



Bachelor of Science

MECHANICAL ENGINEERING

Degree Map | 2020-2021

	YOUR CLASS SCHEDULE	ACADEMIC ADVISING	ENRICHING EXPERIENCES	LIFELONG SUCCESS
Freshman	<ul style="list-style-type: none"> Focus on General Education, Math, and Science courses Enroll in 16 and 17 credit hours in Fall and Spring semesters, respectively 	<ul style="list-style-type: none"> Participate in New Student Orientation Meet with your Academic Advising Center Freshman Advisor before registration Ask your Advisor about the recommended course sequencing for your degree plan 	<p>Prioritize Your Wellness</p> <ul style="list-style-type: none"> Participate in campus recreation Attend Financial Literacy seminars Form healthy study habits <p>Build Your Community</p> <ul style="list-style-type: none"> Use FalconLink & attend Club Day Volunteer Attend campus events Explore student chapters of professional societies: ASME, SAE, ANS, SWE <p>Explore Your World</p> <ul style="list-style-type: none"> Attend an athletics event, musical performance, or visit the art gallery 	<p>Build Your Brand</p> <ul style="list-style-type: none"> Draft your resume Register for the Job Board Seek freshman research opportunities <p>Craft Your Future</p> <ul style="list-style-type: none"> Explore career options Investigate industrial tracks in mechanical engineering: nuclear power and petroleum Have coffee with a faculty member Seek summer internship opportunities
Sophomore	<ul style="list-style-type: none"> Complete basic math and science courses Start core engineering courses Enroll in 17 and 15 credit hours in Fall and Spring semesters, respectively 	<ul style="list-style-type: none"> Meet with your Academic Advising Center Freshman Advisor before registration Verify course sequencing with your academic advisor 	<ul style="list-style-type: none"> Actively participate in the professional society of your choice <p>Prioritize Your Wellness</p> <ul style="list-style-type: none"> Enjoy outdoor spaces on campus <p>Build Your Community</p> <ul style="list-style-type: none"> Join an organization Explore campus leadership (SGA, Orientation Leader, Resident Asst.) Participate in a professional society <p>Explore Your World</p> <ul style="list-style-type: none"> Consider study abroad Attend a lecture series 	<p>Build Your Brand</p> <ul style="list-style-type: none"> Update your resume Join LinkedIn Consider student employment <p>Craft Your Future</p> <ul style="list-style-type: none"> Participate in mock interviews Explore professional licensing of engineers Attend an internship/career fair Continue summer internship program
Junior	<ul style="list-style-type: none"> Complete core engineering courses Start mechanical engineering courses If completing an industrial track, begin track courses Enroll in 17 and 15 credit hours in Fall and Spring semesters, respectively 	<ul style="list-style-type: none"> Meet with your engineering academic advisor before registration Verify course sequencing with your engineering academic advisor 	<p>Prioritize Your Wellness</p> <ul style="list-style-type: none"> Attend a health fair <p>Build Your Community</p> <ul style="list-style-type: none"> Run for organization officer role Apply to be a Falcon Ambassador <p>Explore Your World</p> <ul style="list-style-type: none"> Consider study abroad Participate in service learning 	<p>Build Your Brand</p> <ul style="list-style-type: none"> Update your resume Attend workshops on job hunting and interviewing Conduct research with faculty <p>Craft Your Future</p> <ul style="list-style-type: none"> Commit to preparing for the Fundamentals of Engineering Examination in the semester prior to graduation Continue with summer internship program
Senior	<ul style="list-style-type: none"> Complete mechanical engineering courses Complete industrial track courses Enroll in 14 and 15 credit hours in Fall and Spring semesters, respectively 	<ul style="list-style-type: none"> Meet with your engineering academic advisor before registration Finalize course selections for spring graduation 	<p>Prioritize Your Wellness</p> <ul style="list-style-type: none"> Attend financial literacy seminars <p>Build Your Community</p> <ul style="list-style-type: none"> Attend your ring ceremony Join Alumni Association upon graduation <p>Explore Your World</p> <ul style="list-style-type: none"> Consider study abroad (summer prior to senior year) 	<p>Build Your Brand</p> <ul style="list-style-type: none"> Update your resume Present research <p>Craft Your Future</p> <ul style="list-style-type: none"> Prepare for the Fundamentals of Engineering Examination in the spring semester Attend career fairs Apply for full time jobs

UTPB students will graduate with these skills:

- Leadership
- Problem-solving
- Communication
- Engineering Design
- Social Responsibility
- Confidence
- Global Awareness
- Teamwork
- Critical Thinking

Career opportunities:

- Design Engineer
- Technical Sales
- Project Manager
- Manufacturing
- HVAC Design
- Process Control



BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING REQUIREMENTS

Semester 1

ENGL 1301 English Composition I
HIST 1301 U.S. History to 1877
MATH 2413 Calculus I
CHEM 1311 General Chemistry I
CHEM 1111 General Chemistry I lab
ENGR 1204 Engineering Graphics

16 hours

Semester 2

ENGL 1302 English Composition II
HIST 1302 U.S. History Since 1877
COMM 1315 Introduction to Public Speaking
MATH 2414 Calculus II
PHYS 2325 University Physics I
PHYS 2125 University Physics I Lab

17 hours

Semester 3

PLSC 2305 American National Politics
Creative Arts Course
MATH 2415 Calculus III
PHYS 2326 University Physics II
PHYS 2126 University Physics II Lab
ENGR 2301 Engr. Mechanics: Statics

17 hours

Semester 4

MATH 3301 Introduction to Probability I
MATH 3320 Differential Equations
ENGR 3303 Introduction to Materials Science
ENGR 2302 Engr. Mechanics: Dynamics
ENGR 2305 Fund. of Circuit Analysis

15 hours

Semester 5

ENGR 3332 Mechanics of Materials
ENGR 3375 Intro. to Thermodynamics
ENGR 3354 Intro. to Fluid Mechanics
ENGR 3390 Engineering Programming
MENG 3206 Mechanical Engr. Lab I
MATH 3310 Linear Algebra

17 hours

Semester 6

MENG 3348 Comp.-Aided ME Design
MENG 3351 Heat Transfer
MENG 3356 Fluid Mechanics II
MENG 3364 Mechanical Design I
MENG 3376 Thermodynamics II

15 hours

Semester 7

MENG 3324 Manufacturing Processes
MENG 4205 T/F and Mech. Sys. Lab
MENG 43XX Technical Elective
MENG 43XX Technical Elective
Social and Behavioral Science Course

14 hours

Semester 8

ENGR 3326 Engineering Economics
MENG 4206 ME Laboratory II
MENG 4478 Senior Design
Language, Philosophy and Culture Course
PLSC 2306 State and Local Politics

15 hours