



TITLE OF PROPOSED PROJECT InnovATE				
REQUESTED AMOUNT \$ 868,105	PROPOSED DURATION (1-60 MONTHS) 36 months	REQUESTED STARTING DATE 06/01/15	SHOW RELATED PRELIMINARY PROPOSAL NO. IF APPLICABLE	
NAMES (TYPED)	High Degree	Yr of Degree	Telephone Number	Email Address
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NSF Announcement – Abstract: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1501447

InnovATE is increasing graduates in STEM disciplines, particularly underrepresented minorities and women, in response to demand in local engineering technology, power, aerospace, and manufacturing industries. Interrelated programs are increasing awareness of STEM in middle through high schools, strengthening math skills, and developing a pathway for pursuit of associate and baccalaureate high-tech degrees. They include: STEM outreach program impacting 1680 middle and secondary students; summer program for incoming students to complete the MSSC Production Technician Certification earning 15 college credit-hours; contextualized Intermediate Algebra gateway course to improve math skills proficiency; intensive academic support through math/science Supplemental Instruction; and articulation agreements to baccalaureate degrees.

Intellectual merit drivers of InnovATE are aligned with measurable assessments to advance understanding of which tools and strategies aid successful completion of AS degrees in Electrical Power and Engineering Technologies. This includes developing assessment tools and activities for identifying key factors influencing enrollment in STEM programs, instructional supports needed in Mathematics, influence mentors and industry partners have on students to induce willingness to succeed, and evaluating learning strategies to advance discovery of how STEM technicians learn, study, and train. InnovATE addresses the need to diversify the STEM workforce by targeting Title I schools as the primary pipeline for students from underrepresented groups enrolling in the college to advance desired economic and societal outcomes. InnovATE’s broader impacts is providing a replicative model to increase students pursuing degrees to join a highly-qualified STEM workforce.

InnovATE’s STEM Drivers: Project objectives, activities, deliverables and target goals are described in Table 1 (pages 2 and 3):



Table 1: InnovATE – NSF Award #1501447: 2015 – 2018 Objectives and Expected Outcomes to be Accomplished				
Obj.	Description	Activities	Deliverables	Target Goals
1	Increase the enrollment into the EPT and ET programs by increasing awareness among high school and middle school students, their caregivers and guidance counselors.	<p>1.1 Develop and implement an “applied” BEST (Boosting Engineering, Science and Technology) summer program for high school sophomore, junior and senior students to create awareness of, and improve college readiness for, EPT and ET Associate in Science programs.</p> <p>1.2 Develop and implement middle and high school academic year outreach and enrichment programs to promote EPT and ET Associate in Science programs among students, caregivers, teachers and guidance counselors.</p>	<p>1.1 BEST summer program that includes curriculum, activities and demonstration of equipment in EPT and ET Laboratories</p> <p>1.2 STEM Collegiate Scholars Tool box for developing academic and career pathway map</p> <ul style="list-style-type: none"> • Database for accountability & tracking of student interest, intent, trends, and progress • STEM career training materials and manuals for teachers and guidance counselors • Exhibitions and demonstrations to recruit and enroll secondary students in EPT and ET • YouTube video demonstration of the teaching of STEM standards and benchmarks 	<ul style="list-style-type: none"> • 48 students for 2 Years complete BEST summer program (n=96) • 20 STEM Collegiate Scholars per year at each of the six targeted high-yield high schools (n=120) • STEM Collegiate Scholars tracking & accounting database of career map activities (n=420)
2	Decrease the time to degree completion in the EPT and ET A.S. programs through the introduction of an accelerated learning pathway.	<p>2.1 Develop and implement a summer program for incoming ET A.S. students that allows them to complete a Manufacturing Skills Standards Council Certified Production Technician (MSSC-CPT) Certification preparation course, pass the exam to earn their MSSC-CPT certification and receive 15 articulated credit-hours towards the ET A.S. degree through a “credit for prior learning” policy.</p>	<p>2.1 Curriculum for MSSC-CPT and “Credit for prior learning” policy for MSSC-CPT</p>	<ul style="list-style-type: none"> • 15 students per year enrolled in MSSC-CPT (n=30) • 10 students per year receive MSSC-CPT Industry Recognized Certificate (n=20) • Students per year receive credit for prior learning by awarding 15 credits towards ET program. (n=10)



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3	Increase student retention and degree completion in the EPT and ET A.S. programs by providing Supplemental Instruction in order to meet the industry’s demand for highly skilled workers.	<p>3.1 Contextualize Intermediate Algebra “gateway” course curriculum to better prepare students for EPT and ET curriculum.</p> <p>3.2 Provide intensive academic support through Supplemental Instruction.</p>	<p>3.1 Intermediate Algebra contextualized curriculum and Virtual Learning Objects for EPT/ET programs</p> <p>3.2 2 A model for Supplemental Instruction for EPT and ET programs</p>	<ul style="list-style-type: none"> Increased pass rates of College Algebra from 61.7% to 75% of EPT and ET students.
4	Improve educational pathways for EPT and ET A.S. graduates to pursue the baccalaureate degree level.	<p>4.1 Create agreements to articulate EPT and ET Associate in Science programs to Bachelor’s degrees offered by Florida College System and State University System institutions.</p>	<p>4.1 Three fully executed articulation agreements from EPT and ET A.S. programs to Bachelor’s Degree programs with DSC, PSC and VC</p>	<ul style="list-style-type: none"> Enrollment of students in EPT and ET program will increase 72% from 120 to 206. Retention rate of students in EPT and ET program will increase by 10% from 73.3% to 83.3% Transfer rate of students who transfer to bachelor program will increase by 10% within one year of graduation