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

Pre-Professional Courses

- CSE 1310 Intro to Programming (pre-requisite: MATH 1302)
- CSE 2912 Computer Organization
- CSE 2101 Practical Systems
- CSE 4411 Digital Logic I
- CSE 3318 (2320) Algorithms & Data Structures
- CSE 2315 Discrete Structures
- CSE 3380 Linear Algebra
- CSE 3442 Embedded I
- CSE 3313 Signal Processing
- CSE 3320 Operating Systems
- CSE 4342 Embedded II
- 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
- POLS 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.

4000 Level Courses

3 Technical Elective courses
See list of approved courses on second page. Remember to check pre-requisites.

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.

Only students who have completed all pre-professional courses satisfactorily and thus are admitted to the professional program may take 4000 level courses.
CPE 2019-2020 Classes

Mathematics Electives
- **MATH 2326** - Calculus III (Fall, Spring, & Summer) pre-req: MATH 2425
- **CSE 4345** - Computational Methods (Fall & Spring) pre-req: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330
- **CSE 3315** - Theoretical Concepts in CSE (Fall & Spring) pre-req: CSE 2315

Science Electives
- **BIOL 1441** – Biology I for Science Majors (Fall, Spring, & Summer) pre-req: None
- **CHEM 1441** – General Chemistry (Fall, Spring, & Summer) pre-req: MATH 1302
- **CHEM 1465** – Chemistry for Engineers (Fall, Spring, & Summer) co-req: MATH 1421
- **PHYS 3313 & PHYS 3183** – Intro to Modern Physics (Fall & Spring) pre-req: MATH 2425 and PHYS 1444

Technical Electives
- **CSE 3341** – Digital Logic Design II pre-reqs: CSE 2441 (Fall and Spring)
- **CSE 4310** - Fundamentals of Computer Vision pre-reqs: CSE 3318, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)
- **CSE 4340** – Fundamentals of Wireless Networks pre-reqs: CSE 4344 or CSE 4352 (Fluctuates)
- **CSE 4352** – IoT and Networking pre-reqs: CSE 3442 (Spring only)
- **CSE 4354** – Real-time Operating Systems pre-reqs: CSE 3320 and CSE 3442 (Fall only)
- **CSE 4355** – Electomechanical Systems and Sensors pre-reqs: CSE 3323 and CSE 3442 (Fall only)
- **CSE 4356** – System on Chip (SoC) Design pre-reqs: CSE 3442 (Fall only)
- **CSE 4358** – Microprocessor Systems pre-reqs: CSE 3442 (Summer only)
- **CSE 4360** - Autonomous Robot Design and Programming pre-reqs: CSE 3318, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)
- **CSE 4372** – RISC Processor Design pre-reqs: CSE 3442 (Spring only)
- **CSE 4373** – General Purpose GPU Programming pre-reqs: CSE 3320 (Fall only)
- **CSE 4376** – Digital Communication Systems pre-reqs: CSE 3313 (Fall only)
- **CSE 4377** – Wireless Communication Systems pre-reqs: CSE 3313 and CSE 3442 (Spring only)

Language, Philosophy & Culture Electives
- **ANTHROPOLOGY (ANTH)** 2322
- **ARABIC (ARAB)** 2310, 2314
- **ARCHITECTURE (ARCH)** 2300
- **ART & ART HISTORY (ART)** 1317
- **AMERICAN SIGN LANGUAGE (ASL)** 2314
- **CHINESE (CHIN)** 2310, 2314
- **CLASSICS (CLAS)** 1300
- **INTRO TO LGBTQ+ STUDIES (DIVR)** 2315
- **ENGLISH (ENGL)** 1350, 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 (SOCL/INTS)** 1310
- **SPANISH (SPAN)** 2310, 2314, 2315
- **WOMEN’S STUDIES (WOMS)** 2310, 2315

Creative Arts Electives
- **ARCHITECTURE (ARCH)** 1301
- **ART & ART HISTORY (ART)** 1301, 1309, 1310
- **DANCE (DNCE)** 1300
- **ENGLISH (ENGL)** 1375
- **PHOTOJOURNALISM I (JOUR)** 2340
- **MUSIC (MUSI)** 1300, 1302, 1304, 2300, 2301
- **THEATER ARTS (THEA)** 1342, 1343

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