

**School of Science • The College of New Jersey**  
 Strategic Map, 2015-2018  
*Building Academically Excellent Programs That Will Garner National Recognition*

**2016–2017 OUTCOMES**

Strategic Priority	Strategic Objective	Projects for 2016-2017	Major Outcomes
<b>All Priorities and Objectives</b>		Continue to work with the Center for Institutional Effectiveness to update departmental assessment plans and to identify/enhance usage of appropriate instruments/approaches to measure program-based student learning outcomes.	Held several conversations with the Director of the Center for Institutional Effectiveness and the Assistant Director of Assessment; These individuals also met with several departments; Several departments held retreats and two held full 5-year program reviews; Assessment plans were updated and instruments/measures were identified in three departments; Project ongoing.
		Create an SoS Task Force on Student Success focused on the rapidly changing higher education environment.	Created Task Force; Task Force met throughout the year and engaged the entire SoS and departments in iterative conversations; Task Force used regularly scheduled SoS meetings for speakers, interactive conversations, and to share example recommendations; Task Force created and released a series of recommendations that could be adopted by different levels: (a) individual faculty members, (b) groups of faculty members teaching the same course, (c) departments, and (d) multiple departments.
		Create a new SoS departmental-level grant program, focused on departmental transformation and programmatic excellence.	Creation of program postponed.

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<b>Enhancing Scholarship Broadly Across the SoS</b>	Internal Support for Faculty Research and for Professional Travel for Faculty and Students	Continued support of SoS mini-grant program for faculty research.	Four proposals were received and three were funded.
		Continued support of SoS external scholarly mentor program, scholarly writing groups, and catalysis conversations.	No proposals were submitted.
		Continued support of travel to scholarly conferences at a high level.	Approximately 83 faculty trips and 71 student trips were supported by the School of Science; Approximately 71 scholarly presentations were delivered.
		Provide new administrative support for post-award grant management in the SoS.	Completed search for an SoS Grants Administrator and Budget Manager; Onboarded new colleague; He met with all funded faculty members, pre-award and post-award staff members, and created new SoS process flow procedures and timelines.
	Increased Faculty Engagement and Development in Grant Writing	Increase faculty interest and ease with grant submissions via informal information sessions (brown bag lunches, grant planning sessions) and topic-specific, on-campus support.	Held three on-campus, SoS grant-writing workshops in Fall 2016 (no workshops were held in Spring 2017 due to a staff search); 30 extramural proposals/pre-proposals were submitted, and 25 PIs/Co-PIs, representing all departments, were included on these proposals; The funding rate was 36% for proposals with decisions, and over \$600,000 in external grant funding was awarded.
		Continued support of trips to funding agencies and grant-related conferences with a focus on increasing participation within all departments.	Four faculty and staff members visited the National Science Foundation in Washington, DC; One faculty member attended the CUR Dialogues meeting on grant opportunities; One staff member attended several NSF and NIH grant proposal development and management conferences.
	Enhanced Integration of Research and other Deeply Engaging Pedagogies throughout the Curriculum for Majors and Non-majors	Create a new SoS curriculum development grant program.	Creation of program postponed.
		Continued support of travel to conferences/workshops related to pedagogy, teaching and learning, high-impact practices, scholarly practice, and outcomes assessment.	Supported faculty and staff travel to several key meetings, such as: Understanding Interventions that Broaden Participation in Science, AAC&U meeting on undergraduate STEM education, CUR Dialogues, NSF and NIH grant proposal development and management conferences, and SIGCSE; The National Academies of Sciences released a major report on undergraduate research experiences, and TCNJ is included in the report, and TCNJ was the only institution featured in a stand-alone case study presentation at the national launch of the report in Washington, DC.

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<b>Deepening Student Engagement</b>	Broadening Participation in Student Research, Internships, Capstones, and Academic Clubs	Continued implementation of new SoS Gateway to Research Careers in Science program with expanded program of coordinated academic programming.	Held a series of six coordinated workshops and events, and five Gateway Scholars are participating in the MUSE program during summer 2017; Recruited a new cohort of five Gateway Scholars for Fall 2017; Also, increased the number of other first- and second-year students engaged in research (e.g., NSF-iPics, seminars, shadows).
		Hold a major, campus-wide science outreach event by offering a science-themed lunch in Eickhoff Dining Hall and reception in connection with an SoS Guest Colloquium speaker.	Held “Tasting the Tree of Life: Exploring Biodiversity through Cuisine” event, which drew over 3,400 attendees, received significant press coverage, and won a national award; Created a major website for long-term education and outreach; Delivered a national conference presentation and are preparing a manuscript; The success of this unique event was due to the fact that it was a true collaboration of TCNJ’s School of Science, Department of Biology, and Dining Services, involving over 70 students, staff, and faculty members.
		Support teams of faculty and staff members to attend conferences and workshops focused on student success (e.g., AAC&U, Understanding Interventions).	Teams attended the national conferences on Understanding Interventions that Broaden Participation in Science Careers and AAC&U meeting on undergraduate STEM education; Presented selected presentations at each conference.
	Enhanced Student-Faculty Engagement through Developmental Advising and Mentoring	Offer facilitated discussion sessions for faculty and staff on transitions, equity, inclusion, and diversity.	Used four School of Science monthly meetings for school-wide interactive conversations and presentations on these topics; Hosted an external guest to give a presentation titled “Including Everyone in Learning in the Science Classroom” and to meet with groups of faculty and staff on the topic.
		Increase awareness, number of proposals, and on-campus support for student applications to the National Science Foundation's Graduate Research Fellowship Program (NSF-GRF).	Offered an SoS support program for the NSF-GRF program, including information sessions, workshops, and one-on-one proposal reviews; Four SoS seniors each competitively received a Fellowship; Continued to provide support for Barry Goldwater and Fulbright applicants.
	Enhanced Integration of Research and other Deeply Engaging Pedagogies throughout the Curriculum for Majors and Non-majors	Create a new SoS curriculum development grant program.	Creation of program postponed.
		Continued support of travel to conferences/workshops related to pedagogy, teaching and learning, high-impact practices, scholarly practice, and outcomes assessment.	Supported faculty and staff travel to several key meetings, such as: Understanding Interventions that Broaden Participation in Science, AAC&U meeting on undergraduate STEM education, CUR Dialogues, NSF and NIH grant proposal development and management conferences, new Chairs conference, and SIGCSE; The National Academies of Sciences released a major report on undergraduate research experiences, and TCNJ is included in the report, and TCNJ was the only institution featured in a stand-alone case study presentation at the national launch of the report in Washington, DC.

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<b>Building a Robust Intellectual Community</b>	Recruitment and Development of Diverse and Intellectually Courageous Students, Staff, and Faculty	Prepare advertisements, evaluation criteria, and interview schedules for faculty and staff positions that are well-aligned with the teacher-scholar model in a primarily undergraduate, residential institution and our mission.	Hired three tenure-line faculty members, several visiting faculty members, and two staff members; Held productive meetings with the Offices of Human Resources and Admissions.
		Enhance department-level and school-level recruitment efforts for prospective students.	Significantly revised and enhanced all of our departmental recruitment presentations and open house events; Enhanced participation at open house events; These efforts had a positive impact on yield.
		Identify and submit grant proposals focused on supporting students traditionally underrepresented in the SoS; Implement funded grants.	Submitted a pre-proposal to the Howard Hughes Medical Institute (HHMI) “Inclusive Excellence” program, and we were invited to submit a full-proposal; (For context, 301 pre-proposals were submitted and only 49 institutions were selected to submit a full proposal); Also submitted NIH-MARC and NSF-IUSE proposals.
	Deepened Engagement in Events Where Teaching and Scholarship are Shared within the SoS and Campus Communities	Continue to enhance SoS and departmental colloquia series.	Held 52 colloquia, including disciplinary and interdisciplinary presentations with a broad range of external and SoS faculty speakers.
		Broaden participation at colloquia both inside and outside of their home department.	Colloquia and lecture presentations were well-attended; In collaboration with the Center for the Arts, we hosted guest artists and scientists, lectures, and an Art Gallery exhibition ( <i>A Better Nectar</i> ) focused on the interdisciplinary connections between science art; Tri-Beta Biology honor society also held a reception at the exhibit.
	More Time and Opportunities for Pedagogy, Scholarship, and Professional Development for Faculty and Staff	Continue to support travel to conferences/workshops related to pedagogy, teaching and learning, high-impact practices, scholarly practice, outcomes assessment, academic advising, time management, etc.	Supported faculty and staff travel to several key meetings, such as: Understanding Interventions that Broaden Participation in Science, AAC&U meeting on undergraduate STEM education, CUR Dialogues, NSF and NIH grant proposal development and management conferences, new Chairs conference, and SIGCSE; The National Academies of Sciences released a major report on undergraduate research experiences, and TCNJ is included in the report, and TCNJ was the only institution featured in a stand-alone case study presentation at the national launch of the report in Washington, DC.

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<b>Building a Teaching and Research Supportive Infrastructure</b>	Integration of New Facilities, Instrumentation, and	Finalize Equipment Leasing Fund (ELF) purchasing for strategic laboratory and computing equipment/instrumentation replacement and acquisition plans.	Significant research on an array of laboratory and computational equipment was conducted, and all purchasing was finalized; All equipment was delivered.
	Computing into Curricular and Research Programs	Engage in the planning / design process for renovation of SoS facilities during Phase 2 of the STEM Complex project; Continue to be engaged in communication about progress of the Phase 1 new construction.	Phase 1 – Construction nearly finished; Engaged in meetings and reviews of furniture, equipment, signage, and tours. Phase 2 – Held many meetings with the architects and reviews of drawings.
	Maintenance, Support, and Training for Instrumentation and Computing	Provide group and one-on-one training sessions on high-performance computing and virtual computing.	Delivered two SoS and campus-wide informational / overview presentations; Provided multiple faculty members with one-on-one instruction on how to get started using the Science HPC cluster resource including compute, big data, and virtualization; Worked directly with multiple students to help install, configure, and utilize resources on the Science HPC cluster in both their course work and faculty mentored research.
		Continue to coordinate discussions on long-term maintenance, training, and service needs.	Departments assessed level of support needed and strategic implementation of resources; Project ongoing.
	Enhanced SoS-focused Information and Technology Support	Identify opportunities for grant proposals and opportunities for interdisciplinary/multidisciplinary and inter-institutional/consortial collaborations.	Traveled to Washington, DC and met with several program officers at the NSF; Actively planned several proposals, which will be submitted in AY 2017-2018.
		Provide new support for the High-Performance Scientific Computing Cluster.	Engaged in significant researching and purchasing of hardware and software; HPC Advisory Committee was very active; Provided many faculty members and students with one-on-one instruction and assistance; In collaboration with IT, hosted a meeting the New Jersey Big Data Alliance leadership group at TCNJ.