

FOURTH YEAR

ELEE 4321 Automatic Control Systems
 ELEE 4328 Solid State Electronic Devices
 ELEE 4351 Communication Theory
 ELEE 4361 Senior Design I
 PHIL 2326 Ethics, Technology, and Society
 ELEE X3XX Technical Elective
 ELEE X3XX Technical Elective
 ELEE 4362 Senior Design II
 Choose 1 Government/Political Science
 Choose 1 Integrative/Experiential Learning

THIRD YEAR

ELEE 3225 Electrical Engineering Lab I
 ELEE 3315 Electromagnetics Engineering
 ELEE 3435 Microprocessor Systems
 ELEE 4303 Digital Systems Engineering II
 Choose 1 American History
 ELEE 3230 Electrical Engineering II Lab
 ELEE 3340 Probability & Stats for Electrical Engr.
 ELEE 3302 Electronics II
 ELEE X3XX Technical Elective
 Choose 1 Government/Political Science

SECOND YEAR

MATH 3341 Differential Equations
 PHYS 2426 Physics for Scientists & Engineers II
 ELEE 2305 Electric Circuits I
 ELEE 2105 Electric Circuits I Lab
 ELEE 2319 Numerical Computation
 & Data Visualization
 MATH 2415 Calculus III
 Choose 1 MECE 2301, CHEM 1311
 ELEE 3321 Signals and Systems
 ELEE 3301 Electronics I
 ELEE 3101 Electronics I Lab
 Choose 1 American History

FIRST YEAR

Choose 1 Communication
 Choose 1 Creative Arts
 MATH 2413 Calculus I
 CSCI 1380 Computer Science I
 ELEE 1101 Intro to Electrical Engineering
 Choose 1 Social and Behavioral Sciences
 UNIV 1301 Learning Framework
 MATH 2414 Calculus II
 MATH 2346 Math for Electrical & Comp. Engr.
 PHYS 2425 Physics for Scientists & Engr. I
 ELEE 2330 Digital Systems Engr. I
 ELEE 2130 Digital Systems Engr. I Lab
 Choose 1 Communication
 Choose 1 Creative Arts

2018-2019 ACADEMIC PLAN

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 2018-19 General Education Core or the degree plan for this major: www.utrgv.edu/degreeplans.

Additional Info

1. Minimum Grade Rule

Any course that is a prerequisite or co-requisite for another course must be passed with a grade of C or higher.

2. Mathematics Prerequisites

The first math course in the plan is MATH 2413 Calculus I. Depending on your incoming test scores and high school preparation, the math department may require you to start with an earlier course, for example MATH 1314 College Algebra or MATH 2412 Precalculus.

3. Computer Science Prerequisite

CSCI 1380 Computer Science I has a prerequisite of College Algebra or qualification for a higher level math class. If you qualify for Precalculus or Calculus I you can take CSCI 1380.

4. Prereqs for Senior Design

To enroll in Senior Design I, students should have finished ELEE 3230 and ELEE 3435, and should have finished or be enrolled in at least 9 credits of 4000-level ELEE coursework.

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UTRio Grande Valley

BLUE
 PRINT

ELECTRICAL ENGINEERING (BSEE)

Catalog: 2018-19

**COLLEGE OF ENGINEERING AND
 COMPUTER SCIENCE**

Degree Info

Electrical engineering is a broad field with applications in almost all areas of industry including computer systems, control systems, telecommunications, semiconductors, electronics, and electric power. The Department of Electrical Engineering offers a Bachelor of Science in Electrical Engineering (BSEE) 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 computing facilities.

BLUEPRINT EXPERIENCES

FIRST YEAR

SECOND YEAR

THIRD YEAR

FOURTH YEAR AND BEYOND

CAREERS

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 30 credit hours every year in order to graduate in 4 years.
- Aim for a GPA of 3.4 or higher.
- Take MATH 2413 & 2414 in your first year.

- Aim for a GPA of 3.2 or higher.
- Complete major foundation classes, such as ELEE 1101, ELEE 2330, ELEE 2305, MATH 2346, ELEE 2319, and PHYS 2426.
- Complete 30 credit hours.
- Apply to the Electrical Engineering program, and find and consult with your electrical academic advisor every semester.

- Aim for a GPA of 3.0 or higher.
- Complete 30 credit hours.
- Have you landed an internship or acquired research experience? This is the year to make it happen.

- Aim for a GPA of 3.0 or higher.
- "I have a plan after graduation." If this describes you, great! If not, visit your Faculty Advisor or Career Center!
- Register for your senior design courses: ELEE 4361/ELEE 4362.
- 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 university academic advisor and electrical advisor and bring your orientation folder with you to every session!
- Choose a major with confidence- Visit my.UTRGV.edu and check out MyMajors.
- 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.

- Want to explore different careers? Check out MyMajors!
- Come ready with course suggestions and questions when you visit with your academic advisor.
- Visit the Communication Hauser Lab for help with your speeches.
- Trouble making your tuition payment? The Financial Aid Office can help. Payment plans and emergency loans are also available

- Seek out research opportunities within Electrical Engineering and join a professional organization such as IEEE professional societies. Check out your options at iee.org
- Check DegreeWorks to make sure you are on track for graduation next year.
- Apply for internship and/or job shadowing opportunities. Discuss this with your advisor, faculty mentor, or Career Center.

- Engage in an independent study project or an internship to complement your major, such as NASA, electrical REU program, etc.
- 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! Take an intensive writing course such as ENGL 3342 or become the secretary for your organization.

- Continue to present research or creative works at the Engaged Scholar Symposium at the Engaged Scholar Symposium.
- 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).
- Attend a departmental program such as fall convocation or IEEE student organization.
- Join a student organization! Consider looking into IEEE-BSB, IEEE-Edinburg, SHPE, or visit VLink (utrgv.edu/vlink) for options.

- Look at study abroad opportunities! Consider going to Europe or Asia!
- Check out a cultural campus or community event such as HESTEC or FESTIBA.
- Join another student organization, such as IEEE-HKN, SHPE, Student Government, 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.
- Will a minor expand your career options? We suggest that you might consider a minor ONLY if you are achieving satisfactory performance in your electrical engineering major.
- Explain to someone how your academic program aligns with your strengths and interests.

- Check out the Electrical Engineering department website for postings on career/graduate school.
- Think about three people you can ask for letters of recommendation (professors, mentors, advisors, supervisors, etc.). Give them at least two weeks' advance notice!
- 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.

- Automatic controls
- Robotics
- Bioelectronics
- Digital systems
- Electromagnetics
- Analog electronics
- Power and energy systems
- Communications and signal processing

For additional info, visit the Career Center website and check out "What Can I Do With This Major?" www.utrgv.edu/careercenter