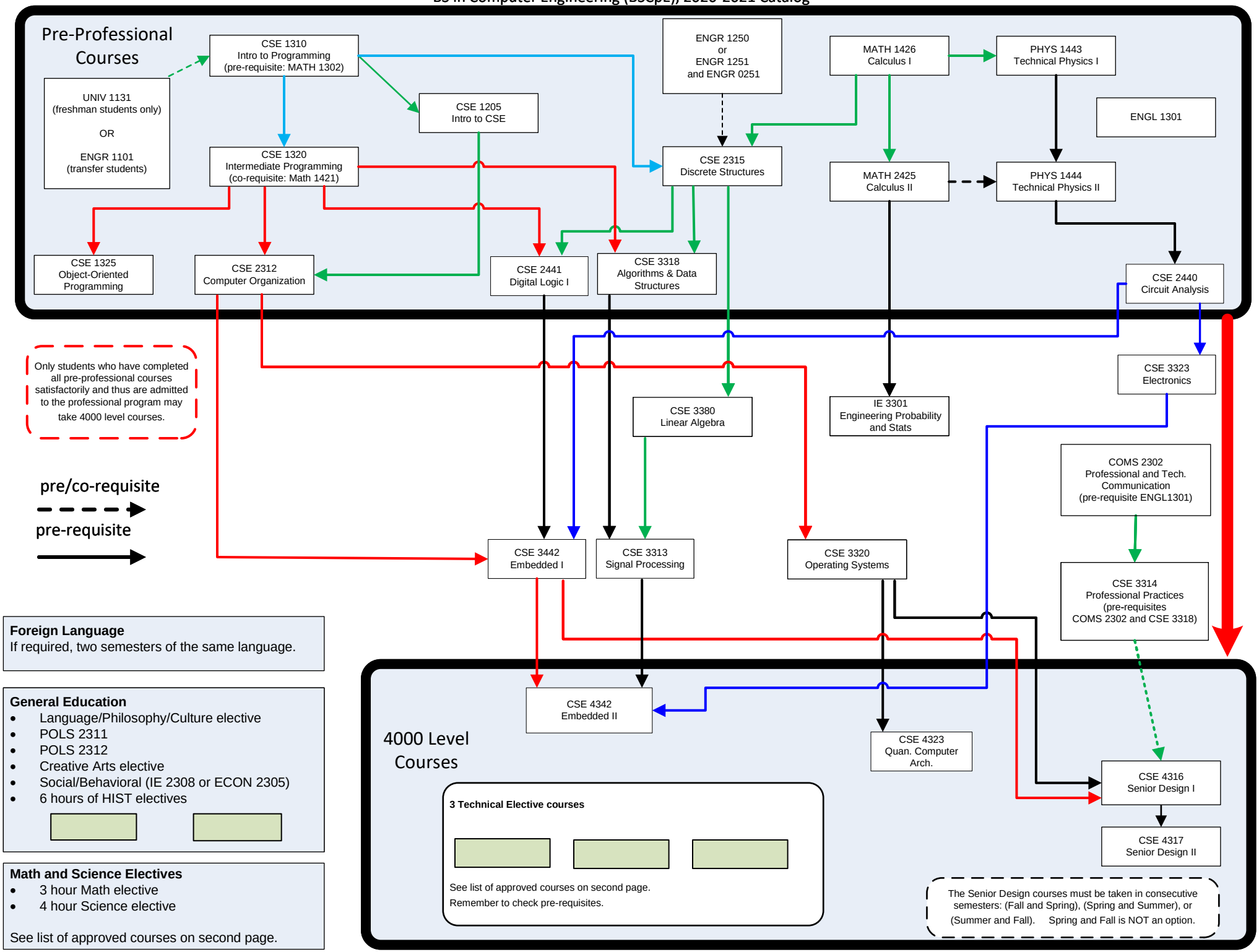
BS in Computer Engineering (BSCpE), 2020-2021 Catalog



CPE 2020-2021 Classes

Mathematics Electives

- MATH 2326 - Calculus III (Fall, Spring, & Summer) pre-req: MATH 2425
- CSE 4345 - Computational Methods (Fall & Spring) pre-req: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330
- CSE 3315 - Theoretical Concepts in CSE (Fall & Spring) pre-req: CSE 2315

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

You need to complete three tech electives for your degree plan, but you are only allowed to take **ONE** of the following: CSE 4308, CSE 4309, CSE 4310, CSE 4340, CSE 4360, CSE 4378, and CSE 4380.

- CSE 3341 – Digital Logic Design II
  pre-reqs: CSE 2441 (Fall and Spring)

- CSE 4352 – IoT and Networking
  pre-reqs: CSE 3442 (Spring only)

- CSE 4354 – Real-time Operating Systems
  pre-reqs: CSE 3320 and CSE 3442 (Fall only)

- CSE 4355 – Electomechanical Systems and Sensors
  pre-reqs: CSE 3323 and CSE 3442 (Fall only)

- CSE 4356 – System on Chip (SoC) Design
  pre-reqs: CSE 3442 (Fall only)

- CSE 4358 – Microprocessor Systems
  pre-reqs: CSE 3442 (Summer only)

- CSE 4372 – RISC Processor Design
  pre-reqs: CSE 3442 (Spring only)

- CSE 4373 – General Purpose GPU Programming
  pre-reqs: CSE 3320 (Fall only)

- CSE 4376 – Digital Communication Systems
  pre-reqs: CSE 3313 (Fall only)

- CSE 4377 – Wireless Communication Systems
  pre-reqs: CSE 3313 and CSE 3442 (Spring only)

Only one of these classes will count in your degree plan:

- CSE 4308 – Artificial Intelligence
  pre-reqs: CSE 3318, and CSE 3380 or MATH 3330 (Fall, Spring, and Summer)

- CSE 4309 – Fundamentals of Machine Learning
  pre-reqs: CSE 3318, MATH 2326 or the consent of the instructor, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall only)

- CSE 4310 - Fundamentals of Computer Vision
  pre-reqs: CSE 3318, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)

- CSE 4340 – Fundamentals of Wireless Networks
  pre-reqs: CSE 4344 or CSE 4352 (Fluctuates)

- CSE 4360 - Autonomous Robot Design and Programming
  pre-reqs: CSE 3318, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)

- CSE 4378 – Intro to Unmanned Vehicle Systems
  pre-reqs: Admission to the professional program and permission from an advisor (Fall only)

- CSE 4380 – Information Security
  pre-reqs: CSE 3320 (Fall and 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