

# Manufacturing Engineering | Bachelor's Degree

|   | FIRST YEAR  | MIDDLE YEARS   | LAST YEARS  |
|---|---|--|---|
| <b>ADVANCE</b><br>your academic journey               | <p>Meet with a <a href="#">First Year Advisor</a> to develop your academic planning.</p> <p>Participate in the <a href="#">Experiential Education Certificate Program</a>.</p>  | <p>Visit the COSE <a href="#">Advising Center</a> for guidance with successful degree completion, identifying resources, and help achieving academic, personal, and professional goals.</p> <p>Regularly check the <a href="#">curricula and flowchart</a> pre-requisites and co-requisites for courses may change over time.</p> <p>Explore external scholarship opportunities such as the <a href="#">Fulbright</a> Scholarship to take your expertise to unique locations abroad.</p> <p>Explore <a href="#">Campus Resources</a> for academic and personal support.</p>  | <p>Check your Degree Audit &amp; meet with your academic advisor.</p> <p>Explore next steps including potential graduate programs.</p> <p>Complement your degree with a <a href="#">micro credential</a>.</p> <p>Complete a capstone project related to major.</p> <p>Create and update a digital portfolio of academic work and experiences.</p>   |
| <b>EXPAND</b><br>your personal and social development | <p>Review your degree plan for courses that include the <a href="#">Service-Learning Excellence</a> program.</p> <p>Begin expanding your student experience by joining a student organization through the <a href="#">Bobcat Organization HUB</a>.</p>  | <p>Consult your academic advisor and learn about <a href="#">scholarship opportunities</a>.</p> <p>Meet with an advisor in <a href="#">Education Abroad</a> or <a href="#">Study in America</a> to explore financial aid options toward learning in an international or national setting.</p> <p>Expand your leadership skills through <a href="#">Student Involvement's Leadership &amp; Service</a> programming and workshops.</p> <p>Join engineering student organizations and collaborate on faculty-led research.</p> <p>Explore <a href="#">Ingram Hall Makerspace (ISoE)</a> to apply your skills and bring ideas to life.</p> | <p>Select a service activity through <a href="#">Student Involvement</a> to give back to the area community.</p> <p>Participate in <a href="#">Senior Design Day</a> to showcase your skills.</p> <p>Attend a <a href="#">Student Government Senate</a> meeting to contribute to the TXST community.</p> <p>Seek out a leadership role with the <a href="#">Leadership &amp; Service</a>.</p> |
| <b>ENRICH</b><br>your practical competence            | <p>Explore the <a href="#">TXST One Stop</a> for more information about the scholarships provided to new and continuing students.</p> <p>Attend an <a href="#">IDEA Center</a> workshop to learn more about undergraduate research.</p> <p>Consider the <a href="#">STEM Communities Learning Assistance</a> program.</p> | <p>Consider the <a href="#">Cooperative Education</a> program to gain valuable real-world experience.</p> <p>Check out the <a href="#">Collaborative Learning Center's (CLC) computer lab</a>, free walk-in STEM tutoring, and resources like a textbook library and TI-83+ calculators to enhance your learning.</p> <p>Learn about <a href="#">Global Career Accelerator</a> options that give you experience with global companies and in-demand tech skills.</p> <p>Discover <a href="#">Global Online Learning Experiences</a> for courses with culturally dynamic perspectives.</p>  | <p>Join a professional organization in your major or passion.</p> <p>Attend a conference related to your major (get recommendations from a faculty) or your student organization.</p> <p>Deliver a presentation in a student conference, workshop, seminar or community organization.</p>   |
| <b>ELEVATE</b><br>your career and professional life   | <p>Complete your <a href="#">Career Assessments</a>, such as Focus2</p> <p>Create your <a href="#">Handshake</a> profile</p> <p>Create your <a href="#">LinkedIn</a> profile and connect with colleagues and leaders</p> <p>Develop and review your <a href="#">resume</a> with Career Services</p>                       | <p>Build <a href="#">Career &amp; Graduate School Fairs</a> into your schedule to ensure your connection maximum opportunities.</p> <p>Join <a href="#">Employer Information Sessions</a> at Career Services or your department.</p> <p>Prepare to <a href="#">ace your job interviews</a> with Career Services or your academic department.</p>   | <p>Develop a full-time employment or graduate school plan with <a href="#">Career Services</a>.</p> <p>Complete your <a href="#">First Destination Survey</a> to share your post-graduation plans.</p> <p>Identify faculty and professional references.</p>   |

**OUTCOMES**

## Marketable Skills

Think critically

Analyze and solve problems

Communicate clearly and effectively

An ability to understand the behavior and properties of materials as they are altered and influenced by processing in manufacturing

Be able to understand the analysis, synthesis, and control of manufacturing operations using statistical and calculus based methods, and simulation

[See more marketable skills for this major](#)

## Career Opportunities

Manufacturing plant engineer

Manufacturing QA engineer

Distribution engineer

Process manufacturing engineer

Applications engineer

Automation supervisor

CAD/CAM specialist

Line supervisor

Material planner

Medical device manufacturing

## Experiences in Manufacturing Engineering

The bachelor of science major in manufacturing engineering provides students with mathematics, science, management, engineering, application skills and includes coursework in materials, product design, tools and processes, automation and systems design, humanities, and social sciences. Two specializations are available: smart manufacturing and mechanical systems manufacturing. Senior design or “capstone” activities incorporate appropriate engineering standards and multiple constraints and is based on knowledge and skills acquired in earlier course work. An optional cooperative education program is available or students may participate in internships which develop both design and industry awareness and expertise. Membership in student organizations, research initiatives and opportunities to apply for nationally recognized service activities contribute to their experience.