Recent Projects

National Science Foundation
Samples of current and previous projects evaluated by PEER

Developing Reliable Educational Avenues to Manifest (DREAM) STEM Careers ($1,045,030, 2019–2024):

With support from the NSF Undergraduate STEM Education: Hispanic-Serving Institutions (HIS) program, this Track 1 project aims to build institutional capacity in STEM, particularly marine science and technology. To achieve this goal, the project seeks to improve student perceptions of STEM and to increase the number of students who enter STEM programs and pursue STEM careers. Project activities include implementation of innovative teaching strategies, use of and research about the effectiveness of technologies such as virtual reality, and development of effective pathways to STEM careers. By developing a STEM Ambassador program, the project will provide opportunities for undergraduates to participate in STEM outreach to K-12 students. The undergraduate STEM Ambassadors will share their experiences and provide real-life examples about what makes STEM interesting and how to be successful in STEM. The project will also engage students in undergraduate research and professional internships to help them develop skills needed in the workplace. The project team will investigate the effectiveness of innovative technologies, such as virtual reality, to actively engage students and elevate their interest in STEM and STEM careers. Expected outcomes of the project include increased recruitment and retention of students in STEM programs, thus contributing to increasing the diversity of the STEM workforce.

- Principal Investigator: Patrick Rice, College of the Florida Keys

CAREER: Building an Online Learning for Mastery System that Creates a Student-centered STEM Learning Environment ($158,887, 2019–2024):

This NSF Faculty Early Career Development (CAREER) program prestigious award supports Dr. Zhongzhou’s activities addressing three major challenges facing STEM higher education in the United States today: educating an increasingly diverse and non-traditional student population, producing at least 1 million additional STEM graduates, and reducing the cost of higher education. The goal of the project is to create a student-centered online learning system that has the potential to allow every student to select and engage with learning resources that best suit their own backgrounds and learning needs.

- Principal Investigator: Dr. Zhongzhou Chen, UCF College of Sciences


This NSF Research for Experiences for Undergraduates (REU) program funded REU Site addresses challenges in next-generation modes of transportation and energy generation. Realizing planned platforms for advanced space travel and energy production can only be achieved through multidisciplinary research, the REU site will actively recruit and partner a diverse group of approximately 33 students over 3 years with leading UCF faculty and graduate students. Together, these teams will advance the fundamental knowledge needed to overcome technical barriers limiting hypersonic flight. Candidate REU students will be matched with individual research projects based on their interests and skills. With most of their time engaged in cutting-edge research, REU students will also benefit from research-oriented seminars, professional development workshops, software training, and launch pad facility tours. HYPER has several goals; most importantly, to prepare students for Ph.D. level research and research-oriented employment.
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• Principal Investigator: Dr. Ali Gordon, UCF College of Engineering and Computer Science

Valencia College Engineering Technology Supply Chain Automation ATE Project (§224,999, 2018–2021):
To best serve the growing national and global supply chain workforce environment, new talent must be engaged in programmatic opportunities to address the skills-gap in emerging technician occupations. The Valencia College Engineering Technology Supply Chain Automation ATE project located in Central Florida is advancing research on effective practices in engineering technology (ET) workforce education through a new curriculum framework and innovative approaches to teaching supply chain automation (SCA). The new SCA-specialization is providing a model for community colleges across the country, contributing to a growing movement for businesses and industries to become more efficient in distribution and supply chain automation practices. The project is designed to demonstrate that the SCA-specialization within the ET associate degree (A.S.) program is a viable two-year degree option that will serve the community through partnerships with industry, leading to high wage employment opportunities in high-demand occupations, and generating new knowledge on the skills and competencies identified by industry to meet the workforce needs in SCA. Following a rigorous evaluation, Valencia will share best practices, curriculum and insight with other ATE centers and projects and collaborators to add knowledge to benefit the whole.

• Principal Investigator: Dr. Nasser Hedayat, Valencia College

STEM Transfer Students Opportunity for Nurtured Growth (STRONG) (§999,994, 2018–2023):
With funding from the NSF Scholarships in Science, Technology, Engineering and Mathematics (S-STEM) program, the STEM TRTransfer Students Opportunity for Nurtured Growth (STRONG) project is providing support to low-income students with demonstrated financial need and academic promise to succeed in STEM disciplines at the UCF. This S-STEM Track 2 project is funding up to 36 scholarships over 5 years for transfer students who are pursuing bachelor's degrees in STEM. Compared to first time in college (FTIC) students who begin their academic careers at a four-year institution, transfer students generally find the path to obtaining a bachelor's degree more challenging, and they are significantly less likely to graduate than their FTIC counterparts. Finding ways to improve the educational experiences of these students is an urgent national priority. The aim of UCF's STRONG project is to substantially increase retention, graduation rates, and career success of STEM transfer students. This goal is achieved in part by giving each student a role in various STEM activities within a community of high-achieving scholars, who are majoring in similar fields. Providing financial support, mentorship, and opportunities for academic engagement outside the classroom promises to reduce the obstacles students face, keep them interested in their field of study, and motivate them to excel academically. A thorough study of how the program affects its participants will maximize the impact of the intervention and informs future efforts to improve the educational experiences of STEM transfer students.

• Principal Investigator: Dr. Mubarak Shah, UCF College of Engineering and Computer Science

An Educational Network to Gain STEM Graduates and Enhance STEM Education (ENGAGE)
($1,109,550, 2017–2020):
The Louis Stokes Alliances for Minority Participation (LSAMP) program assists universities and colleges in diversifying the STEM workforce through their efforts at significantly increasing the numbers of students from historically underrepresented minority (URM) populations to successfully complete degree programs in science, technology, engineering and mathematics (STEM) disciplines. The LSAMP Bridge to the Baccalaureate (B2B) funding opportunity provides support for URM STEM students who begin their instruction at a community college with the intent to transfer into 4-year STEM degree programs, in
addition to other infrastructure support such as STEM faculty professional development. ENGAGE aims to broaden participation of URM students and enhances diversity in STEM. Valencia College, on behalf of the Central Florida STEM Alliance (CFSA), seeks to significantly increase the number of URM STEM students transferring from CFSA two-year colleges, Valencia College, Lake-Sumter State College and Polk State College, to STEM baccalaureate degree programs at regional university partners, the Florida Institute of Technology, Florida Polytechnic University, UCF, University of Florida and University of South Florida.

- Principal Investigator: Dr. Kathleen Plinske, Valencia College

**SaTC: EDU: Online Digital Forensics Courses and Labs for Students and Professionals** ($314,955, 2017–2019)

Information leakage and data breaches have become increasingly damaging to businesses, the government, and people's lives. While the existing cybersecurity curricula focus on defensive solutions, this proposed online program from the UCF attempts to provide both defensive and post-attack digital forensics curriculum for dedicated digital forensics students and professionals. This National Science Foundation (NSF) Secure and Trustworthy Cyberspace program funded project will enrich the future cybersecurity workforce with both preventative and post-attack digital forensics skills to effectively counter the cause and effect of cyber-attacks. This program will also help alleviate shortages of qualified digital forensic researchers and practitioners in cybersecurity areas.

- Principal Investigator: Dr. Yier Jin, Department of Electrical and Computer Engineering, University of Florida

**RET Site: Collaborative Multidisciplinary Engineering Design Experiences for Teachers (CoMET)** ($595,702, 2016–2020):

The objective of this NSF Research Experiences for Teachers (RET) Site program funded project is to provide K–12 teachers with a hands-on engineering design experience covering all aspects of the Internet of Things, from the manufacturing of a sensor, to the hardware and software that allows it to connect to the Internet. In order to support the STEM educational services for teachers and students in K–12, the RET site program aims at creating competent teacher trainers who will ensure quality pre-service and in-service teacher education, by providing multidisciplinary experiences that are relevant to the current technical development. Teachers will develop teaching modules to deploy in the classroom in the form of lecture notes, demonstration kits, and prototypes. Thirty teachers in STEM education from Seminole, Orange, and Brevard County public school districts will be targeted for the eight-week summer research and one-week train-the-trainer experience in the following summer. The participants will rotate to four different laboratories, where they will learn about the practice of engineering in various disciplines such as Materials Science and Engineering, Civil and Environmental Engineering, Mechanical Engineering, Computer and Electrical Engineering and Computer Science on the UCF campus under the guidance of faculty mentors.

- Principal Investigator: Dr. Hyoung Jin Cho, UCF College of Engineering and Computer Science, Department of Mechanical and Aerospace Engineering

**RET Site: Research Experiences for Teachers in Computer Vision and Bio-Medical Imaging** ($600,000, 2016–2019):

The goal of this NSF Research Experiences for Teachers (RET) Site program funded project at UCF is to generate high school students who are inspired by knowledge of technological innovation, and to address the more immediate need for generating a pool of teachers familiar with the processes and workings of innovation in our technologically sophisticated and demanding society. The RET site proposes to use
Computer Vision and Bio-Medical Imaging to immerse teachers in research methods; involve them in UCF faculty's research projects; and assist and mentor them in transitioning, transferring, and communicating their experiences to their classrooms. This RET site will encourage teachers to build and sustain longer term relationships with UCF’s research programs, and open up pathways for high school students to consider research careers and select academic paths that lead to pursuing graduate studies. Teachers will be embedded within a successful, active research group and exposed to the intellectual excitement involved in research activity, and this will help them observe how researchers develop the skills necessary to work on research projects. At the end of their year-long RET engagement, they will partake in a dissemination workshop, where they will foster discussions with other STEM teachers, about their training experiences and their classroom outcomes.

- Principal Investigator: Dr. Mubarak Shah, UCF College of Engineering and Computer Science


A NSF Advanced Technological Education (ATE) program funded project at the Florida Keys Community College (FKCC) aimed at the development of an Associate in Science (AS) degree for Engineering Technology that will focus on training alternative energy technicians and conducting research to foster wind, solar and tidal energy technologies locally, regionally, nationally and internationally. With increasing demands for "solar and wind" jobs, the training needed to create the workforce necessary to sustain the rapid expansion and transition to these new energy production technologies is also needed. FKCC is ideally located in one of the sunniest, windiest and tidal energy rich cities in the United States. As FKCC trains the 21st Century workforce for green energy, conducts research to harness the surrounding renewable energy resources, and develops a global network devoted to fostering the renewable energy industry, the Engineering Technology Alternative Energy Technicians (ET-AET) program will be at the epicenter.

- Principal Investigator: Dr. Patrick Rice, Florida Keys Community College, Marine Sciences

**REU Site: Engineering and Nanoscience of Materials and Device Applications in Biotechnology and Medicine ($391,867, 2016–2019):**

This National Science Foundation (NSF) Research Experiences for Undergraduates (REU) Site program hosted by the NanoScience Technology Center (NSTC) at UCF will engage a diverse cohort of students, recruited from underrepresented groups, in the development of materials and technologies for application in biotechnology and medicine. During the 10-week summer experience involving a multidisciplinary team of faculty and students, the participants will gain hands-on research training in topics such as adoptive cancer immunotherapy and targeted nanoparticle cancer therapy, engineering of Micro-Electro-Mechanical systems (MEMS) devices and body-on-a-chip systems for proteomics research, develop nanofibers for tissue engineering, engineer smart wound healing patches, and nanomanufacturing of tunable plasmonic sensors. The program strengthens bridges to community colleges in Central Florida and minority institutions with limited research capabilities by promoting the benefits of undergraduate research. This REU experience will inspire students to pursue careers that produce high quality researchers and personnel, which will help address the growing need for trained professionals capable of developing and deploying biotechnology and the next generation of medicine in the field.

- Principal Investigator: Dr. Andre Gesquiere, UCF Nanoscience Technology Center and Department of Chemistry

**NUE: Collaborative Networked Virtual Experiences for Nanotechnology Education ($200,000, 2014–**
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The purpose of this Nanotechnology Undergraduate Education (NUE) in Engineering project funded by NSF is to promote student engagement and interactive learning in nanotechnology education. The development of virtual experiments and concept demonstrations through online modules can enhance student understanding of the subject. The project aims to provide opportunities for students to utilize interactive media of microscopic images of both natural and artificial objects and virtually operate nanoscale devices and instruments to which they would otherwise have limited hands on exposure. Student collaboration is addressed through shared virtual experiences and modules which will be made accessible on mobile devices and portable technology.

- Principal Investigator: Dr. Jayan Thomas, UCF College of Optics and Photonics

LSAMP Bridges to the Baccalaureate: Building Pathways through Connection and Direction for URM Students in STEM ($1,500,000, 2014–2017):

This NSF, LSAMP Bridges to the Baccalaureate (B2B) funded effort was to increase the number of underrepresented minority (URM) Science, Technology, Engineering, and Math (STEM) students who transferred to university STEM majors from three Central Florida colleges that comprise the Central Florida STEM Alliance (CFSA). Valencia College, Lake-Sumter State College, and Seminole State College of Florida partnered to achieve the objective of having at least 642 URM students from the CFSA transfer into bachelors' STEM majors by 2017. The project addressed multiple areas and barriers by integrating student centered, faculty centered, and department centered activities. The student centered component included pre-college student outreach, dedicated STEM academic advising, summer academic enrichment, URM STEM student learning support, career awareness and experiences, and URM student financial support. Faculty centered activities included focus on learning strategies, diversity and inclusion, faculty research program, and curriculum alignment, whereas department centered activities focus on targeted STEM pathways and STEM online academic support. The evaluation plan examined changes in strategic indicators such as the number of URM students declaring a STEM major, persistence rate for URM, URM associate degree graduation rate, URM GPA, and more.

- Principal Investigator: Dr. Kathleen Plinske, Valencia College Osceola and Lake Nona Campus

Collaborative Research: RET in Engineering and Computer Science Site: Research Experiences for Teachers focused on Applications of ImagEs and SiGnals In High Schools (AEGIS) ($487,500, 2012–2018):

Funded by the National Science Foundation (NSF) Research Experiences for Teachers (RET) program, AEGIS partners UCF and the Florida Institute of Technology (FIT) with four nearby school districts (Brevard Public Schools, Orange County Public Schools, the School District of Osceola County, and Seminole County Public Schools) to assist mathematics and science teachers in learning about engineering research. The project's objectives are to (a) recruit a diverse, talented, high school teacher population from counties in the vicinity of UCF and FIT, (b) actively engage the recruited teachers in research within the field of Session Initiation Protocol (SIP), (c) develop and disseminate to a large audience a series of innovative and replicable secondary science teaching unit plans, (d) disseminate the AEGIS results to other interested stakeholders around the nation, and (e) establish a lasting partnership between AEGIS researchers and high school teachers in the participating Central Florida counties.

- Principal Investigator: Dr. Michael Georgiopoulos, UCF College of Engineering and Computer Science ($262,500, 2012–2018)
- Principal Investigator: Dr. Georgios Anagnostopoulos, Florida Institute of Technology ($225,000, 2012–2018)
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South Florida Community College Bioenergy Education Program ($900,000, 2012–2016):
The purpose of this National Science Foundation (NSF) Advanced Technological Education (ATE) program funded project was for South Florida Community College (SFCC) to collaborate with Vercipia Biofuels and other biofuel/biomass companies in Florida's agricultural heartland to address the technician workforce needs of the advanced biofuels industry. The goals of the project were to educate technicians to work in the advanced biofuels production industry and agriculture biomass production; develop instructional materials about advanced biofuels production; and establish a biofuels education pathway from area high schools to South Florida Community College to Florida universities.

- Principal Investigator: Erik Christensen, SFSC Applied Sciences and Technologies

The National Science Foundation (NSF) has designated the Computer Vision Lab, Department of Electrical Engineering and Computer Science, at UCF, as a site for Research Experiences for Undergraduates (REU) in the area of Computer Vision. This project is a continuation of a REU site in Computer Vision that has operated successfully at UCF for the past 27 years. Each summer the project engages ten undergraduates in a 12-week, full-time summer program immersing them in the field of Computer Vision, encouraging them to pursue graduate school and research careers.

- Principal Investigator: Dr. Mubarak Shah, UCF College of Engineering and Computer Science

This National Science Foundation (NSF) Communicating Research to Public Audiences (CRPA) funded project sought to build an interactive exhibit at the Orlando Science Center to showcase intelligent avatar technology for use in educating middle school students in science and engineering. The exhibit features an avatar acting as a moderator, guiding the museum visitor through an interactive exercise that educates him/her about artificial intelligence, computer graphics, and the Turing Test. The primary objectives of this project were to effectively communicate the results of NSF-funded research to the general public via a museum exhibit and to introduce the target audience (middle school students) to computer science in a way that will encourage them to consider a career as computer scientists or engineers.

- Principal Investigator: Dr. Avelino Gonzalez, UCF College of Engineering and Computer Science

This was a National Science Foundation (NSF) Advanced Technological Education (ATE) funded effort to facilitate professional development for secondary school teachers leading to the design and implementation of new biotechnology laboratory activities in regional high school biology classrooms. The State College of Florida, Manatee-Sarasota (SCF) (formerly Manatee Community College) and the two school districts in the college’s service area (Manatee County and Sarasota County) partnered to increase the number of students entering Science, Technology, Engineering, and Mathematics (STEM) fields by: (a) encouraging high school students to consider careers in science or in teaching science and (b) improving the overall quality of science education in local secondary schools to increase the preparedness of high school graduates to succeed in college science courses.

- Principal Investigator: Jane Pfeilsticker, State College of Florida, Manatee-Sarasota

Students Actualizing Talent at Education’s Subsequent Stages (STATESS) ($599,973, 2010–2014):
This was a National Science Foundation (NSF) Scholarships in Science, Technology, Engineering, and
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Mathematics (S-STEM) funded project at UCF aimed at recruiting academically talented students in STEM fields and providing financially needy students opportunity and support to focus on academics. Through STATESS, the Department of Mathematics and the Department of Electrical Engineering and Computer Science offered 24 to 28 academically talented students, from sciences and engineering disciplines, scholarships in the range of $4,000 to $10,000, depending on financial need. Scholarship recipients received resources and participated in activities intended to ensure the student’s success in completing their undergraduate or graduate degrees.

- Principal Investigator: Dr. Mubarak Shah, UCF College of Engineering and Computer Science

Integrating Sustainability into the Industrial Engineering Curriculum ($149,824, 2010–2013):
The broad goals of this National Science Foundation (NSF) Course, Curriculum, and Laboratory Improvement (CCLI) funded project were to provide industrial engineering (IE) students at UCF with multiple exposures to what it means to have a sustainable mindset and to facilitate the development of both the passion and the skills to integrate industrial engineering tools and methods with sustainable practices. The expected outcomes of this integration included an increase in social responsibility, development of innovative thinking skills, and a better understanding of sustainability issues. The project is critical and holds a key role in enhancing the ability of future engineering graduates to better contribute to a more sustainable future, preserving natural resources, and advancing technological and societal development.

- Principal Investigator: Dr. Dima Nazzal, UCF College of Engineering and Computer Science

I3: The UCF Community Embraces the Knowledge-Based Economy ($1,045,130, 2010–2016):
The goals of this National Science Foundation (NSF) funded Innovation through an Institutional Integration (I3) program were to (a) provide coherence to the multiple internally and extramurally funded Science, Technology, Engineering, Mathematics (STEM) projects at UCF and (b) integrate STEM research and education activities throughout the UCF Community. Specific expected outcomes included increased interaction and synergy among NSF funded (and similar) STEM K–12 and undergraduate educational and research programs, a more informed UCF community with greater ability to participate in a knowledge-based economy, integration of STEM research into education, increased participation of undergraduates in research, increased participation of under-represented minorities and women in STEM, and strengthened education and outreach components of future research programs.

- Principal Investigator: Dr. Marion Soileau, UCF Office of Research and Commercialization and UCF Optics, Physics, Electrical Engineering, and Computer Science; Dr. Tony Waldrop, UCF Provost (Former Principal Investigator); Dr. Terry Hickey, retired UCF Provost (Former Principal Investigator)

Software Development Educational Pathway (SDEP) ($570,137, 2010–2013):
This National Science Foundation (NSF) Advanced Technological Education (ATE) funded project was designed to address the shortage of well-prepared software developers by creating a new Bachelor of Applied Science track in software development that will articulate students from Associate of Science degrees in computer programming from the four partner colleges UCF, Valencia College, Eastern Florida State College, Lake-Sumter State College, and Seminole State College. Project goals included curriculum alignment, faculty development, student retention activities, and online instruction best practices.

- Principal Investigator: Dr. Craig Tidwell, UCF Regional Campus

Undergraduate Computer Security Course Enhancement ($150,000, 2009–2012):
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This National Science Foundation (NSF) Cybercorps: Scholarships for Service S-STEM Course, Curriculum, and Laboratory Improvement (CCLI) program funded project aimed at developing innovative learning materials for four undergraduate courses in the College of Engineering and Computer Science at the UCF. The four courses focused primarily on system security and information protection, but handled different domain areas, namely (a) security in general computing applications; (b) information security and the underlying enabling technology of cryptography; (c) hardening of operating systems, system vulnerabilities, and safe system administration; and (d) security and intrusion detection in networks and Internet. Learning materials were developed for a new enrollment environment that allows and encourages students from Computer Science, Information Technology, Computer Engineering, and Electrical Engineering to take these security courses. The learning materials were developed and delivered using the rich facilities of the Center for Online and Virtual Education (COVE) of the College of Engineering & Computer Science (CECS) at UCF.

- Principal Investigator: Dr. Ratan Guha, UCF College of Engineering and Computer Sciences

This National Science Foundation (NSF) Workforce in the Mathematical Science funded project consisted of a rigorous one-year enhanced research experience in computational theory and practice for undergraduate mathematics majors through carefully designed course work and guided research projects and activities.

- Principal Investigator: Dr. Mubarak Shah, UCF College of Engineering and Computer Science

PROFIT: Pictures Represent Opportunities for Inspiration in Technology ($1,200,000, 2007–2012):
This project was funded through the National Science Foundation (NSF) Innovative Technology Experiences for Students and Teachers (ITEST) Program. It was a comprehensive project centered on introducing computer vision and imaging experiences into the core curriculum of mathematics and Information Technology (IT). The project utilized a novel model for training mathematics and IT teachers to use pictorial IT for transferring exciting, appealing modules into core curricula and a model for mentoring students through their pre-collegiate years to attract them into IT-STEM careers. The evaluation featured a mixed-methods design.

- Principal Investigator: Dr. Niels da Vitoria Lobo, UCF College of Engineering and Computer Science

Creating Student Investigators (CSI): Arkansas ($1,006,802, 2006–2011):
This Arkansas State University endeavor, funded through the National Science Foundation (NSF) Innovative Technology Experiences for Students and Teachers (ITEST) program, aimed to provide science education professional development for middle- and secondary-school teachers of the Delta region of Arkansas. The evaluation used a mixed-methods design that included instruments and measured change in content knowledge, attitude, pedagogical methods, portfolio and lesson plans, and the impact of the experiences.

- Principal Investigator: Dr. Karen L. Yanowitz, Arkansas State University

Greater Orlando GK-12 (GO GK–12) was a National Science Foundation (NSF) funded program that partners the UCF College of Optics and Photonics with Orange County Public Schools (OCP) and the Orlando Science Center (OSC). UCF received a three-year $1,500,000 grant from NSF in the spring of 2005.
and a no-cost extension for a fourth year ending in June, 2009. At the core of the program each year, 10 UCF graduate-level science, technology, engineering, and mathematics (STEM) students were paired with the same number of secondary (middle or high school, depending on the cohort) science teachers in the OCPS system. The program was designed as a comprehensive partnership between UCF, OCPS and OSC to (a) strengthen science, technology, engineering, and mathematics (STEM) education and (b) increase partnerships between schools and science community.

- Principal Investigator: Dr. David Hagan, UCF College of Optics & Photonics

Through this CAREER proposal, the PI sought to extend the teaching and researching components to include a Historically Black College University. Hence, the PI intended to combine past international collaboration and national research experiences and current research interests to advance the understanding of inquiry in diverse settings. The PI brings these research interests and experiences together to define a focus for her central career goal, which was to contribute significantly to the effectiveness of science teaching and learning in diverse school settings.

- Principal Investigator: Dr. Bobby Jeanpierre, UCF College of Community Innovation and Education

SpaceTEC National Center for Excellence ($2,999,917, 2005–2010):
SpaceTEC, the NSF Advanced Technological Education (ATE) Program’s National Aerospace Technical Education Center, includes 12 community college and university partnerships, giants of the aerospace industry, and support by NASA, the Air Force, and the Federal Aviation Administration (FAA). Founded in 2001, SpaceTEC’s participating colleges have successfully developed and delivered practice-based aerospace technology degrees and certificate programs driven by industry needs and built on real-world skills, resulting in the nation’s first core-certified aerospace technicians. Over the past 3 years, participating colleges have successfully (a) developed and delivered practice-based aerospace technology degree and certificate programs; (b) graduated and placed significant numbers of students from these programs; (c) created and implemented articulation agreements for all 12 colleges; (d) conducted workshops and internships for college faculty and K–12 teachers; (e) hosted outreach events for college, university, and K–12 students; and (f) developed and implemented a national examination process to certify aerospace technicians. SpaceTEC provides outreach and dissemination for a variety of space-related disciplines such as robotics, simulation technology, and geospatial information systems. Educational modules in key technical areas and specific discipline modules relating space themes to academic areas such as math, English, and humanities have been widely disseminated. Services to underserved populations are producing measurable results, and initial steps have been taken to develop sustainable processes.

- Principal Investigator: Mr. Frank Margiotta, Eastern Florida State College