BS in Computer Science (BSCS), 2020-2021 Catalog

Pre-Professional Courses

- CSE 1310 Intro to Programming (prerequisite: MATH 1302)
- CSE 1320 Intermediate Programming (coreq: Math 1421)
- CSE 1325 Object-Oriented Programming

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

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

Math Elective
- 3 hours of Math electives

See list of approved courses on second page

4000 Level Courses

5 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 prerequisites.

Math Elective
- 3 hours of Math electives
See list of approved courses on second page

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.
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)
- CSE 4345 - Computational Methods (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 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 (Fall 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 – Data Mining
  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 3318, 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 3318, 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 4383 – Object-oriented Software Engineering
  prereqs: CSE 1325, CSE 3318, and CSE 3310 (Fall, Spring, & Summer)
- CSE 4384 – Signal Processing
  prereqs: CSE 3318 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 (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