

RETENTION AND COMPLETION OF UNDERREPRESENTED STEM Ph.D. STUDENTS: EFFORTS OF THE UNIVERSITY OF SOUTH FLORIDA GRADUATE SCHOOL

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University of South Florida

Council of Graduate Schools Annual Meeting

December 6, 2012



UNIVERSITY OF SOUTH FLORIDA

- A SYSTEM OF CAMPUSES WITH AN ENROLLMENT OF OVER 47,000: LARGEST CAMPUS IS IN TAMPA
- OVER 10,000 GRADUATE STUDENTS OR 25% OF THE STUDENT BODY
- RANKED AS VERY HIGH IN RESEARCH AND COMMUNITY ENGAGEMENT BY THE CARNEGIE FOUNDATION
- RANKED IN THE TOP 50 OF ALL UNIVERSITIES IN FEDERAL RESEARCH EXPENDITURES



UNIVERSITY OF SOUTH FLORIDA

- ▶ BETWEEN 20–25% OF GRADUATE STUDENTS ARE FROM UNDERREPRESENTED MINORITY GROUPS.
- ▶ APPROXIMATELY 12% OF GRADUATE STUDENTS ARE INTERNATIONAL STUDENTS.
- ▶ AVERAGE TIME TO DEGREE FOR MASTERS STUDENTS IS APPROXIMATELY TWO YEARS AND FIVE YEARS FOR DOCTORAL STUDENTS.



UNIVERSITY OF SOUTH FLORIDA

- ▶ GRADUATION RATE OF DOCTORAL STUDENTS IS OVER 50%.
- ▶ GRADUATION RATE OF URM DOCTORAL STUDENTS IS APPROXIMATELY 60%.



ONGOING EFFORTS RELATED TO RETENTION AND COMPLETION OF URM STEM DOCTORAL STUDENTS

- ▶ RECRUITMENT AT TARGETED HBCUs AND HSIs AND OTHER RELATED CONFERENCES AND EVENTS
- ▶ PROFESSIONAL DEVELOPMENT WORKSHOPS
- ▶ FLORIDA EDUCATION FUND (MCKNIGHT DOCTORAL SCHOLARS–AFRICAN–AMERICAN AND HISPANIC STUDENTS–GRADUATION RATE OVER 80%).
 - FIVE YEARS OF STIPEND AND WAIVERS (University provides both the last two years of funding)
 - ONE–ON–ONE MENTORING
 - WORKSHOPS AND PROFESSIONAL DEVELOPMENT ACTIVITIES
 - PARTICIPATION IN JOURNAL WRITING AND CONFERENCE



ONGOING EFFORTS

- ▶ DIVERSITY FELLOWSHIP AWARDS
 - STIPENDS AND WAIVERS PROVIDED TO MASTER'S AND DOCTORAL STUDENTS
 - SUMMER PROGRAM
 - CLASSES
 - WORKSHOPS
 - FOLLOWUP THROUGHOUT DEGREE PROGRAM
 - STRONG ALUMNI



ONGOING EFFORTS

- ▶ MEMBER OF THE CENTER FOR THE INTEGRATION OF RESEARCH, TEACHING, AND LEARNING THAT FOCUSES ON BUILDING THE SUCCESS OF STEM GRADUATE STUDENTS FOR THE PROFESSORiate.
- ▶ TEACHING AS RESEARCH PROJECTS CREATE KEY LEARNING OPPORTUNITIES AND EXPERIENCES.



ONGOING EFFORTS

- ▶ CREATE OPPORTUNITIES FOR STEM DOCTORAL STUDENTS TO PARTICIPATE FULLY IN GRADUATE SCHOOL INITIATIVES
 - DOCTORAL STUDENT LEADERSHIP INSTITUTE
 - INTERDISCIPLINARY RESEARCH CHALLENGE GRANTS
 - GRADUATE SCHOOL AMBASSADORS

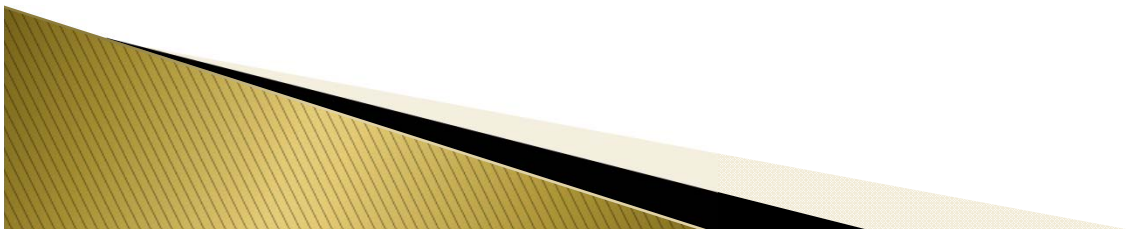


GRANT EFFORTS

SLOAN FOUNDATION AND THE NSF ALLIANCE FOR GRADUATE EDUCATION AND THE PROFESSORIATE (AGEP)

▶ SLOAN FOUNDATION

- Five-year award to coordinate USF SYSTEM-WIDE efforts to enhance the success of URM STEM graduate students
- Goals are to enroll an additional 72 URM graduate students within 5 years and to increase retention to 75% by the end of year 5 (baseline-67%).



SLOAN FOUNDATION AWARD

► Strategies

- Selection of 5 Dean's Scholars (successful URM graduate students in STEM fields with low URM enrollment)
 - Scholars will recruit new STEM graduate students from their home undergraduate institutions either through direct visits or communicating virtually.
- Development of more formal MOUs with HBCUs and HSIs.
- Development of an interdisciplinary faculty group that focuses on funding and success efforts for URM graduate students



SLOAN FOUNDATION AWARD

- ▶ Strategies, cont'd.
 - Development of the SLOAN Scholar Speaker Series
 - Presentations by the Dean's Scholars on successful strategies
 - Institutionalization of all efforts by USF



CENTRAL FLORIDA AGEPE ALLIANCE

- ▶ FUNDED FOR PLANNING GRANT AND HAVE SUBMITTED PROPOSAL FOR THE LATEST RFP
- ▶ ALLIANCE IS COMPRISED OF THE UNIVERISTY OF CENTRAL FLORIDA (UCF), THE UNIVERSITY OF SOUTH FLORIDA (USF), HILLSBOROUGH COMMUNITY COLLEGE (HCC), VALENCIA COMMUNITY COLLEGE (VCC), AND THE FLORIDA EDUCATION FUND (FEF).



CENTRAL FLORIDA AGEF ALLIANCE

▶ PURPOSE:

- Broaden the pathways to the professoriate by creating an academic/social support net that better prepares URM students from the community college (CC), transfer, and graduate students to successfully graduate from STEM PhD programs with the goal of entering postdoctoral positions and/or the professoriate.



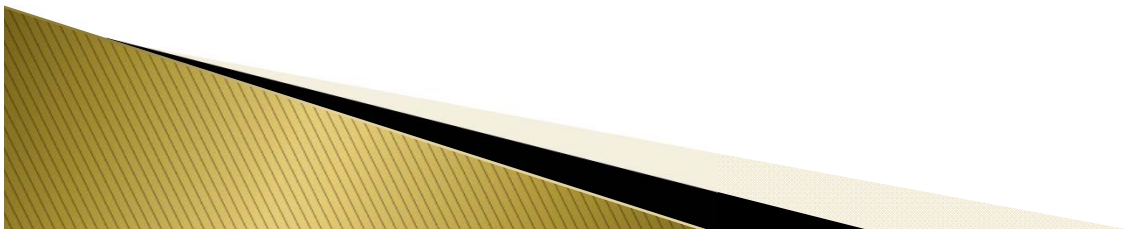
CENTRAL FLORIDA AGEPE ALLIANCE

- ▶ Planning grant allowed for the development and implementation of surveys, interviews and focus groups to collect and analyze data of CC students and university freshman and sophomores on their demographics, academic aspirations, inspirational factors, motivational factors, and the existence of an academic/social support community.



CENTRAL FLORIDA AGEPE ALLIANCE

- ▶ Similar analyses were done with STEM transfer students, 'native' undergraduate juniors and seniors, STEM graduate students, and STEM faculty.
- ▶ Results were used to inform the AGEPE proposal and to develop strategies to better target URM STEM graduate student success.



A FEW EXAMPLES OF INTERESTING AGEF FINDINGS

- ▶ URM CC students were more “first generation” than UCF/USF freshman and sophomore students.
- ▶ Academic goals of URM CC students (other than Cuban) were less lofty than those of UCF/USF students.
- ▶ Encouragement to pursue STEM education occurred later in schooling for URM CC students than USF/UCF students.



Other grant examples:

- ▶ USF GRADUATE SCHOOL HAS BEEN FUNDED FOR THE DIMAC INITIATIVE AND THE PPI AWARD AND IS A PROJECT AFFILIATE FOR THE RECENT PFF LEARNING ASSESSMENT AWARDS.
- ▶ USF IS ALSO THE RECIPIENT OF BRIDGE TO THE DOCTORATE AND ALFRED P. SLOAN MINORITY STUDENT AWARDS FOCUSED ON PROMOTING THE SUCCESS OF URM GRADUATE STUDENTS IN ENGINEERING AND THE MARINE SCIENCES.



ON THE HORIZON---

- ▶ INSTITUTIONALIZE SLOAN EFFORTS
- ▶ INCORPORATE AGEP EFFORTS INTO THE ACADEMIC FABRIC OF THE PARTICIPATING INSTITUTIONS
- ▶ POTENTIAL FUNDING FOR A SUBMITTED IGERT PROPOSAL FOCUSED ON GRADUATE STUDENT TRAINING IN TRANSLATIONAL APPROACHES RELATED TO PERSONS WITH DISABILITIES (PREDICTING AT LEAST A 75% RETENTION RATE)
- ▶ WORK TO INCORPORATE URM STEM DOCTORAL STUDENT SUCCESS IN ALL INITIATIVES



PROBABLE KEYS TO SUCCESS

- ▶ HAVING A MENTOR AND BECOMING ONE FOR FUTURE SCHOLARS
- ▶ ONGOING DIRECT COMMUNICATION AND INVOLVEMENT WITH URM STEM STUDENT COHORTS
- ▶ OPPORTUNITIES TO EXCEL IN POSITIONS BOTH IN AND OUT OF ACADEMIA



THANK YOU ON BEHALF OF USF GRADUATE STUDENTS!

