ACADEMIC PLAN

FIRST YEAR

Course	Title
Choose 1	Communication (Core)
MATH	Calculus I
CSCI 1380	Computer Science I
ELEE 1101	Introduction to Electrical Engineering
Choose 1	Social and Behavioral Sciences (Core)
UNIV 1301	Learning Framework
MATH 2414	Calculus II
MATH 2346	Mathematics for Electrical and Computer Engineers
PHYS 2425	Physics for Scientists and Engineers I
ELEE 2330	Digital Systems Engineering I
ELEE 2130	Digital Systems Engineering I Lab

SECOND YEAR

Course	Title
MATH 3341	Differential Equations
PHYS 2426	Physics for Scientists and Engineers II
ELEE 2305	Electric Circuits I
ELEE 2105	Electric Circuits I Lab
ELEE 2319	Numerical Computation and Data Visualization
MATH 2415	Calculus III
MECE 2301 or CHEM 1301 or CHEM 1311 or CHEM 1307	Statics or General Chemistry I or Chemistry for Engineers
ELEE 3321	Signals and Systems
ELEE 3301	Electronics I
ELEE 3101	Electronics I Lab
Choose 1	American History (Core)

THIRD YEAR

Course	Title
ELEE 3225	Electrical Engineering Lab I
ELEE 3315	Electromagnetics Engineering
ELEE 3435	Microprocessor Systems
ELEE 4303	Digital Systems Engineering II
Choose 1	American History (Core)
ELEE 3230	Electrical
ELEE 3340	Probability and
ELEE 3302	Electronics II
ELEE X3XX	Technical Elective
Choose 1	Government/ Political Science (Core)

FOURTH YEAR

Course	Title
ELEE 4321	Automatic Control Systems
ELEE 4328	Solid State Electronic Devices
ELEE 4351	Communication Theory
ELEE 4361	Senior Design I
PHIL 2326	Professional Ethics
ELEE X3XX	Technical Elective
ELEE X3XX	Technical Elective
ELEE 4362	Senior Design II
Choose 1	Government/ Political Science (Core)
Choose 1	Integrative/Experiential Learning Option (Core)

UT Rio Grande Valley

BLUE PRINT

ELECTRICAL ENGINEERING (BSEE)
Catalog: 2017-18
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.

Contact Info

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Additional Info

1. Minimum Grade Rule
Any course that is a prerequisite 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.

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. ☐ Shoot for a GPA of 3.4 or higher. ☐ Take MATH 2413 & 2414 in your first year.	☐ Shoot 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.	☐ Shoot 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.	☐ Shoot for a GPA of 3.0 or higher. ☐ "I have a plan for after graduation." If this describes you, great! If not, visit your Faculty Advisor or Career Center! ☐ Register for your senior design project: 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.	•**Automatic controls** •**Bioelectronics** •**Digital systems** •**Electromagnetics** •**Analog electronics** •**Power and energy systems** •**Communications and signal processing**
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 the Kuder Journey. ☐ 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 Kuder Journey! ☐ Come ready with course suggestions and questions when you visit 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 ieee.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 academic 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 society. ☐ 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-EKN, 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 Career Connection 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 the Career Center portal! ☐ Check your UTRGV email for the daily Messenger- locate and attend one student workshop.	☐ Update your resume in Career Connection 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 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.	**For additional info, visit the Career Center website and check out "What Can I Do With This Major?" www.utrgv.edu/careercenter**

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