The Mechanical Engineering course sequence requires careful attention to prerequisites. The mathematics and physics sequence is the longest chain of connected courses and requires seven semesters to complete. Students who miss a course or do not complete a course in the sequence with a “C” or better will likely delay graduation.

Mechanical Engineering courses leave little opportunity to “catch up” if students start slowly or miss content. Because of the connections between content and the rapid pace of coverage, it is critical that students work hard from the beginning and seek help immediately if they are struggling with any material. The department provides supplemental instruction and recitation sessions in key courses and students should take full advantage of these if they wish to efficiently move through the sequence.

All course prerequisites must be completed with a grade of C or better.

Continuation in the Mechanical Engineering program requires that students maintain an overall GPA of 3.0 or better. Those falling below 2.5 will be placed on probation for one semester with the chance to raise the GPA. If, after that probationary semester, the GPA is still below 2.5, enrollment in MECE courses will be blocked. In general, students wanting to have good employment options upon graduation need a minimum GPA of 3.0.

Beginning with the fall 2018 semester, the department will enforce a new course repeat policy. Students will be required to request permission to repeat an MECE course and will be delayed in enrolling in repeat courses until regular students have had opportunity to register. Should they fail to earn a “C” or better upon repeating the course once, they will have to apply to an appeal committee explaining why they should be allowed a third opportunity. If the appeal is persuasive and they are permitted to take a course a third time but do not complete it with a “C” or better, they will be asked to leave the program.

A composite GPA of 2.5 or better in Mechanical Engineering coursework is required. All Mechanical Engineering coursework must be passed with a grade of ‘C’ or better.

Mechanical Engineering is a broad field with applications in almost all areas of industry including aviation and aerospace, alternative energy, automotive, automated manufacturing and robotics, chemical, computer, electronics, petroleum, nanotechnology, materials, textiles, and heavy equipment and machinery. The Department of Mechanical Engineering offers a Bachelor of Science in Mechanical Engineering (BSME) degree that is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). This degree provides a broad, solid education in engineering fundamentals as well as the opportunity for in-depth study in specialized topics. Students completing the program will have rigorous foundation for engineering practice in industry as well as for graduate studies in engineering and other disciplines. The program has well-equipped, accessible laboratories and extensive experimental and computing facilities.

### ACADEMIC PLAN

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MECE 1101</td>
<td>Thermodynamics</td>
</tr>
<tr>
<td>MECE 1221</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>MECE 2140</td>
<td>Fluid Mechanics Laboratory</td>
</tr>
<tr>
<td>MECE 2340</td>
<td>Thermodynamics</td>
</tr>
<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
</tr>
<tr>
<td>CHEM 1109</td>
<td>General Chemistry</td>
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<tr>
<td>CHEM 1309</td>
<td>General Chemistry</td>
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<tr>
<td>PHYS 2425</td>
<td>College Physics</td>
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<tr>
<td>PHYS 2426</td>
<td>College Physics</td>
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<tr>
<td>CHEM 3338</td>
<td>Inorganic Chemistry</td>
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**SECOND YEAR**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>MECE 3115</td>
<td>Manufacturing Processes and Systems</td>
</tr>
<tr>
<td>MECE 3160</td>
<td>Manufacturing Systems</td>
</tr>
<tr>
<td>MECE 3230</td>
<td>Materials Engineering</td>
</tr>
<tr>
<td>MECE 3321</td>
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<td>MECE 3336</td>
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<td>MECE 3362</td>
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**THIRD YEAR**

<table>
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<th>Course Code</th>
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<tr>
<td>MECE 3361</td>
<td>Thermodynamics</td>
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<tr>
<td>MECE 3450</td>
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</tr>
<tr>
<td>MECE 3449</td>
<td>Thermodynamics</td>
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<tr>
<td>MECE 3115</td>
<td>Manufacturing Processes and Systems</td>
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<tr>
<td>MECE 3160</td>
<td>Manufacturing Systems</td>
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</table>

**FOURTH YEAR**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MECE 4101</td>
<td>Engineering Graphics</td>
</tr>
<tr>
<td>MECE 4102</td>
<td>Engineering Graphics</td>
</tr>
<tr>
<td>MECE 4103</td>
<td>Engineering Graphics</td>
</tr>
<tr>
<td>MECE 4350</td>
<td>Engineering Graphics</td>
</tr>
</tbody>
</table>

### ADDITIONAL INFO

- The Mechanical Engineering course sequence requires careful attention to prerequisites.
- The mathematics/Physics sequence is the longest chain of connected courses and requires seven semesters to complete. Students who miss a course or do not complete a course in the sequence with a “C” or better will likely delay graduation.
- Mechanical Engineering courses leave little opportunity to “catch up” if students start slowly or miss content. Because of the connections between content and the rapid pace of coverage, it is critical that students work hard from the beginning and seek help immediately if they are struggling with any material.
- The department provides supplemental instruction and recitation sessions in key courses and students should take full advantage of these if they wish to efficiently move through the course sequence.
- All course prerequisites must be completed with a grade of C or better.
- Continuation in the Mechanical Engineering program requires that students maintain an overall GPA of 3.0 or better. Those falling below 2.5 will be placed on probation for one semester with the chance to raise the GPA. If, after that probationary semester, the GPA is still below 2.5, enrollment in MECE courses will be blocked. In general, students wanting to have good employment options upon graduation need a minimum GPA of 3.0.
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### CONTACT INFO

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**EENGR Room 3.222**

(956) 665-2394

mechanical.engineering@utrgv.edu
**FIRST YEAR**
- Complete your core English classes (section 010) during your first year.
- Complete 33 credit hours every year in order to graduate in 4 years.
- Shoot for a GPA of 3.5+.
- Take MATH 2414 in your first year.
- UTRGV has a Writing Center and a Learning Center. Make it a point to visit them!
- Complete major foundation classes, such as Statics, Dynamics and Thermodynamics. Continue to take a math or engineering analysis class every semester.
- Complete 34 credit hours.

**SECOND YEAR**
- Complete 34 credit hours.
- Have you landed an internship or acquired research experience? This is the year to make it happen.
- Start thinking about your Senior Design project, assembling your team, and choosing the project. You may want to look at various national design competitions sponsored by professional societies such as ASME, SAE, SME, SHPE, and AAA.
- Complete 34 credit hours.

**THIRD YEAR**
- Have you landed an internship or acquired research experience? This is the year to make it happen.
- Start thinking about your Senior Design project, assembling your team, and choosing the project. You may want to look at various national design competitions sponsored by professional societies such as ASME, SAE, SME, or SHPE.
- Check Degree Works to make sure you are on track for graduation next year.
- Apply for internships. Discuss this with your advisor, career center, or Career Center. Shoot for a GPA of 3.5+.
- Complete 34 credit hours.

**FOURTH YEAR**
- “I have a plan after graduation.” If this describes you, great! If not, visit your Faculty Advisor or Career Center! Complete at least 30 credit hours to graduate.
- Submit your application(s) for graduate school, an apprenticeship, or for fulltime employment.
- Shoot for a GPA of 3.5+.
- Complete 34 credit hours.

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**MILESTONES**
- Attend the Freshman Mechanical Engineering orientation in the fall.
- Visit a faculty member during their office hours and ask a question about class.
- Classes fill up fast. When registration opens, be sure to register on the first day for your group.
- Cold or Flu getting you down? We have Student Health Services on campus with free office visits.
- Complete your core English classes (section 010) during your first year.
- Complete major foundation classes, such as Statics, Dynamics and Thermodynamics. Continue to take a math or engineering analysis class every semester.
- Complete 34 credit hours.

**ADVICE & SUPPORT**
- Check out various opportunities within your major and join a professional organization such as ASME, SAE, SME, or SHPE.
- Check Degree Works to make sure you are on track for graduation next year.
- Apply for internships. Discuss this with your advisor, career center, or Career Center. Shoot for a GPA of 3.5+.
- Complete 34 credit hours.

**APPLY WHAT YOU LEARN**
- Look for a service learning course! For guidance, visit Engaged Scholarship & Learning Office.
- Participate in a campus-sponsored community service project.
- Ask a student in class to study with you.
- Get some help on the Engagement Zone through My.UTRGV.edu.
- Attend a diversity based campus or community event (e.g. MLK Day of Service).
- Join a student organization! Consider looking into SHPE or SME or ASME or SAE or visit VULK (utrgv.edu/vlink) for options.

**GLOBAL, CAMPUS & COMMUNITY ENGAGEMENT**
- Look for a diversity based campus or community event (e.g. MLK Day of Service).
- Attend a diversity based campus or community event (e.g. MLK Day of Service).
- Join a student organization! Consider looking into SHPE or SME or ASME or SAE or visit VULK (utrgv.edu/vlink) for options.
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- Join a student organization! Consider looking into SHPE or SME or ASME or SAE or visit VULK (utrgv.edu/vlink) for options.

**LIFE AFTER GRADUATION**
- Create a resume and set up your profile on the Handshake site. (My.UTRGV.edu).
- Get summer plans? Visit Career Center and ask about places to do some job shadowing.
- Research shows that students who work on campus perform better than those who work off campus. Look for a job on Handshack!
- Check your UTRGV email for the daily Messenger- locate and attend one student workshop.
- Update your resume in Handshake and have it reviewed.
- Visit the Career Center site to find a job to attend. At the event, approach a recruiter and discuss internships.
- Explain to someone how your academic program aligns with your strengths and interests.
- Think about three people you can ask for letters of recommendation (professors, mentors, advisors, supervisors, etc.). Give them at least two weeks’ notice when you actually have an application that requires them.
- When is the deadline for your graduate school application? Visit the program admissions webpage. Most do not accept late applications!

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**CAREERS**
- Machine design
- Systems design
- Manufacturing and production
- Energy conversion
- Energy resources
- Transportation and environmental impact
- Materials and structures
- Industries
  - Automotive
  - Aerospace
  - Electronics
  - Chemical products
  - Petroleum
  - Textiles
  - Industrial equipment
  - Heating and air conditioning systems
- National Aeronautics and Space Administration
- Utility companies
- National laboratories
- Federal government:
  - Department of Energy
  - Department of Defense
  - Federal Aviation Administration

**FOR ADDITIONAL INFO, VISIT THE CAREER CENTER WEBSITE AND CHECK OUT “WHAT CAN I DO WITH THIS MAJOR?” www.utrgv.edu/careercenter**