# FOUR-YEAR PLAN

## Computer Science, B.S.

**15 to Finish**

CONCORD UNIVERSITY

## Semester 1

| Course | Credits | Grade | | ✔ |
|---|---|---|---|---|
| ENGL 101: Composition & Rhetoric I | 3 | C* | 🏴 | ☐ |
| General Education Course | 3 | | | ☐ |
| General Education Course | 2-3 | | | ☐ |
| CS 151: Introduction to Computer Science | 3 | | 🏴 | ☐ |
| MATH 103: College Algebra | 3 | | | ☐ |
| UNIV 100: CU Foundations | 1 | | | ☐ |

**15-16**

## Semester 2

| Course | Credits | Grade | | ✔ |
|---|---|---|---|---|
| ENGL 102: Composition & Rhetoric II | 3 | C* | 🏴 | ☐ |
| General Education Course | 3 | | | ☐ |
| CS 252: Data Structures & Object Oriented Programming | 3 | | | ☐ |
| CS 282: Database and Information Management | 3 | | | ☐ |
| MATH 104: College Trigonometry | 3 | | | ☐ |

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## Semester 3

| Course | Credits | Grade | ✔ |
|---|---|---|---|
| General Education Course | 3 | | ☐ |
| General Education Course | 3 | | ☐ |
| CS 272: Human Centered Design | 3 | | ☐ |
| CS Concentration Course | 3 | | ☐ |
| MATH 253: Calculus with Analytic Geometry I | 4 | | ☐ |

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## Semester 4

| Course | Credits | Grade | ✔ |
|---|---|---|---|
| General Education Course | 3 | | ☐ |
| CS 221: Computer Networking | 3 | | ☐ |
| CS 357: Parallel and Distributed Computing | 3 | | ☐ |
| MATH 219: Discrete Mathematics | 3 | | ☐ |
| PHYS 201" University Physics with Calculus, Part 1 | 4 | | ☐ |

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The **Bachelor of Science in Computer Science** curriculum is designed to give students a thorough understanding of computers; the physics of the hardware; the underlying mathematical principles; and the creation of software solutions. The core prepares students for a wide variety of careers and graduate school, but students can also choose one of three concentrations in which to specialize.

## CONCENTRATIONS

Each of the elective CS concentrations is designed for different career interests:

**Software Development**
**Cybersecurity**
**Analysis, Simulation, and Modeling**

## MILESTONE COURSES

Courses marked as Milestone Courses are crucial for staying on track to complete your degree in four years. Take them in the recommended semester to stay on track! If you see a recommended minimum grade, this is the grade you need to earn to have the best chance for success in this degree! Grades marked with an asterisk are required to pass.

## Helpful Hints

- CS 151 is prerequisite to all other computer science courses.
- Only offered Fall semester, every year: CS 272.
- Only offered Spring semester, every year: CS 252, MATH 219, PHYS 201.
- Only offered Spring semester, every other year: CS 221, CS 357.
- Semester 2—Students choosing the Cyber Security concentration should take CS 232 instead of CS 282. Offered every Spring semester.

# FOUR-YEAR PLAN Computer Science, B.S.

## Semester 5

| Course | Credits | Grade | ✔ |
|---|---|---|---|
| General Education Course | 3 | | ☐ |
| CS 253: Software Engineering | 3 | | ☐ |
| CS 325: Computer Organization and Hardware | 3 | | ☐ |
| PHYS 202: University Physics with Calculus, Part II | 4 | | ☐ |
| Elective or Concentration Course | 3 | | ☐ |

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## Semester 6

| Course | Credits | Grade | ✔ |
|---|---|---|---|
| General Education Course | 3 | | ☐ |
| CS 421: Operating Systems | 3 | 🏳 | ☐ |
| CS Concentration Course | 3 | | ☐ |
| Elective or Concentration Course | 3 | | ☐ |
| Elective or Concentration Course | 3 | | ☐ |

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## Semester 7 🏆

| Course | Credits | Grade | ✔ |
|---|---|---|---|
| General Education Course | 3-4 | | ☐ |
| CS 261: Introduction to Intelligent Systems | 3 | | ☐ |
| CS 442: Analysis of Algorithms | 3 | | ☐ |
| CS: 456: Capstone Project | 2 | 🏆 | ☐ |
| PHYS 319: Digital Electronics | 2 | | ☐ |

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## Semester 8 🏆

| Course | Credits | Grade | ✔ |
|---|---|---|---|
| CS 232: Introduction to Computer Security | 3 | | ☐ |
| CS 456: Capstone Project | 2 | 🏆 | ☐ |
| Elective or Concentration Course | 3 | | ☐ |
| Elective or Concentration Course | 3 | | ☐ |
| CS or MATH course | 3 | | ☐ |

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**You're FINISHED!!**

## ADVISING

When you choose to pursue this degree, you will be assigned an advisor who is an expert in the field of Computer Science. This advisor can help you with course selection, career planning, resume building, and help you with tracking your path to degree completion.

## CAREERS

With a degree in Computer Science, you will be trained for careers such as: Software Developer; Software Engineer; Computer Programmer; Information Security Analyst; Computer Network Architect.

## STUDENT ORGANIZATIONS

Coding Coalition

## COMPLEMENTARY MINORS

CS pairs well with most minors.
The **Analysis, Simulation, and Modeling** concentration is ideal for those who want to minor or double major in a science.

## CAPSTONE

The Computer Science degree culminates in a Capstone Project. Students will take two consecutive semesters of CS 456 to fulfill this requirement.

## Helpful Hints

- Only offered Fall semester, every year: CS 261, CS 325, PHYS 202.
- Only offered Fall semester, every other year: CS 253, CS 442.
- Only offered Spring semester, every year: CS 232.
- Only offered Spring semester, every other year: CS 421.
- Semester 7—PHYS 325 may be offered instead of PHYS 319.
- Semester 8—Students choosing the Cyber Security concentration should take CS 282 instead of CS 232. Offered every Spring semester.