### Bachelor of Science
MECHANICAL ENGINEERING
Petroleum Track
Degree Map | 2019-2020

#### YOUR CLASS SCHEDULE
- **Freshman**
  - Focus on General Education, Math, and Science courses
  - Enroll in 16 and 17 credit hours in Fall and Spring semesters, respectively

- **Sophomore**
  - Complete basic math and science courses
  - Start core engineering courses
  - Enroll in 17 and 15 credit hours in Fall and Spring semesters, respectively

- **Junior**
  - 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

- **Senior**
  - Complete mechanical engineering courses
  - Complete industrial track courses
  - Enroll in 14 and 15 credit hours in Fall and Spring semesters, respectively

#### ACADEMIC ADVISING
- **Freshman**
  - 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

- **Sophomore**
  - Meet with your Academic Advising Center Freshman Advisor before registration
  - Verify course sequencing with your academic advisor

- **Junior**
  - Meet with your engineering academic advisor before registration
  - Verify course sequencing with your engineering academic advisor

- **Senior**
  - Meet with your engineering academic advisor before registration
  - Finalize course selections for spring graduation

#### ENRICHING EXPERIENCES
- **Prioritize Your Wellness**
  - Participate in campus recreation
  - Attend Financial Literacy seminars
  - Form healthy study habits

- **Build Your Community**
  - Use FalconLink & attend Club Day
  - Volunteer
  - Attend campus events
  - Explore student chapters of professional societies: ASME, SAE, ANS, SWE

- **Explore Your World**
  - Attend an athletics event, musical performance, or visit the art gallery

- **Build Your Brand**
  - Draft your resume
  - Join LinkedIn
  - Consider student employment

- **Craft Your Future**
  - Participate in mock interviews
  - Explore professional licensing of engineers
  - Attend an internship/career fair

#### LIFELONG SUCCESS
- **Build Your Brand**
  - Update your resume
  - Join LinkedIn
  - Consider student employment

- **Craft Your Future**
  - Participate in mock interviews
  - Explore professional licensing of engineers
  - Attend an internship/career fair

- **Craft Your Future**
  - Update your resume
  - Present research

- **Craft Your Future**
  - Prepare for the Fundamentals of Engineering Examination in the spring semester
  - Attend career fairs
  - Apply for full time jobs

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**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
## B. S. MECHANICAL ENGINEERING REQUIREMENTS – Petroleum Track

### 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 Statistics
- MATH 3320 Differential Equations
- ENGR 3303 Introduction to Materials Science
- ENGR 2302 Engr. Mechanics: Dynamics
- ENGR 3375 Intro. to Thermodynamics

**15 hours**

### Semester 5
- ENGR 3332 Mechanics of Materials
- ENGR 3354 Intro. to Fluid Mechanics
- MENG 3206 Mechanical Engr. Lab I
- MATH 3310 Linear Algebra
- PENG 2301 Petroleum Fundamentals
- Social and Behavioral Science Course

**17 hours**

### Semester 6
- MENG 3348 Comp.-Aided ME Design
- MENG 3356 Fluid Mechanics II
- MENG 3364 Mechanical Design I
- MENG 3376 Thermodynamics II

**15 hours**

### Semester 7
- ENGR 3390 Engineering Programming
- MENG 4205 T/F and Mech. Sys. Lab
- PENG 3101 Drilling Fluids Laboratory
- PENG 3104 Reservoir Engineering Lab.
- PENG 3301 Drilling Engineering
- PENG 3304 Reservoir Engineering I
- Language, Philosophy and Culture Course

**16 hours**

### Semester 8
- MENG 3351 Heat Transfer
- MENG 4478 Senior Design
- PENG 4301 Production Engineering
- PLSC 2306 State and Local Politics

**13 hours**