

Computer Science Minor

Chair: Daniel Joyce, Ph.D.

Office Location: Mendel Science Center Rm. 161

Telephone: (610) 519-7307

[Website](#)

About

The Department of Computing Sciences seeks to provide outstanding education, to advance scholarship, and to engage in activities that benefit society as a whole, in accordance to the University mission. The Department aims to equip students with a solid foundation in computer science, and to prepare them for lifelong independent learning and innovative thinking in a constantly changing discipline. Its faculty members strive to maintain professional currency, and to involve students and colleagues in their research investigations. These endeavors support the University mission to transmit, pursue, and discover knowledge in an atmosphere of collegiality in the university community. Supported by a liberal arts education, the Department seeks to develop the total person, sensitive to social and ethical concerns affected by the computing discipline, and committed to addressing the needs of a diverse and interconnected modern society.

Program: [Computing Sciences](#)

Type: Minor

MINOR: Computer Science (20 credits)

The computer science minor consists of 6 courses from the requirements for the computer science major. The minor provides a strong foundation in computer science suitable for application to any other major field of endeavor.

Program Notes:

- Courses that fulfill minor requirements may be used to fulfill other requirements (i.e., primary major, core curriculum, minors, concentrations, or free electives).

Course	Title	Credits
	CSC 1051 or ECE 1260 & 1261	4
	CSC 1052 or ECE 2160 & 2161	4
	CSC 1300 or MAT 2600	3
CSC 2053	Platform Based Computing	3
CSC 4480	Principles of Database Systems	3
	Computer Science Electives for Minor	3-4

Category Descriptions

CSC 1051 or ECE 1260 & 1261

Credits: 4

Select 1 option from CSC 1051 or ECE 1260 & 1261.

Course	Title	Credits
CSC 1051	Algorithms & Data Struc I	4
ECE 1260	EGR Prog and Applic	3
ECE 1261	EGR Prog and Applic	1

CSC 1052 or ECE 2160 & 2161

Credits: 4

Select 1 option from CSC 1051 or ECE 2160 & 2161

Course	Title	Credits
CSC 1052	Algorithms & Data Struc II	4
ECE 2160	C++ Algorithms & Data Struct	3
ECE 2161	C++ Algorithms&Data Struct Lab	1

CSC 1300 or MAT 2600

Credits: 3

Select 1 class from these options.

Course	Title	Credits
CSC 1300	Discrete Structures	3
MAT 2600	Foundation of Math I	3

Computer Science Electives for Minor

Credits: 3-4

Select 1 Class from the list below.

- Student can request permission from the CSC department chair to use other courses related to computing as an elective.

Course	Title	Credits
CSC 1600	Operating Systems	3
CSC 1700	Analysis of Algorithms	3
CSC 1800	Organ of Prog Languages	3
CSC 2400	Computer Systems I	3
CSC 3010	Overview of Cybersecurity	3
CSC 3080	Info Security & Protection	3
CSC 3150	Game Development	3
	One Linear Algebra Course	3-4
CSC 3400	Information Retrieval	3
CSC 4170	Theory of Computation	3
CSC 4181	Compiler Construction	3
CSC 4300	Computer Graphics	3
CSC 4380	Info Visualization	3
CSC 4450	Digital Forensics	3
	CSC 4490 or STAT 4480	3
CSC 4500	Artificial Intelligence	3
CSC 4505	Applied Machine Learning	3
CSC 4510	Machine Learn&Theory&Evolution	3
	CSC 4550 or STAT 4380	3
CSC 4598	Machine Translation	3
CSC 4630	Software Dev and Systems	3
CSC 4700	Software Engineering	3
CSC 4730	Human Computer Interaction	3
CSC 4800	Web Application Development	3
CSC 4810	Mobile App Development	3
	CSC 4900 or ECE 3180	3
CSC 5920	Logic	3
CSC 5930	Topics Computer Science	3
CSC 5993	Independent Study	3
PHI 2180	Computer Ethics	3
CSC 4505	Applied Machine Learning	3
ECE 3476	Computer and Network Security	3