

# COMPUTER SCIENCE (B.A.)

The Bachelor of Arts in Computer Science provides an introduction to the discipline and an opportunity to integrate Computer Science (CS) with another field. In contrast to the B.S. program, the B.A. requires fewer credits in CS, permitting a student to complete a second major, minor, or courses in another discipline such as Mathematics, Management, and Physics; thus it satisfies the needs of students with a combination of interests.

## Integrative Studies Requirements

Minimum 40 credits

Code	Title	Credits	Completed
<b>Major Requirements (50 credits)</b>			
<i>Core Requirements:</i>			
ISCS-140	Programming Foundations I	4	
CS-185	Programming Foundations II	4	
CS-265	Computer Architecture	4	
CS-280	Data Structures & Algorithms	4	
CS-355	Computer Networks	4	
CS-360	Database Systems	4	
MATH-135	Discrete Mathematics for CS	4	
ISCS-150 or INCS-160	Website Design & Construction Microcomputer Systems	4	
CS-215 or CS-320	OS Administration Operating Systems Design	4	
CS-293 or CS-493	Supervised Field Experience Adv Supervised Field Experienc	2	
MATH-141	Introductory Statistics (*recommended but not required*)		
<i>Select <b>one</b> of the following:</i>		4	
ISCS-210	Python Programming		
CS-225	C++ Programming		
CS-290	Special Topics (with department approval)		
<b>Upper-Level Requirements</b>			
<i>Select <b>two</b> of the following:</i>		8	
IICS-350	Cybercrime		

CS-375	Software Engineering	
CS-395	Mobile Device App Programming	
CS-420	E-Commerce Development	
CS-430	Principles Program Languages	
CS-455	Crypt & Network Security	
CS-490	Advanced Special Topics	
CS-495	AI & Robotics	
CS-498	Independent Study (allowed with department approval)	
IIPHYS-342	Data Analysis for Scientists	
<b>Total Credits</b>		<b>50</b>

It is strongly recommended for students to consider participating in either CS-297 Internship or CS-497 Advanced Internship.

## Electives

Select courses to reach a total of 120 credits for the degree.

## Degree Requirements

120 credits

40 credits at the upper-level

## Upon completion of the Computer Science B.A. degree, students will be able to:

- Demonstrate software development skills in at least one computer programming language through the commonly accepted level of data structures.
- Demonstrate understanding of fundamental data structures and algorithms.
- Demonstrate an introductory understanding of computer architecture and/or operating systems other than Microsoft Windows (currently Linux, Unix or iSeries).
- Demonstrate understanding in fundamental mathematical concepts in order to be competent computer scientists
- Demonstrate technical skills in completing mathematical processes.
- Demonstrate software development skills in at least one other computer programming language not taught in item 1 above.