A STEM Center is being developed to provide academic support to students in the MAGEC-STEM program. It will consist of a model classroom to conduct workshops and seminars for faculty and students. It will also be used to provide personalized tutorials in lab, to establish mentor/protégé relationship, to strengthen advisor/advisee relationship, to provide career counseling/exploration and to employ high ability students to man tutorial labs or serve as peer tutors under faculty supervision.

PROGRAM EXPECTED OUTCOMES
- STEM student enrollment will increase by 20% annually
- STEM students quality as measured by the SAT scores at admission will improve by 10% annually, reaching a minimum of 1000 by 2006
- STEM retention rate will improve by no less than 80% by 2007
- Graduation rate for STEM undergraduates will increase by 10% a year reaching 40% by the year 2008
- The percentage of STEM graduates enrolling in graduate schools will increase gradually by 5% a year and will reach 30% by the year 2008

PARTNERSHIPS
The MAGEC-STEM Project will take advantage of the partnership arrangements with:
- Georgia Institute of Technology
- Mercer University
- Medical College of Georgia
- Area businesses
- Area school systems
- H.O. Systems, Inc.
- BellSouth
- Gulf Stream Aerospace Corporation
- South Eastern Consortium for Minorities in Engineering (SECME), Inc.

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SUMMER PROGRAM ACTIVITIES

The MAGEC-STEM Program will host a six-week residential summer enrichment STEM Education Camp for approximately 25 to 35 entering freshmen. Students who participate in the camp will receive $1,000 for the summer, $1,500 for each academic year they are in the program, and a laptop computer for their use while attending SSU. The summer enrichment education camp will focus on:

• Scientific and Critical Thinking
• Lectures and Labs in Biology, Chemistry, Physics and Engineering related issues
• Mathematical Methods in STEM where students learn the fundamental concepts in mathematics and learn to use the computer and software in solving mathematical problems

STUDENT SELECTION CRITERIA

• High school senior who has demonstrated academic potential with a minimum of 2.8 GPA
• SAT score 900 or above OR ACT 19 or above
• Student shows interest to pursue a career in STEM disciplines at SSU

STUDENT RESPONSIBILITIES

• Student attends summer enrichment program as pre-freshman.
• Student should continue undergraduate education in one of the STEM discipline at SSU:
  - Biology, Chemistry, Mathematics
  - Civil Engineering Technology
  - Chemical Engineering Technology
  - Computer Science Technology
  - Electronics Engineering Technology
  - Mechanical Engineering Technology

• Civil Engineering
• Computer Engineering
• Electrical Engineering
• Mechanical Engineering

• MAGEC-STEM students are eligible to participate in the Georgia Tech Regional Engineering Program (GTREP). GTREP offers undergraduate degree programs in Civil, Computer and Electrical Engineering that are equal in quality to programs offered on the Atlanta campus of Georgia Tech. Students take freshman and sophomore classes at SSU. They become Georgia Tech students in their junior and senior years, with their classes taught primarily by GTREP faculty. Students graduating from GTREP receive a Georgia Tech Regional Engineering Program degree.

• Student has to commit adequate time to the program activities and maintain a minimum of 3.0 GPA.
• Student participates in at least two on/off campus internships.
• Student commits one hour per week to meet with assigned peer mentor.

BACKGROUND INFORMATION

Savannah State University (SSU) received $2.5 million from the National Science Foundation (NSF) to implement the Minority Access to Graduate Education and Careers in Science, Technology, Engineering and Mathematics (MAGEC-STEM) program. The purpose of the initiative is to address the critical need to substantially increase the number of minority students matriculating into graduate school for advanced studies leading to MS and Ph.D. degrees in Science, Technology, Engineering and Mathematics (STEM) disciplines. The program is designed to facilitate the transition of minority youngsters from high school to matriculation into college and graduate school, and eventually the workforce.

MAGEC-STEM PRIMARY GOALS

To create an awareness and interest in the areas of STEM disciplines in our service area; to increase the number of students pursuing STEM education at SSU; to prepare MAGEC-STEM students for the challenges of graduate study and to encourage and assist STEM students to enter graduate school.

RECRUITMENT

A MAGEC-STEM pre-college activity will focus on recruitment and consist of:

• Recruitment of students into STEM disciplines through local and national partnerships
• An annual Science and Mathematics Teachers Workshop for science and mathematics teachers in the service area
• Visits to Coastal Georgia high schools by the program assistant, faculty members and undergraduate students

RETENTION

Retention efforts in MAGEC-STEM include an orientation for incoming STEM majors, an early warning system and mid-stream intervention, workshops on study skills, time management and textbook mastery, individual counseling sessions, peer tutoring and counseling, and tracking and early intervention.

STUDENT SUPPORT

• Pre-Freshman Program:
  - Summer Enrichment Camp
  - Summer Enrichment Camp (6 weeks—$1000/Student)
  - Academic year Scholarship:
  - $1500/Student (each academic year)
• Undergraduate Bridge Program:
  - Academic year and summer
  - Research participation at SSU
  - Undergraduate summer research internship
  - Off-Campus summer research internship
• Travel assistance to attend national conferences
• Lap-top computers

ACADEMIC YEAR PROGRAM ACTIVITIES

• Enrichment Courses
• Seminar Series
• Peer Mentoring
• Attendance to Regional/National Scientific Conferences
• Test Preparation: MCAT, DAT, GRE & FE