

THE FACTS

SAMUEL
GINN
COLLEGE
OF



ENGINEERING

VISION

COLLEGE

RANKINGS

PROGRAMS

STUDENTS

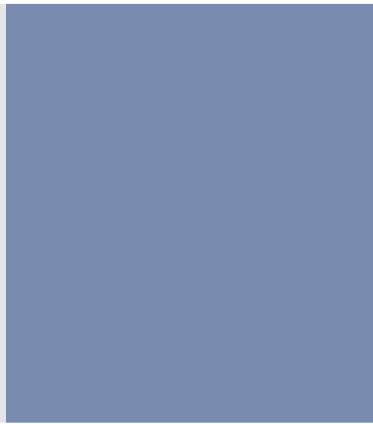
FACULTY

ALUMNI

RESEARCH

HERITAGE





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- Our College

- Our Rankings

- Our Programs

- Our Students

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- Our Alumni

- Our Research

Our Heritage

Vision

Short-term

Position the College of Engineering to become one of America's top 20 engineering programs by 2008

Long-term

Position the college to move into the top 10 by 2014, competing decisively for our nation's brightest students and most outstanding faculty

College at a Glance

Students

Enrollment

Undergraduate: 2,815

Graduate: 651

Total: 3,466

Incoming engineering freshman

- Sixty-five percent ranked in the top 25 percent of their high school
- Average
 - High school GPA: 3.61
 - ACT score: 25.5 (university-wide: 24.1)
 - SAT score: 1192.8 (university-wide: 1128.9)

Above figures represent the 2005-2006 academic year.

Degrees awarded 2004-2005 academic year

Bachelor's: 517

Master's: 134

Doctorates: 29

Total: 680

Faculty

Tenure-track teaching faculty: 158

1856 — East Alabama Male College is chartered

1869 — Offers course in civil engineering within School of Sciences

Facts

Our College...

- Comprises the largest engineering program in the state of Alabama and is the university's third largest in terms of enrollment
- Produces about half of the state's engineering graduates
- Awards more than \$1 million in scholarships annually
- Conducts approximately half of the university's \$71 million in annual research
- Maintains an aggressive campaign to update and expand classroom and laboratory facilities, including the renovation of landmark Ross Hall to a state-of-the-art facility, and the new \$108 million Transportation Technology Center to advance engineering technology in a variety of disciplines
- Houses nine departments offering 15 majors, 12 research centers, and is a nationally recognized leader in three of Auburn University's seven "Peaks of Excellence" primary research areas
 - Information technology
 - Detection and food safety
 - Transportation
- Is represented by more than 30,000 Auburn Engineering alumni around the globe, including more than 12,000 in Alabama
- Has a rich heritage of solid engineering disciplines that combine fundamentals with real-world experience



1872 — Becomes Agricultural and Mechanical College of Alabama; awards degree of civil engineering to W.E. Horne, believed to be one of first engineering degrees granted by a southern institution of higher education

1886 — Five-horsepower Weston electric generator is installed in Langdon Hall basement, lighting engineering shops and, eventually, the town of Auburn

Our Rankings...

- Among the nation's public universities, according to *U.S. News & World Report America's Best Colleges 2006*
 - Undergraduate program 40th; third in Southeastern Conference
 - Graduate program 48th
- Nineteenth in the nation in number of bachelor's degrees awarded to African-Americans, according to the American Society for Engineering Education



1891 — Offers South's first electrical engineering course; faculty pioneers x-ray technology and makes one of its first applications to medicine

1899 — Becomes Alabama Polytechnic Institute, affirming commitment to teach 'mechanics' as a cornerstone of institution's mission

Our Programs...

- First in the nation to offer a bachelor's degree in wireless engineering
- First in the Southeast to offer bachelor's and master's degrees in software engineering
- University's Alabama Center for Paper and Bioresource Engineering is the nation's only pulp, paper and bioresource research and education center offering undergraduate curricula with pulp, paper and bioresource specializations for chemical, electrical and mechanical engineering students, and a multidisciplinary research environment for engineering graduate students and faculty
- Received a \$1+ million grant from BellSouth for AU's Minority Engineering Program to enhance recruitment and retention of minority engineering students
- Received a \$3+ million grant from the Vodafone-US Foundation for scholarship, fellowship and program support in recognition of the college's quality programs in wireless engineering
- Business-Engineering-Technology Program uniquely prepares students to integrate business and engineering principles to solve real-world problems



1913 — Thomas Edison's chief engineer, Auburn alum Miller Reese Hutchison, donates wireless telegraph, prompting course offering in wireless telegraphy

1923 — Maria Rogan Whitson earns bachelor's degree in electrical engineering, making her the institution's first female engineering graduate

Our Students...

- Eagerly sought after by recruiters because of their practical, hands-on approach to engineering
- Comprise approximately one-quarter of those who graduate with honors university-wide; one-third of all university honors students; and 80 percent of cooperative education students
- Participate in a variety of educational activities beyond the classroom, gaining experience with teamwork and project management. These include the Society of Automotive Engineers (SAE) Aero Design micro aerial vehicle, Formula SAE race car, SAE Mini Baja all-terrain vehicles, solar car, solar house, concrete canoe, steel bridge and hovercraft competitions

Most recent results

- Aero — 1st out of 35
- Mini Baja
 - ♦ East: 2nd out of 71
 - ♦ Midwest: 6th out of 143
 - ♦ West: 8th out of 131
- Formula — 47th out of 140
- Solar car — 4th in class, 12th overall out of 30



1925-1959 — First five facilities comprising Engineering Quad constructed: Dunstan, Ramsay, Ross, Textile and Wilmore

1960 — Becomes Auburn University

Our Faculty...

- Maintain top ranking in research awards per faculty member among southeastern schools
- Include

Prathima Agrawal

- Former executive director of Telcordia Technologies' Mobile Networking Research Department, now director of Auburn's Wireless Engineering Research and Education Center — providing instrumentation and expertise in support of Auburn's wireless degree program

Juan Gilbert

- Leader in software research including human-computer interaction, spoken language systems and educational technology. American Society for Engineering Education 2005 Minorities in Engineering Award; *Black Issues in Higher Education* Special Recognition Award; featured in *The Chronicle of Higher Education*

Bruce Tatarchuk

- Pioneer in research of microfibrus materials that can filter out biological and chemical contaminants; director of Auburn's Center for Microfibrus Materials Manufacturing — producing low cost, high performance, 3-D microfibrus materials and structures



1984-1986 — Two new facilities constructed for Engineering Quad: Broun Hall and Harbert Engineering Center

1999 — Offers Southeast's first bachelor's and master's degrees in software engineering

Our Alumni...

- Auburn Engineering is one of the nation's top producers of NASA engineers and scientists and has graduated four astronauts — T. K. Mattingly, Jim Voss, Jan Davis and Clifton Williams — and three directors of Kennedy Space Center — Richard Smith, James Kennedy and Forrest McCartney
- Three members of the prestigious National Academy of Engineering are Auburn engineers — John Junkins, Oliver Kingsley and Philip Lett
- Kirk Newell designed and developed the self-cleaning electric range oven; alumnus William Bynum pioneered the engineering breakthroughs that revolutionized the South through air conditioning
- Philip Lett designed and developed the U.S. Army's M1A1 main battle tank, the most successful combat weapon of its kind in history
- More than 40 percent of State of Alabama Engineering Hall of Fame members are Auburn graduates
- According to *Forbes* magazine, Auburn University has produced more CEOs for the nation's best small companies than any university in the South and ranks fourth nationally in this category
- More than two dozen Auburn graduates serve as CEOs of the nation's top corporations; others lead major government agencies
- More than 100 graduates serve on the Auburn Alumni Engineering Council acting as advisors in all aspects of the college, from curriculum and accreditation to communications to student recruitment



2001 — College of Engineering named for alumnus Samuel Ginn, wireless pioneer who gave the college \$25 million — among the largest cash gifts in the history of Alabama higher education and the largest single gift in Auburn University's 150-year history

Our Research...

- Conversion of fossil fuels to hydrogen — clean-burning energy that creates no pollution and looks to our future energy needs
- Techniques for separating nanoparticles and developing nanoparticle films that are more precise and more environmentally sound than current processes
- Global communication systems that integrate software, hardware and networks — retaining our nation's edge in wireless communication
- Computers that respond to voice commands in a variety of languages, increasing the speed and effectiveness of police, medical and tactical response time
- Software that maintains diversity in student enrollment, expediting the review of applications
- Computer programming that enables multiple measurements to be performed on individual cast metal samples in space, minimizing sample-to-sample variability
- Hand-held instruments with acoustic wave sensors that detect harmful bacteria and toxins in food and the environment
- A new energy source to replace batteries in NASA's satellites, improving global communication technology by extending their life in orbit through use of flywheels made of graphite fiber composites that serve as power generators
- A polyester stent — expandable tube often used to keep clogged arteries open in the heart — that is less expensive and more effective than existing metal stents



2002 — Offers nation's first wireless engineering degree; Wilmore Laboratories renovated to state-of-the-art laboratory and administrative complex

2003 — Becomes only Alabama university to offer a fiber engineering program — one of only four nationally accredited programs of its kind

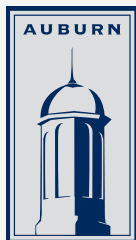
- Antiterrorism efforts through...

- Microfibrous technology that includes
 - ✦ Filters that could help save thousands of lives by removing carbon monoxide from fires at a rate 10 times more efficient than filters currently on the market
 - ✦ A self-regenerating air filtration system that removes biological and chemical contaminants in office building air handling systems, military installations, hospitals, airplanes and vehicles
 - ✦ Clean-air filtration systems and smaller, lighter gas mask canisters that enable long-lasting protection and breathing comfort
- The addition of vertical flight capability to the Micro Aerial Vehicle — a small, unmanned vehicle with military and civilian uses including field surveillance, reconnaissance, intelligence collection, combat applications and disaster monitoring
- Bullet-resistant material that offers far superior resistance, weighs less and is more comfortable than existing material
- Analytical models of floating distribution centers the U.S. military will use to improve access to stored supplies and reduce storage costs
- The study of aircraft cabin air quality and assessment of chemical and biological threats



2004 — Graduates inaugural class of nation's first wireless engineering program

2005 — Begins renovation of Ross Hall; holds groundbreaking ceremonies for Transportation Technology Center



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