

## South Georgia State College STEM Grant abstract

At South Georgia State College (SGSC), we are working on two of the three STEM Initiative Goals. The main focus of the grant is to improve the two R's (retention and recruitment). The lead contact for the grant is Charles Johnson ([charles.johnson@sgsc.edu](mailto:charles.johnson@sgsc.edu)) Dean of the school of Sciences at SGSC.

### **STEM Initiative Goal 1: Improve STEM college readiness for P-12 students**

#### Strategy 1: Boys & Girls Club Partnership (P-8th grade)

Partnering with the Boys & Girls Club will provide an avenue to reach out to P-8 students to help initiate and supplement skills that are integral for success in STEM courses now, building a foundation for higher education in the future. Faculty members will develop and provide STEM programs for the Boys & Girls Club of Douglas, GA, an organization whose mission is "To enable all young people, especially those who need us most, to reach their full potential as productive, caring, responsible citizens." The faculty will incorporate specific techniques to address barriers to learning for students that may be at a disadvantage, e.g., those of low socioeconomic status.

#### Strategy 2: STEM prep program

Implementation of a STEM prep program at SGSC will provide an avenue to reach out to 9-12 students to help supplement and refine skills that are integral for success in STEM courses now, building the foundation for higher education in the future. Faculty and staff will plan and implement a two-day workshop that incorporates integral STEM skills while also addressing barriers to learning for students that may be at a disadvantage, e.g., first-generation college students for whom student-teacher relationships are beneficial.

#### Strategy 3: Community Workshop

Research suggests that gaps in learning abilities that translate to STEM success already exist by the time children reach kindergarten. By implementing a community workshop that reaches out to Pre-K parents, we can employ the help of families to initiate basic inquiry and build the general knowledge needed for students to be successful in STEM courses even before they enter elementary school. Faculty and staff will hold community workshops that will provide information and resources for Pre-K parents/guardians that will better prepare their children for success in STEM courses. Strategic advertising and implementation will take place to ensure we reach out to students that may be at a disadvantage.

## **STEM Initiative Goal 2: Improve performance and retention in STEM core courses and majors**

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### Strategy 1: Develop Boost workshop

Faculty and STEM Center Coordinators will develop a Boost workshop to be offered at the beginning of each semester. The Boost workshops will “boost” student skills needed to be successful in the STEM classes by focusing on such topics as time management, note taking, and test taking. In addition, IE will create a list of STEM students requiring any learning support classes. The STEM Center Coordinators will invite these students to attend these Boost workshops. STEM faculty will also create videos that will help to reinforce what is offered in the Boost workshops. The videos will instruct students on best practices for success in their classes. Videos may include but are not limited to how to study for the subject matter, problem-solving strategies, and test reviews. Coordinators for the STEM Centers will collect, catalog, and distribute the resources. Mini-grants and/or release time will be required for faculty developing these resources.

### Strategy 2: Identify Underprepared STEM Students

Faculty members will use pretests (such as the Toledo Test for prospective Chemistry students) to assess their preparedness to enroll in STEM courses. The classes targeted will include BIOL 2107, MATH 1111 and CHEM 1211. The pretest is to be administered the first day of class. STEM majors requiring any learning support will also be identified and STEM Centers Coordinators will meet with them during the first week of classes to encourage them to attend the STEM academic Boost workshop. STEM Centers Coordinators will work with them to teach them strategies for success and familiarize them with other resources, such as STEM center tutors and tutor.com, the importance of grades, and advising.