

Quality Education for Minorities  
National Science Foundation – NSF  
Innovation through Institutional Integration (I3) Initiative  
May 22, 2010

“Enhancing Global Research and Education in  
STEM at Spelman College (G-Stem)”

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# Quick Facts

- Spelman College, a private , liberal arts college for women is a leading Historically Black College (HBCU) that ranks 2<sup>nd</sup> in the USA for graduating African American baccalaureate students who obtain doctoral degrees.
- It ranks 5<sup>th</sup> in the country for awarding baccalaureate degrees in Science and Engineering (S&E) to African American descendants.

# Quick Facts

- Number of students: 2,100
- Number of students in STEM: 700 ?
- % students with abroad experience: 42%
- % STEM students with abroad experience: 13% (including psychology)

## Mission of the Project

G-STEM seeks to prepare African American women within the STEM disciplines to be globally engaged upon graduation from Spelman College.

# Goals of the Project

- Goal #1: Modify Spelman College's infrastructure through the creation of a central G-STEM office which will integrate the efforts of various campus divisions to further develop the global learning experiences available to STEM students.

# Goals of the Project

- Goal # 2: To promote the development of globally engaged STEM scholars by expanding the number of international research collaborative opportunities available and creating a formal mentoring program .

# Objectives

To meet these 2 goals, the following objectives will be met:

- Establish 15 new research partnerships with international institutions
- Increase the number of STEM students who engage in international research experiences to 35%
- Develop an integrated mentoring program
- Disseminate the global experiences to internal and external audiences

# Currently Funded NSF Projects

- 1- Students Integration Science and Technology for Research Scholarship (SISTERS)
- 2- Spelman STEM scholars (S3) Program
- 3- Collaborative Research: BPC-DP: CARE – Computer and Robotics for African American students
- 4- ASPIRE (Advancing Spelman's College Participation in Informatics Research and Education) Project

# Current Funded NSF Projects

- 5- Collaborative Research: BPC-A:ARTSI:  
Advancing Robotics Technology for Societal  
Impact
- 6- RUI: Coherent Two Dimensional Resonance  
Spectroscopy
- 7- Computational Modeling for Indium and  
Enriched-Indium Gallium Nitride Epitaxy  
under High-Pressure Chemical Vapor  
Deposition

# Project Evaluation

- Years 1-4—Formative Evaluations
  - Focuses on the development of the program, G-STEM scholars, international collaborations, and the linkage between G-STEM and the other NSF programs.
- Year 5—Summative Evaluation
  - Systematic assessment of goals of G-STEM, and assessment of practices which can be adopted by other institutions.

# Project Evaluation

- Evaluations will consist of:
  - Assessment of target goals
  - Document review
  - Interviews, focus groups (student and faculty)
  - Network and database analyses
  - Workshop evaluations

# Dissemination of Knowledge

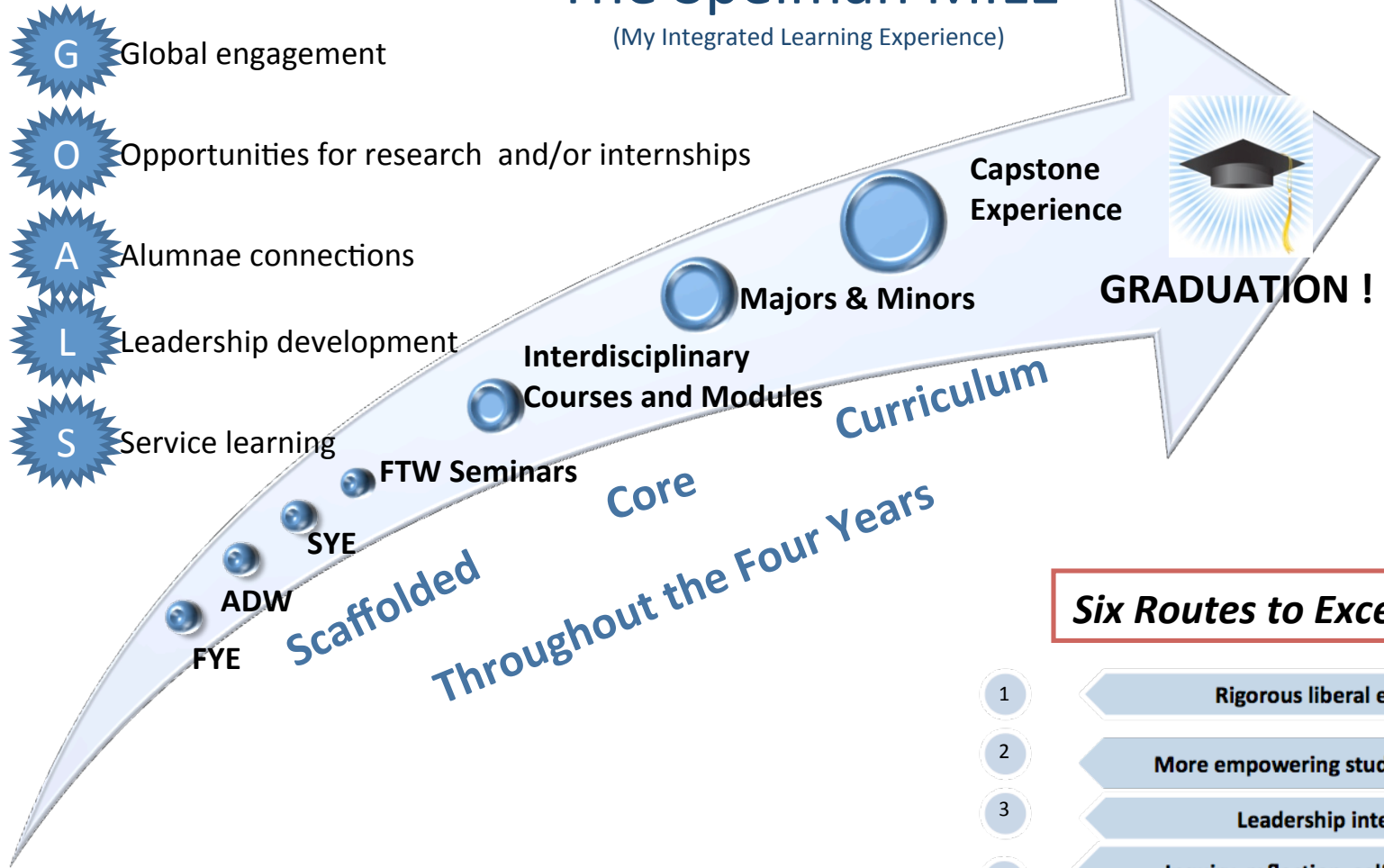
- Campus-wide dissemination
  - Annual student presentations of experiences
  - Discussion of experiences among NSF funded projects (lab presentations)
  - Faculty use of student experiences/data in classroom
- National dissemination
  - Workshop open to other HBCU's and colleges at end of project to present program evaluation findings.

# Sustainability of the Project

- G-STEM augments the new core curriculum, the Spelman MILE by enhancing undergraduate research and international experiences. The Spelman MILE will be in effect, Fall 2010

# Transforming the Student and Faculty Experience: The Spelman MILE

(My Integrated Learning Experience)



## Six Routes to Excellence

- 1 Rigorous liberal education
- 2 More empowering student experience
- 3 Leadership integrated
- 4 Inquiry, reflection, self-assessment and experimentation
- 5 Assessment and measurable outcomes
- 6 Spelman Millennial Professor