Spelman College: Curriculum & Highlights

• Degrees offered in:
  Biochemistry, Biology, Chemistry, Computer and Information Sciences, Economics, Environmental Science, Dual Degree Engineering, Health Sciences, Mathematics, Physics, Psychology, Sociology and Anthropology

• Top institution of baccalaureate origin of Black women earning PhDs in STEM

Point of Contact:
Dr. Claudia Scholz, Associate Provost for Research
Data Science & Quantitative Biology

• Data Science Initiative
  – Infusing STEM and social science courses with data science content
• Data Visualization
  – Peter Chen: multidimensional spectroscopy to reduce peak congestion
  – Brandeis Marshall: #BlackTwitter Project
  – Jay Nias: 3D printed manifestations of real-time social data
• Partnership with the Broad Institute (Cambridge, Mass.)
  – Mentawab Ayalew: Transcriptome Analysis; Mathematical Modeling
  – Tiffany Oliver: bioinformatics & Genetic Epidemiology
  – Yonas Tekle: Genomics, Transcriptome & Proteomics & the sexual behavior of amoeboid microbes
Capabilities: Climate & Environment

- **Guanyu Huang**: Multi-scale atmospheric (air quality) modeling
- **Nirajan Dhakal**: Hydrological Analysis and Modeling, Hydroclimatology, Hydroinformatics
- **Bikhari Tharu**: Bayesian Analysis, Mixed Models, Longitudinal Data Analysis, Functional Data Analysis, Data Modeling and Analysis
- **T. Cássia de Brito Galvão**: Geographic information systems to study erosion in Georgia and environmental justice in greater Atlanta
Capabilities: Social & Behavioral Science

- Scholarship of Teaching & Learning
- **Angelino Viceisza**: economic decision making; experimental economics & random controlled trials; eye-tracking
- **Valerie Taylor**: experimental social psychology; interracial social interactions; stereotype threat
- **Leyte Winfield**: blended learning and inclusive pedagogy in chemistry instruction
- **Lisa Hibbard**: blended learning and student motivation, efficacy and success
Capabilities: Chemical & Materials Science

- **Shanina Sanders**: Green chemistry, organocatalysis; heterocyclic compounds
- **Tameka Clemons**: regulation of insulin-degrading enzyme (IDE).
- **Kimberly Jackson**: food and pharmaceutical chemistry
- **Michelle Gaines**: Interfacial Surface Chemistry; microgel particles
- **Natarajan Ravi**: Tuning the bandgap in graphene by intercalation