

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

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Circuits & Signals

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)

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.

4000 Level Courses

CSE 4342
Embedded II

CSE 4360
Robotics

CSE 4340
Mobile Systems

2 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 in the Computer Engineering Program Guide. Remember to check prerequisites.

CSE 4344
Computer
Networks

CSE 4323
Quan. Computer
Arch.

CSE 4314
Professional Practices

CSE 4316
Senior Design I

CSE 4317
Senior Design II

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
- 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 4303 – Computer Graphics
prereqs: CSE 3318 and CSE 3380 or MATH 3330
- CSE 4305 – Compilers
prereqs: CSE 3302 and CSE 3315
- CSE 4308 – Artificial Intelligence
prereqs: CSE 3318 and IE 3301 or MATH 3313
- CSE 4309 – Fundamentals of Machine Learning
prereqs: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330
- 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
- CSE 4322 – Software Project Management
prereqs: CSE 3310
- CSE 4340 – Fundamentals of Wireless Networks
prereqs: CSE 4344 or CSE 4352
- CSE 4342 – Embedded Systems II
prereqs: CSE 3442 and coreq CSE 3313
- CSE 4345 – Computational Methods
prereqs: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330
- CSE 4351 – Parallel Processing
prereqs: CSE 3320
- 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 – Electomechanical 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 3323 (Spring only)
- CSE 4360 - Autonomous Robot Design and Programming
prereqs: CSE 3318, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4378 – Intro to Unmanned Vehicles
prereqs: Department consent (Fall only)
- CSE 4380 – Information Security
prereqs: CSE 3320
- CSE 4381 – Information Security 2
prereqs: CSE 3320 and coreq CSE 4344
- CSE 4382 – Secure Programming
prereqs: CSE 3320
- CSE 3315 – Theoretical Concepts in Computer Science & Engineering
prereqs: CSE 2315
- CSE 3330 – Database Systems and File Structures
prereqs: CSE 1325 and CSE 3318

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