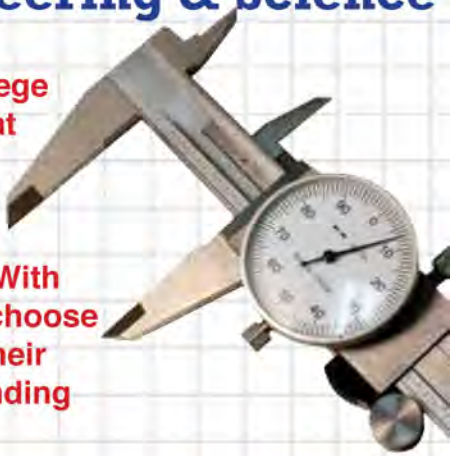
LOUISIANA TECH UNIVERSITY

COLLEGE OF ENGINEERING AND SCIENCE

Louisiana Tech University

College of Engineering & Science

Students enrolled in the College of Engineering and Science at Louisiana Tech University are involved in hands-on, project-based learning from their very first day of class. With fourteen different majors to choose from, students quickly find their passion and begin understanding their chosen career path.



Building Engineers and Scientists for Tomorrow

So, why study engineering?

If you have an interest in math and science, or if you grew up taking things apart and putting them back together, or if you just like to solve problems, you likely have an aptitude for engineering and science. With our integrated curriculum, students have the first year to learn about different areas of engineering and science while completing projects like a saltwater fish tank. For engineers, their textbook comes to life in the "lab" that they own. Each student has their own "robotics" kit that they use to learn about engineering fundamentals. Concepts like circuits, conservation of energy, and statics are brought to life with the kit. By combining lecture and lab in one setting, students begin to see how a theory can be applied to a real-world problem. Graduates from the College of Engineering and Science are well-known. Our alumni have become presidents of major oil and gas companies and officers within the Department of Defense. They head divisions of the Army Corps of Engineers and state departments of transportation. They design complex bridges and interstate systems and work with NASA at both the Johnson Space

The College's integrated curriculum also guarantees that professors in engineering, mathematics, and the sciences are all involved in your career path and that you are not a nameless face in the class room.

Center in Houston and the Kennedy Space Center in Florida. They are high ranking chemical engineers in well-known companies such as Exxon-Mobil, PPG, The Dow Chemical Company, and Eastman Chemical Company. They create medical devices that put people's lives back together and they create anti-hacking and viral programs for computers. They are teachers and community leaders. Louisiana Tech graduates are among the most sought after engineering and science graduates in the country.

Hands-On Projects

Students complete multiple hands-on projects, beginning with our Living With the Lab Curriculum (where students use a robotics kit to make a pump and a fish tank assembly) through senior capstone design. Our facilities include a rapid prototyping machine, water jet machine, 3D foam router, full machine shop, foundry, concrete lab, distillation columns, biomedical labs and much more.

College of Engineering & Science Statistics

- **14 Engineering and Science majors** from nanosystems and cyberengineering to mechanical engineering and physics.
- **Freshman Engineering Class Size of 40** Small classes provide consistent interaction
- **Average starting salary of $60,000** Engineering and science graduates earn competitive salaries
- **100 + Companies** recruit Engineering and Science graduates through the career fairs and at the program level.
- **Dedicated Faculty** Students will find caring faculty in every program area. Whether it is academic advising, research, or extra-curricular activities, our faculty are dedicated to helping our students succeed.

Team Collaboration
Starting with the first year of study, students learn teamwork and communication skills by working on group projects with people in multiple engineering and science majors.

Find your success, beginning with an education from the College of Engineering and Science at Louisiana Tech and begin solving the world's greatest challenges.

Engineering and Science Programs

Biomedical Engineering
Biomedical engineers apply fundamentals from engineering, medical sciences, and mathematics to solve problems in medicine and biology, and to understand, modify, or control biological systems.

Chemical Engineering
Chemical engineers chemically transform various natural resources into more useful and valuable products, including paper, gasoline, medicines, and computer microchips.

Chemistry
Scientists with a background in chemistry work with aspects of physics and math, earth and environmental science, biology, and medicine.

Civil Engineering
Civil engineers design, construct, and maintain man-made and natural infrastructures, such as bridges, water treatment facilities, and runways.

Computer Science
Computer scientists design algorithms and use programming and state-of-the-art concepts in computer systems technology to develop and repair computer hardware (equipment) and software (procedures) that address defense, biomedical, business, and general computer needs.

Construction Engineering Technology
Technologists with a background in construction engineering technology use the practical application of engineering science to provide technical and managerial services in the areas of construction most closely aligned with engineering, with a particular emphasis on highway, heavy, and underground construction.

Cyber Engineering
Cyber engineers incorporate electrical engineering and computer science to understand cyberspace and use skills developed in digital forensics, security policy, and computer network defense to perform cyber security tasks, as well as work on engineering hardware and software.

Electrical Engineering
Electrical engineers apply the laws of electrical phenomena to design, develop, and improve electronics and solid-state devices, and to control, convert, and distribute energy.

Electrical Engineering Technology
Technologists with a background in electrical engineering technology perform a variety of technical tasks in the areas of computers, electrical power, communications, instrumentation, and control systems.

Industrial Engineering
Industrial engineers make decisions related to the best use of people, material, equipment, and energy to achieve the goals of an organization, and can be found in manufacturing facilities, hospitals, amusement parks, and many other locations that make a product or offer a service.

Mathematics and Statistics
Mathematicians serve a variety of fields, including business, education, and engineering by helping compute budgets, weights, limits, and by helping educate professionals.

Mechanical Engineering
Mechanical engineers design, develop, test, manufacture, and maintain machines, systems, devices, and components that improve living conditions.

Nanosystems Engineering
Nanosystems engineers design, develop, and characterize materials, devices, and systems in the range of 1-100 nanometers, and integrate these materials with macroscale devices and systems.

Physics
Scientists with a background in physics apply the principles of physics and the techniques of physics research in a variety of fields, including astrophysics, material science, biophysics, and solid state physics.

We prepare students to address the Grand Challenges of Engineering:

- Make solar energy economical
- Provide energy from fusion
- Develop carbon sequestration methods
- Manage the nitrogen cycle
- Provide access to clean water
- Restore / improve urban infrastructure
- Advance health informatics
- Engineer better medicines
- Reverse-engineer the brain
- Prevent nuclear terror
- Secure cyberspace
- Enhance virtual reality
- Advance personalized learning
- Engineer tools for scientific discovery

www.engineeringchallenges.org
www.grandchallengescholars.org
www.latech.edu/coes/gcscholars

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