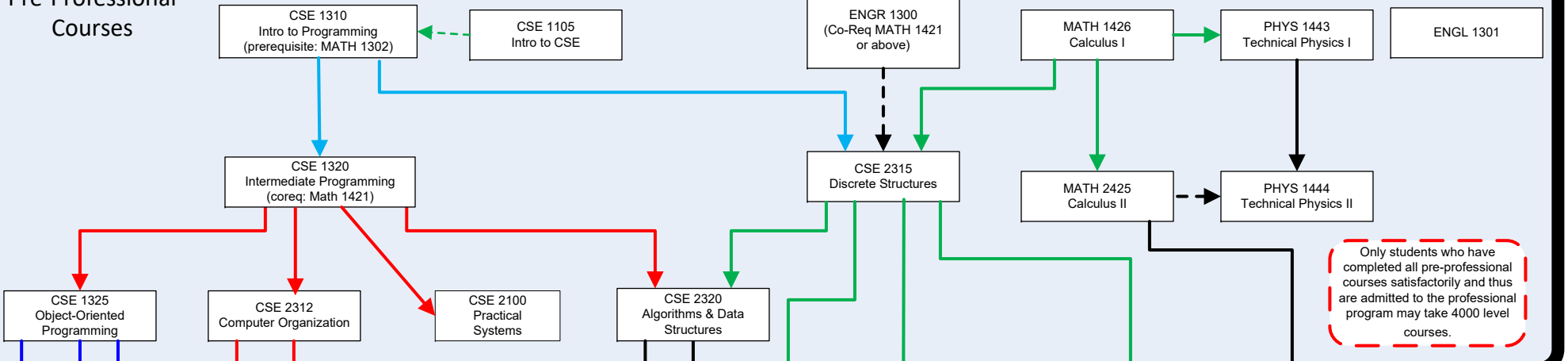
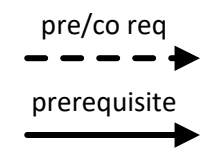


# BS in Computer Science (BSCS), 2015-2016 Catalog

## Pre-Professional Courses



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

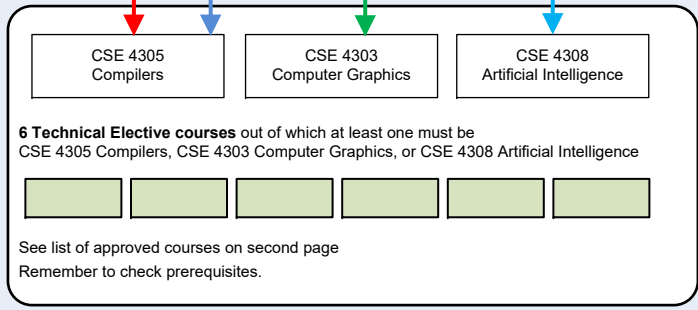


**Foreign Language**  
If required, two semesters of the same language

- 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



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.

## CS 2015-2016 Classes

### Mathematics Electives

- MATH 2326 - Calculus III (Fall, Spring, & Summer)
- CSE 4345 - Computational Methods (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 2320 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 2320 and IE 3301 (Fall, Spring, & Summer)
- CSE 4309 – Fundamentals of Machine Learning  
prereqs: CSE 2320, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4310 - Fundamentals of Computer Vision  
prereqs: CSE 2320, 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 4323 – Quantitative Computer Architecture  
prereqs: CSE 3320 (Fall & Spring)
- CSE 4331 – Database Implementation and Theory  
prereqs: CSE 3330 (Fall, Spring, & Summer)
- CSE 4334 – Datamining  
prereqs: IE 3301 or MATH 3313 and coreq: CSE 3330 (Fall & Spring)
- CSE 4340 – Fundamentals of Wireless Networks  
prereqs: CSE 4344 or CSE 4352 (Fluctuates)
- CSE 4345 – Computational Methods  
prereqs: CSE 2320, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall & Spring)
- CSE 4351 – Parallel Processing  
prereqs: CSE 3320 (Fall & Spring)
- CSE 4360 - Autonomous Robot Design and Programming  
prereqs: CSE 2320, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4361 – Software Design Patterns  
prereqs: CSE 3311 (Fall & Spring)
- CSE 4378 – Intro to Unmanned Vehicles  
prereqs: Department consent (Fall only)

- CSE 4379 – Unmanned Vehicles Development  
prereqs: B or better in CSE 4378 (Spring 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 3311 – Object-orientated Software Engineering  
prereqs: CSE 1325, CSE 2320, and CSE 3310 (Fall, Spring, & Summer)
- CSE 3313 – Signal Processing  
prereqs: CSE 2320 and CSE 3380 or MATH 3330 (Fall & Spring)
- IE 3315 – Operations Research I  
prereqs: coreq 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 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 (SOCL) 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