EXPERIENTIAL MAJOR MAP

Industrial Engineering | Bachelor's Degree

TEXAS STATE UNIVERSITY

	FIRST YEAR	MIDDLE YEARS	LAST YEARS
ADVANCE your academic journey	Take advantage of the Student Learning Assistance Center (Tutoring). Explore majors with a MyMajors assessment. Meet with a First Year Advisor to develop your academic planning. Participate in the Experiential Education Certificate Program. Take advantage of COSE Virtual Express advising.	Visit the COSE Advising Center for guidance with successful degree completion, identifying resources, and help achieving academic, personal, and professional goals. Explore external scholarship opportunities such as the Fulbright Scholarship to take your expertise to unique locations abroad. Explore Campus Resources for academic and personal support. Meet with a faculty mentor to select an undergraduate research opportunity. Share your knowledge as a Peer Mentor or Tutor at SLAC.	Create and update a digital portfolio of academic work and experiences. Complete a capstone project related to major. Explore next steps including potential graduate programs. Complement your degree with a micro credential. Check your Degree Audit & meet with your academic advisor.
EXPAND your personal and social development	Begin expanding your student experience by joining a student organization through the Bobcat Organization HUB. Review your degree plan for courses that include the Service-Learning Excellence program.	Join engineering student organizations and collaborate on faculty-led research. Participate in Women in STEM initiatives and the Hispanic and Latino STEM Mentoring Program (HLSAMP) Consult your academic advisor and learn about scholarship opportunities. Expand your leadership skills through Student Involvement's Leadership & Service programming and workshops. Meet with an advisor in Education Abroad or Study in America to explore financial aid options toward learning in an international or national setting.	Participate in Senior Design Day to showcase your skills. Attend financial literacy workshops (e.g., budgeting, student loans, taxes). Seek out a leadership role with the Leadership & Service. Attend a Student Government Senate meeting to contribute to the TXST community.
ENRICH your practical competence	Explore the TXST One Stop for more information about the scholarships provided to new and continuing students. Attend an IDEA Center workshop to learn more about undergraduate research. Consider the STEM Communities Learning Assistance program.	Consider the Cooperative Education program to gain valuable real-world experience. Learn about Global Career Accelerator options that give you experience with global companies and in-demand tech skills. Check out the Collaborative Learning Center's (CLC) computer lab, free walk-in STEM tutoring, and resources like a textbook library and TI-83+ calculators to enhance your learning. Discover Global Online Learning Experiences for courses with culturally dynamic perspectives.	Join a professional organization in your major or passion. Deliver a presentation in a student conference, workshop, seminar or community organization. Attend a **conference** related to your major (get recommendations from a faculty) or your student organization.
ELEVATE your career and professional life	Complete your Career Assessments, such as Focus2. Develop and review your resume with Career Services. Create your Handshake profile. Create your LinkedIn profile and connect with colleagues and leaders.	Join Employer Information Sessions at Career Services or your department. Prepare to ace your job interviews with Career Services or your academic department. Build Career & Graduate School Fairs into your schedule to ensure your connection maximum opportunities.	Develop a full-time employment or graduate school plan with Career Services. Attend employer info sessions at Career Services. Complete your First Destination Survey to share your post-graduation plans. Identify faculty and professional references

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OUTCOMES

Marketable Skills

Think critically

Analyze and solve problems

Communicate clearly and effectively

Perform effectively as team members by providing leadership, establishing goals, planning tasks, meeting objectives and creating a collaborative and inclusive work environment

Apply design of experiments, statistics, operations research and data analytics to identify the key factors for improving product performance, quality, and efficiency of processes and services

See more marketable skills for this major

Experiences in Industrial Engineering

The bachelor of science major in industrial engineering (IE) provides students with a background in diverse fields including social sciences, humanities and English to refine communication skills; math, chemistry, physics, and engineering; probability, statistics and design of experiments; operations research, productivity analysis, and human factors engineering; engineering economics; and computer programming, data analytics, and machine learning. Required projects in senior design courses incorporate appropriate engineering standards and multiple constraints and are based on knowledge and skills acquired in earlier course work. An optional cooperative education program is available which develops both design and industry awareness and expertise. Students can also identify IE related internships. Leadership in student organizations, research initiatives and opportunities to apply for nationally recognized service activities contribute significantly to IE students' experience.

Career Opportunities

Designing and improving business, manufacturing or service operations in sectors such as aerospace, communications, electronics and semiconductors, healthcare, oil, energy and gas, performing as:

- Data analyst
- Data scientist
- Data engineer
- Human factors engineer
- Industrial engineer
- Lean manufacturing engineer
- Lean systems engineer
- Logistics engineer
- Logistics manager
- Occupational health and safety manager
- Operations analyst
- Operations research analyst
- Operations engineer
- Operations manager
- Sustainability engineer
- Process improvement specialist
- Production manager
- Production planner
- Project manager
- Quality engineer
- Reliability engineer
- Systems engineer
- Supply chain engineer
- Supply chain manager

Other opportunities:

- Consulting: process improvement specialist
- Education: teacher, certified trainer
- Government: policy fellow, president
- Research: experimental designer, data analyst, systems designer, operations researcher