BS in Software Engineering (BSSE), 2018-2019 Catalog

Pre-Professional Courses

- CSE 1310 Intro to Programming (prerequisite: MATH 1302)
- CSE 2312 Computer Organization
- CSE 2302 Programming Languages
- CSE 3302 Databases
- CSE 1320 Intermediate Programming (coreq: Math 1421)
- CSE 2100 Practical Systems
- CSE 3318 (2320) Algorithms & Data Structures
- CSE 3311 Object-Oriented Software Engineering
- CSE 1325 Object-Oriented Programming
- CSE 3315 Theoretical CS
- CSE 3380 Linear Algebra

Math and Science Electives

- 3 hours of Math electives
- 4 hours of Science electives

General Education

- Language/Philosophy/Culture elective
- HIST 1301
- HIST 1302
- POLS 2311
- POLS 2312
- Creative Arts elective
- Social/Behavioral (IE 2308 or Econ 2305)

Foreign Language

If required, two semesters of the same language

Math and Science Electives

- 3 hours of Math electives
- 4 hours of Science electives

See list of approved courses in SE Program Guide.

4000 Level Courses

- CSE 4310 Intro to Software Eng.
- CSE 3310 Intro to Software Eng.
- CSE 4361 Software Patterns
- CSE 4321 Software Testing
- CSE 4322 Software Project Management
- CSE 4380 Information Security
- CSE 4314 Professional Practices
- CSE 4316 Senior Design I
- CSE 4317 Senior Design II

2 Technical Elective Courses

See list of approved courses in the Software Engineering Program Guide. Remember to check prerequisites.
SE 2018-2019 Classes

Mathematics Electives

- MATH 2326 - Calculus III
- 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
  prerequisites: CSE 3318 and CSE 3380 or MATH 3330
- CSE 4305 – Compliers
  prerequisites: CSE 3302 and CSE 3315
- CSE 4308 – Artificial Intelligence
  prerequisites: CSE 3318 and IE 3301
- CSE 4309 – Fundamentals of Machine Learning
  prerequisites: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330
- CSE 4310 - Fundamentals of Computer Vision
  prerequisites: CSE 3318, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)
- CSE 4323 – Quantitative Computer Architecture
  prerequisites: CSE 3320
- CSE 4331 – Database Implementation and Theory
  prerequisites: CSE 3330
- CSE 4334 – Datamining
  prerequisites: IE 3301 or MATH 3313 and coreq: CSE 3330
- CSE 4340 – Fundamentals of Wireless Networks
  prerequisites: CSE 4344 or CSE 4352
- CSE 4344 – Computer Network Organization
  prerequisites: CSE 3320
- CSE 4345 – Computational Methods
  prerequisites: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330
- CSE 4351 – Parallel Processing
  prerequisites: CSE 3320
- CSE 4360 - Autonomous Robot Design and Programming
  prerequisites: CSE 3318, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4378 – Intro to Unmanned Vehicles
  prerequisites: Department consent (Fall only)
- CSE 4381 – Information Security 2
  prerequisites: CSE 3320 and coreq CSE 4344
- CSE 4382 – Secure Programming
  prerequisites: CSE 3320
- CSE 3313 – Signal Processing
  prerequisites: CSE 3318 and CSE 3380 or MATH 3330
- IE 3315 – Operations Research I
  prerequisites: coreq MATH 2326

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