

Declaring/Changing a Major, Minor, or Applied Minor

Section A: Policies and Instructions

Declaring a Major:

1. Students are required to file a declaration of major at the Registrar's Office no later than the end of their fourth semester.
2. A late fee of \$25.00 will be charged if the petition is submitted after the deadline.
3. A declared major may be changed at any time up to the add/drop deadline of the student's final semester by submitting a new major declaration form.

Declaring a Minor:

1. Minors are optional programs, you are not required to have a minor to graduate.
2. The deadline for declaring a minor is the 5th day of classes of the spring semester of the senior year.
3. Students must declare their Major Field of concentration before declaring a minor.

Declaring an Applied Minor:

1. Applied minors are optional programs, they are not required for graduation.
2. The deadline for declaring an applied minor is the 5th day of classes of the spring semester of the senior.

Progress towards completion of a major, a minor, and an applied minor will be tracked in DegreeWorks.

Complete Section B below and the relevant program section. Next to each requirement, indicate which semester (e.g. Fall 2023) you have taken or will take that course.

Your form must be signed by the Department/Program and your academic advisor (must be in your field of study for your major).

Section B: Student Information

Student Name _____ ID# _____

Email _____ Date _____

Planned Date of Graduation: May _____ December _____ Year: _____

Select one:

- _____ I wish to declare my primary Major
- _____ I wish to declare a Minor
- _____ I wish to declare a second Major
- _____ I wish to declare an Applied Minor
- _____ I wish to change my Major

Computer Science

Use this form to declare a major or a minor in [Computer Science](#).

Declaration/Change of Major

To earn a Bachelor of Arts in Computer Science, you must complete the following courses, in addition to general education requirements:

Core courses (28 credit hours)

Course Code	Course Title	Credit Hours	Semester
<input type="checkbox"/> MATH 180	Calculus A	4	
<input type="checkbox"/> MATH 195	Math Toolkit	2	
<input type="checkbox"/> CS 128	Programming & Problem Solving	4	
<input type="checkbox"/> CS 256	Data Structures	4	
<input type="checkbox"/> CS 266	Computing Skills	1	
<input type="checkbox"/> CS 310	Algorithms	3	
<input type="checkbox"/> CS 320	Principles of Computer Organization	3	
<input type="checkbox"/> CS 388	Methods For Research and Dissemination in Computer Science	3	
<input type="checkbox"/> CS 488	Senior Seminar	3	

Four additional CS courses (12 credits hours) from the following:

Course Code	Course Title	Credit Hours	Semester
<input type="checkbox"/> CS 335	Advanced Data Structures	3	
<input type="checkbox"/> CS 345	Software Engineering	3	
<input type="checkbox"/> CS 350	Electronics & Instrumentation	3	
<input type="checkbox"/> CS 355	Computer Game Design	3	
<input type="checkbox"/> CS 360	Parallel & Distributed Computation	3	
<input type="checkbox"/> CS 365	Artificial Intelligence and Machine Learning	3	
<input type="checkbox"/> CS 375	Cyberethics in the Current Age	3	
<input type="checkbox"/> CS 410	Networks & Networking	3	
<input type="checkbox"/> CS 420	Operating Systems	3	
<input type="checkbox"/> CS 430	Database Systems	3	
<input type="checkbox"/> CS 440	Programming Languages	3	
<input type="checkbox"/> CS 382/482	Special Topics	3	

<input type="checkbox"/> CS 481	Internship (requires departmental approval)	0-3
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In exceptional cases, the department may allow

Course Code	Course Title	Credit Hours	Semester
<input type="checkbox"/> CS 484	Faculty/Student Collaborative Research	1-3	
<input type="checkbox"/> CS 485	Independent Study	1-3	
<input type="checkbox"/> CS 486	Student Research	1-3	

Concentrations

Beginning in the 2022-23 academic year, students majoring in computer science have the option to focus their studies in one of four areas of concentration:

- Computing for social good
- Cybersecurity
- Game design
- Systems engineering and administration

Your academic adviser can help you understand the requirements for each concentration area.

Computing for Social Good

Course Code	Course Title	Credit Hours	Semester
<input type="checkbox"/> MATH 180	Calculus A	4	
<input type="checkbox"/> MATH 195	Math Toolkit	2	
<input type="checkbox"/> CS 128	Programming & Problem Solving	4	
<input type="checkbox"/> CS 256	Data Structures	4	
<input type="checkbox"/> CS 266	Computing Skills	1	
<input type="checkbox"/> CS 310	Algorithms	3	
<input type="checkbox"/> CS 320	Principles of Computer Organization	3	
<input type="checkbox"/> CS 388	Methods For Research and Dissemination in Computer Science	3	
<input type="checkbox"/> CS 488	Senior Seminar	3	
<input type="checkbox"/> CS 275	Computing for Social Good	3	
<input type="checkbox"/> CS 375	Cyberethics in the Current Age	3	
<input type="checkbox"/>	Three additional courses drawn from a selection from Computer Science and other disciplines		

Students may declare a concentration in CS for Social Good if they are graduating in Spring 2025 or later. Students graduating earlier than this who are interested in this field should speak with their advisor about how to best position themselves in this area, but cannot declare a concentration.

Cybersecurity

The Computer Science department plans to make Cybersecurity available as a concentration for students graduating in Spring 2026 or later. Students graduating earlier than this who are interested in this field should speak with their advisor about how to best position themselves in this area, but cannot declare a concentration.

Game Design

Course Code	Course Title	Credit Hours	Semester
<input type="checkbox"/> MATH 180	Calculus A	4	
<input type="checkbox"/> MATH 195	Math Toolkit	2	
<input type="checkbox"/> CS 128	Programming & Problem Solving	4	
<input type="checkbox"/> CS 256	Data Structures	4	
<input type="checkbox"/> CS 266	Computing Skills	1	
<input type="checkbox"/> CS 310	Algorithms	3	
<input type="checkbox"/> CS 320	Principles of Computer Organization	3	
<input type="checkbox"/> CS 355	Computer Game Design	3	
<input type="checkbox"/> CS 388	Methods For Research and Dissemination in Computer Science	3	
<input type="checkbox"/> CS 488	Senior Seminar	3	
<input type="checkbox"/>	Three additional courses drawn from a selection from Computer Science and other disciplines		

*[CS 355](#): Students should endeavor to take this course as early in the sequence as their schedule allows.

A student's Capstone project, proposed in [CS 388](#) and executed in [CS 488](#), should tie in to the field of Computer Game Design in some way.

If a student's schedule permits, they are strongly encouraged to take [CS 455](#), Game Design Studio, to deepen their understanding of the material and further strengthen their portfolio. This course is offered as a stacked class with [CS 355](#).

Students may declare a concentration in Computer Game Design if they are graduating in Spring 2025 or later. Students graduating earlier than this who are interested in this field should speak with their advisor about how to best position themselves in this area, but cannot declare a concentration.

Systems Administration

Course Code	Course Title	Credit Hours	Semester
<input type="checkbox"/> MATH 180	Calculus A	4	
<input type="checkbox"/> MATH 195	Math Toolkit	2	
<input type="checkbox"/> CS 128	Programming & Problem Solving	4	
<input type="checkbox"/> CS 256	Data Structures	4	
<input type="checkbox"/> CS 266	Computing Skills	1	

<input type="checkbox"/> CS 310	Algorithms	3
<input type="checkbox"/> CS 320	Principles of Computer Organization	3
<input type="checkbox"/> CS 388	Methods For Research and Dissemination in Computer Science	3
<input type="checkbox"/> CS 488	Senior Seminar	3
<input type="checkbox"/> CS 325	Systems Engineering & Administration	3
<input type="checkbox"/> CS 425	Advanced Topics In Systems Engineering and Administration	

Minor/Applied Minor Declaration Form

Declared Major(s) _____

To earn a minor in computer science, you must complete the following courses:

Course Code	Course Title	Credit Hours	Semester
<input type="checkbox"/> MATH 195	Math Toolkit	2	
<input type="checkbox"/> CS 128	Programming & Problem Solving	4	
<input type="checkbox"/> CS 256	Data Structures	4	
<input type="checkbox"/> CS 310	Algorithms	3	

Three additional CS courses, 300 and above, excluding:

Course Code	Course Title	Credit Hours	Semester
<input type="checkbox"/> CS 481	Internship (requires departmental approval)	0-3	
<input type="checkbox"/> CS 483	Teaching Assistant	1-3	
<input type="checkbox"/> CS 484	Faculty/Student Collaborative Research	1-3	
<input type="checkbox"/> CS 485	Independent Study	1-3	
<input type="checkbox"/> CS 486	Student Research	1-3	

In exceptional cases, the department may waive the exclusion of CS 484, CS 485 or CS 486.

This student is hereby approved to pursue a major _____ / minor _____ in accordance to the above plans (please enter your full name below).

Academic advisor _____ Date _____

Department/Program Convener _____ Date _____

This completed form must be emailed to registrar@earlham.edu for processing. Your adviser and the Department/Program Convener must be copied on the email.

Registrar _____ Date _____