



# INDUSTRIAL ENGINEERING



Industrial engineering is the optimization of complex processes, systems, and organizations. It combines engineering and business to make informed decisions through interactions with people and the application of industrial engineering fundamentals. Industrial engineers design and continually improve processes to run efficiently with minimal waste or defects. Industrial engineers focus less on physics-based analysis and design and more on systems-level analysis of performance. Simply put, industrial engineers improve the efficiency and profitability of organizations and processes. The Louisiana Tech Industrial Engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, <https://www.abet.org/>.



Industrial engineers work in a number of specialties, including operations research, systems, manufacturing, production, management science, safety, and ergonomics. Other specialized pursuits may include:

- MANUFACTURING ENGINEERING
- ROBOTICS AND COMPUTER-INTEGRATED MANUFACTURING
- SYSTEMS ENGINEERING
- PROJECT MANAGEMENT
- QUALITY AND PROCESS ENGINEERING
- HUMAN FACTORS ENGINEERING
- DATA ANALYTICS
- SUPPLY CHAIN MANAGEMENT
- PRODUCTION AND INVENTORY CONTROL
- ENVIRONMENT PROTECTION / INDUSTRIAL SAFETY
- TECHNICAL SALES AND MARKETING
- ENGINEERING SOFTWARE MANAGEMENT
- AUTOMATIC CONTROLS AND AUTOMATION



## **A SAMPLE OF THE EMPLOYERS THAT HAVE HIRED LOUISIANA TECH INDUSTRIAL ENGINEERING STUDENTS**

- LOCKHEED MARTIN
- PROCTOR & GAMBLE
- AMAZON
- SCHLUMBERGER
- AT&T
- DOW CHEMICAL COMPANY
- INTEL
- NEIMAN MARCUS
- JOHNSON & JOHNSON
- BAXTER HEALTHCARE SYSTEMS
- HONDA MOTOR CO.
- U. S. POSTAL SERVICE
- NASA
- TARGET
- PAYPAL
- FRITO LAY



## Statistics

- ▶ **\$67,000 AVERAGE STARTING SALARY FOR LOUISIANA TECH BSIE GRADUATES 2019-2020**
- ▶ **\$92,660 AVERAGE MID-CAREER SALARY FOR INDUSTRIAL ENGINEERS IN THE U.S.**
- ▶ **HIGHEST JOB OPPORTUNITY PER CAPITA AMONG ALL ENGINEERING MAJORS**
- ▶ **13:1 STUDENT / FACULTY RATIO**

## Famous Industrial Engineers

**Tim Cook** - CEO, Apple, 2011- present

**Chad Holliday** - Chairman and CEO of DuPont 1999-2009; Chairman of Royal Dutch Shell 2015 - present

**William Swanson** - Chairman and CEO of Raytheon 2004-2014

**Mike Duke** - President and CEO, Walmart 2009-2013

**Michael Eskew** - Chairman and CEO, UPS 2002-2007

**John Forehand** - CEO, Accenture 2001-2006



## Certifications

Students in Louisiana Tech's Industrial Engineering program have the opportunity to earn Six Sigma and Lean certifications as they complete their degree. These certificates enhance professional skills and improve a student's marketability for competitive

- **SIX SIGMA GREEN BELT**

This certificate is built into the Industrial Engineering curriculum. Completion requires an A or B in Engineering Statistics I and II. According to Indeed.com, the median salary for an industrial engineer with a Six Sigma Green Belt is \$95,261.

- **SIX SIGMA BLACK BELT**

All industrial engineering graduates who take the Six Sigma Black Belt Project course will earn this certificate. According to Indeed.com, the median salary for Six Sigma Black Belts is \$126,551

- **LEAN CERTIFICATION**

This certificate is built into the program curriculum. Completion requires an A or B in Lean Manufacturing Systems. According to Indeed.com, the median salary for a certified Lean Specialist is \$81,574.

- **LEAN SIX SIGMA CERTIFICATION**

This certificate requires completion of the Industrial Engineering curriculum as well as one additional course: Six Sigma Black Belt Project. According to Indeed, the median Salary for a Certified Lean Six Sigma Specialist is \$110,257.

## Alumni Testimonials

*"The Louisiana Tech Industrial Engineering program was instrumental in guiding me to the successful career that I have today. The well thought out curriculum not only taught me the principles of process optimization, but also helped me develop the skills to properly manage and execute a project. In my current role as a Business Process Manager, I am constantly utilizing content from my IE coursework. I believe the program prepared me well to excel in the workforce."*

- **Taylor Fritz**, '12, Business Process Manager, Schlumberger

*"Louisiana Tech has, unquestionably, impacted my daily work life. At Tech, I learned many skills that I currently use at my job. There are several times that I see myself using tools that I remember working on in some classes. The Industrial Engineering program also has a great selection of classes. The staff has always been very supportive and show they care and want their students to succeed. I also had the opportunity to earn my Six Sigma Black Belt Certification that, in my opinion, made a huge difference in the hiring process. It definitely helped me stand out against other candidates. Overall, the Louisiana Tech Industrial Engineering program has had such a great influence in my life and I am very proud to be a bulldog!!!"*

- **Manoela Chiacchio**, '17, Industrial Engineer, Hydro-Sapa Extrusions

### For more information:

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