

**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

CSE 2440  
Circuit Analysis

CSE 2440  
Circuit Analysis

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

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 on second page

**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.

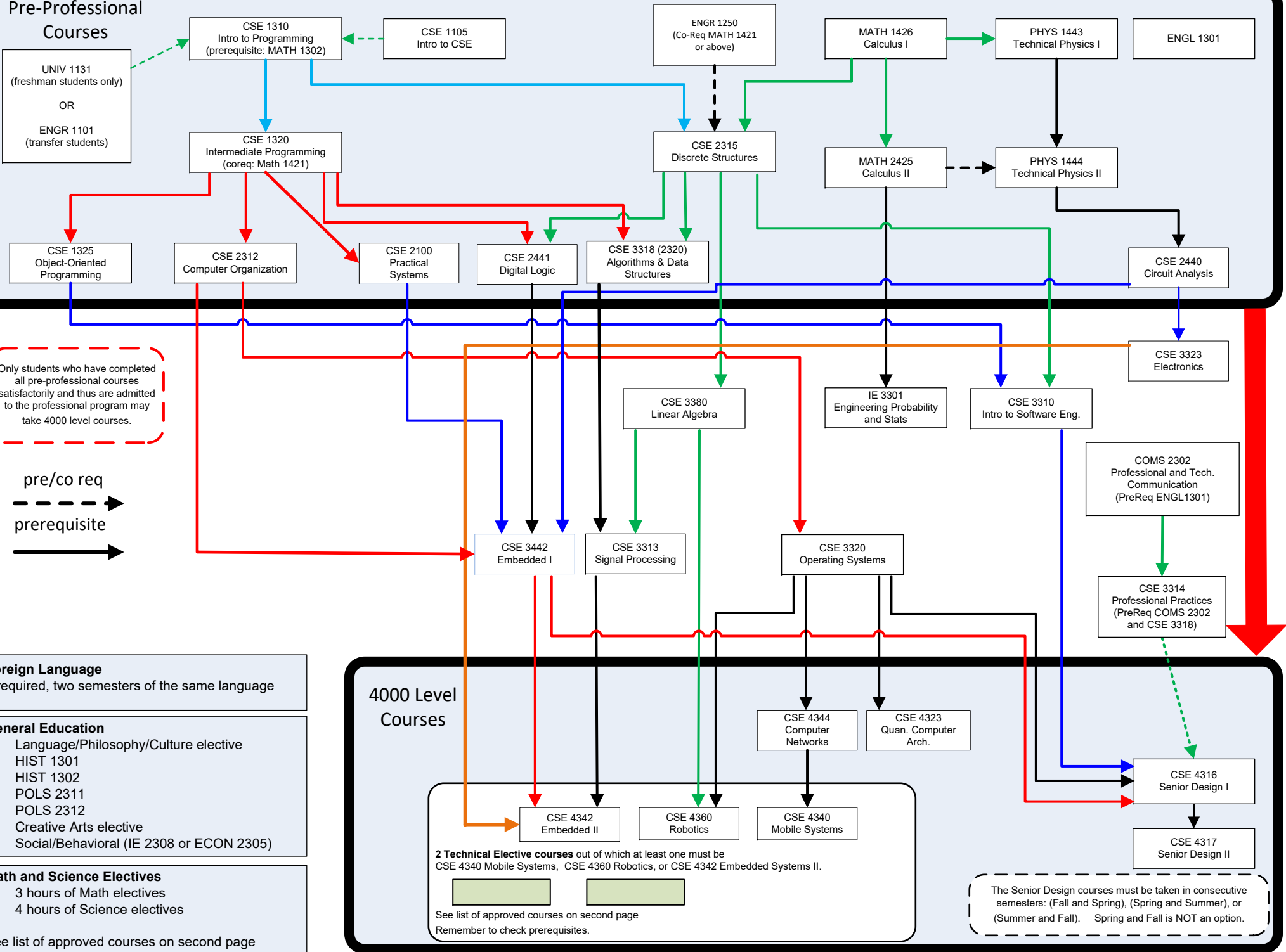
See list of approved courses on second page  
Remember to check prerequisites.

CSE 4344 Computer Networks    CSE 4323 Quan. Computer Arch.

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 (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 3323 (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 3315 – 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
- 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, 2314
- RUSSIAN (RUSS) 2310, 2314
- SOCIOLOGY (SOCI) 1310
- SPANISH (SPAN) 2310, 2314, 2315
- WOMEN'S & GENDER STUDIES (WOMS) 2310

### Creative Arts Electives

- ARCHITECTURE (ARCH) 1301
- ART & ART HISTORY (ART) 1301, 1309, 1310
- DANCE (DNCE) 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