

South Carolina State University

**Historically Black Colleges & Universities – Under Graduate Program/
Research Infused Science, Technology, Engineering, and
Mathematics Curricula**

[HBCU-UP/RISC]

February 16, 2006

Project Director: James Allen Anderson, ScD, PE

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EXECUTIVE SUMMARY

- **PROJECT TITLE:** Historically Black Colleges & Universities – Under Graduate Program / Research Infused Science, Technology, Engineering, and Mathematics Curricula [HBCU-UP/RISC]
- **FUNDING AGENCY:** National Science Foundation (NSF)
- **FUNDING DURATION:** \$2,498,154 for 5-Years
- **PRINCIPAL INVESTIGATOR:** Dr. Jo-Ann D. Rolle
- **PROJECTOR DIRECTOR:** Dr. James A. Anderson
- **INVESTIGATOR/INVESTIGATORS:** Dr. Daniel M. Smith, Jr., Dr. Kuzman Adziewski, and CORE Faculty (8).
- **SUPPORT AREAS:** Ms. Betty Boatwright, Institutional Research
Dr. Thomas Thompson, Project Evaluator
Ms. K. Irene Scott, Project Administrative Assistant
- **UNDERGRADUATE PARTICIPATION:**
Scholarship Support for at least 12 students per year & Research Support for at least 10 students (with Faculty Mentors) per year.

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PROJECT GOALS, DELIVERABLES, AND/OR TASKS:

- **Increase in the number of Science, Technology, Engineering, and Mathematics (STEM) majors enrolled at the University**
- **Provide additional Scholarship Support for STEM majors at the University**
- **Provide Research Support & Experiences for STEM majors at the University to better prepare them to attend Graduate School(s) and to be more successful.**
- **Develop Integrated and Innovative STEM curricula led by CORE-Faculty at the University to recruit STEM majors and better prepare STEM majors to attend Graduate School and be more successful**
- **Develop STEM-Faculty to better prepare STEM majors at the University to attend graduate School and be more successful by exposing them to Integrated & Innovative STEM curricula and mentoring them in Research Experiences.**

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NARRATIVE

The overall goal of this project is to improve the quality of the STEM curricula the number of underrepresented STEM undergraduates who are well prepared for STEM careers and/or graduate studies. This is to be accomplished through the development and implementation of Research-Infused STEM Curricula (RISC) that address the needs of the majors in the respective disciplines. Three (3) strategies are being used, and they are as follows:

- *Identify, Recruit, and Retain Talented STEM majors*
- *Improve the Quality of the current STEM Curricula*
- *Expand Opportunities for STEM majors to participate in Research activities that will better prepare them for Graduate School*

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NARRATIVE

The Management Plan for this Project incorporates the talents of the SCSU Faculty, Staff, and Administrators, through an Internal Steering Committee, to accomplish its goals, objectives, and successful activities completions. The Project also has an External Advisory Board that strengthens its effort and activities through the involvement of representatives from other Universities, National Laboratories, and Industry. Evaluation and assessment of the Project activities will be accomplished by an Internal Evaluation Team and an External Evaluator. The Internal Evaluation Team will use the NSF Self-Evaluation Indicator System (SEIS) for data storage and analysis. Evaluation will be a Continuous-Process, and this enables the Project Management Team to make modifications that are needed to ensure Quality-Control and Success in meeting the Project Goals.

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CORE FACULTY

- § Sam McDonald Calculus
- § Zlatko Zografski Computer Science
- § Nasrollah Himidi Chemistry (Organic Laboratory/
Simulation/Imaging)
- § Julius Barnes Physics
- § Charles J. Warner Engineering Technology
- § Kenneth Okofer Nuclear Engineering
- § Linda Payne K-12 Science
- § Larry Williams Biology

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STEERING COMMITTEE

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