

COMPUTER SCIENCE MAJOR

Requirements

The computer science major may be taken toward either the Bachelor of Arts (B.A.) or the Bachelor of Science (B.S.) degree. The B.A. degree in computer science requires a total of 14 courses, and the B.S. degree in computer science requires a total of 16 courses.

Course	Title	Credits
Required courses		
CISC 1400	Discrete Structures	4
CISC 2100 & CISC 2110	Discrete Structures II and Discrete Structures II Lab ¹	4
CISC 1600 & CISC 1610	Computer Science I and Computer Science I Lab ²	4
CISC 2000 & CISC 2010	Computer Science II and Computer Science II Lab	4
CISC 2200	Data Structures	4
CISC 3500	Database Systems	4
CISC 3593	Computer Organization	4
CISC 3595	Operating Systems	4
CISC 4080	Computer Algorithms	4
CISC 4090	Theory of Computation	4
CISC 4615	Data Communications and Networks	4
For the Bachelor of Arts degree		
Select two electives ³		
For the Bachelor of Science degree		
CISC 4631	Data Mining	
MATH 1206	Calculus I ^{4,5}	
Select three electives ³		

¹ For students entering prior to Fall 2015 (class of 2020 or earlier), CISC 4700 Network and Client Server is required instead of CISC 2100 Discrete Structures II.

² Students who take CISC 1600 during Fordham's Summer Session do not take CISC 1610, as the summer lecture and lab are offered in a combined format.

³ Elective courses are selected from department courses (which may include some graduate courses) or in cognate areas in consultation with a department adviser. One elective CISC course must be numbered 2000 or above, while the remaining elective must be numbered 3000 or above. The following courses may not count toward this requirement: CISC 4001 Computers and Robots in Film, CISC 4650 Cyberspace: Issues and Ethics, and CISC 4660 Minds, Machines, and Society.

⁴ Required for students entering in Fall 2017 (class of 2022) and later.

⁵ MATH 12AB Transfer Calculus AB and MATH 12BC Transfer Calculus BC (transfer credit from AP Calculus AB or AP Calculus BC) also fulfill this requirement.

3-2 Engineering Program

Computer science majors pursuing the Cooperative Program in Engineering have a slightly different set of requirements to fulfill to complete their major in computer science. All courses are required.

Course	Title	Credits
Computer Science Courses		
CISC 1600 & CISC 1610	Computer Science I and Computer Science I Lab ¹	4
CISC 2000 & CISC 2010	Computer Science II and Computer Science II Lab	4
CISC 2200	Data Structures	4
CISC 3500	Database Systems	4
CISC 3593	Computer Organization	4
CISC 3595	Operating Systems	4
CISC 4080	Computer Algorithms	4
CISC 4090	Theory of Computation	4
CISC 4615	Data Communications and Networks	4
CISC 4631	Data Mining	4
Mathematics Courses		
MATH 1206	Calculus I ²	4
MATH 1207	Calculus II	4
MATH 2001	Discrete Mathematics	4
MATH 2004	Multivariable Calculus I	4
MATH 2005	Multivariable Calculus II	4
MATH 2006	Linear Algebra I	4
MATH 3002	Differential Equations	4
Physics Courses ³		
PHYS 1701 or NSCI 1701	Physics I	3
PHYS 1703 or NSCI 1703	Physics I Recitation	0
PHYS 1511 or NSCI 1511	Physics I Lab	1
PHYS 1702 or NSCI 1702	Physics II	3
PHYS 1704 or NSCI 1704	Physics II Recitation	0
PHYS 1512 or NSCI 1512	Physics II Lab	1
Chemistry Courses ³		
CHEM 1321 or NSCI 1321	General Chemistry I	4
CHEM 1331 or NSCI 1331	General Chemistry Lab I	2

¹ Students who take CISC 1600 during Fordham's Summer Session do not take CISC 1610, as the summer lecture and lab are offered in a combined format.

² MATH 12AB Transfer Calculus AB and MATH 12BC Transfer Calculus BC (transfer credit from AP Calculus AB or AP Calculus BC) also fulfill this requirement.

³ Students at the Lincoln Center campus typically fulfill these requirements via courses with Natural Sciences courses (subject code NSCI). Students at the Rose Hill Campus typically fulfill these requirements with Physics (subject code PHYS) and Chemistry (subject code CHEM) courses.

These courses fulfill only Fordham University's requirements to earn the B.S. in computer science for 3-2 students. Additional Columbia

requirements need to be fulfilled for acceptance into one of Columbia's engineering tracks. Consult the 3-2 program director for additional guidance.

Availability

The major in computer science is available at Fordham College at Rose Hill, Fordham College at Lincoln Center, and Fordham's School of Professional and Continuing Studies at Rose Hill and Lincoln Center.

Fordham College at Rose Hill students: *The requirements above are in addition to those of the Core Curriculum.*

Fordham College at Lincoln Center students: *The requirements above are in addition to those of the Core Curriculum.*

Professional and Continuing Studies students: *The requirements above are in addition to those of the PCS Core Curriculum and any additional electives that may be required to earn a minimum of 124 credits.*