

**Department of Geosciences
Florida Atlantic University
Strategic Plan 2013-2018**

Adopted by the Geosciences Faculty 4/19/2013

Background

Florida Atlantic University's Strategic Plan 2012-2017 (<http://www.fau.edu/planning/files/2012-17StrategicPlan.pdf>) was approved by the FAU Board of Trustees in the spring of 2012. The university-wide strategic plan identifies 4 goals and 3 signature themes that provide a framework for achieving those goals:

Goal I: Enrich the educational experience

Goal II: Inspire research, scholarship and creative activity

Goal III: Increase FAU's community engagement

Goal IV: Leverage momentum toward achieving FAU's strategic goals by being good stewards of its human, technological, physical and financial resources

Signature Themes:

Marine and Coastal Issues

Biotechnology

Contemporary Societal Challenges

The Charles E. Schmidt College of Science (CESCOS) at FAU developed a college level tactical plan for implementation from 2012-2017 (Insert link when it is ready). CESCOS began the process in the summer of 2011 with a college retreat to consider the college vision and mission statements, and SWOTT (Strengths, Weaknesses, Opportunities, Threats, and Trends) analysis, and completed a tactical plan that included college goals and strategies for their fulfillment in the Spring of 2013.

The Department of Geosciences developed a strategic plan during the 2012-2013 academic year that aligns with that of both the university and college level plans. The department appointed a sub-committee to evaluate our strengths and weaknesses and envision a path of continued development and enhanced success over the next 5 years. The following strategic plan, endorsed by the Department of Geosciences faculty, the Dean of CESCOS, and FAU's Provost, will be implemented from the 2013-2014 through the 2017-2018 academic years.

Mission Statement

The Department of Geosciences will provide students with a high quality scientific education and expose them to professional practices and research centered on Earth Systems Science, Human-Environmental Interactions, and Geospatial Information Sciences. The Department aims for excellence in teaching, research and creative activity, and strives to service the university, local, regional, and global communities through its research, degree programs, certificates, course offerings, professional training, mentoring, outreach, and creativity.

Department Overview

Due to a nexus of issues, including rapid population growth, restoration of the Everglades and Indian River and Lake Worth Lagoons, and climate change, Southeastern Florida is an opportune location for research involving human-environmental interactions. The Department of Geosciences has responded to these regional opportunities by developing expertise in both basic and applied sciences. Faculty research informs understanding and management of humanized and natural systems at the regional, national, and international scale. Our instructional offerings provide an appropriate mix of theoretical and practical training to prepare students for careers with agencies, businesses, and municipalities working to address complex environmental issues. The Department of Geosciences currently possesses expertise in and plans to build upon the following research and instructional areas:

Earth Systems Science

- Biogeography
- Coastal Processes
- Environmental Geology
- Hydrogeology
- Near-surface Geophysics

Human-Environmental Interactions

- Climate Change
- Environmental Health
- Environmental Restoration
- Ethno-botany
- Urban sustainability
- Water sustainability and quality

Geospatial Information Science

- Geographic Information Systems (GIS)
- Remote Sensing
- Spatial Modeling

Building our Future: Geosciences Goals and Strategies, 2013-2018

Goal 1: Increase Research and Scholarship Activity

Strategies for Success

- a. Increase the amount of extramural funding from federal, state, and local sources
 - i. Increase grant submission rate
 - ii. Enhance internal, external, and interdisciplinary collaboration to increase competitiveness for funding
- b. Increase publication quantity and quality
- c. Attract high quality graduate students and Post-docs
 - i. Seek opportunities to increase or supplement stipends

- ii. Increase grant based funding for research assistants and Post-docs
- d. Increase undergraduate research participation and scholarship
 - I. Promote the existing Honors Program in Geography and proposed program in Geology to increase student and faculty participation
 - II. Increase grant based funding for undergraduate research assistants
 - III. Seek opportunities to incorporate research into existing courses and develop new courses that emphasize research techniques

Resources needed to implement strategies

- a. Faculty hires, with appropriate salary, start-up funding, and laboratory space support, that complement our existing strengths and expand opportunities for collaboration. Including hires with expertise in the following areas:
 - i. Coastal processes, especially in the dune, beach, and littoral zones
 - ii. Native and/or exotic fauna in coastal zones and the human-environment interface with applications in restoration contexts
 - iii. Spatial data analysis and modeling
 - iv. Climate change effects on ecosystem services that provide flood protection and freshwater
 - v. Urban sustainability
- b. Support staff positions
 - I. Grant writing support coordinator
 - II. Laboratory and field equipment management and maintenance for research and instructional purposes; field trip, field course, and field sampling coordination and support
 - III. Additional budgetary assistant to accommodate growth
- c. Increased stipend support from the College and University levels and/or internally derived supplemental support
- d. Continual and increasing support for departmental and field research equipment and resources, such as current technology, software, trucks, sea-worthy vessels, and airboats

Goal 2: Enhance Instructional Experience and Degree Offerings

Strategies for Success

- a. Expand student field experiences and exposure to research methodology in courses at graduate and undergraduate levels, and in coordination with FAU's Quality Enhancement Plan
- b. Increase undergraduate and graduate student enrollment numbers in both courses and degree programs
- c. Increase degree completion rates of our students
- d. Increase and broaden the department's e-Learning course offerings, and develop e-Learning programs and certificates
- e. Assess greater integration of department degrees as we evaluate how well our degree programs align with our expertise, capabilities, and mission

- f. Evaluate degree requirements in terms of efficiency and relevancy to industry needs as expressed in consultation with agencies and businesses that employ our alumni
- g. Develop a Geospatial Information Science Professional Master's degree

Resources needed to implement strategies

- a. Faculty hires with expertise to instruct courses in the department's focal areas that dovetail with strategic planning foci, complement and expand our existing instructional offerings, and prepare students for future career opportunities
- b. Technological resources for offering state of the art e-courses
- c. Adequate vehicles and equipment for field-based instruction in South Florida's logistically challenging environments

Goal 3: Expand International Collaboration and Educational Opportunities

Strategies for Success

- a. Build on existing international relationships, and pursue additional sustainable international collaborations that provide research and education opportunities for faculty and students
- b. Offer additional study abroad courses, international field experiences within our degrees and courses, and pursue student exchange programs
- c. Seek grants that support international collaboration and education

Resources needed to implement strategies

- a. Support from the Office of International Programs on study abroad programs and agreements with international institutions
- b. Support staff position that can assist with international program coordination and execution
- c. Funding from internal sources for exploratory activities and collaboration building with current and potential international partners

Goal 4: Augment Strengths Concerning FAU's Marine and Coastal Issues and Contemporary Societal Issues Signature Themes

Strategies for Success

- a. Build upon efforts to work with internal and external partners concerning science and management in Lake Worth and Indian River Lagoons, and other regional estuarine and coastal systems.
- b. Continue research in the Greater Everglades system
- c. Enhance human-environment interaction strengths, especially in the context of global climate change and the effects of sea level on natural areas, the densely populated urban South Florida metropolitan area, and their interdependencies
- d. Host and participate in symposia with other departments, colleges, institutes, and centers to discuss linkages, commonalities, and potential synergisms for collaboration

Resources needed to implement strategies

- a. Faculty hires in all five of the research areas enumerated under Goal 1, with appropriate start-up funding and laboratory space

- b. Funding from internal sources for exploratory activities and collaboration building with internal and external partners

Goal 5: Improve Department Visibility and Outreach

Strategies for Success

- a. Increase outreach efforts to local agencies, organizations, and commercial entities for collaborative opportunities, internships, knowledge transfer, and alumni employment
- b. Publicize, internally and externally, achievements, strengths, and offerings of the department, including events at local secondary schools and on campus that may result in recruitment of new students
- c. Increase participation of faculty and students at local, regional, national, and international conferences and symposia

Resources needed to implement strategies

- a. Assistance from departments and personnel at the College and University levels with internal and external public engagement, information sharing, and publicity
- b. Funding from internal and external sources for faculty and students to travel to regional, national, and international conferences and symposia, and for informational booths/promotional materials at outreach events, conferences, and symposia