Pre-Professional Courses

CSE 1310 Intro to Programming (pre-requisite: MATH 1302)
CSE 1105 Intro to CSE
ENGR 1300 (co-requisite MATH 2421 or above)
MATH 1426 Calculus I
PHYS 1443 Technical Physics I
ENGL 1301

CSE 1320 Intermediate Programming (co-requisite: Math 1421)
CSE 2100 Practical Systems
CSE 2320 Algorithms & Data Structures
CSE 2315 Discrete Structures
MATH 2425 Calculus II
PHYS 1444 Technical Physics II

CSE 1325 Object-Oriented Programming
CSE 2312 Computer Organization
CSE 3330 Databases
CSE 3302 Programming Languages
CSE 3310 Intro to Software Eng.
CSE 3315 Theoretical CS
CSE 3380 Linear Algebra
IE 3301 Engineering Probability and Stats
COMS 2302 Professional and Tech. Communication (pre-requisite ENGL 1301)
CSE 3314 Professional Practices (pre-requisites: COMS 2302 and CSE 2300/2318)

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 hour Math elective
- 4 hour Science elective
See list of approved courses on second page.

4000 Level Courses

CSE 4361 Software Design Patterns
CSE 4321 Software Testing
CSE 4322 Software Project Management
CSE 4316 Senior Design I
CSE 4317 Senior Design II

3 Technical Elective Courses
See list of approved courses on second page. Remember to check pre-requisites.

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

Science Electives

- **BIOL 1441** – Biology I for Science Majors (Fall, Spring, & Summer) pre-req: None
- **CHEM 1441** – General Chemistry (Fall, Spring, & Summer) pre-req: MATH 1302
- **CHEM 1465** – Chemistry for Engineers (Fall, Spring, & Summer) co-req: MATH 1421
- **PHYS 3313 & PHYS 3183** – Intro to Modern Physics (Fall & Spring) pre-req: MATH 2425 and PHYS 1444

Technical Electives

- **CSE 4303** – Computer Graphics pre-reqs: CSE 2320 and CSE 3380 or MATH 3330 (Fall & Spring)
- **CSE 4305** – Compilers pre-reqs: CSE 3302 and CSE 3315 (Fall & Spring)
- **CSE 4308** – Artificial Intelligence pre-reqs: CSE 2320 and IE 3301 (Fall, Spring, & Summer)
- **CSE 4309** – Fundamentals of Machine Learning pre-reqs: CSE 2320, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall only)
- **CSE 4310** - Fundamentals of Computer Vision pre-reqs: CSE 2320, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)
- **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 4344** – Computer Network Organization pre-reqs: CSE 3320 (Fall, Spring, & Summer)
- **CSE 4345** – Computational Methods pre-reqs: CSE 2320, 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 2320, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)
- **CSE 4378** – Intro to Unmanned Vehicles pre-reqs: Department consent (Fall 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 3313** – Signal Processing pre-reqs: CSE 2320 and CSE 3380 or MATH 3330 (Fall & Spring)
- **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**