

FIRST YEAR

MECE 2350	Numerical Methods for Engineers	MECE 2350	Choose 1	Communication
MECE 3449	Mechanical Engineering Analysis I	MECE 3449	Choose 1	Calculus I
MECE 3499	Mechanical Engineering Analysis I	MECE 3499	Choose 1	Chemistry for Engineers
MECE 2301	Statics	MECE 2301	Choose 1	Chemistry for Engineers Lab
MECE 2302	Dynamics	MECE 2302	Choose 1	Intro to Mechanical Engineering
MECE 2335	Thermodynamics I	MECE 2335	Choose 1	MECE 1221
ELEE 2317	Electrical and Electronic Systems	ELEE 2317	Choose 1	MECE 1101
MECE 3320	Measurement & Instrumentation	MECE 3320	Choose 1	MECE 1109
MECE 3360	Heat Transfer	MECE 3360	Choose 1	MECE 1309
MECE 3160	Heat Transfer Laboratory	MECE 3160	Choose 1	MECE 1309
MECE 4350	Machine Elements	MECE 4350	Choose 1	MECE 1101
PHIL 2326	Ethics, Technology, & Society (Language, Philosophy, & Culture)	PHIL 2326	Choose 1	MECE 1221

SECOND YEAR

MECE 3321	Mechanics of Solids	MECE 3321	Choose 1	Communication
MECE 3315	Fluid Mechanics	MECE 3315	Choose 1	Calculus I
MECE 3115	Fluid Mechanics Laboratory	MECE 3115	Choose 1	Chemistry for Engineers
MECE 3304	System Dynamics	MECE 3304	Choose 1	Chemistry for Engineers Lab
MECE 3380	Kinematics & Dynamics of Mach	MECE 3380	Choose 1	Intro to Mechanical Engineering
MECE 3320	Measurement & Instrumentation	MECE 3320	Choose 1	MECE 1221
MECE 3360	Heat Transfer	MECE 3360	Choose 1	MECE 1101
MECE 3160	Heat Transfer Laboratory	MECE 3160	Choose 1	MECE 1109
MECE 4350	Machine Elements	MECE 4350	Choose 1	MECE 1309
PHIL 2326	Ethics, Technology, & Society (Language, Philosophy, & Culture)	PHIL 2326	Choose 1	MECE 1101

THIRD YEAR

MECE 3321	Mechanics of Solids	MECE 3321	Choose 1	Communication
MECE 3315	Fluid Mechanics	MECE 3315	Choose 1	Calculus I
MECE 3115	Fluid Mechanics Laboratory	MECE 3115	Choose 1	Chemistry for Engineers
MECE 3304	System Dynamics	MECE 3304	Choose 1	Chemistry for Engineers Lab
MECE 3380	Kinematics & Dynamics of Mach	MECE 3380	Choose 1	Intro to Mechanical Engineering
MECE 3320	Measurement & Instrumentation	MECE 3320	Choose 1	MECE 1221
MECE 3360	Heat Transfer	MECE 3360	Choose 1	MECE 1101
MECE 3160	Heat Transfer Laboratory	MECE 3160	Choose 1	MECE 1109
MECE 4350	Machine Elements	MECE 4350	Choose 1	MECE 1309
PHIL 2326	Ethics, Technology, & Society (Language, Philosophy, & Culture)	PHIL 2326	Choose 1	MECE 1101

MECE 4361	Senior Design Project I	MECE 4361	Choose 1	Communication
MECE 3336	Thermodynamics II	MECE 3336	Choose 1	Calculus I
MECE 4101	Fundamentals of Engineering	MECE 4101	Choose 1	Chemistry for Engineers
MECE 4101	Fundamentals of Engineering	MECE 4101	Choose 1	Chemistry for Engineers Lab
MECE 4362	Senior Design Project II	MECE 4362	Choose 1	Intro to Mechanical Engineering
MECE 4362	Senior Design Project II	MECE 4362	Choose 1	MECE 1221
MECE 4362	Senior Design Project II	MECE 4362	Choose 1	MECE 1101
MECE 4362	Senior Design Project II	MECE 4362	Choose 1	MECE 1109
MECE 4362	Senior Design Project II	MECE 4362	Choose 1	MECE 1309
MECE 4362	Senior Design Project II	MECE 4362	Choose 1	MECE 1101

2019-2020 ACADEMIC PLAN

FOURTH YEAR

Graduation Requirements:

- 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.

Courses in red are part of the General Education Core Curriculum (GEC).
 "Choose 1" indicates course options. If options are not listed, please review the General Education Core or the degree plan for this major: www.utrgv.edu/degreeplans.

Additional Info

- The Mechanical Engineering course sequence requires careful attention to prerequisites. The mathematics/Engineering Analysis/Fluids 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 at UTRGV of 2.5 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.

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UTRio Grande Valley

BLUE PRINT

MECHANICAL ENGINEERING (BSME)
Catalog: 2019-20
COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

Degree Info

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.

BLUEPRINT EXPERIENCES

FIRST YEAR

SECOND YEAR

THIRD YEAR

FOURTH YEAR AND BEYOND

MILESTONES

- UTRGV has a Writing Center and a Learning Center. Make it a point to visit them!
- 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.

- Shoot for a GPA of 3.5+.
- 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.

- Shoot for a GPA of 3.5+.
- 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, SAMPE, SAE, and AIAA.

- Shoot for a GPA of 3.5+.
- "I have a plan for 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.

ADVICE & SUPPORT

- Meet with your academic advisor and bring your orientation folder with you to every session!
- Attend the Freshman Mechanical Engineering convocation 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.

- Join a professional organization such as: ASME, SAE, SWE, or SHPE. Participate in one of the student design competitions such as: Mini Baja, Aero Design, or Rocket Launching.
- Want to explore different careers? Check out MyMajors on my.utrgv.edu!
- Come ready with course suggestions and questions when you visit your academic advisor.
- Trouble making your tuition payment? The Financial Aid Office can help. Payment plans and emergency loans are also available

- Seek out research opportunities within your major and join a professional organization such as: ASME, SAE, SWE, or SHPE.
- Check Degree Works to make sure you are on track for graduation next year.
- Apply for internships. Discuss this with your advisor, faculty mentor, or Career Center.
- Visit the Communication Hauser Lab for help with your presentations.

- Engage in an independent study project or an academic internship to complement your major. Consider replacing one of the three required 3-hour technical electives by taking MECE 3100 three times or taking MECE 3300 and satisfying associated requirements.
- Discuss future plans with your faculty mentor or advisor that includes employment, finances, and other life goals.
- Apply for graduation one semester prior to your anticipated date. Visit the Academic Advising Center to ensure you are on track.

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.

- To find undergraduate research opportunities, visit the Engaged Scholarship & Learning Office.
- Consider attending the LeaderShape Institute or attend the Engaged Scholar Symposium.

- Go show off your research, service-learning or creative works at the Engaged Scholar Symposium!
- Sharpen your writing skills! Use the writing center and produce good lab reports or become the secretary for your organization.

- Continue to present research or creative works at the Engaged Scholar Symposium, HESTEC, ASME, SHPE, or other society meetings.
- Set up an informational interview with an individual (especially an alumnus) currently in the field you aspire to work in.

GLOBAL, CAMPUS & COMMUNITY ENGAGEMENT

- Set up your profile 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 SWE or ASME or SAE or visit VLink (utrgv.edu/vlink) for options.

- Look at study abroad opportunities! Consider going to Europe.
- Check out a cultural campus or community event such as HESTEC or FESTIBA.
- Join another student organization. Perhaps ASME, SAE or visit VLink for options.
- Check out a campus event that offers free lunch-bring a friend!

- Consider serving on a campus life/community committee or become a student leader and make a difference. Visit VLink or speak with your Student Government Association for more information!
- Travel the world! Look into study abroad opportunities at Office for International Programs & Partnerships.

- Identify employers of interest and seek them out at job fairs, online, at on-campus information sessions, staffing agencies, etc. The Career Center can help.
- Before a job interview, schedule a mock interview with the Career Center or speech coaching with the Communication Hauser Lab.

LIFE AFTER GRADUATION

- Create a résumé and set up your profile on the Handshake icon: (My.UTRGV.edu).
- Got 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 Handshake!
- 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 fair 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' advance notice if you need a letter! Only ask for letters when you actually have an application that requires them.
- When is the deadline for your graduate school application? Visiting the program admissions webpage. Most do not accept late applicants!

- Have you received your acceptance for graduate school or an employment offer? If not, network: talk to faculty, the Career Center, and get on LinkedIn.
- Formulate and implement a strategy for life after graduation: attend career fairs, graduate fairs, apply to fellowships, etc.
- Update your information with Alumni Relations. Enjoy alumni mixers, events and continued access to Career Center services!
- Remember to do your exit loan counseling on studentloans.gov.

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