Department of Physics
Albright College

Dr. Brian Buerke, chair

Dr. Devon Mason
Albright physics department offers a cutting-edge curriculum with close faculty-student interaction

Students build novel optical devices in the **Advanced Optics Laboratory** course

Partial support for this course is provided by the National Science Foundation's Course, Curriculum, and Laboratory Improvement Program under grant DUE-0311292.
Physics concentrators at Albright may take one of three tracks or combine with another concentration.

- **Tracks within physics:**
  - Traditional (graduate school or industry)
  - Optics
  - Secondary Education

- **Typical combined concentrations:**
  - Mathematics
  - Chemistry
  - Computer Science
  - Digital Media
Physics courses at Albright emphasize project-based learning and advanced technology at all levels.

Astronomy students (PHY 102) design and build quadrants.

Optics students (OPT 101) measure the speed of light.
Albright physics department makes equipment like the atomic force microscope (AFM) available to all students.

AFM measures features as small as 2 nanometers.

Pits and lands on the surface of a CD at 30 nm resolution.

Amaryllis pollen at 60 nm resolution.
Physics students work on a wide range of research projects under the ACRE program

- **Game Theory**
  “The Effect of Error on Rational Cooperation in the Traveler’s Dilemma”

- **Automotive Engineering**
  “A Quest for Potential Efficiencies in the Development of Hybrid Vehicles”

- **Material Physics**
  “Development of a Procedure for Analyzing Carbon Nanotubes”
Physics students work on a wide range of research projects under the ACRE program (cont.)

- **Astrophysics**
  - “General Relativistic Investigation of the Twin Paradox”

- **Technological Applications**
  - “Laser Range Finding with Amplitude-Modulated Beam and Phase-Shift Measurement”
  - “Study of Speed Enforcement Technology and Analysis of Error in RADAR and LIDAR”

- **Optical Physics**
  - "Optical Tweezers: Grasping Matter with Light”
  - "Optical Symbol Recognition Using Holography“
  - "Measurement of Superluminal Propagation of Light through a Tunneling Barrier"
Albright physics students also do research at universities through the NSF REU program

New York University

Towson State University

Alabama A&M University

University of Maryland
Albright physics graduates find employment at a wide range of companies

- Lockheed Martin
- Litton Electronic Devices
- AT&T
- East Penn Manufacturing
- The Vanguard Group
- Fidelity Investments
- The SI Organization
- Meadowlark Optics
- Bethlehem Steel
- Edmund Optics
- Croda
Nobel laureate Eric Cornell helped celebrate the opening of the new Albright science center
Albright students and faculty interacted closely with Dr. Cornell, 2001 Nobelist in physics, during his visit