

TUSKEGEE UNIVERSITY

Celebrating 127 Years of Excellence and Service



College of Engineering, Architecture & Physical Sciences

**Electrical Engineering Department
Summary On Highlights, Challenges,
and Opportunities**

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Electrical Engineering Highlights

- New Systems Engineering Masters Started Fall 2009
 - 16 Students/FALL 2009
 - 30 students/FALL 2010(15 from Puerto Rico)
- 45 Conference Paper, 33 Journal Papers, 1 book, 4 book chapters during the last two years
- New EE Program Courses
 - 13 New Grad Courses (Incl. Renewable Energy, Radar, Reliability, Optics, etc.)
 - 3 New Undergrad Course(Digital Control, Image Processing, Micro Apps)
- 25% of Electrical Engineering Students go to Graduate School (MIT, Stanford, Georgia Tech, Michigan, Univ. Tennessee, Tuskegee, etc.)
- iPhone Applications Development Project Started for College of Engineering

Electrical Engineering Highlights

- Senior Design Project Building Chips in Actual Clean Room
- FOCUS Program Participation—Undergrad LED Research at GIT
- Research Experience for Undergraduates such as NOAA, Air Force Research Lab
- Company Sponsored Research Projects such as Wall Climbing Robot Reviewed by Raytheon Vice Presidents
- All Undergraduates Required to Do A Co-op or Internships
- Graduating Senior Accepted into Princeton, and Rice to Study For A Ph.D
- Continuous Improvement in Quality Control in PreRegistration, Registration, and Matriculation Requirements Between Students and Their Advisers
- RFID Project Consultant
- Participate in NSF Funded ERC in Solid State (Arizona the Lead)
- NSF Funded Communications Project

Challenges

- Challenge New and Existing Professors to Improve Their Test Development, Teaching Method, and Interaction Effectiveness With the Students
- Allocation of Funds for Student Owned Kits and Tools
- New and Untenured Professors Impacted by Economy Slowdown
- Teaching Using Social Network Tools, Multimedia, and Other Creative Tools- Apple Apps
- Examine & Implement Process Improvement Models and Concepts for Training & Documenting Faculty Advising, Teaching, Active Mentoring of New Faculty, Customer Service, Achieving Desired Program Outcomes, and Reducing Variability in Important Variables
- Student Recruitment for Graduate School Using The Network
- ABET AND BEYOND

Opportunities

- Provide Distant Learning for Those Pursuing Systems Engineering Masters
- Increase Number of Tuskegee Undergraduate Students and US Citizens Pursuing a Graduate Degree In the EE Department to 40-50%
- Increase Number of Undergraduate Students Participation in National Competitions and Undergraduate Research
- Identify and Target Potential Proposals Integrating Biomedical Sciences and Engineering
- Process Improvement A Seamless and On Going Part of Service and R&D