CESCOS Strategic Plan
2018-2022

Approved by Strategic Planning Committee on September 24, 2018

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Background

The Charles E. Schmidt College of Science (CESCOS) is the primary source of science research and education for more than three million people living and working in our service region of Southeast Florida. Through its academic departments and research centers, the College provides outstanding opportunities and challenges for both undergraduate and graduate science and non-STEM majors. The education and research programs of our College include major efforts in many fields ranging from biotechnology, bioinformatics and brain science to cryptology, developmental systems, dynamical systems, environmental sciences, geoinformation science, marine science and space-time physics.

Research and scholarship are central to our College's mission and play vital roles in the life of the College as a whole. External research funding, the great majority of it coming from federal agencies such as the National Science Foundation and the National Institutes of Health, underwrites major programs of research by our faculty and students. Science faculty members throughout the College have developed state-of-the-art research programs in diverse disciplines and important new interdisciplinary areas. Our faculty members have active collaborations that extend not only across FAU's colleges and campuses but also with local research institutions such as the Max Planck Florida Institute (MPFI) and The Scripps Research Institute (TSRI); as well as affiliations with national laboratories, such as those at Los Alamos and Oak Ridge, and international collaborations that span the globe.

In the knowledge-based and innovation-dependent economy of the 21st Century that demands graduates with higher science and math skills, our College's programs prepare students who can enter the workforce ready to meet local, national and international needs in a globally competitive environment.

Vision Statement

Our vision is to be recognized for interdisciplinary educational and research programs in science, and to be a leader in the international academic community.

Mission Statement

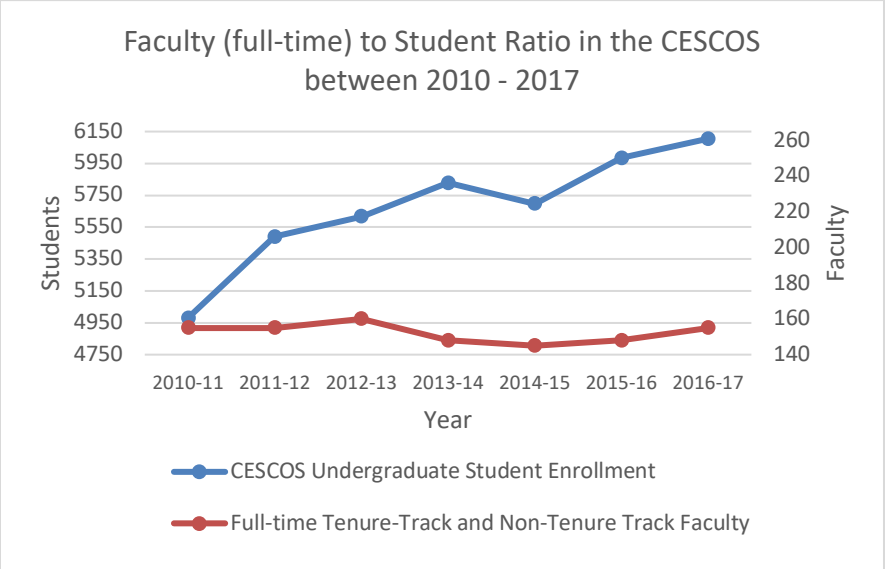
The mission of the Charles E. Schmidt College of Science is:

- To provide excellence in both disciplinary and interdisciplinary science education for our students.
- To apply the power of inquiry and discovery to fundamental problems of scientific importance.
- To find solutions to societal challenges in a culture of research, partnership and scholarship.
- To develop internationally recognized research and instructional programs to meet the needs of the region, the nation and the global community.

Recent Statistics

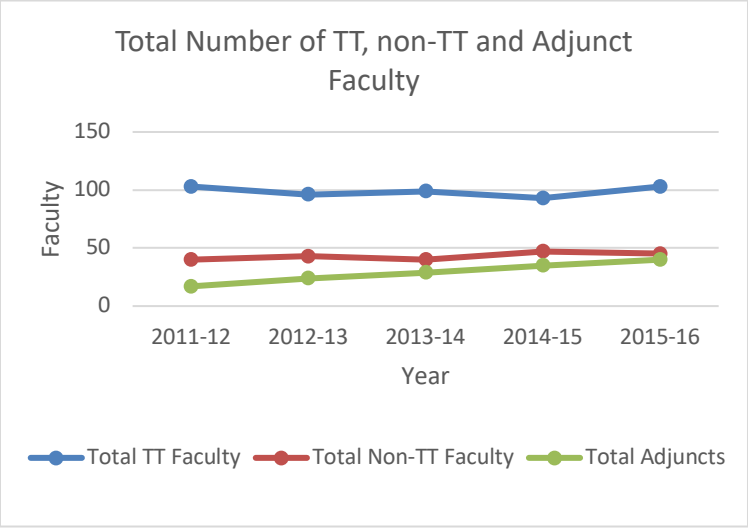
The figures below provide trend analysis of CESCOS student enrollment, faculty numbers, success rate of proposals submitted and total award dollars received in the College in recent years.

Figure 1. The total number of undergraduate students and faculty in the CESCOS, 2010 - 2017.



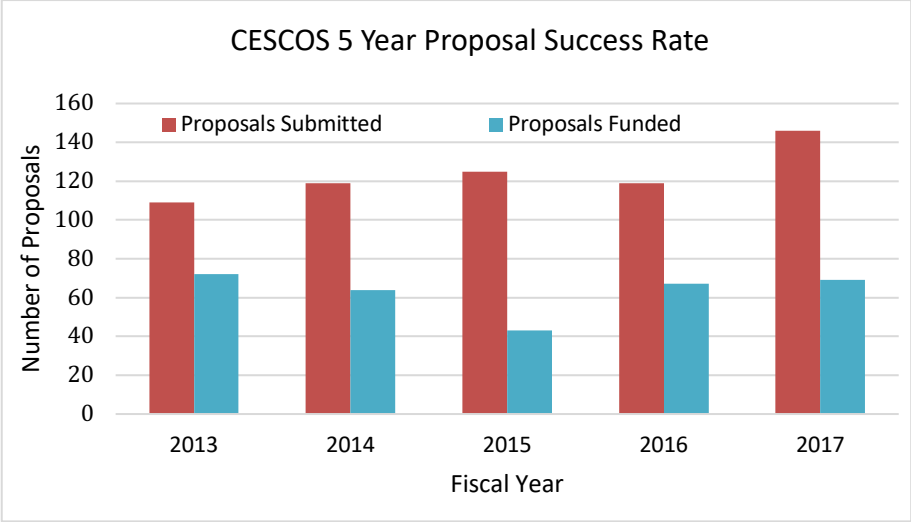
The total number of students taught by College faculty (majors and non-majors), as seen in Figure 1, has increased by 23% since 2010. Over the same time period the number of faculty (tenured or tenure-track (TT) faculty and non-TT) remained the same.

Figure 2. Difference between full- and part-time faculty numbers in the CESCOS, 2011 - 2016.



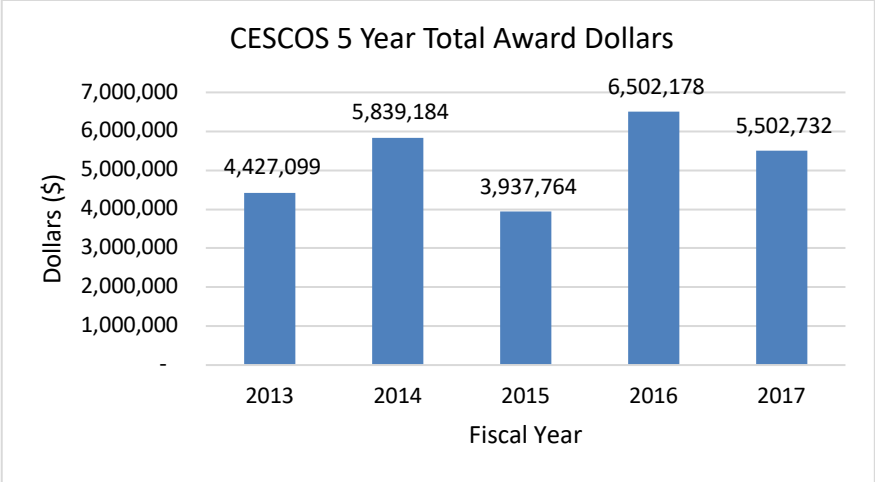
In the past seven years the number of tenured or TT faculty has remained the same (103 in 2011 to 103 in 2016) and the number of full-time non-TT instructors has increased by 12.5% (40 in 2011 to 45 in 2016). Over the same time period the total number of adjuncts (part-time) has increased by 135% (17 in 2011 to 40 in 2016). Note: the number of TT faculty is essentially the same as it was in 2001.

Figure 3. Number of grant proposals submitted versus proposals funded by CESCOS faculty, 2013 – 2017.



As seen in Figure 3, the number of proposals submitted has increased by 34%. However, the the number of approved proposals has remained relatively the same.

Figure 4. Total Award dollars in the CESCOS, 2013 – 2017.



The total award dollars received by the College has fluctuated over the past five years. The amount of funding in 2017 increased by 24% compared to 2013, but decreased by 15% from 2016.

College Goals, Priorities and Strategies

Any recommended plan with goals and objectives will necessarily, and should, change with prevailing circumstances, opportunities and uncertainties. The following Goals, Objectives and Strategies for the Charles E. Schmidt College of Science are intended to be implemented during the next four years in support of the FAU Strategic Plan, 2015-2025. However, close attention to the FAU Strategic Plan will govern those areas of the College that will need to be prioritized over other areas of the College's academic and research programs.

The Goals, Objectives and Strategies outlined here align closely with the FAU Strategic Plan and Board of Governors Productivity Indicators that were being considered at the time of planning for future funding. Where indicated, funds will be either new funds as they become available or funds reallocated from existing College funds, primarily from Education and General (E&G) funds, Foundation funds or funds recovered through indirect cost recovery on grants.

Charles E. Schmidt College of Science's (CESCOS) Strategic Plan

The strategic plan is comprised of five priorities that will guide the growth of the CESCOS over the next five years: *1. Support Student Success, 2. Increase Extramural Funding, 3. Grow Interdisciplinary Collaboration, 4. Embrace Faculty Diversity, and 5. Build Infrastructure.* To achieve the goals of the plan we have identified *three core overarching themes*. These themes are interlaced in the strategic plan, connect the five priorities, and will play a critical role in the ultimate success of this plan.

Increase Research-Active Tenure Faculty

Faculty are the keys to the success of any academic institution. Faculty facilitate student success inside and outside the classroom, procure external funding for STEM education and cutting-edge research, and play a critical role in the functioning of their academic institutions. To aspire to the goal of being recognized as a top-tier research institution and to be nationally acclaimed for contributions to creativity and research, we need to hire tenure-track faculty to meet increasing enrollment (Priority 1), increase extramural funding (Priority 2), grow interdisciplinary research collaborations (Priority 3), recognize outstanding faculty, staff and student contributions (Priority 4), and build operational infrastructure to improve effectiveness in educational, research, and community-outreach activities (Priority 5).

Innovation

Innovation drives the success of teaching outcomes, research proposals, interdisciplinary collaborations, scholarship, and creative activities that provide the foundation for accommodating the growing and robust collection of students, faculty, and staff that comprise the FAU community. Embracing a culture of innovation will lead to continuous development of new ideas, technological and scientific breakthroughs and expansion of research opportunities, partnerships with nationally recognized scientific institutions, and diversified revenue streams. To provide the foundation for stimulating academic experiences for students and a high-quality research environment for faculty, we need to promote curricular and pedagogical innovations (Priority 1), renovate the internal framework that bolsters support for research proposals (Priority 2), foster the diverse academic environment and collaborations (Priorities 3 and 4), and enhance instructional and research technologies with access to state-of-the-art equipment and facilities (Priority 5).

Support Network

The success of the CESCOS strategic plan over the next five years will depend upon the construction of a support network for students, faculty and staff. Development of this support network is comprised of expanding programs (Priority 1) and extramural funding (Priority 2), establishing a recognition system that celebrates all engaged parties (Priority 4), and building internal and external partnerships (Priority 3) and resources (Priority 5) to improve collaborative and experiential learning and research opportunities. The overarching support network underlies the goals and objectives of the CESCOS strategic plan and ties them together as a cohesive unit with the major aim of developing excellence in teaching, research, and scientific innovations to allow the college to become a leader in the international academic community and gain recognition as a top-tier research institution.

Charles E. Schmidt College of Science Five-Point Priority Strategic Plan

Priority 1. Support Student Success

Enhance success in the classroom and outside the classroom. Implement evidence-based instructional practices (EBIPs) in the classroom and establish an experiential learning plan for students. Strengthen student advising in order to enhance student success, including retention, graduation and beyond.

Objective A. Increase the Hiring of Tenure-track Faculty to Meet Enrollment and Curricular Needs.

- Staff tenure track faculty to meet the needs of majors and enrollments.
    - CESCOS will make an immediate effort to raise the number of tenure track faculty to 118 by the end of the 2019-2020 academic year to bring the TT faculty to student ratio back to an appropriate level for a research university.
    - Assuming another ~6% increase in majors and FTEs by 2022, CESCOS will increase the number of tenure track faculty by seven additional tenure track faculty to reach a total of 125 tenure track faculty in 2022.
    - Concomitantly, the hiring of new non-tenure track faculty and use of overload faculty will only be used to fill unforeseen instructional needs where replacement by tenure track faculty is impractical in the short-term.
- Staff tenure track faculty to meet the curricular needs of majors. There are a number of tenure-track positions that the CESCOS departments have identified as being critical to the future success of their students. For example:
    - Quantitative Environmental Scientists - Marine ecology, environmental sciences, geosciences, or any branch of experimental biology desperately need practicing quantitative scientists with which to collaborate for grant funded research and to provide advanced courses in statistics and process/mechanistic modeling. Quantitative techniques are fundamental to all aspects of research in these fields and Ph.D. and M.S. students need more, not less, formal training.
    - At the Departmental level, identify key program requirements to teach the skills necessary for National certified programs.

Objective B. Promote Curriculum and Pedagogical Innovation.

- Support faculty to experiment with new pedagogies and new technologies.
    - Expose students to experiential learning by encouraging departments to offer laboratory classes with real world applications for STEM and non-STEM majors.
    - Implement a variety of teaching methods and student assessments within the same course, where possible, and expand the utilization of technology applications to enhance learning.
    - Link laboratory classes with the lectures to reinforce overall concepts.
    - Provide students with access to state-of-the-art instrumentation for a more innovative curriculum and enhance student problem-solving and analytical skills.
    - Develop more courses that involve teams teaching across colleges or disciplines.

- Transform the student experience and stimulate academic innovation through collaborative learning.
    - Incorporate different learning approaches such as group projects, collaborative problems solving, project-based learning experiences.
    - Increase opportunities for students to engage in faculty-supervised research, internships and other extracurricular activities.
- Extend the academic experience beyond the classroom to prepare students for tomorrow's global society.
    - Provide opportunities for students to identify community-based projects and activities in which they can engage and receive academic credit.
    - Encourage students to work with Academic Service-Learning and the Office for Undergraduate Research and Inquiry (OURI) offices at FAU. Enhance and expand the internship programs in the College, at the undergraduate and graduate levels, using the Tech Runway, FAU Research Park, and local, state, and national research institutions.
    - Increase the number of CESCOS organized and taught study abroad programs.
- Increase retention and graduation rate by supporting the undergraduate advising services (UAS) office to work with the CESCOS faculty to design personalized degree completion pathways.
- Use our geographic advantage to host more scientific conferences, which will promote FAU's CESCOS and expose students to participation in professional academic pursuits, scientific presentation, and the larger scientific community beyond FAU.

Objective C. Support and Expand Undergraduate and Graduate Programs

- Identify strategies and opportunities to increase enrollment in lower enrollment departments and degree programs.
- Provide support for the increasing number of science majors in the College, including the number of summer courses and enrollment, increased faculty numbers, and additional teaching laboratory space.
- Support and encourage departments to design new courses to increase new undergraduate programs and graduate concentrations.
- Identify innovative strategies in the CESCOS and work with the Graduate College to provide competitive graduate student stipends and provide health benefits.
- Increase Honors-in-the-Majors programs throughout the CESCOS. Open up two-way HIM's (Research/Course).
- Adopt a uniform policy for approving concentrations in the General Studies Program.

Objective D. Provide Strong Career Advising and Mentoring

- Work with the FAU Career Center to increase partnerships with the FAU Research Park, local industry and institutions to effectively prepare graduates with the skills (communication, critical thinking and ability to collaborate with diverse teams) to be workforce ready. Develop 'Flight Plans' from the 'Classroom to Career'.
- Educate students concerning career options and identify appropriate programs of study that provide the education for those careers.
- Hold an annual College Career Day, when graduates can come back to make presentations and have Q&A sessions.

- Support the development of accurate tracking mechanisms to figure out what both our undergraduate and graduate alumni pursue and where they settle in order to provide our students with career mentoring resources and contacts for possible employment.

Support Student Success: Action Plan and Metrics

A. Increase the Hiring of Tenure-track Faculty to Meet Student Enrollment.

To meet the needs of majors and increasing enrollment, as well as staff critical positions for the future success of students, the CESCOS is committed to increase the number of tenure-track faculty.

Action/Metric: *Increase the number of tenure-track faculty*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
New TT Faculty	*7*	*8*	*3*	*4*

Budget/Source: *$80,000 S&B per hire/E&G*
Responsible Party: *Provost, Dean, Department Chairs*

B. Promote Curriculum and Pedagogical Innovation.

To increase retention and graduation rate, the College of Science will reinvent and strengthen its curriculum via innovative teaching methods, state-of-the-art equipment, and experiential learning practices to prepare students for transition into the workforce. By supporting CESCOS faculty to innovate their teaching strategies, we aim to increase graduation rates by 5% per year (currently 1140 undergraduates and graduates).

Metric: *Number of science majors graduating*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Students graduating	*1197*	*1257*	*1320*	*1386*

Responsible Party: *Associate Dean for Undergraduate Studies*

Action/Metric: *Increase the number of undergraduate curriculum grants*
Timeline:

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
	2	*3*	*4*	*5*

Responsible Party: *Chairs, Associate Dean for Undergraduate Studies, Dean*

To further this aim, it will be absolutely necessary to work with additional internal entities to ensure that students get the support they require in order to be successful. This includes, but is

not limited to, the OURI and UAS offices to assist in expanding research and internship opportunities and developing individualized success plans for graduation.

Action/Metric: Develop more courses that involve teams teaching across colleges or disciplines.
Timeline:

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
	5	*5*	*5*	*5*

Responsible Party: *Chairs, Associate Dean for Undergraduate Studies, Dean*

Action/Metric: Host more scientific conferences.
Timeline:

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
	5	*5*	*5*	*5*

Responsible Party: *Chairs, Dean*

C. Expand Undergraduate and Graduate Programs.

In order to increase enrollment and attract the best students, CESCOS needs to create competitive programs and more effectively market them to prospective students. Curriculum innovation is an ongoing process and offering additional undergraduate and graduate program concentrations will increase CESCOS ability to capture the attention of better quality students.

Metric: *Increase academic advising*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
New Advisors	*1*	*1*	*1*	*1*

Budget:
Responsible Party: *Associate Dean of Undergraduate Studies*

Metric: *Increase the number of Honors-in-the Major programs (two-way HIM programs)*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
New Honors Programs	*2*	*3*	*4*	*5*

Responsible Party: *Department Chairs, Dean*

Action/Metric: *Increase the graduate stipends and provide health insurance*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
MS Stipend	*$15,000*	*$16,500*	*$18,000*	*$19,500*
PhD Stipend	*$22,500*	*$25,000*	*$27,500*	*$30,000*

Budget:
Responsible Party: *Department Chairs, Dean*

Action/Metric*: Increase the number of external grants that support graduate students.*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Rate of Grant Increase	*5%*	*5%*	*5%*	*5%*

Responsible Party: *Department Chairs, Associate Dean of for Research, Dean, Vice President for Research*

Metric: *Increase the number scholarships to support graduate students*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Scholarships	*3*	*5*	*8*	*10*

Budget: *$3,000 per scholarship; cash gifts; endowments; foundation grants; corporate sponsorship*
Responsible Party: *Department Chairs, Associate Dean of for Research, Dean, Vice President for Research*

New programs, especially HIMs, will require students to actively participate in research and an adequate number of research active, tenure-track faculty with research funding and additional graduate teaching assistantships and scholarships will be required. To support many of these aims, CESCOS will need to identify donors willing to support undergraduate and graduate research. In addition, all CESCOS faculty, including affiliates, should be encouraged to include tuition costs on all federal grant applications.

D. Provide Strong Career Advising and Mentoring

CESCOS will partner with the FAU Career Center, Research Park, and local industry and institutions to prepare graduates to enter the workforce by offering internships, experiential learning opportunities, and skills training on advanced technologies by experts in the field.

Action: *Implement undergraduate mandatory exit survey*
Responsible Party: *Associate Dean for Undergraduate Studies, Chairs, Dean*

Action: *Implement CESCOS Career Day*
Responsible Party: *Associate Dean for Undergraduate Studies, Chairs, Dean*

Success will be determined by the number of graduates able to find employment in their chosen area of study. These statistics can be captured with exit surveys that can be utilized to better strategize career mentoring resources for current CESCOS students. In addition, implementing

a CESCOS Career Day and inviting successful alumni will provide current students additional means of educational and practical mentoring and potential employment opportunities.

Priority 2. Increase Extramural Funding

Increase extramural funding for: a) basic and applied research, b) science/STEM education and c) student success initiatives. CESCOS recognizes that the hiring of additional tenure-track faculty will increase extramural funding pursuit and success, and encourage that follow-through in Priority 1 will sow the seeds of additional success in Priority 2.

Objective A. Hire Interdisciplinary Tenure-Track Faculty to Pursue Grant Funding

- Increase the number of interdisciplinary tenure-track faculty around the Pillars and Platforms focus areas.

Objective B. Increase Research and Grant Support for CESCOS faculty

- Work with Environmental Health and Safety (EHS), Institutional Review Board (IRB), and Division of Research (DOR) to reduce compliance/retraining requirements and redundancy of forms.
- Work with the DOR to streamline the proposal submission process via GrantsERA.
- Hire college wide grant writer to facilitate successful grant proposal submissions.
- Provide seed funding for collaborative and cross-disciplinary research and increase proposal submissions.
- Provide gap funding for research projects.

Objective C. Support STEM Education Grants Across the CESCOS and FAU

- Support grants that incorporate evidenced-based instructional practices.
- Increase the number of Research Experiences for Undergraduates (REUs) proposals submitted by CESCOS faculty.

Objective D. Recognize Scholarly/Research Success

- Award scholarly/research accomplishments.
- Publicize faculty research, collaborations and achievements in different ways,
    - College web page.
    - Press releases.
    - Social media.
    - Faculty assembly.

Increase Extramural Funding Action Plan: Action Plan and Metrics

A. Hire Interdisciplinary Tenure-Track Faculty to Pursue Grant Funding

Metric: *Dollars and grants awarded*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Grant dollars Awarded	*$6,500,000*	*$7,500,000*	*$8,500,000*	*$9,500,000*

Responsible Party: *Associate Dean of Research, Dean*

B. Increase Research and Grant Support for CESCOS faculty

Metric: *Funding for seed grants*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Seed Fund Grants	*$200,000*	*$400,000*	*$600,000*	*$800,000*

Budget/Source: *Funds from College Seed Grant Program (IDC recovery), and funds from Division of Research Seed Grant Program*
Responsible Party: *Associate Dean of Research, Chairs, Dean, Vice President for Research*

C. Support STEM Education Grants Across the CESCOS and FAU

Metric: *Number of STEM education grants submitted and awarded*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
STEM Education Grants Submitted	*6*	*6*	*6*	*6*
STEM Education Grants Awarded	*2-3*	*2-3*	*2-3*	*2-3*

Budget/Source: *Funds from College Seed Grant Program (IDC recovery), and funds from Division of Research Seed Grant Program.*
Responsible Party: *Associate Dean of Research; Chairs; Dean; Vice President for Research*

Action/Metric: *Increase the number of REU Programs*
Timeline:

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Number of REU Programs	*5*	*6*	*7*	*8*

Budget: *Federal grants; IDC recovery*
Responsible Party: *Department Chairs, Dean*

D. Recognize Scholarly/Research Success

Metric: *Number of Scholarly/Research awards*
Timeline:

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Number of awards	*1*	*1*	*1*	*1*

Budget/Source: *$*
Responsible Party: *Associate Dean of Academic Affairs, Dean, Department Chairs*

Priority 3. Grow Interdisciplinary Collaboration

There needs to be added emphasis on interdisciplinary collaboration among the faculty. Concerted effort is needed to improve collaboration and the role of CESCOS in FAU's Pillars.

Objective A. Build and Support Pillar-Relevant Interdisciplinary Programs and Centers

- Substantially increase the CESCOS investment, focus and actions concerning the Ocean Science and Engineering/Environmental Sciences Pillar. Given the Pillar's centrality in FAU's strategic priorities and defining vision, and the fact that a substantial concentration of FAU's faculty, degree programs, research output and students focused on Ocean and Environmental Sciences are housed within CESCOS, take the following actions:
    - Propose to add a new Co-Director for the Pillar, chosen from CESCOS faculty on the Boca Raton or Davie campuses, who will work collaboratively with a new Co-Director from Harbor Branch Oceanographic Institute to steer the overall success of the pillar and participation of the central and southern campuses at FAU.
    - Begin work with FAU administration to establish a School of Ocean and Environmental Sciences at FAU that collects relevant faculty into a single administrative unit. The guiding document for this effort will be the "Roadmap for achieving excellence in interdisciplinary education and research at FAU", produced in 2014 by an ad hoc committee of the Environmental Science Program Committee. Pursuing implementation of the expressed plan, or substantially similar plan, will advance the role of the CESCOS and improve its participation in the Ocean Science and Engineering/Environmental Sciences Pillar, advance FAU in the arenas of ocean and environmental sciences, and compete with other peer institutions, retain faculty and students, and increase extramural funding success.
- Build on the historical computational strengths of the Center for Complex Systems and Brain Sciences as an interdisciplinary Ph.D. degree program with strong potential to help bridge the multiple academic units flying under the Brain Science pillar at FAU.
    - Appoint a permanent director from CESCOS for the Center.
    - Obtain strong support from the university to strengthen its role as a driver of interdisciplinary research and core data analysis techniques, such as machine learning. This includes infrastructure investments such as computing resources as well as strategic hires in computational areas.
- Continue to support the Center for Cryptology and Information Security (CCIS).
    - Hiring of faculty.
    - Expand infrastructure to meet the needs of CCIS.
- Support Medical Physics Program.
    - Hire faculty to increase collaboration with the College of Medicine and hospitals and cancer institutes.
- Support a Medicinal Chemistry Core Group (MCCG).
    - Hire faculty to create a powerhouse at FAU to improve active therapeutics discovered by FAU scientists (e.g. osteoarthritis, cancer and neuroscience) and bridge to biotech companies in Jupiter, FL and HBOI.
- Support the interdisciplinary programs in Data Science.
    - Build and lead the interdisciplinary graduate program in data science
    - Develop undergraduate programs in data science

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Objective B. Promote Interdisciplinary Research

- Improve collaboration and the role of CESCOS in FAU's Pillars with the appointment of a Pillars Liaison who helps promote and coordinate interdisciplinary Pillar based collaboration in CESCOS.
- Establish a formalized forum for interested faculty members to network on collaborative/interdisciplinary opportunities.
- Build the interdisciplinary research program in Data Science and Analytics and Artificial Intelligence, spearheaded by the CESCOS-organized FAU Data Science and Analytics Conferences and enhanced by the Sandbox and Portal
- Establish a visiting scholars program to facilitate the exchange of faculty between departments and colleges to immerse them with researchers in other disciplines.
- Continue the "Departmental Pairs" program.
- Encourage faculty collaborations by supporting an increase in the number of co-chairs on graduate student committees.
- Provide seed funding for collaborative and cross-disciplinary research.
- Establish clear guidelines on how collaborative efforts by faculty should be evaluated at the departmental and College levels, as well as, for Promotion and Tenure evaluation.
- Establish clear guidelines on how collaborative efforts by departments should be assessed at the College and University level.
    - The focus of the state's metrics on the number of majors in degrees for assessing degree programs and departments creates a competitive environment where smaller departments must guard against the erosion of their degree programs from incursion across disciplinary boundaries. The threat of closure is real from a decline in majors due to interdisciplinary programs utilizing departments' courses and fundamental disciplinary intellectual property. This issue must be addressed so that interdisciplinary collaboration is universally attractive to departments that naturally and enthusiastically participate in collaboration.

Objective C. Recognition of Collaborative Research within the CESCOS

- Create an Outstanding Faculty Collaborative Research Award to recognize faculty teams for their accomplishments in research and scholarly activities.

Grow Interdisciplinary Collaboration: Action Plan and Metrics

A. Support the Hire of Interdisciplinary/Collaborative Faculty

Metric: *Number of interdisciplinary faculty*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
New Faculty	*1*	*1*	*1*	*1*

Budget/Source: *$80,000 S&B per hire/E&G*
Responsible Party: *Provost, Dean, Department Chairs*

B. Promote Interdisciplinary Research

Metric: *Funding for interdisciplinary/collaborative seed grants*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Seed Fund Grants	*$50,000*	*$100,000*	*$200,000*	*$250,000*

Budget/Source: *Funds from College Seed Grant Program (IDC recovery), and funds from Division of Research Seed Grant Program.*
Responsible Party: *Associate Dean of Research, Chairs, Dean, Vice President for Research*

C. Recognition of Collaborative Research within the CESCOS

Metric: *Number of collaborative faculty awards*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Awards	*2*	*4*	*6*	*8*

Budget/Source: *$ /IDC recovery*
Responsible Party: *Associate Dean of Research, Chairs, Dean*

Priority 4. Embrace Faculty Diversity

FAU is committed to excellent teaching, innovative research and the personal and intellectual growth of its students in a diverse academic environment. This pursuit is made possible only by the distinctive collection of students, faculty and staff that converge at the university. It is through this mutual exchange of ideas, experiences and perspectives that sustains the depth of our learning.

CESCOS is a minority-serving college (62% of undergraduate students are non-white), and Hispanic-serving college (28% of undergraduate students are Hispanic), and 68% of our undergraduate students are female. The CESCOS is committed to create programs, policies and an environment that will support the success of women and under-represented minorities (URMs) and other under-served groups.

Objective A. Improve the Diversity and Gender Balance of Faculty in Hiring

- To better reflect in our faculty the diverse backgrounds of our students, make a priority of pursuing qualified Black or African American, Hispanic or Latino, and female candidates with all future openings at all faculty levels.
- Establish training in diversity (including ethnicity, cultural and gender) for faculty on search committees to complete before being put on task.
- Pursue a diverse applicant pool. All of our departmental searches will be broad and have input from the CESCOS Diversity and Inclusion committee.
- Target position advertisements to regional, national, and international institutions producing qualified graduates from the target demographics, as well as organizations with specific targeted outreach efforts.
- To address any pay disparities in hiring, offer letters will publicize the Florida Has a Right to Know website where all faculty and staff salaries are made public so that both parties are negotiating based on full and publicly available information.
- Establish a CESCOS Targets of Opportunity fund to facilitate the hiring of women and URMs to achieve faculty excellence through diversity.

Objective B. Formalize Institutional Structures to Enhance the Success and Visibility of Women and Under-Represented Minorities within the CESCOS

- Establish a Diversity and Inclusion Committee in the CESCOS.
- Work with the Diversity and Multicultural Affairs and the Association for Women in Science (AWIS).

Objective C. Recognition of Women and Under-Represented Minorities within the CESCOS

- Create annual awards to recognize outstanding contributions by women and under-represented minorities for their accomplishments in research and scholarly activities.
- Support events and activities that foster and recognize inclusiveness of diversity at the local, state, national and international levels.
    - Women's History Month
    - Black History Month
    - International Day of Women and Girls in Science

Embrace Faculty Diversity: Action Plan and Metrics

A. Improve the Diversity and Gender Balance of Faculty

Action: *Target of opportunity fund to increase recruitment of outstanding URM/Female Scientists*

Establish a target of opportunity fund to compete for salary support and start-up packages to recruit outstanding scholars.

Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Target Fund	*$150,000*	*$150,000*	*$150,000*	*$150,000*

Budget/Source: *$*
Responsible Party: *Associate Dean for Academic Affairs; Diversity & Inclusion Officer; Dean*

B. Formalize Institutional Structure and Enhance the Success and Visibility of Women and Under-Represented Minorities within the CESCOS

Action: *Establish a Diversity and Inclusion Committee*
Responsible Party: *Associate Dean for Academic Affairs, Diversity & Inclusion Officer, Dean*

C. Recognition of Women and Under-Represented Minorities within the CESCOS

Metric: *Number of URM/Female science events*
Timeline:

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Number of events	*1*	*1*	*1*	*1*

Responsible Party: *Associate Dean for Academic Affairs, Diversity & Inclusion Officer, Dean*

Action/Metric: *Number of URM/Female Science awards*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Number of awards	*1*	*1*	*1*	*1*

Responsible Party: *Associate Dean of Academic Affairs; Dean; Department Chairs*

Priority 5. Build Infrastructure

The operational infrastructure and capacity of the CESCOS needs to be enhanced to support the goals of this strategic plan.

Objective A. Hire a CESCOS Grant Manager/Writer to Work with the CESCOS Faculty and Administrative Staff

- The Grant Manager/Writer will:
    - Find funding opportunities
    - Facilitate interdisciplinary team grant submissions
    - Keep track of yearly grant awards and budgets for the CESCOS.

Objective B. Assess Current Space Needs and Identify Future Space Needs

- Create a College Space Committee, composed of members from each department and the Dean's office, to study and make recommendations concerning space allocation and usage, and specifically:
    - Develop a renovation plan for existing lab and office spaces to account for increased enrollments and research funding.
    - Identify new building needs, including those for teaching and engaging undergraduates in research activities that reflect our growing student enrollment.
    - Ascertain space requirements (lab and office) for new faculty hires.
    - Evaluate, make recommendations upon, and implement any new space policies at the College and University levels.

Objective C. Support state-of-the-art core instrumentation facilities

- Provide students and faculty in the CESCOS with enhanced instructional technology resources.
- Coordinate technology fee grant submissions.

Build Infrastructure: Action Plan and Metrics

A. Hire a CESCOS Grant Manager/Writer to Work with the CESCOS Faculty and Administrative Staff.

Action: *Hire a CESCOS grant manager/writer*
Budget/Source: *$60,000/IDC funds*
Responsible Party: *Associate Dean for Research, Dean.*

B. Assess Current Space Needs and Identify Future Space Needs.

Metric: *Space for Teaching Labs, Research Labs, Instrumentation Labs and Administrative and Faculty Office Space*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
	Access space	*Identify needs/requirements*	*Plan for renovations/new buildings*	*Implement plan*

Responsible Party: *Associate Dean for Research, Chairs, Dean.*

C. Support state-of-the-art core instrumentation facilities

Metric: *Research Instrumentation/Infrastructure*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
	Access research and teaching equipment/ instrumentation	*Identify needs/requirements and instrumentation cores*	*Implement plan*	*Implement plan*

Budget/Source: *E&G funds/IDC recovery funds*, *Technology Fee Grant*
Responsible Party: *Dean, Associate Dean for Research, Department Chairs, Vice President for Research*

Metric: *Funds for instrumentation/equipment maintenance*
Timeline

Year	*2018-19*	*2019-20*	*2020-21*	*2021-22*
Maintenance Funds	*$100,000*	*$120,000*	*$140,000*	*$160,000*

Budget/Source: *E&G funds/IDC recovery funds, Foundation funds, grant funds*
Responsible Party: *Dean, Associate Dean for Research, Department Chairs*

Assessment Plan

The strategies associated with the objectives of this plan are concrete and specific and we have identified a set of direct measures and benchmarks by which the College will evaluate the achievement of our planning goals. Data will be collected and examined annually through the College's extant assessment infrastructure. Strategies, metrics, and benchmarks will be adjusted, as appropriate, in response to these findings for continuous program improvement. All results and responses thereto will be reported to the Dean of the College as well as to other relevant divisions of the university.

This plan utilizes mixed methods of assessment. The metrics consist primarily of quantitative indicators of growth in programs and courses offered, faculty and professional staff headcounts, student enrollments, outreach activities, and funding. However, qualitative measures are also included to directly gauge the coherence and quality of our academic programs. Each of these variables is expected to contribute to increases in FAU's student graduation rates (particularly in STEM disciplines) and total research expenditures, both of which are highlighted in the University Strategic Plan, 2015-2025.