

# COLLEGE OF ENGINEERING

GRADUATE PROGRAMS

University of Louisiana at Lafayette  
HOME OF THE RAGIN' CAJUNS

## ABOUT US

The University of Louisiana at Lafayette is the state's second-largest public university and the largest in the University of Louisiana System. The Carnegie Classification of Institutions of Higher Education has ranked UL Lafayette as a Research University with Very High Research Activity, its most prestigious designation. The University is dedicated to excellence in undergraduate and graduate education, public impact research and community service.

UL Lafayette's nationally recognized engineering graduate programs produce professionals who are in high demand for their critical-thinking and problem-solving skills. Engineering students receive more than technical training – the college's curriculum and extracurricular activities are designed to help students become leaders, entrepreneurs and innovators.

## UNIVERSITY RESEARCH *by the numbers*

**TOP 3%**  
*in the nation*

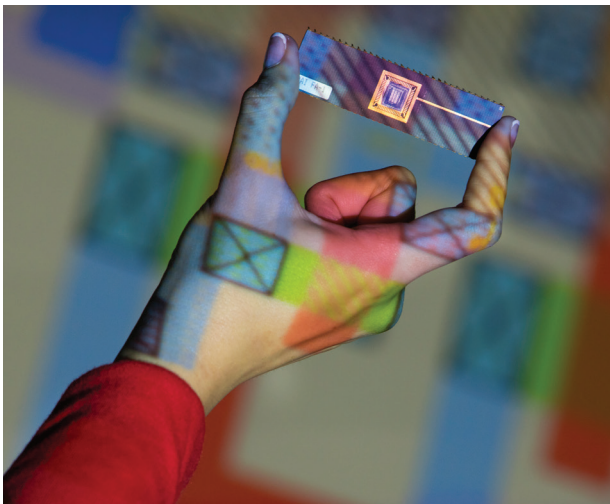
- Carnegie Classification  
of Institutions of Higher  
Education

**\$164**  
*million*

2020 Research  
Expenditures  
- 2020 NSF Higher Education and  
Research Development Survey

**#7**  
*in the nation*

for research that's funded  
through business and  
industry partnerships  
- 2020 NSF HERD Survey



# COLLEGE OF ENGINEERING GRADUATE PROGRAMS

## EDUCATING ENGINEERS TO SOLVE TOMORROW'S CHALLENGES.

The College of Engineering offers Doctor of Philosophy (Ph.D.) and Master of Science (M.S.) degrees with concentrations available in chemical, civil, electrical, mechanical, and petroleum engineering. Additionally, the college in partnership with the B.I. Moody College of Business offers an engineering management concentration under the M.S. engineering degree.

In the Department of Engineering Technology, the college also offers an M.S. in Systems Technology allowing students to attend fully online or face-to-face.

The Ph.D. program emphasizes leadership, management, entrepreneurship and innovations skills and are structured with a focus on a specialization core in addition to the systems engineering curriculum. The following requirements are integrated into the program courses:

- Designing Leaders Program
- Project Management
- Commercialization
- Lean Six Sigma
- Systems Engineering
- Professional Career Development Seminar



These programs offer professional development and leadership training that enables students to become tomorrow's engineering leaders.

Current research teams are engaged in a broad array of research, utilizing state of the art laboratories and research facilities that cater to the needs of our engineering students.



### CHEMICAL ENGINEERING

- M.S. in Engineering - Chemical Engineering
- Ph.D. in Systems Engineering - Chemical Engineering

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

**Research Areas:** Homogeneous and heterogeneous catalysis, materials for energy applications, nanomaterials, advanced processes for environmental remediation, batteries, carbon capture and conversion of CO<sub>2</sub> into

chemicals, biomaterials, renewable energy, biomass conversion into energy and chemicals, conversion of waste to valuable products.



### MECHANICAL ENGINEERING

- M.S. in Engineering - Mechanical Engineering
- Ph.D. in Systems Engineering - Mechanical Engineering

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

**Research Areas:** energy efficiency and sustainable energy, high performance materials and advanced manufacturing, robotics and controls, biomedical engineering, electronic materials and devices, cyber-physical systems and cybersecurity.





## CIVIL ENGINEERING

- M.S. in Engineering - Civil Engineering
- Ph.D. in Systems Engineering - Civil Engineering

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

**Research Areas :** Water sustainability and climate adaptation, environmental engineering, alternative energy

from waste products, infrastructural materials development and optimization, flood resilience, watershed management, and coastal protection, transportation engineering and safety, intelligent transportation systems (ITS), structural and architectural engineering.



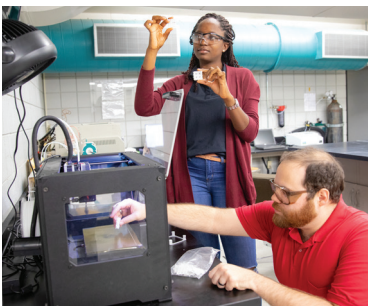
## ELECTRICAL ENGINEERING

- M.S. in Engineering - Electrical Engineering
- Ph.D. in Systems Engineering - Electrical Engineering

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

**Research Areas:** Future fiber communication networks; advanced and photonic technologies for 5G and beyond;

computer visualization systems; design and development of IoT and embedded systems; smart, connected, and sustainable energy systems; secure smart systems; pico-satellite systems and communication; brain-computer systems for mental health; drones and robotic design and application; reliable and sustainable smart grids and advanced intelligent control systems.



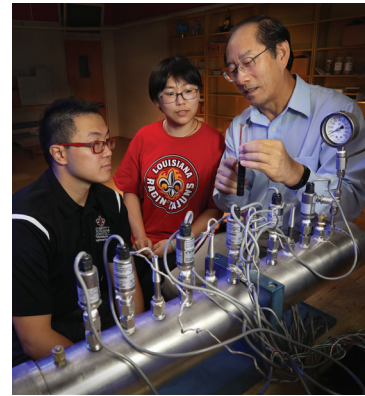
## ENGINEERING TECHNOLOGY

- M.S. in Systems Technology (online or face-to-face)

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

The Master of Science in Systems Technology is for students who work in a range of industries, including energy, manufacturing, chemical production, construction, and maintenance services.

This master's program equips students with advanced problem-solving skills and cutting-edge tools to develop solutions to complex systems problems in these industries. Curriculum focuses on project management, lean manufacturing, total quality control, risk assessments and safety management systems and the design process.



## PETROLEUM ENGINEERING

- M.S. in Engineering - Petroleum Engineering
- Ph.D. in Systems Engineering - Petroleum Engineering

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

**Research Areas/Research Labs:** Enhanced oil recovery/EOR and CO<sub>2</sub>-Flooding Labs; Geomechanics and petrophysics/Digital Imaging and Reservoir Property Labs; Fluid mechanics in fractures/Fracture Testing Lab; Petroleum Production

Optimization/Fracture Proppant Testing Lab; Petroleum Reservoir Simulation/Numerical Reservoir Simulators; Smart oilfield/Computer Lab. All labs are equipped with computerized state-of-the-art instruments and apparatus.



## ENGINEERING MANAGEMENT

- M.S. in Engineering - Engineering Management

[engineering.louisiana.edu/engineering\\_management](http://engineering.louisiana.edu/engineering_management)

Offered in partnership with the B.I. Moody III College of Business Administration, the program is designed for professionals with existing engineering experience, a master's degree in engineering with a concentration in engineering management helps students develop the business and management skills needed to lead teams in project-based work.

This program offers an invaluable credential that bridges the gap between engineering and business. In addition, because engineering managers are usually involved in the financial, production and marketing activities of their firm, business management skills can be beneficial for those seeking management positions.

The engineering management program will improve leadership skills and help the working engineer to gain a solid foundation in areas such as lean six sigma, data analysis for engineering projects, engineering project management, systems engineering, accounting, financial management, organizational behavior and leadership, and entrepreneurial management.



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**Engineering**

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