

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

Pre-Professional Courses

UNIV 1131
(freshman students only)
OR
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

PHYS 1443
Technical Physics I

ENGL 1301

CSE 1320
Intermediate Programming
(coreq: Math 1421)

CSE 2315
Discrete Structures

MATH 2425
Calculus II

PHYS 1444
Technical Physics II

CSE 1325
Object-Oriented
Programming

CSE 2312
Computer Organization

CSE 2100
Practical
Systems

CSE 2441
Digital Logic

CSE 3318 (2320)
Algorithms & Data
Structures

IE 3301
Engineering Probability
and Stats

CSE 2440
Circuits & Signals

CSE 3323
Electronics

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

COMS 2302
Professional and Tech.
Communication
(PreReq ENGL1301 and either
ENGR 1250 or ENGL 1302)

CSE 3442
Embedded I

CSE 3313
Signal Processing

CSE 3320
Operating Systems

CSE 4342
Embedded II

CSE 4323
Quan. Computer
Arch.

CSE 4314
Professional Practices

CSE 4316
Senior Design I

CSE 4317
Senior Design II

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)

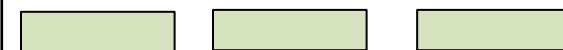
Math and Science Electives

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

See list of approved courses in CpE Program Guide.

4000 Level Courses

3 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.

CPE 2019-2020 Classes

Mathematics Electives

- MATH 2326 - Calculus III
- 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 - Fundamentals of Computer Vision
prereqs: CSE 3318, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)
- CSE 4340 – Fundamentals of Wireless Networks
prereqs: CSE 4344 or CSE 4352
- 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 3318, 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
- CLASSICS (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
- SOCIOLOGY (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