### BS- Computer Science – Computer Engineering (SC-BSCS/COME)

#### 2023 Catalog year: College of Science and Engineering

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Sophomore</th>
<th>Junior</th>
<th>Senior</th>
</tr>
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<tbody>
<tr>
<td><strong>Fall semester</strong></td>
<td><strong>Spring semester</strong></td>
<td><strong>Fall semester</strong></td>
<td><strong>Spring semester</strong></td>
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<tr>
<td>MATH 2471 (F,S,Su) Calculus I TCCNS: MATH 2413</td>
<td>MATH 2472 (F,S,Su) Calculus II TCCNS: MATH 2414</td>
<td>MATH 3305 (F,S,Su) Probability &amp; Statistics</td>
<td>Minor courses (as needed, see advisor)</td>
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<tr>
<td>ENG 1310 (F,S,Su) College Writing I TCCN ENGL 1301</td>
<td>PHIL 1305 or 1320 Critical Thinking or Ethics and Society TCCN PHIL 1301 or 2306</td>
<td>EE 2400 (F,S,Su) Circuits &amp; Devices I</td>
<td>Elective courses (as needed, see advisor)</td>
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<tr>
<td>COMM 1310 (F,S,Su) Fundamentals of Human Communication TCCN SPCH 1311 or 1315</td>
<td>CS 2315 (F,S) Computer Ethics</td>
<td>CS 3354 (F,S,Su) Intro to Object Oriented Design</td>
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<tr>
<td>CS 1428 (F,S,Su) Foundations of Computer Science I TCCN COSC 1437</td>
<td>CS 2308 (F,S,Su) Foundations of Computer Science II TCCN COSC 2436/2336</td>
<td>CS 3358 (F,S,Su) Data Structures</td>
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<tr>
<td>CS 2318 (F,S,Su) Assembly Language TCCN COSC 2425/2325</td>
<td>CS 3398 (F,S,Su) Software Engineering</td>
<td>CS 3399 (F,S,Su) Computing Systems Fundamentals</td>
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<tr>
<td>CS 3339 (F,S,Su) Computer Architecture</td>
<td><strong>Core courses must be completed:</strong></td>
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<td><strong>8 hours of the same science from approved list</strong></td>
<td><strong>4 hours science from approved list</strong></td>
<td><strong>MATH 3305 (F,S,Su) Probability &amp; Statistics</strong></td>
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<tr>
<td><strong>3 hours from:</strong> ENG 3303 (F,S,Su) Technical Writing or ENG 3313 (S) Scientific Writing</td>
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<td>CS 4371 (F,S) Computer Systems Security (no longer listed as a project course option)</td>
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<td><strong>EE 2420 (F,S,Su) Digital Logic</strong></td>
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<tr>
<td><strong>CS 3358 (F,S,Su) Data Structures</strong></td>
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<tr>
<td><strong>MATH 2358 (F,S,Su) Discrete Math I TCCN MATH 2305</strong></td>
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<tr>
<td><strong>CS 2318 (F,S,Su) Assembly Language TCCN COSC 2425/2325</strong></td>
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<td><strong>Required WI courses:</strong> CS 2315, 3398</td>
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<td><strong>Additional WI courses:</strong> ENG 3313, ENG 3303</td>
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**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.

**Choose one project course option:**
- CS 4318 Compiler Construction (F,S)
- CS 4380 Parallel Programming (F,S)

**Choose two computer engineering electives:**
- CS 4310 Computer Networks (F,S)
- CS 4318 Compiler Construction (F,S)
- CS 4328 Operating Systems (F,S,Su)
- CS 4333 Dreamscape (F,S,Su)
- CS 4337 Computer Vision (F)
- CS 4347 Machine Learning (F,S)
- CS 4500 Unix Systems Programming (F,S)
- CS 4388 Parallel Programming (F,S)
- CS 4389 Computer Graphics (F,S)
- EE 3326 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 4380 cannot count for both the project course and concentration elective. * CS 4347 & EE 4332 cannot be both taken to satisfy 6 hours concentration electives.*

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### KEY:
- Arrows indicate prerequisites.
- Arrows with dotted lines indicate co-requisites.
- Arrows with dash lines are recommended prerequisite.
- Courses taught specific semesters are indicated with the following codes:
  - F: Fall
  - S: Spring
  - Su: Summer Session I or II
  - S-Spring
- Required WI courses: CS 2315, 3398
- Additional WI courses: ENG 3313, ENG 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
- 3 credits Core 080
- 3 credits Core 091
- 3 credits Core 092

### TXST options:
- ENG 1310, ENG 1320, ENG 1321, ENG 3303
- CS required course: MATH 2471
- CS required course: See catalog for options
- CS required course: PHIL 1305 or 1320
- CS required course: ART 2313, DAN 2313, MU 2313, TH 2313
- TXST options: HIST 1310/2327/2381 and [HIST 1320/2328/2382]
- TXST options: POSI 2310 & POSI 2320
- CS required course: COMM 1310
- CS required course: MATH 2472

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