BS - Computer Science – Computer Engineering

2024 Catalog year: College of Science and Engineering

Freshman Fall semester

- MATH 2471 (F,S,Su)
  Calculus I
  TCCNS: MATH 2414

Freshman Spring semester

- MATH 2472 (F,S,Su)
  Calculus II
  TCCNS: MATH 2414

Sophomore Fall semester

- PHIL 1305 or 1320
  Critical Thinking or Ethics and Society
  TCCNS PHIL 1301 or 2306

- ENGR 1310 (F,S,Su)
  College Writing I
  TCCNS ENG 1301

Sophomore Spring semester

- CS 2315 (F,S)
  Computer Ethics

- CS 2358 (F,S,Su)
  Discrete Math I
  TCCNS CSCS 2400

- CS 2308 (F,S,Su)
  Foundations of Computer Science II
  TCCNS CSCS 2400

- CS 2318 (F,S,Su)
  Assembly Language
  TCCNS CSCS 2402

- MATH 3354 (F,S,Su)
  Intro to Object Oriented Design

- MATH 3358 (F,S,Su)
  Data Structures

- MATH 3398 (F,S,Su)
  Discrete Math II

- CS 3359 (F,S,Su)
  Computing Systems Fundamentals

- CS 3360 (F,S)
  Computer Architecture

- CS 3398 (F,S,Su)
  Software Engineering

Junior Fall semester

- EE 2400 (F,S,Su)
  Circuits & Devices I

- CS 3354 (F,S,Su)
  Intro to Object Oriented Design

- CS 3358 (F,S,Su)
  Data Structures

- MATH 3398 (F,S,Su)
  Discrete Math II

- CS 3359 (F,S,Su)
  Computer Architecture

- CS 3360 (F,S)
  Computing Systems Fundamentals

Junior Spring semester

- MATH 3305 (F,S,Su)
  Probability & Statistics

- EE 4400 (F,S,Su)
  Circuits & Devices II

- CS 4371 (F,S)
  Computer Systems Security

Minor courses (as needed, see advisor)

Elective courses (as needed, see advisor)

Choose two computer engineering electives:

- CS 4310 Computer Networks (F,S)
- CS 4318 Compiler Construction (F)
- CS 4328 Operating Systems (F,S,Su)
- CS 4337 Computer Vision (F)
- CS 4347 Machine Learning (F,S)
- CS 4350 Unix System Programming (F,S)
- CS 4380 Parallel Programming (F,S)
- CS 4388 Computer Graphics (F)
- EE 3378 Numerical & Scientific Data Analysis Using Python (F)
- EE 3400 Circuits II (F,S,Su)
- EE 4332 Introduction to CAE Simulation on HPC Systems (S)

Note:
- *CS 4318 & CS 4350 cannot count for both the project course and concentration elective.
- *CS 4347 & EE 4331 cannot be both taken to satisfy 6 hours concentration electives.

Choose one project course:

- CS 4318 (F)
  Computer Construction
  OR
  CS 4380 (F,S)
  Parallel Programming

Note: Project course must be different than computer engineering elective.

This is not an official degree audit and it is subject to change. This chart is intended to be used by students who start out at Texas State. Please contact the College of Science Undergraduate Advising Center for advising.

Note: In addition to major courses, students must also complete all core and minor requirements (if applicable) and any other requirements for graduation.

KEY:
Arrows indicate prerequisites.
Arrows with dotted lines indicate co-requisites.
Courses taught specific semesters are indicated with the following codes:
F-Fall  Su-Summer Session I or II  S-Spring

Required WI courses: CS 2315, 3398
Additional WI courses: ENGR 3313 or 3303

Core courses must be completed:
- 6 credits Core 010
- 3 credits Core 020
- 6 credits Core 030
- 3 credits Core 040
- 3 credits Core 050
- 6 credits Core 060
- 6 credits Core 070
- 6 credits Core 080
- 3 credits Core 091
- 3 credits Core 092

US 1100 may be required for some students. Consult with an advisor regarding course choices.