BS in Computer Engineering (BSCpE), 2019-2020 Catalog

Pre-Professional Courses

1. CSE 1310 Intro to Programming (prerequisite: MATH 1302)
2. CSE 1105 Intro to CSE
3. ENGR 1250 (Co-Req: MATH 1421 or above)
4. MATH 1426 Calculus I
5. MATH 2425 Calculus II
6. PHYS 1443 Technical Physics I
7. ENGL 1301

Prerequisites:

4000 Level Courses

1. CSE 2315 Discrete Structures
2. MATH 2425 Calculus II
3. PHYS 1444 Technical Physics II
4. CSE 2440 Circuits & Signals
5. CSE 3380 Linear Algebra
6. IE 3301 Engineering Probability and Stats
7. ENGR 1250 (Co-Req: MATH 1421 or above)
8. CSE 2441 Digital Logic
9. COMS 2302 Professional and Tech. Communication

Foreign Language
- If required, two semesters of the same language

General Education
- Language/Philosophy/Culture elective
- HIST 1311
- HIST 1312
- POLS 2311
- POLS 2312
- Creative Arts elective
- Social/Behavioral (IE 2308 or ECON 2305)

Math and Science Electives
- 3 hours of Math electives
- 4 hours of Science electives

See list of approved courses in CPE Program Guide.

4 Technical Elective courses

See list of approved courses in the Computer Engineering Program Guide. Remember to check prerequisites.

The Senior Design courses must be taken in consecutive semesters: (Fall and Spring), (Spring and Summer), or (Summer and Fall). Spring and Fall is NOT an option.
Mathematics Electives

- MATH 2326 - Calculus III
- MATH 3303 - Mathematical Game Theory
- MATH 3304 - Linear Optimization Applications
- CSE 3315 - Theoretical Concepts in Computer Science and Engineering
- CSE 4345 - Computational Methods

Science Electives

- BIOL 1441 – Cell and Molecular Biology
- CHEM 1441 – General Chemistry
- CHEM 1465 – Chemistry for Engineers

Technical Electives

- CSE 4310 - Intro to Computer Vision
  prerequisites: CSE 2320, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)
- CSE 4340 - Mobile Systems Engineering
  prerequisites: CSE 3320 and co-requisite CSE 4344
- CSE 4352 – IoT and Networking
  prerequisites: CSE 3442
- CSE 4354 – Real-time Operating Systems
  prerequisites: CSE 3320 and CSE 3342
- CSE 4356 – System on Chip (SoC) Design
  prerequisites: CSE 3442
- CSE 4358 – Microprocessor Systems
  prerequisites: CSE 3323 (Spring only)
- CSE 4360 - Autonomous Robot Design and Programming
  prerequisites: CSE 2320, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)

Language, Philosophy & Culture

- ANTHROPOLOGY (ANTH) 2322
- ARCHITECTURE (ARCH) 2300
- ART & ART HISTORY (ART) 1317
- INTRO TO CLASSICAL MYTHOLOGY (CLAS) 1300
- ENGLISH (ENGL) 2303 2309 2319 2329
- GLOBAL (GLOBAL) 2301
- INTERDISCIPLINARY STUDIES (INTS) 1310
- LINGUISTICS (LING) 2371
- MEXICAN AMERICAN STUDIES (MAS) 2300
- PHILOSOPHY (PHIL) 1304 2300
- INTRO TO POPULAR CULTURE (SOCS) 1310
- ARABIC (ARAB) 2314
- CHINESE (CHIN) 2314
- FRENCH (FREN) 2314
- GERMAN (GERM) 2314
- GREEK (GREK) 2314
- KOREAN (KORE) 2314
- LATIN (LATN) 2314
- PORTUGUESE (PORT) 2314
- RUSSIAN (RUSS) 2314
- SPANISH (SPAN) 2314

Creative Arts Electives

- ARCHITECTURE (ARCH) 1301
- ART & ART HISTORY (ART) 1301 1309 1310
- DANCE (DNCE) 1300
- MUSIC (MUSI) 1300 1302 2300 2301
- THEATER ARTS (THEA) 1342 1343