

University of Louisiana at Lafayette

# COLLEGE OF ENGINEERING

EDUCATING ENGINEERS TO SOLVE TOMORROW'S CHALLENGES

Bachelor's Degree in Chemical Engineering with

## BIOENGINEERING CONCENTRATION

Louisiana's only Bioengineering concentration blends courses and labs that focus on subjects such as biomaterials and biomedical engineering, biomechanics, biomass conversion, human anatomy and physiology, pharmaceutical operations, and biochemistry. It provides students with expertise that will help them professionally in creating medical, diagnostic and therapeutic devices, and developing pharmaceutical products, food supplements and preservatives.

[chemical.louisiana.edu](http://chemical.louisiana.edu)

Bachelor's Degree in Civil Engineering with

## STRUCTURAL ENGINEERING & COASTAL HAZARDS CONCENTRATION

The Structural Engineering & Coastal Hazards concentration prepares civil engineering students to design and build resilient infrastructure—such as buildings and bridges—that can withstand forces like wind, waves, and storm surges. Through a blend of coursework and hands-on labs in structural analysis and design, wind and flood engineering, coastal hydrology, bridge design, and storm surge modeling, students gain the expertise needed to address the impacts of extreme weather and protect coastal communities.

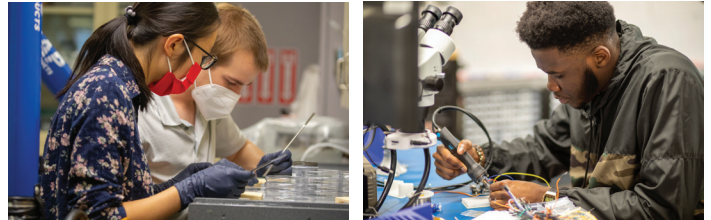
[civil.louisiana.edu](http://civil.louisiana.edu)

Bachelor's Degree in Civil Engineering with

## WATER RESOURCES & ENVIRONMENTAL ENGINEERING CONCENTRATION

The Water Resources & Environmental Engineering concentration offers professional development opportunities that focus on subjects such as hydrologic and hydraulic modeling, flood mitigation, coastal hydrology, water and wastewater treatment, solid and hazardous waste management, and environmental assessment. It prepares students for careers that address the needs for a water-resilient and environmentally sustainable society.

[civil.louisiana.edu](http://civil.louisiana.edu)



Bachelor's Degree in Electrical Engineering with

## COMPUTER ENGINEERING CONCENTRATION

The Computer Engineering concentration provides special training in the analysis and design of the hardware and software aspects of computers and computer-based systems. The concentration's areas of study include computer architecture and hardware design, computer networks and communications, hardware-software co-design for robotics, drones, and autonomous cars.

[electrical.louisiana.edu](http://electrical.louisiana.edu)

Bachelor's Degree in Electrical Engineering with

## POWER & SUSTAINABLE ENERGY CONCENTRATION

The Power & Sustainable Energy concentration focuses on electric energy conversion and integration, including renewable energies, power system operation and control, smart grids, and electric vehicles. Emerging trends in grid modernization and developing sustainable energies have increased the demand for experts nationwide in fields related to energy technologies.

[electrical.louisiana.edu](http://electrical.louisiana.edu)

Bachelor's Degree in Electrical Engineering with

## SECURE SMART SYSTEMS CONCENTRATION

The Secure Smart Systems concentration prepares students to engage in the new revolution in smart systems, system security and embedded systems. Areas of studies include cyber-physical systems, embedded systems, machine learning, Internet of Things, human-computer interface, cybersecurity and control systems. As the expansion of smart technologies continues — and as security challenges arise as a result of that expansion — employment opportunities for graduates in this field are increasing as well.

[electrical.louisiana.edu](http://electrical.louisiana.edu)

Bachelor's Degree in Engineering and Technology Management with

## **CONSTRUCTION MANAGEMENT CONCENTRATION**

The Construction Management concentration equips students with the skills and knowledge needed to manage construction projects from planning to completion. Through a blend of courses and labs in construction methods and materials, cost estimating and budgeting, building information modeling (BIM), project management, planning and control, construction safety, and workforce leadership, students gain practical experience and business insight—with a business minor embedded in the curriculum. This concentration prepares graduates for a wide range of roles in the construction industry, enabling them to lead teams, improve jobsite efficiency, and navigate the demands of a dynamic, fast-paced field.

[engineeringtech.louisiana.edu](http://engineeringtech.louisiana.edu)

Bachelor's Degree in Engineering and Technology Management with

## **MANUFACTURING MANAGEMENT CONCENTRATION**

Louisiana's only Manufacturing Management concentration prepares students for leadership roles in modern manufacturing by combining engineering, technology, and business. The curriculum includes hands-on courses and labs in lean manufacturing, smart automation, applied mechatronics, robotics, supply chain strategy, quality systems, CNC operations, and project management—along with an embedded business minor. Students gain the skills to streamline operations, integrate advanced technologies, and drive innovation in high-performance manufacturing.

[engineeringtech.louisiana.edu](http://engineeringtech.louisiana.edu)

Bachelor's Degree in Mechanical Engineering with

## **AUTONOMOUS & ROBOTIC SYSTEMS CONCENTRATION**

The Autonomous & Robotic Systems concentration provides students with the foundation and skills they'll need to successfully integrate autonomous and robotic systems with the human workforce. The concentration blends courses and labs that focus on subjects such as engineering design, mechatronics, kinematics of machines, control systems, robotic technologies, applied machine learning, the Internet of Things, and robot dynamics and control.

[mechanical.louisiana.edu](http://mechanical.louisiana.edu)

Bachelor's Degree in Mechanical Engineering with

## **SUSTAINABLE ENERGY SYSTEMS CONCENTRATION**

The Sustainable Energy Systems concentration provides students with exposure to sustainability principles in power generation through courses in solar energy and sustainable energy consumption in the design of the built environment. Subjects include renewable energy, advanced engineering methods, energy systems and sustainability, solar energy system design, modeling and simulation of solar energy, energy conversion and environmental engineering.

[mechanical.louisiana.edu](http://mechanical.louisiana.edu)

Bachelor's Degree in Petroleum Engineering with

## **SMART OILFIELD CONCENTRATION**

The nation's only Smart Oilfield concentration combines coursework in machine learning, the Internet of Things (IoT), coding, statistics, computational applications, and data modeling. Students gain hands-on experience with specialized software to develop skills in automation, predictive analytics, safety, environmental responsibility, and the economic viability of oil and gas operations. In addition, the Petroleum Engineering department offers the only academic program in the country that provides education and training aligned with the International Association of Drilling Contractors (IADC) WellSharp Certification.

[petroleum.louisiana.edu](http://petroleum.louisiana.edu)



## **CONTACT US**

[engineering.louisiana.edu](http://engineering.louisiana.edu)



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