B.A. IN COMPUTER SCIENCE (CS.BA)

Code	Title	Credits
Major Requirements/Computer Science (54 credits)		
CS-104	Introduction to Problem Solving and Software Development	3
(Satisfies Technological Literacy (TL) in General Education)		
CS-175	Introduction to Computer Science I	3
CS-175L	Introduction to Computer Science I lab	1
CS-176	Introduction to Computer Science II	3
CS-176L	Introduction to Computer Science II Lab	1
CS-205	Data Structures and Algorithms	3
CS-205L	Data Structures and Algorithms Lab	1
CS-286	Computer Architecture I	3
CS-305	Advanced Computing	3
CS-325	Software Engineering Concepts	3
CS-310	Advanced Object-Oriented Programming and Design	3
CS-414	Computer Networks	3
CS-432	Database Systems	3
CS-438	Operating Systems Analysis	3
CS-450	Cyber Security	3
CS-492A	Computer Science Senior Project A	3
CS-492B	Computer Science Senior Project B	3
(CS-492A and CS-492B satisfy Reasoned Oral Discourse (RD) in General Education)		
Select 6 credits of Computer Science (CS) courses at the 200-level or higher [1]		6
Select 3 credits of Computer Science (CS) courses at the 400-level or higher (except CS-488 and CS-489)		3
Interdisciplinary Requirements (7 credits)		
MA-130	Applied Discrete Mathematics	3
Select one of the following:		4
MA-109	Pre-Calculus Mathematics	
Select 4 credits of Mathematics (MA) [2]		
(MA-109 or higher satisfies Mathematics in General Education)		
Free Electives (23 credits) [3]		
Select 23 credits of free electives [3]		23
General Education Requirements (36 credits) [4]		
Complete 36 credits as outlined on the General Education table. [4]		36
Total Credits		**120**

1

Except the following courses: CS-288, CS-289, CS-388, CS-389, CS-488, and CS-489

2

Except MA-100 Quantitative Reasoning and Problem Solving (3 cr.), MA-101 College Algebra (3 cr.)MA-103 Foundations of Elementary Mathematics (3 cr.)MA-105 Mathematical Modeling in the Social Sciences (3 cr.)MA-107 Mathematics in the Arts (3 cr.)MA-120 Introduction to Mathematical Reasoning (4 cr.)MA-130 Applied Discrete Mathematics (3 cr.)MA-203 Foundations of Elementary Mathematics I (3 cr.)MA-204 Foundations of Elementary Mathematics II (3 cr.)MA-237 Programming and Technology in Mathematics (4 cr.)

3

Please consult with your advisor regarding the required number of free electives that must be completed.

4

The General Education curriculum requires the completion of 45 credits. However, students may be able to share credits from within their major or interdisciplinary requirements. Please consult with your advisor to determine which General Education *(*http://catalog.monmouth.edu/undergraduate-catalog/academic-programs-support-services-regulations/general-education-requirements/*) courses must be completed.*

Sequence Chart

First Year

Fall	Credits	Spring	Credits
EN-101 College Composition I	3	EN-102 College Composition II	3
CS-104 Introduction to Problem Solving and Software Development (Gen*Ed Technological Literacy (TL)	3	CS-175 & 175L	4
Gen*Ed Aesthetics (AT) AR,DA,MU,TH	3	MA-109 Pre-Calculus Mathematics (Gen*Ed Mathematics)	4
HS-xxx Historical Perspectives (HS.SV)	3	Gen*Ed Social Science Survey (SS.SV)	3
Gen*Ed Cultural Diversity (CD) or Global Understanding (GU)	3	Free Elective	3
Semester Credits	**15**	**Semester Credits**	**17**

Second Year

Fall	Credits	Spring	Credits
CS-176 & 176L	4	CS-286 Computer Architecture I	3
MA-130 Applied Discrete Mathematics	3	CS-205 & 205L	4
Gen*Ed Historical Perspectives (HS.SV) or Social Science Survey (SS.SV)	3	Gen*Ed Natural Science (NS) BY,CE,PH,SC,GL	3
Gen*Ed Natural Science (NS) BY,CE,PH,SC,PL	3	Free Elective	6
EN-2xx Gen*Ed Literature (LIT)	3		
Semester Credits	**16**	**Semester Credits**	**16**

Third Year

Fall	Credits	Spring	Credits
CS-310 Advanced Object-Oriented Programming and Design	3	CS-2xx+ Computer Science Elective	3
CS-305 Advanced Computing	3	Free Elective	4
CS-325 Software Engineering Concepts	3	CS-414 Computer Networks	3
CS-432 Database Systems	3	CS-438 Operating Systems Analysis	3
		FO-xxx Gen*Ed World Lanaguage	3
Semester Credits	**12**	**Semester Credits**	**16**

Fourth Year

Fall	Credits	Spring	Credits
CS-2xx+ Computer Science Elective	3	CS-400 Computer Science Elective	3
CS-450 Cyber Security	3	CS-492B Computer Science Senior Project B	3
CS-492A Computer Science Senior Project A	3	Free Electives	6
Free Elective (Gen*Ed Experiential Education (ExEd)	1	PR-4xx Gen*Ed Interdisciplinary Perspectives	3
Free Elective	3		
Semester Credits	**13**	**Semester Credits**	**15**

Total Credits 120