INSTRUMENTATION AND CONTROL SYSTEMS ENGINEERING TECHNOLOGY

The Instrumentation and Control Systems Engineering Technology (ICET) program prepares students to meet the demands of our increasingly automated society, providing expertise in sensors and calibration, programmable logic controllers, process troubleshooting, robotics and electrical power. ICET graduates are familiar with instrumentation, discrete and analog control systems, microcontrollers, data collection and transfer and networking. They design, plan, research, evaluate, test and implement electrical and electromechanical systems that span the biomedical, chemical, civil, cyber, electrical, industrial, mechanical and nanosystems disciplines.

Graduates from the ICET program may work on projects involving industrial equipment, computers, cell phones, navigation systems, wiring and lighting in buildings, and other types of electrical and electromechanical systems. Other specialized pursuits may include the following.

- **Aerospace engineering**
- **Broadcast engineering**
- **Control and instrumentation engineering**
- **Design**
- **Electrical/electronics engineering**
- **IT consulting**
- **Network engineering**
- **Nuclear engineering**
- **Systems analysis**
- **Management consulting**
- **Project management**
- **Technical writing or sales**

EMPLOYERS SEEKING ICET GRADUATES

- **Alliance Compressors**
- **American Electric Power**
- **ASSET Engineering**
- **Benteler Steel**
- **CenturyLink**
- **Clearwater Paper**
- **Cleco Corporation**
- **Cooper Tire and Rubber**
- **Entergy**
- **Georgia Pacific**
- **Helmerich & Payne**
- **L3 Technologies**
- **Lamb Weston**
- **Oncor Electric Delivery**
- **Renovo.auto**
- **Sapa Extrusions**
- **Solar Turbines, Inc.**
- **West Fraser**

Courses

Engineering Technology:
Engineering Technology Problem Solving I-III, Circuits & Circuits Lab, Statics & Strength of Materials, Thermodynamics, Dynamics & Mechanisms, Fluid Mechanics, Heat Transfer, Engineering Economics

Mathematics:
Algebra, Trigonometry, Applied Calculus, Applied Calculus for ICET

Science:
General Physics I & II, (with labs), Chemistry and Chemistry Lab, Biology

Instrumentation & Control Systems Engineering Technology:
Electronics, Instrumentation, Electrical Power I & II, Control Systems I-III, Process Measurements, Electro-Mechanical Power Conversion, Capstone Design I-III, Project Management

OPPORTUNITIES AND ACTIVITIES

Outside of classes, ICET students engage in student-run organizations, special interest clubs, special projects, competitions and honor societies, including the student groups listed below.

- **Engineering & Science Association (ESA)**
- **Institute of Electrical & Electronics Engineers (IEEE)**
- **Eta Kappa Nu Honor Society (HKN)**
- **Grand Challenge Scholars Program**
- **Aerospace Engineering Club**
- **Tau Beta Pi (Engineering Honor Society)**
- **Society of Women Engineers (SWE)**

Alumni Testimonials

"I am the owner of Automated Power located in Flowood near Jackson, Mississippi. Automated Power sells electrical switchgear, VFDs, heat tracing and engineering services to industrial clients throughout the Southeast. Electrical engineers from Louisiana Tech are always in high demand. It's fun to design an electrical project for a client and see it used for years in their operation."

***- Mac Marsh,** P.E., '81, Owner, Automated Power*

"Being an electrical engineer is a big job with big responsibilities. Now, think about everything you use on a daily basis that requires electricity. Everything with a plug and an on/off switch requires electricity to operate, and engineers help make this happen. This is why I enjoy being an electrical engineer."

***- Roland Beard,** '04 (B.S.) & '15 (M.S.), Systems Operations Specialist, Entergy Corporation*

"While working in the electrical engineering field, I have experienced many opportunities and have been able to explore the world as an entrepreneur in business. It has allowed me to pursue opportunities that I never imagined would be possible. A degree in electrical engineering or electrical engineering technology, now (ICET), opens many doors professionally while allowing a person to go the direction that best fits them personally. Louisiana Tech was a great starting point for my career."

***- Lonnie Barr,** '98, Executive VP/COO, Inolect, LLC*

"The electrical engineering technology (now ICET) and MBA degrees that I received while attending Louisiana Tech have helped me compete and win in a technical business. Working in this field is fun, rewarding and rarely feels like work. I get to see how so many different things are made, throughout all types of industry imaginable, solve big and important problems and make friends and money along the way. I can confidently say that a Louisiana Tech engineering degree is very well received and respected in industry throughout the nation, aiding you in quickly establishing credibility in your field. I can also add that going through the Louisiana Tech engineering program brought me close to people that made attending the University a whole lot of fun and enabled me to make many lifelong friends that I still work with today, almost 20 years later."

***- David Doyal,** '99 (B.S.) & '01 (M.A.), Executive VP, Industrial Electronic Supply, Inc.*

For more information:
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