities across the state of Florida and beyond and extend critical knowledge and expertise to meet society’s most pressing issues

- **Strategy** – Increase activities with DAC, GEPAC, and AAC
- **Strategy** – Organize outreach events to highlight research and reward excellence

Objective 3.2 – Increase community engagement activity

- **Strategy** – Utilize curriculum to facilitate community interaction with outside mentors/clients
- **Strategy** – Encourage student organizations to pursue community engagement
- **Strategy** – Establish partnerships with other universities

Given the dramatic changes in higher education, CEGEs’ strategic plan needs to address the new challenges facing large public universities. Our strategic plan outlines the motivation for change and the initiatives we will undertake to expand our impact through strategic research partnerships with local, state, national and global stakeholders. CEGE at FAU is already counted among State’s research-intensive Civil and Environmental engineering departments. Here is where we stand relative to our peer program in the nation.

- Faculty - Student Ratio
- Student Enrolment/Graduation rates
 - FTIC
 - Student retention
 - Four-year graduation rates

- Six-year graduation rates
- Courses offered by faculty
 - Undergraduate research
 - Student Scholarships
 - Faculty endowment
 - Career Placement & Salaries
- Modernization of curriculum/Laboratories Space
- GRA/GTA by each departmental program
- Research Expenditures
 - Research Space
 - Student Office Space
- Federal funded research centers

Our assessment process confirmed that Civil Environmental and Geomatics Department at FAU has great strengths on which we will continue to build. These departmental strengths are found in a range of areas:

Student Diversity: A Key area where the department distinguished itself of other institutions is in the diversity of its students' body.

High Ranked Core Programs/Specializations: A couple core programs/specializations (transportation) are ranked at or near the top in their fields in the state and national (e.g environmental engineering). Also, our people are keen and successful at working collaboratively on research, teaching and other scholarly activities.

Graduation Rates & Job Placement: At CECE five and six years graduation rates have been steadily improving in recent years. Also, we have seen improvement in four-year graduation.

Resource-Rich Location: FAU location offers an unparalleled range of resources: major metropolitan areas, cultural institutions, corporate headquarters, shorelines, and natural preserves, all within close range, enrich classroom instruction, offer hands-on experience in the field, and create educational and vocational opportunities for our students beyond the University. In environmental engineering, access to a range of ecosystems turning Florida into a living laboratory for research and teaching.