## **COMPUTER SCIENCE B.A.**



## **ACADEMIC ADVISING**

Partnering with students to successfully navigate college

Location: Main Hall 208

Phone: 719.255.3260

Website: Academic Advising

#### **Connect With Your Advisor**

**Current UCCS Students** 

• Appointments: <a href="www.uccs.edu/advising/current-students">www.uccs.edu/advising/current-students</a>
Prospective Students: <a href="www.uccs.edu/admissions/contact">www.uccs.edu/admissions/contact</a>

## **GENERAL ACADEMIC INFORMATION**

#### **Minimum Graduation Requirements**

- 120 credit hours
- 2.0 CU cumulative GPA
- Residency: Last 30 credit hours of degree must be completed while registered in the College Engineering & Applied Science at UCCS

#### **Student Responsibilities**

Students are required to know and follow:

- All academic policies set forth by the University, College, and academic department in the UCCS Catalog: <u>catalog.uccs.edu</u>
- All course prerequisites designated by the University. Failure to meet course prerequisites may result in an administrative drop of the course from a student's schedule. See degree audit for course prerequisites within the academic major.

### **DEGREE REQUIREMENTS**

Explore Computer Science: Computer Science | College of Engineering and Applied Science (uccs.edu)

|  | Comp  | outer Science Requirements  |              |  |  |  |  |  |
|--|---|---|--------------|--|--|--|--|--|
| Computer Science Courses   | Course/Area   | Course Title  | Credit Hours |  |  |  |  |  |
| (35 hours)   | Computer Science Foundation Courses                                   |   |              |  |  |  |  |  |
|  | CS 1120   | Computational Thinking with Beginning Programming   | 3            |  |  |  |  |  |
| You must be admitted into the  | CS 1150   | Principles of Computer Science  | 3            |  |  |  |  |  |
| College of Engineering in order to take any CS coursework.   | CS 1450   | Data Structures & Algorithms  | 3            |  |  |  |  |  |
| take any C3 Coursework.  | CS 2060   | Programming with C  | 3            |  |  |  |  |  |
| All CS course work requires a grade  | CS 2080   | Programming with UNIX   | 2            |  |  |  |  |  |
| of "C" or better.  | CS 2160   | Computer Organization & Assembly Language Programming   | 3            |  |  |  |  |  |
|  | CS 3020,<br>CS 3060,<br><b>OR</b>                                     | Advanced Object Technology Using C#/.NET Object Oriented Programming in C++   | 3            |  |  |  |  |  |
|  | CS 3080   | Python Programming  |              |  |  |  |  |  |
|  | CS 3160   | Concepts of Programming Languages   | 3            |  |  |  |  |  |
|  | CS 3300   | Introduction to Software Engineering  | 3            |  |  |  |  |  |
|  | Computer Science Core Course Electives Choose 2 of the courses below. |   |              |  |  |  |  |  |
|  | CS 4200   | Computer Architecture I   | 3            |  |  |  |  |  |
|  | CS 4500   | Operating Systems I   | 3            |  |  |  |  |  |
|  | CS 4720   | Design & Analysis of Algorithms   | 3            |  |  |  |  |  |
|  |   | Computer Science Capstone   |              |  |  |  |  |  |
|  | CS 4300   | Advanced Software Engineering   | 3            |  |  |  |  |  |
|  |   |   |              |  |  |  |  |  |
| Computer Science Track (18 hours)  • Students are required to complete   | Artificial<br>Intelligence &<br>Machine<br>Learning                   | Complete 6 courses from those listed below. CS 3880, 4435, 4440, 4460, 4710, 4730, 4820, 4850, 4860, 4870, 4890   | 18           |  |  |  |  |  |
| one of the tracks listed.  | Cybersecurity   | Complete 6 courses from those listed below.<br>CS 2910, 3910, 4910, 4920, 4930, 4940, 4950, 4980  | 18           |  |  |  |  |  |
| <ul> <li>Some tracks require additional<br/>advanced mathematics courses.</li> <li>Students should carefully check<br/>prerequisites when deciding on a</li> </ul> | Game<br>Development   | Complete the following courses: CS 3350, GDD 2150, 3200 Complete 3 courses from the following: GDD 3100, 4000, 4400, 4500 NOTE: Students choosing this track should replace CS 1120 in the core with GDD 1100 | 18           |  |  |  |  |  |
| track.   | General   | Complete 6 <b>UNUSED</b> CS courses in consultation with your faculty advisor. Only two courses can be below 4000-level.  | 18           |  |  |  |  |  |

# **COMPUTER SCIENCE B.A.**



| <ul> <li>ENGL 1310 ENGL 1310, 1308, or 1305 (Students of TCID 2090)</li> <li>PORT 3000 (0 Credits) – Writing Portfolio</li> <li>MATH 1040 OR MATH 1350</li> <li>CS 2150</li> <li>CS 2020</li> </ul> | choosing ENGL 1305 must complete ENGL 1300 first.)  |  |
|---|---|--|
| • CS 2150   |   |  |
| • CS 2300   |   |  |
| Component   | Course  |  |
| Gateway   | GPS 1010  |  |
| Explore – Arts, Humanities and Cultures   | See Degree Audit  |  |
| Explore – Society, Behavior and Health  | See Degree Audit  |  |
| Explore – Physical and Natural World  | See Degree Audit  |  |
| Navigate  | See Degree Audit  |  |
| Summit  | CS 4300 (included in major requirements)  |  |
| Writing Intensive Courses (WIC) Two courses with one upper-division (3000+ level)   | See Degree Audit  |  |
| Inclusiveness   | See Degree Audit  |  |
| Sustainability  | See Degree Audit  |  |
| Complete 34 hours of open electives to fulfill the total of   | and upper-division hours required for the degree program.   |  |
|   | CS 2300  Component  Gateway  Explore – Arts, Humanities and Cultures  Explore – Society, Behavior and Health  Explore – Physical and Natural World  Navigate  Summit  Writing Intensive Courses (WIC)  Two courses with one upper-division (3000+ level)  Inclusiveness  Sustainability |  |

## **FOUR-YEAR DEGREE PLAN**

| <b>\</b> | FALL      | Hours | <b>V</b> | SPRING    | Hours |
|----------|-----------|-------|----------|-----------|-------|
|          | CS 1120   | 3     |          | CS 1150   | 3     |
|          | FNGI 1310 | 3     |          | TCID 2090 | 3     |

|     | '''==                                       |    | · · · · · ·                                  |    |
|-----|---|----|--|----|
| Jue | CS 1120                                     | 3  | CS 1150                                      | 3  |
|     | ENGL 1310                                   | 3  | TCID 2090                                    | 3  |
| Ī   | GPS 1010                                    | 3  | Explore – Arts, Humanities & Cultures Course | 3  |
| ea  | MATH 1040 <b>OR</b> MATH 1350               | 4  | General Elective                             | 3  |
| >   | Explore – Society, Behavior & Health Course | 3  | General Elective                             | 3  |
|     | TOTAL                                       | 16 | TOTAL  | 15 |

Please note that this is an example degree program and your program may vary. Students are responsible for completing all course prerequisites.

|    | 1 | FALL                                 | Hours | 1 | SPRING                               | Hours |
|----|---|--------------------------------------|-------|---|--------------------------------------|-------|
| 0  |   | CS 1450                              | 3     |   | CS 2060                              | 3     |
| ĕ  |   | CS 2300                              | 3     |   | CS 2150                              | 3     |
| Ľ  |   | Explore – Physical and Natural World | 3     |   | CS 2020                              | 3     |
| ea |   | General Elective                     | 3     |   | Track Elective                       | 3     |
| >  |   | General Elective                     | 3     |   | General Elective (Writing Intensive) | 3     |
|    |   | TOTAL                                | 15    |   | TOTAL                                | 15    |

|          | 1 | FALL                                | Hours | 1 | SPRING          | Hours |
|----------|---|-------------------------------------|-------|---|-----------------|-------|
| 4.       |   | CS 3020, CS 3060, <b>OR</b> CS 3080 | 3     |   | CS 3160         | 3     |
| èe       |   | CS 2160                             | 3     |   | CS 3300         | 3     |
| Ē        |   | General Elective (Inclusiveness)    | 3     |   | Track Elective  | 3     |
| <u>_</u> |   | Track Elective                      | 3     |   | Navigate Course | 3     |
| lea/     |   | CS 2080                             | 2     |   | CS Core Course  | 3     |
|          |   |                                     |       |   | PORT 3000       | 0     |
|          |   | TOTAL                               | 14    |   | TOTAL           | 15    |

|             | J | FALL                                 | Hours | 1 | SPRING                                  | Hours |
|-------------|---|--------------------------------------|-------|---|---|-------|
| _           |   | CS Core Course                       | 3     |   | CS 4300                                 | 3     |
| l o         |   | Track Elective                       | 3     |   | Track Elective                          | 3     |
| F           |   | Track Elective                       | 3     |   | General Elective                        | 3     |
| ea          |   | General Elective (Sustainability)    | 3     |   | General Elective (UD Writing Intensive) | 3     |
| <b>&gt;</b> |   | Upper-Division (UD) General Elective | 3     |   | General Elective                        | 3     |
|             |   | TOTAL                                | 15    |   | TOTAL                                   | 15    |