

Pre-Professional
Courses

UNIV 1131
(freshman students only)
OR
ENGR 1101
(transfer students)

CSE 1310
Intro to Programming
(pre-requisite: MATH 1302)

CSE 1320
Intermediate Programming
(co-requisite: Math 1421)

CSE 1106
Intro to CSE

MATH 1426
Calculus I

PHYS 1443
Technical Physics I

ENGL 1301

MATH 2425
Calculus II

PHYS 1444
Technical Physics II

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

CSE 1325
Object-Oriented
Programming

CSE 2312
Computer Organization

CSE 3318
Algorithms & Data
Structures

CSE 2315
Discrete Structures

CSE 3380
Linear Algebra

IE 3301
Engineering Probability
and Stats

COMS 2302
Professional and Tech.
Communication
(pre-requisite ENGL1301)

CSE 3330
Databases

pre/co-req

pre-requisite

CSE 3302
Programming
Languages

CSE 3315
Theoretical CS

CSE 3310
Intro to Software Eng.

CSE 3320
Operating Systems

CSE 3314
Professional Practices
(pre-requisites
COMS 2302 and CSE 3318)

Foreign Language

If required, two semesters of the same
language.

General Education

- Language/Philosophy/Culture elective
- POLS 2311
- POLS 2312
- Creative Arts elective
- Social/Behavioral: (IE 2308 or ECON 2305)
- 6 hours of HIST electives

4000
Level
Courses

CSE 4305
Compilers

CSE 4303
Computer Graphics

CSE 4360
Robotics
(Fall only)

6 Technical Elective courses out of which at least one must be
CSE 4305 Compilers, CSE 4303 Computer Graphics, or CSE 4360 Robotics.

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

CSE 4308
Artificial Intelligence

Security Elective

CSE 4380
Information Security

CSE 4381
Information Security 2

CSE 4382
Secure Programming

Complete **ONE** of the following three security courses.
CSE 3320 is a pre-requisite for all three courses.

CSE 4344
Computer Networks

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.

CSE 4316
Senior Design I

CSE 4317
Senior Design II

Math Elective

- 3 hour Math elective

See list of approved courses on second page.

CS 2022-2023 Classes

Each course taken can be used to satisfy only one degree plan requirement. For example, you can CSE 4380 as your security elective, but it will not also count as a technical elective. If you take CSE 4380 and CSE 4381, CSE 4380 can satisfy your security elective and CSE 4381 can count as a technical elective.

Mathematics Electives

- MATH 2326 - Calculus III (Fall, Spring, & Summer) pre-req: MATH 2425
- CSE 4345 - Computational Methods (Fall & Spring) pre-reqs: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330

Technical Electives

- CSE 4303 – Computer Graphics
pre-reqs: CSE 3318 and CSE 3380 or MATH 3330 (Fall & Spring)
- CSE 4305 – Compilers
pre-reqs: CSE 3302 and CSE 3315 (Fall & Spring)
- CSE 4309 – Fundamentals of Machine Learning
pre-reqs: CSE 3318, MATH 2326 or the consent of the instructor, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4310 - Fundamentals of Computer Vision
pre-reqs: CSE 3318, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)
- CSE 4321 – Software Testing and Maintenance
pre-reqs: CSE 3310 (Fall, Spring, & Summer)
- CSE 4322 – Software Project Management
pre-reqs: CSE 3310 (Fall & Spring)
- CSE 4323 – Quantitative Computer Architecture
pre-reqs: CSE 3320 (Fall & Spring)
- CSE 4331 – Database Implementation and Theory
pre-reqs: CSE 3330 (Fall, Spring, & Summer)
- CSE 4334 – Datamining
pre-reqs: IE 3301 or MATH 3313 and co-req: CSE 3330 (Fall & Spring)
- CSE 4340 – Fundamentals of Wireless Networks
pre-reqs: CSE 4344 or CSE 4352 (Fluctuates)
- CSE 4345 – Computational Methods
pre-reqs: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall & Spring)
- CSE 4351 – Parallel Processing
pre-reqs: CSE 3320 (Fall & Spring)
- CSE 4360 - Autonomous Robot Design and Programming
pre-reqs: CSE 3318, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4361 – Software Design Patterns
pre-reqs: CSE 3311 (Fall & Spring)
- CSE 4373 – General Purpose GPU Programming
pre-reqs: CSE 3320 (Fall only)
- CSE 4376 – Digital Communication Systems
pre-reqs: CSE 3313 (Fall only)
- CSE 4378 – Intro to Unmanned Vehicles
pre-reqs: Department consent (Fall only)

- CSE 4379 – Unmanned Vehicles Development
pre-reqs: B or better in CSE 4378 (Spring only)
- CSE 4380 – Information Security
pre-reqs: CSE 3320 (Fall & Spring)
- CSE 4381 – Information Security 2
pre-reqs: CSE 3320 and co-req CSE 4344 (Fall & Spring)
- CSE 4382 – Secure Programming
pre-reqs: CSE 3320 (Fall & Spring)
- CSE 3311 – Object-orientated Software Engineering
pre-reqs: CSE 1325, CSE 3318, and CSE 3310 (Fall, Spring, & Summer)
- CSE 3313 – Signal Processing
pre-reqs: CSE 3318 and CSE 3380 or MATH 3330 (Fall & Spring)
- ENGR 4302 – Engineering Entrepreneurship
pre-reqs: Admitted to an engineering professional program (Fall only)
- IE 3315 – Operations Research I
pre-reqs: co-req MATH 2326 (Fall & Spring)

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 (SOCI/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