Additional Info

Minimum Grade Rule
Any course that is a prerequisite for another course must be passed with a grade of C or higher.

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.

Computer Engineering Program Web page
http://www.utrgv.edu/cmpe/index.htm

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UTRio Grande Valley

BLUE PRINT

COMPUTER ENGINEERING (BSCE)
***General Track**
Catalog: 2019-20
COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

Degree Info

Computer engineering is a discipline that embodies the science and technology of design, construction and implementation of software and hardware components of modern computing hardware and software systems and computer-controlled equipment. The body of knowledge for computer engineering includes algorithms, computer architecture and organization, computer systems engineering, circuits and signals, database systems, digital logic, digital signal processing, electronics, embedded systems, computer networks, operating systems, programming, software engineering and discrete structures.

2019-2020 ACADEMIC PLAN

FIRST YEAR

Choose 1	Communication		
MATH 2413	Calculus I		
CMPE 1101	Intro to Computer Engineering		
Choose 1	Government/Political Science		
Choose 1	Integrative & Experiential Learning		
UNIV 1301	Learning Framework		
Choose 1	Communication		
MATH 2414	Calculus II		
CMPE 1370	Engr. Computer Science I		
CMPE 1170	Engr. Computer Science I Lab		
PHYS 2425	Physics for Scientists & Engineers I		

Courses in red are part of the General Education Core Curriculum (GECC).
"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.

SECOND YEAR

MATH 2346	Math for Electrical & Computer Engr.		
CMPE 2380	Computer Science II		
Choose 1	Social and Behavioral Sciences		
Choose 1	American History		
CMPE 2330	Digital Systems Engineering I		
CMPE 2130	Digital Systems Engineering I Lab		
CMPE 3333	Algorithms and Data Structures		
PHYS 2426	Physics for Scientists & Engineers II		
CMPE 2320	Electric Circuits I		
CMPE 2120	Electric Circuits I Lab		
Choose 1	Government/Political Science		
CHEM 1309	Chemistry for Engineers or		
	CHEM 1311 General Chemistry I		
CHEM 1109	Chemistry for Engineers Lab or		
	CHEM 1111 General Chemistry I Lab		

THIRD YEAR

CMPE 3340	Software Engineering I		
Choose 1	CMPE 3437 Microprocessor Systems or		
	CMPE 2333 Comp. Org. & Assembly Lang.		
MATH 3341	Differential Equations		
CMPE 3334	Systems Programming		
CMPE 3403	Electronics for Computer Engineering		
CMPE 3331	Microcontroller & Embedded Systems Lab		
PHIL 2326	Ethics, Technology, and Society		
Choose 1	CMPE 3322 Signals and Systems or		
	CMPE 4333 Database Design and Impl.		
Choose 1	CMPE 4375 Introduction to VLSI or		
	Software Engineering II (CMPE 3341) or		
	Electrical Eng. I Lab (CMPE 3226) or		
	Obj. Oriented Prog. In Java (CMPE 3326)		
CMPE 4335	Computer Architecture		
CMPE 4303	Digital Systems Engineering II		

FOURTH YEAR

STAT 3337	Probability and Statistics		
Choose 1	American History		
Choose 1	Technical Elective		
Choose 1	CMPE 4390 Communication Network or		
	CMPE 4345 Computer Networks		
Choose 1	Senior Design I (CMPE 4371 or 4373)		
Choose 1	Creative Arts		
Choose 1	General Concentration		
CMPE 4334	Operating Systems		
Choose 1	Technical Elective		
Choose 1	Senior Design II (CMPE 4372 or 4374)		

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 42 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 CMPE 1101, CMPE 1370, CMPE 1170, MATH 2346, CMPE 2330, and PHYS 2426. ☐ Complete 41 credit hours. ☐ Apply to the Computer Engineering program, and find and consult with your computer engineering academic advisor every semester.	☐ Shoot for a GPA of 3.0 or higher. ☐ Complete 15 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: either CMPE 4371/CMPE 4372 or CMPE 4373/CMPE 4374. ☐ Complete at least 28 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 computer engineering 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 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 Computer 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, computer engineering 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 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 computer engineering major. ☐ Explain to someone how your academic program aligns with your strengths and interests.	☐ Check out the Computer 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.

CAREERS

- Information protection
- Communications and wireless networks
- Computational science
- Operating systems
- Computer networks
- Computer systems
- Embedded systems
- Computer vision and robotics
- Circuit design
- Signal, image, and speech processing
- VLSI
- Bioinformatics

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