About Florida A&M University

Florida A&M University is one of eleven institutions in Florida's State University System. Florida A&M University is a four-year, public, co-educational and fully accredited institution of higher learning. The main campus is spread over 419 acres located on the highest of seven hills in Tallahassee, the capital of Florida. In 1997 Florida A&M University was selected as the Time magazine/Princeton Review College of the Year. FAMU recently won the title of best college for black students among all U.S. universities from Black Enterprise magazine, and it has been No. 1 in producing black students with bachelor's degrees. As of Fall 2005 Florida A&M University offered 108 undergraduate degrees in 64 undergraduate programs and 60 graduate degrees in 32 graduate programs (including 1 professional and 8 doctoral degrees) within its 12 Schools and Colleges.

Further Information

For more information about the please contact the individual faculty listed in this brochure. In addition general questions can be directed to:

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Department of Physics
Room 205 Jones Hall,
Florida A&M University
Tallahassee, FL 32310
(850) 599 - 3557 Fax

DEPARTMENT OF PHYSICS

FLORIDA A&M UNIVERSITY

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... and counting
Educational Opportunities

Undergraduate Study

The undergraduate physics degree at FAMU is designed to prepare you for a career in teaching or industry or for further studies at the graduate level in Physics.

Three Bachelor of Science degree options are available:
(1) B.S. in Physics: This option prepares students to pursue advanced degrees in physics and engineering or to immediately work in science research and development.
(2) B.S. in Physics (applied track): The applied physics option prepares students to pursue a more diversified career in many science-related areas such as computers, environment, management, government agencies, and research laboratories.
(3) B.S. in Science education with a major in Physics education. The Teacher Certification option prepares students to teach physics and related science courses in grades K-12.

If you would like to know how a major in physics might fulfill your interests, please contact the FAMU Physics Department to learn more about the various programs so that together you can design a program to fit your specific needs.

The Physics Department offers students the opportunity for hands-on learning in a number of newly-established undergraduate laboratories. Modern equipment and exciting experiments are available in optics, electronics, and condensed matter labs. The department has a newly-remodeled astrophysics lab with a fully automated observatory including a remote control keck at the Tallahassee Challenger Center. Beginning in Spring 2007 the department will offer an undergraduate introduction to Biophysics.

Physics undergraduate students at FAMU are strongly encouraged to work on research projects with faculty members. Research assistantships are often available throughout the term and during the summer months. Often, by working with various professors throughout their undergraduate degree, students can get a good feeling for what areas of research would interest them for a career. Experience is also available with Research Experience for Undergraduates at major universities with ties to FAMU, for example the Boston University Biophotonics Center. Faculty research interests can be found elsewhere in this brochure, or online.

Graduate Study

The FAMU Department of Physics awards both the M.S. and the Ph.D. degrees in physics. In order to be considered by the Department for admission, the student must have, as a minimum, an overall undergraduate GPA of 3.0 and/or a minimum overall GRE of 1000 along with two letters of recommendation. Additional issues concerning admission are handled on a case-by-case basis. Details concerning course requirements are provided in the University catalog. Generally stated, we expect our students to earn the M.S. degree after the first two years studying for the Ph.D. degree. At this time, the student completes a Masters Project. The Ph.D. degree requires satisfactory performance on the Ph.D. Candidacy examination (usually taken during the first year of graduate study), satisfactory performance on the Second Ph.D. Examination (which focuses on specific graduate coursework and the Ph.D. Dissertation Proposal), a Ph.D. Dissertation, satisfactory performance on the Dissertation Defense and an overall graduate GPA of at least 3.0.

The Ph.D. in physics is a research-based degree. Support for the student’s matriculation normally comes from tuition remission provided by the University and research stipends from the research group the student joins. The student, in conjunction with her/his major Professor, is expected to choose a research topic, under the advisement of a Dissertation Committee chaired by the ‘major’ Professor. The FAMU Physics Department has a research faculty of 15 (2006-07) who conduct world class experimental and theoretical research in a wide variety of areas. The Department expects to provide ‘excellence with caring’ to each student.

Lewis Johnson - Associate Professor of Physics (850) 599-8456, lewis.johnson@famu.edu Ph.D. Physics - Duke University 1997 Research: Remote sensors and probes for homeland security, agriculture, environmental monitoring, nuclear proliferation monitoring and terrorist threat analysis. Physics of stand off and remote material detection and identification. Laser-Plasma Interactions, LIBS, Atmospheric LIDAR, and Raman all using high power and ultrafast laser systems.

Robin J. Kennedy - Professor of Physics (850) 599-3470, drebinj kennedy@etncape.net Ph.D. Physics - University of Canterbury, 1976 Research: My research concentrates on the growth of thin films by laser ablation for spintronics applications. The materials are characterized structurally by single crystal x-ray diffraction and atomic force microscopy. We use a range of magnetic and electric techniques to determine the magneto-transport properties of the materials. Other research is in the combination of high Tc superconductors with ferries for RADAR devices.

Mugus Mochena - Professor of Physics (850) 599-3783, mugus.mochena@famu.edu Ph.D. Physics - University of California, Riverside, 1991 Research: Research Interest includes understanding the electronic, optical and magnetic properties of quantum dots. Our research involves understanding properties of both bare quantum dots, doped quantum dots and quantum dots embedded in different matrices. Other areas of research include quantum wires, nanoacoustics, and role of iron clusters in initiation of growth of single walled carbon nanotubes.

Naila Niculescu - Associate Professor of Physics (850) 599-3859, nicule@eng.fau.edu Ph.D. Physics - University of Bucharest, Romania, 1973 Research: Wide Bandgap Materials for Microelectronics - Cubic boron nitride thick films for (1) thermal management and (2) cold electron emission. Solid Oxide Fuel Cells (SOFC) - The primary objective of the current research program is to generate semi-empirical procedures and databases for enhancing porous anode - electrolyte assemblies for SOFC.

Ray H. O'Neal, Jr. - Associate Professor of Physics (850) 599-3807, ray. o'neal@famu.edu Ph.D. Physics - Stanford University, 1995 Research: Astronomy, High Energy Astrophysics, Detector Materials, Particle Astrophysics, Systems and Instrumentation.

Afi Rawlings - BS Physics 2004 Graduate Student in Biophysics at the University of Michigan FAMU prepares students extremely well for the rigors of graduate school and the work force. They nurture the person as well as the scientist.

Kyon Williams - BS Physics 1997 Ph.D Physics 2004 Postdoctoral Fellow Princeton Plasma Physics Laboratory “My physics education was excellent. I had the wonderful experience of working with brilliant professors performing world-class research.”