BS in Computer Engineering (BSCpE), 2018-2019 Catalog

Pre-Professional Courses

- UNIV 1131 (Freshman students only)
- ENGR 1101 (Transfer students)
- CSE 1310 Intro to Programming (prerequisite: MATH 1302)
- CSE 1105 Intro to CSE
- ENGR 1250 (Co-Req: MATH 1421 or above)
- MATH 1426 Calculus I
- MATH 2425 Calculus II
- PHYS 1443 Technical Physics I
- PHYS 1444 Technical Physics II
- ENGL 1301

Technical Elective courses out of which at least one must be CSE 4340 Mobile Systems, CSE 4360 Robotics, or CSE 4342 Embedded Systems II.

See list of approved courses on second page.

Remember to check prerequisites.

4000 Level Courses

- CSE 4342 Embedded II
- CSE 4360 Robotics
- CSE 4340 Mobile Systems
- CSE 4344 Computer Networks
- CSE 4323 Quan. Computer Arch.

Foreign Language
If required, two semesters of the same language

General Education
- Language/Philosophy/Culture elective
- HIST 1301
- HIST 1302
- POLS 2311
- MATH 2312
- Creative Arts elective
- Social/Behavioral (IE 2308 or ECON 2305)

Math and Science Electives
- 3 hour Math elective
- 4 hour Science elective

See list of approved courses on second page.

Only students who have completed all pre-professional courses satisfactorily and thus are admitted to the professional program may take 4000 level courses.

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.
CPE 2018-2019 Classes

Mathematics Electives
- MATH 2326 - Calculus III (Fall, Spring, & Summer)
- CSE 4345 - Computational Methods (Fall & Spring)
- CSE 3315 - Theoretical Concepts in CSE (Fall & Spring)

Science Electives
- BIOL 1441 – Cell and Molecular Biology (Fall, Spring, & Summer)
- CHEM 1441 – General Chemistry (Fall, Spring, & Summer)
- CHEM 1465 – Chemistry for Engineers (Fall, Spring, & Summer)
- PHYS 3313 & PHYS 3183 – Intro to Modern Physics (Fall & Spring)

Technical Electives
- CSE 4303 – Computer Graphics
  prereqs: CSE 3318 and CSE 3380 or MATH 3330 (Fall & Spring)
- CSE 4305 – Compilers
  prereqs: CSE 3302 and CSE 3315 (Fall & Spring)
- CSE 4308 – Artificial Intelligence
  prereqs: CSE 3318 and IE 3301 (Fall, Spring, & Summer)
- CSE 4309 – Fundamentals of Machine Learning
  prereqs: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4310 - Fundamentals of Computer Vision
  prereqs: CSE 3318, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)
- CSE 4321 – Software Testing and Maintenance
  prereqs: CSE 3310 (Fall, Spring, & Summer)
- CSE 4322 – Software Project Management
  prereqs: CSE 3310 (Fall & Spring)
- CSE 4340 – Fundamentals of Wireless Networks
  prereqs: CSE 4344 or CSE 4352 (Fluctuates)
- CSE 4342 – Embedded Systems II
  prereqs: CSE 3442 and coreq CSE 3313 (Fall & Spring)
- CSE 4345 – Computational Methods
  prereqs: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall & Spring)
- CSE 4351 – Parallel Processing
  prereqs: CSE 3320 (Fall & Spring)
- CSE 4352 – IoT and Networking
  prereqs: CSE 3442 (Spring only)
- CSE 4354 – Real-time Operating Systems
  prereqs: CSE 3320 and CSE 3442 (Fall only)
- CSE 4355 – Electromechanical Systems and Sensors
  prereqs: CSE 3323 and CSE 3442 (Fall only)
- CSE 4356 – System on Chip (SoC) Design
  prereqs: CSE 3442 (Fall only)
- CSE 4357 – Advanced Digital Logic Design
  prereqs: CSE 3442 (Spring only)
- CSE 4358 – Microprocessor Systems
  prereqs: CSE 3442 (Spring only)
- CSE 4360 – Autonomous Robot Design and Programming
  prereqs: CSE 2320, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4372 – RISC Processor Design
  prereqs: CSE 3442 (Spring only)
- CSE 4373 – General Purpose GPU Programming
  prereqs: CSE 3320 (Fall only)
- CSE 4376 – Digital Communication Systems
  prereqs: CSE 3313 (Fall only)
- CSE 4377 – Wireless Communication Systems
  prereqs: CSE 3313 (Spring only)
- CSE 4378 – Intro to Unmanned Vehicles
  prereqs: Department consent (Fall only)
- CSE 4380 – Information Security
  prereqs: CSE 3320 (Fall & Spring)
- CSE 4381 – Information Security 2
  prereqs: CSE 3320 and coreq CSE 4344 (Fall & Spring)
- CSE 4382 – Secure Programming
  prereqs: CSE 3320 (Fall & Spring)
- CSE 4395 – Theoretical Concepts in CSE
  prereqs: CSE 2315 (Fall & Spring)
- CSE 3330 – Database Systems and File Structures
  prereqs: CSE 1325 and CSE 2320 (Fall, Spring, & Summer)

Language, Philosophy & Culture Electives
- ANTHROPOLOGY (ANTH) 2322
- ARABIC (ARAB) 2310, 2314
- ARCHITECTURE (ARCH) 2300
- ART & ART HISTORY (ART) 1317
- American Sign Lang. (ASL) 2314
- CHINESE (CHIN) 2310, 2314
- CLASSICS (CLAS) 1300
- INTRO TO LGBTIQ+ STUDIES (DIVR/WOMS) 2315
- ENGLISH (ENGL) 2303, 2309, 2319, 2329
- FRENCH (FREN) 2310, 2314
- GERMAN (GERM) 2310, 2314
- GLOBAL (GLOBAL) 2301
- GREEK (GREK) 2314
- HISTORY (HIST) 2377
- 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 (SOC/INTS) 1310
- SPANISH (SPAN) 2310, 2314, 2315

Creative Arts Electives
- ARCHITECTURE (ARCH) 1301
- ART & ART HISTORY (ART) 1301, 1309, 1310
- DANCE (DANCE) 1300
- ENGLISH (ENGL) 1375
- MUSIC (MUSI) 1300, 1302, 1304, 2300, 2301
- THEATER ARTS (THEA) 1342, 1343

History Electives
- HIST 1301
- HIST 1302
- HIST 1331
- HIST 1332