THE UNIVERSITY OF SCRANTON

COLLEGE OF ARTS & SCIENCES

COMPUTER SCIENCE

About the Program

Computer science students master the underlying concepts of computing, with an emphasis on software engineering. At Scranton, computer science majors build an educational and experiential foundation to become innovators in the field or to pursue advanced study.

Students in this ABET accredited program also have the option of pursuing an exciting track in game development.

Outcomes & Opportunities

- Students are encouraged to do internships to gain workplace experience. These experiences provide an opportunity for students to help companies utilize problem-solving technology.
- Students enter the workplace armed with practical skills and experience, finding employment as computer systems analysts, software engineers, information systems managers and business application developers.
- You'll find graduates working in a wide range of companies and organizations including Microsoft, IBM, Lockheed Martin, MetLife, *The New York Times* and Facebook.
- Students with strong undergraduate records may be accepted and dually enrolled in Scranton's graduate program in software engineering through the Combined Baccalaureate/Master's degree program.
- Other alumni have completed advanced degrees at Carnegie Mellon, Harvard, Penn, UConn, Drexel, Iowa State, Lehigh, UMass and Yale.

Ranked #8 nationally for "Best Science Labs" by The Princeton Review

A CATHOLIC & JESUIT UNIVERSITY • FOUNDED IN 1888 •

SUCCESS AHEAD

admissions.scranton.edu/compsci

COMPUTER SCIENCE CURRICULUM

	Department & Number - Descriptive Title of Course	Fall Cr.	Spr. Cr.
FIRST YEAR			
MAJOR	CMPS 134 - Computer Science I/CMPS 134L –		
	CMPS 144 - Computer Science II/CMPS 144L	4	4
GE QUAN	MATH 142 - (Q) Discrete Structures	4	
COGNATE	MATH 114 - (Q) Calculus I		4
GE EP	CMPS 112 - (FYDT, FYOC) Introduction to Computing		
	& Information Technology	3	
GE EP	WRTG 107 - (FYW) Composition		3
GE PHIL-T/RS	PHIL 120 - Introduction to Philosophy		
	T/RS 121 - (P) Theology I: Introduction to the Bible	3	3
GE HUMN	HUMN ELECT - Humanities Electives	3	3
GE FSEM	First Year Seminar [1]		
		17	17
SECOND YEAR			
MAJOR	CMPS 240 - Data Structures & Algorithms		
	CMPS 250 - Machine Organization & Assembly Language Programming	3	3
MAJOR	CMPS 260 - Theoretical Foundations of Computer Science		3
MAJOR	CMPS 213 - Sophomore Colloquia I – CMPS 214 - Sophomore Colloquia II	0.5	0.5
COGNATE	MATH 221 - Calculus II - MATH ELECTIVE [4]	4	3-4
GE NSCI	NSCI ELECT - Natural Science Elective [2]	4-4.5	4-4.5
GE PHIL-T/RS	PHIL 210 - Ethics		
	T/RS 122 - (P) Theology II: Introduction to Christian Theology	3	3
		14.5-15	16.5-18
THIRD YEAR			
MAJOR	CMPS 352 - Operating Systems – CMPS 344 - Programming Languages	3	3
MAJOR	CMPS 340 - Introduction to Database	3	
MAJOR	CMPS 350 - Computer Architecture	3	
MAJOR	CMPS ELECT - Major Electives [3]		6
MAJOR	CMPS 313 - Junior Colloquia I – CMPS 314 - Junior Colloquia II	0.5	0.5
GE S/BH	S/BH ELECT - Social/Behavioral Electives	3	3
GE ELECT	FREE ELECT - Free Electives	3	3
		15.5	15.5

	Department & Number - Descriptive Title of Course	Fall Cr.	Spr. Cr.
FOURTH YEAR			
MAJOR	CMPS 374 - (W,EPW) Fundamentals of Software Engineering –		
	CMPS 490 - (W,EPW) Capstone Project	3	3
MAJOR	CMPS ELECT - Major Electives [3]	3	3
MAJOR	CMPS 413 - Senior Colloquia I – CMPS 414 - Senior Colloquia II	0.5	0.5
GE PHIL	PHIL 214 - (P) Computers & Ethics		3
GE HUMN	HUMN ELECT - Humanities Electives	3	3
GE ELECT	FREE ELECT - Free Elective	3	
		12.5	12.5

Total: 121-123 Credits

ABET Computing Accreditation Commission

Accredited by the Computing Accreditation Commission of ABET, abet.org

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CONTACT INFORMATION

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1.888.SCRANTON *or visit* **admissions.scranton.edu**

[1] The selection of a First Year Seminar is likely to fulfill requirements for both the First Year Seminar and a General Education Requirement. Thus, the First Year Seminar will not add to the total credits for the semester. Talk with your advisor if you have any questions.

[2] Computer Science majors must complete at least 8 credits of courses in a laboratory science for science or engineering majors. Qualifying sequences include PHYS 140-PHYS 141, CHEM 112-113 or BIOL 141-BIOL 142, along with their associated Labs; other courses require explicit approval of the department.

[3] Major electives in Computer Science must be chosen from CMPS 341, CMPS 354, CMPS 355, CMPS 356, CMPS 358, CMPS 360, CMPS 362, CMPS 364, CMPS 370, CMPS 372, CMPS 376, CMPS 384, CMPS 393, CMPS 440 and CMPS 481.

[4] Must be a mathematics course approved by the department.

Curriculum grid effective for the 2022-23 academic year in accordance with the undergraduate course catalog.