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

Pre-Professional Courses

- CSE 1310 Intro to Programming (prerequisite: MATH 1302)
- CSE 1105 Intro to CSE
- CSE 1320 Intermediate Programming (coreq: Math 1421)
- CSE 1325 Object-Oriented Programming
- CSE 2312 Computer Organization
- CSE 2100 Practical Systems
- CSE 2441 Digital Logic
- CSE 2320 Algorithms & Data Structures
- CSE 2315 Discrete Structures
- CSE 2440 Circuits & Signals
- CSE 3380 Linear Algebra
- CSE 3320 Operating Systems
- CSE 3440 Embedded I
- CSE 3313 Signal Processing
- CSE 3320 Operating Systems
- CSE 3320 Operating Systems
- CSE 3442 Embedded II
- CSE 3442 Embedded II
- CSE 4317 Senior Design II
- CSE 4316 Senior Design I
- CSE 4323 Quan. Computer Arch.
- CSE 4314 Professional Practices
- CSE 4310 Engineering Probability and Stats
- PHYS 1444 Technical Physics I
- PHYS 1443 Technical Physics II
- MATH 1426 Calculus II
- MATH 2425 Calculus III
- MATH 1425 Calculus I
- PHY 1444 Technical Physics II
- PHY 1443 Technical Physics I

Pre/co req

prerequisite

Foreign Language
If required, two semesters of the same language

General Education
- Language/Philosophy/Culture elective
- HIST 1301
- HIST 1302
- 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.

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.
**CP 2019-2020 Classes**

**Mathematics Electives**
- MATH 2326 - Calculus III
- MATH 3303 - Mathematical Game Theory
- MATH 3304 - Linear Optimization Applications
- CSE 3315 - Theoretical Concepts in CSE
- 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
  prereqs: CSE 2320, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)
- CSE 4340 - Mobile Systems Engineering
  prereqs: CSE 3320 and co-requisite CSE 4344
- CSE 4352 – IoT and Networking
  prereqs: CSE 3442
- CSE 4354 – Real-time Operating Systems
  prereqs: CSE 3320 and CSE 3442
- CSE 4356 – System on Chip (SoC) Design
  prereqs: CSE 3442
- CSE 4358 – Microprocessor Systems
  prereqs: CSE 3323 (Spring only)
- CSE 4360 - Autonomous Robot Design and Programming
  prereqs: CSE 2320, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)

**Language, Philosophy & Culture**
- ANTHROPOLOGY (ANTH) 2322
- ARABIC (ARAB) 2310, 2314
- ARCHITECTURE (ARCH) 2300
- ART & ART HISTORY (ART) 1317
- CHINESE (CHIN) 2310, 2314
- INTRO TO CLASSICAL MYTHOLOGY (CLAS) 1300
- ENGLISH (ENGL) 2303, 2309, 2319, 2329
- FRENCH (FREN) 2310, 2314
- GERMAN (GERM) 2310, 2314
- GLOBAL (GLOBAL) 2301
- GREEK (GREK) 2314
- HISTORY (HIST) 2377
- INTERDISCIPLINARY STUDIES (INTS) 1310
- KOREAN (KORE) 2310, 2314
- LATIN (LATN) 2314
- LINGUISTICS (LING) 2371
- MEXICAN AMERICAN STUDIES (MAS) 2300
- PHILOSOPHY (PHIL) 1304, 2300
- PORTUGUESE (PORT) 2314
- RUSSIAN (RUSS) 2310 , 2314
- INTRO TO POPULAR CULTURE (SOCI) 1310
- SPANISH (SPAN) 2310, 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