B.S. IN MATHEMATICS WITH A CONCENTRATION IN STATISTICS (MA.STAT.BS)

Code	Title	Credits
Major Requirements/Mathematics (42-43 credits)		
(Satisfies Mathematics in General Education)		
MA-120	Introduction to Mathematical Reasoning	3-4
or MA-130	Applied Discrete Mathematics	
MA-125	Calculus with Analytic Geometry I	4
MA-126	Calculus with Analytic Geometry II	4
MA-221	Linear Algebra	3
MA-220	Probability and Statistics I	3
MA-225	Calculus with Analytic Geometry III	4
MA-311	Differential Equations	3
MA-320	Probability and Statistics II	3
MA-350	Computation and Statistics	3
MA-419	Introduction to Mathematical Modeling	3
Select one of the following:		3
MA-421	Design of Experiments and ANOVA	
MA-440	Regression and Time Series Analysis	
MA-460	Multivariate and Categorical Statistics	
Select 6 credits from Mathematics (MA) from levels 300+, 400+ OR		6
CS-371	Scripting Languages	
CS-420	Survey of Artificial Intelligence Concepts and Practices	
CS-432	Database Systems	
DS-317	Ethics and Bias in Computer Science and AI	
MA Interdisciplinary Requirements (18 credits)		
CS-175	Introduction to Computer Science I	3
CS-175L	Introduction to Computer Science I lab	1
DS-310	Introduction to Data Science Using Low Code No Code	3
DS-320	Data Analysis Techniques Using Python	3
Select one of the following groups:		8
(Satisfies Natural Sciences in General Education)		
Group A (8 credits)		
CE-111	General Chemistry I	
CE-111L	General Chemistry I Laboratory	
CE-112	General Chemistry II	
CE-112L	General Chemistry II Laboratory	
Group B (8 credits)		
PH-211	General Physics with Calculus I	
PH-211L	General Physics with Calculus I Laboratory	
PH-212	General Physics with Calculus II	
PH-212L	General Physics with Calculus II Laboratory	
Group C (8 credits)		
BY-109	Introduction to Ecology and Evolution	
BY-110	Introduction to Cell and Molecular Biology	

Free Electives (23-24 credits) [1]		
Complete 23-24 of free elective credits. [1]		23-24
General Education Requirements (36 credits) [2]		
Complete 36 credits as outlined on the General Education table. [2]		36
Total Credits		**120**

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

[2] *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.*

Notes

- 54 credits must be completed at the 200 level or higher.

Sequence Chart

First Year

Fall	Credits	Spring	Credits
EN-101 College Composition I	3	EN-102 College Composition II	3
MA-125 Calculus with Analytic Geometry I (Gen*Ed Mathematics)	4	MA-120 Introduction to Mathematical Reasoning or 130	4
Gen*Ed Historical Perspectives (HS.SV)	3	MA-126 Calculus with Analytic Geometry II	4
Gen*Ed Aesthetics (AT) AR,DA,MU,TH	3	CS-175 Introduction to Computer Science I	3
Gen*Ed Technological Literacy (TL)	3	CS-175L Introduction to Computer Science I lab	1
Semester Credits	**16**	**Semester Credits**	**15**

Second Year

Fall	Credits	Spring	Credits
MA-220 Probability and Statistics I	3	MA-225 Calculus with Analytic Geometry III	4
MA-221 Linear Algebra	3	DS-310 Introduction to Data Science Using Low Code No Code	3
CE-111 & CE-111L or PH-211 & PH-211L or BY-109	4	CE-112 & CE-112L or PH-212 & PH-212L or BY-110	4
Gen*Ed Social Science Survey (SS.SV)	3	Gen*Ed Historical Perspectives (HS.SV) or Social Science Survey (SS.SV)	3
FO-XXX Gen*Ed World Language	3		
Semester Credits	**16**	**Semester Credits**	**14**

Third Year

Fall	Credits	Spring	Credits
MA-311 Differential Equations	3	MA-320 Probability and Statistics II	3
DS-320 Data Analysis Techniques Using Python	3	MA-350 Computation and Statistics	3
EN-2xx Gen*Ed Literature (LIT)	3	Gen*Ed Cultural Diversity (CD) or Global Understanding (GU)	3
Gen*Ed Reasoned Oral Discourse (RD)	3	Free Electives	6
Free Electives	3		
Semester Credits	**15**	**Semester Credits**	**15**

Fourth Year

Fall	Credits	Spring	Credits
MA-421 or MA-440 or MA-460	3	MA-419 Introduction to Mathematical Modeling	3
Major Elective (MA, CS, DS). See Curriculum Chart.	3	Major Elective (MA, CS, DS). See Curriculum Chart.	3
Free Electives	8	Gen*Ed Interdisciplinary Perspectives (ISP)	3
		Free Electives	6
Semester Credits	**14**	**Semester Credits**	**15**

Total Credits 120