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The Patel College of Global Sustainability (PCGS) was established in 2009 to foster sustainable urban communities and environments through collaborative research, education and community involvement. Its research generates innovations and new knowledge that helps cities around the world, including those in developing countries, reduce their ecological footprint while improving their form and function to make them healthier, more livable and resilient.

The Patel College of Global Sustainability comprises the M.A. Program in Global Sustainability,

## Office of Sustainability

The Office of Sustainability coordinates and builds partnerships for university-wide initiatives that advance the University of South Florida's strategic goal of creating a sustainable campus environment. To accomplish this mission, we actively support faculty, staff, students, alumni, and neighborhood partners in their efforts to transform the University of South Florida into a 'Green University', where decisions structural and routine consider

The M.A. in Global Sustainability offers nine concentrations, all concentrations are available in a traditional on-campus format and online.

This program is designed to prepare students to address complex regional, national, and global challenges related to sustainability and the ability to innovate in diverse cultural, geographic, and demographic contexts. The Patel College of Global Sustainability strives to offer a dynamic curriculum, top-notch internship experiences, and overall superior education for our students.

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This certificate program will provide a general foundation for coastal sustainability. It is designed to appeal to an audience with a wide range of backgrounds and interests in the planning, policy, and management fields. The certificate will be of particular interest to those related to sustainability students, and those involved with planning and management in coastal communities.

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The certificate program will provide a general foundation in sustainability and thorough understanding of all forms of energy that can support a sustainable economy. It is designed to appeal to an audience with a wide range of backgrounds and career interests by addressing energy from all angles (technology, business, economic, policy, social) unlike similar-sounding programs at other institutions, which are designed narrowly for engineering and hard science students.

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This certificate program will provide a general foundation in sustainability and a solid understanding of key issues in food systems and safety/security. The program will cover (1) the concepts, principles, economics, and finance of sustainability, as well as transition towards a green economy; (2) food production, distribution, marketing, disposal, and policy; and (3) food safety and security regarding biological, chemical, and physical threats. It is designed for an audience of a wide range of backgrounds with career interests in the field of food sustainability and security.

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This certificate program will provide a general foundation of sustainable tourism and related concepts of sustainability. It is designed to appeal to an audience with a wide range of backgrounds and interests in the tourism and hospitality industry. The curriculum will be of particular interest to those related to global tourism movements such as the United Nation's World Tourism Organization, the International Ecotourism Society, and the Global Sustainability Tourism Council.

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The Patel College of Global Sustainability develops research that creates solutions for sustainability development in a rapidly-changing world. Its research is based upon USF's broad, interdisciplinary expertise in the areas of water, public health, energy, global security, and social equity. This interdisciplinary approach provides a fertile foundation for the development of unique solutions to emerging and existing problems.

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Energy production and use are strong indicators of economic prosperity and high living standards. Global energy demand is projected to grow dramatically within the next 50 years, but at the same time the public is concerned about energy security, climate change, and environmental pollution. Clearly, our country needs policies and technologies that enhance energy conservation and promote renewable energy production from sustainable natural resources. Given the critical nature of energy, we have made renewable energy R&D and education top priorities at the College with a focus on technology develope

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Algae represents a promising source of alternative fuels and bioproducts, but with the added benefit of serving as a sink for carbon dioxide and wastewater. Using our experience in algae engineering for the production of chemicals and fuels, we use native Floridian algae strains at our lab and outdoor facilities to generate and commercialize algal products under real-world conditions. Algal lipids can be transesterified to produce biodiesel or can be thermally treated to produce aviation- and military-specification fuels. Algal sugars can be used to produce a myriad of chemicals via fermentation, whereas algal protein can serve as animal feed and fish food. Our applied research closes the gap between innovative ideas and the marketplace.

Our efforts are focused on:

- Design of cost-effective cultivation platforms
- Scale-up and operation of algae production systems
- Optimization of productivity
- Water, nutrient, and energy management
- Co-product development
- Intellectual property management



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Biomass is an abundant and inexpensive domestic feedstock for biorefineries designed to produce value-added products and clean power. Florida ranks first in the country in annual biomass productions sugarcane bagasse and yard waste in South Florida, citrus peel and agricultural residues in Central Florida, and woody biomass in Northern Florida.

We test and optimize the conversion of various biomass species to sugars in scalable and cost-effective ways through biochemical conversion. First, biomass is pretreated using mild conditions and green chemistry principles. Then, cellulase enzymes are employed to convert cellulose to simple



This project will develop and demonstrate an innovative transitioning framework from gray to green infrastructure systems for urban watersheds through the execution of the tasks outlined below and illustrated in the figure below.



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The global challenges of rapid urbanization and climate change adaptation in the midst of growing water scarcity is driving the need for a paradigm shift to Integrated Urban Water Management (IUWM).





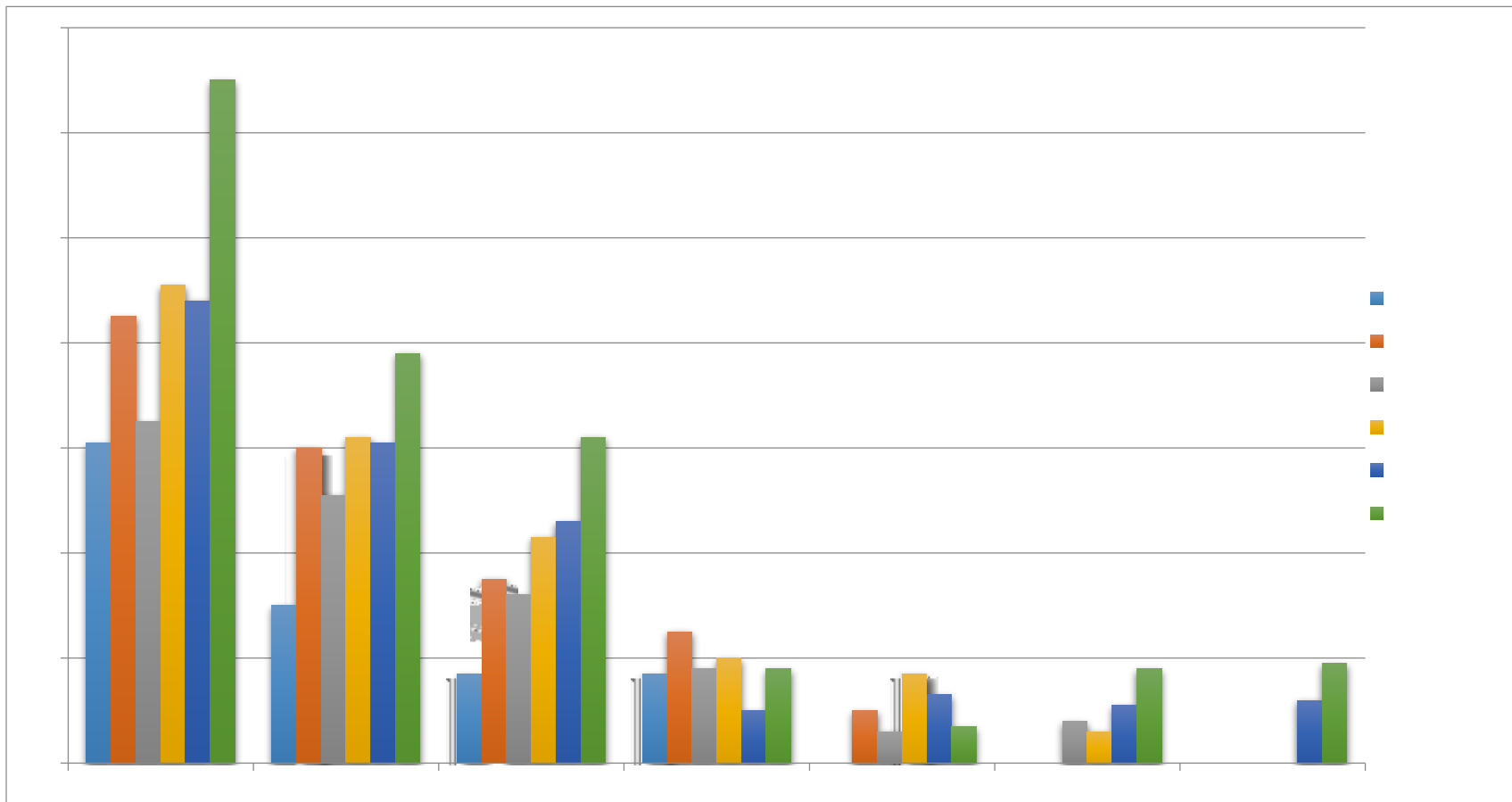


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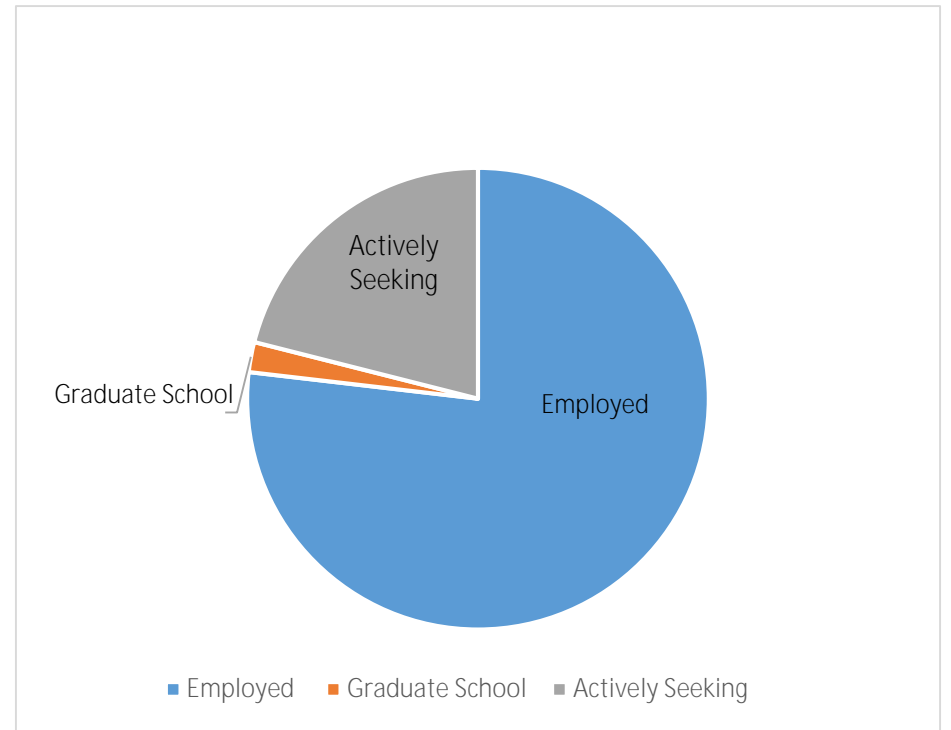
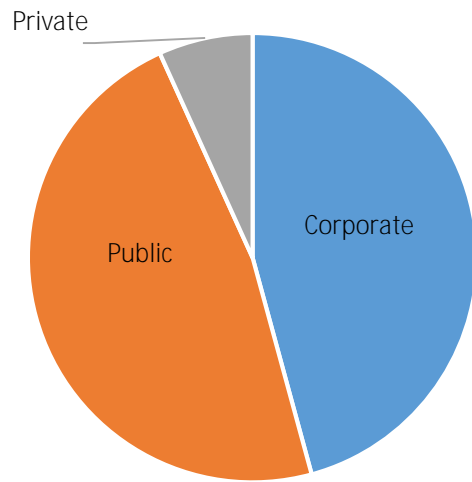
Representation from 2010-2015 of recruitment and admissions



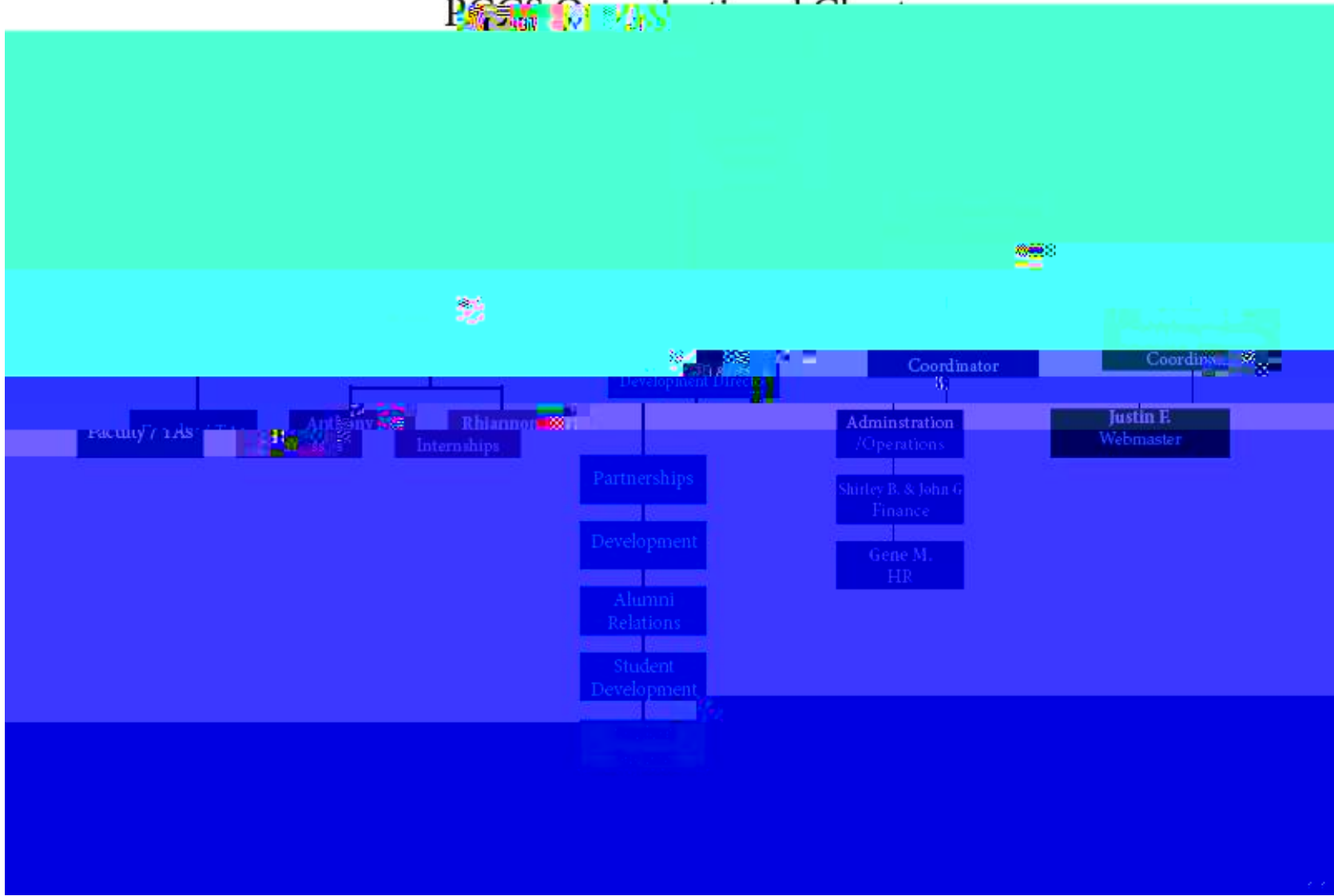
Number of students enrolled, by area of concentration:



- 80% of PCGS alumni are employed or in graduate school



# BOGGS' COLLEGE



- E& G funding \$1,000,000 annually
- Endowment: \$3,200,000 annually
- Foundation funding \$450,000 annually
- Grants \$100,000