Technical Studies Division

Overview

The Technical Studies Division at Lee College offers hands-on training and industry-relevant education in essential fields that power modern industry. Our programs focus on preparing students for high-demand careers in areas such as petrochemical, manufacturing, power generation, and industrial automation. Students can choose from three key programs and acquire essential skills through courses in technical mathematics.

Traditional Awards

College Studies Offered

- **Analytical Instrumentation Technology**

This program trains students to operate, maintain, and troubleshoot sophisticated equipment used for chemical analysis and process monitoring. Emphasis is placed on real-world applications in process industries, including calibration and repair of analyzers used in the petrochemical and industrial sectors.
Learn more about Analytical Instrumentation

- **Instrumentation Technology**
  Develop skills in the installation, maintenance, and repair of instrumentation systems that measure and control variables such as flow, temperature, and pressure. This program prepares students for roles in automation, process control, and systems integration.
  Explore Instrumentation Technology
- **Electrical Technology**
  Covers fundamentals of electrical systems, including wiring, motor controls, and electrical troubleshooting, with hands-on labs simulating real-world industrial conditions. Students gain skills necessary for careers in industrial electrical maintenance.
  Discover Electrical Technology
- **Technical Math for Trades**
  The technical math courses support students in the technical programs by covering algebra, geometry, and trigonometry, focusing on practical applications in electrical, instrumentation, and analytical technologies.

Advanced Awards

(Proposed) Instrumentation and Controls Advanced Certificate — credit classes

This certificate program is designed for professionals seeking to deepen their expertise in advanced instrumentation, process control, and automation technologies. The curriculum emphasizes theoretical knowledge and hands-on application, preparing participants to excel in complex industrial environments.

The Measurement and Advanced Control Systems Hub — Instrumentation Networking Enterprise (MACH-INE) — non-credit classes

The Lee College MACH-INE is a premier educational center for emerging technologies in control systems, offering a state-of-the-art facility, expert instructors, and a philosophy rooted in hands-on learning. The MACH-INE specializes in designing and delivering courses for fieldbus and process control systems, maintaining an applied research center, and customizing training for diverse industrial needs. The MACH-INE emerges from the legacy of the Fieldbus Center at Lee College which created worldwide recognition for the campus in the Instrumentation profession. The MACH-INE remains

affiliated with the Fieldbus Center industry sponsor, Fieldcomm Group, which Develops global standards for integrating digital devices with on-site, mobile, and cloud systems, ensures conformance for reliable, interoperable automation, and advances unified models like PA-DIM® and Ethernet-APL using HART®, FOUNDATION™ Fieldbus, and FDI™ standards.

Student Resources

- **Specialist Advisor — Domingo Estrada**
  destrada@lee.edu | 281.425.6559 | TV1-210B
  Domingo Estrada is the Specialist Advisor for the Technical Studies Division, providing guidance on every step of the educational journey, from application to graduation. He assists with college applications, financial aid, placement testing, and course selection.
- **ISA Membership**
  Students are encouraged to join the International Society of Automation (ISA) to access industry news, standards, networking opportunities, and professional development resources. Membership supports careers in automation and process control.
- **Hands-On Training Facilities**
  The division offers state-of-the-art labs featuring process control simulators, electrical motor control stations, and analyzer labs, ensuring practical training that mirrors real-world industrial settings.
- **Career Services**
  The Career Services team helps students find internships and job placements, leveraging the Baytown area's proximity to numerous petrochemical plants and industrial facilities.

Why Choose Technical Studies at Lee College?

- **Industry-Relevant Curriculum**
  Programs are developed in collaboration with industry experts, ensuring students acquire skills in demand in today's job market.
- **Experienced Faculty**
  Instructors bring professional backgrounds and practical insights from their respective fields.
- **High Employment Rates**
  Graduates of the technical programs have strong employment prospects due to the demand for skilled technicians.
- **High Pay Rates**
  Instrumentation Tech
  Electrical Tech
  Analyzer Tech

Faculty Contacts

Primary Contacts

Kristi Bowden, Administrative Specialist, Technical Studies
kbowden@lee.edu | 281.425.6418 **|** TV1-214B

With an A.S. in Administration & Management from Lee College, Kristi brings 9 years of dedicated service to the Technical Studies Division. Her administrative expertise keeps the division running smoothly, supporting faculty and students across Electrical Technology, Instrumentation Technology, and Analytical Instrumentation Technology.

Richard Tunstall, Faculty, Instrumentation/Division Chair
rtunstall@lee.edu | 281.425.6472 | TV1-214D

Richard brings a dual background in education and industry, with a B.S. in Education from Baylor University and 15 years as an Instrumentation Technician and Designer at Exxon. With 33 years at Lee College, he serves as the Division Chair for Technical Studies, guiding both the division and its students with a dedication to excellence.

Other Faculty Contacts

Patrick Bravo, Faculty, Instrumentation
pbravo@lee.edu | 281.834.0549 | TV-4 103

Patrick has 35 years of industry experience as an Instrumentation Technician and Turnaround Planner with Exxon. Holding an A.A.S. in Instrumentation from Lee College, he's spent the past 3 years teaching, sharing his extensive field knowledge to prepare students for success in the instrumentation industry.

Edward Bauman, Faculty, Analytical Instrumentation
ebauman@lee.edu | 281.425.6543 | TV2-102A

Edward holds a B.S. in Electronics from the University of Houston and has 27 years of technical experience as an Analyzer and Electronics Technician with Exxon BOP and U.S. Steel. With 10 years on the faculty at Lee College, Edward is passionate about guiding students in the specialized field of analytical instrumentation.

Wally Collins, Faculty, Instrumentation

wacollins@lee.edu | 281.425.6474 | TV1-213A

Wally brings 40 years of industry expertise to the classroom, including roles as an Analyzer/Instrument Technician, Trainer, and Downstream Coordinator at Exxon and Arco. He holds an A.A.S. in Electronics/Instrumentation from Lee College and has been a faculty member for 9 years, sharing his in-depth technical skills with instrumentation students.

David Gerza, Faculty, Instrumentation/Analyzers
dgerza@lee.edu | 832.556.5211 | TV2-118B
David has amassed 37 years of experience as an Instrument/Analyzer Technician with Gulf, Chevron, and Chevron-Phillips. With multiple A.A.S. degrees in Technology, Data Processing, Instrumentation, and Electronics from Lee College, he has spent the last 6 years on the faculty, bringing a wealth of applied knowledge to students in both instrumentation and analyzers.

Sajjad Khan, Faculty, Instrumentation
skhan@lee.edu | 281.425.6564 | TV3-103C

Sajjad holds an M.Sc. in Chemistry from Osmania University and has a robust 38-year background as an Instrumentation Technician and Process and Instrumentation Instructor at ARAMCO, ADNOC, and SUSLA. With one year at Lee College, he offers a global perspective on instrumentation that enriches student learning.

Davoud Khoini, Faculty, Instrumentation
dkhoini@lee.edu | 281.425.6328 | TV2-214

Davoud holds an A.A.S. in Instrumentation from Lee College and has 17 years of experience as an Instrumentation Technician with companies like KROHNE, Petrofac, and Arkema. Now in his 8th year as a faculty member, he focuses on giving students practical, hands-on skills essential for success in the field.

Bryan Knight, Faculty, Electrical Technology
bknight@lee.edu | 281.425.6243 | TV1-214A

Bryan is a Journeyman Electrician with 21 years of field experience from Walker Engineering. With one year at Lee College, he brings a strong foundation in electrical systems, preparing students to meet the technical demands of today's electrical industry.

Sayantan Saha, Faculty, Electrical Technology
ssaha@lee.edu | TV3-102A

Sayantan holds an M.S. in Electrical Engineering from the University of Mississippi, where he also taught as a Graduate Instructor for 4 years. With one year on the faculty at Lee College, he’s committed to providing students with a deep understanding of electrical engineering principles.

FIND A CAREER
My Next Move