

Mathematics Major-BS - Applied Statistics Concentration (Matriculated at UMD in 2020)

Freshman Year					
First Semester			Second Semester		
MTH 151	Calculus 1 (US 1D)	4	MTH 152	Calculus II	4
DSC 101	Introduction to Data Science (US 1E)	3	MTH 182	Discrete Mathematics II	3
MTH 181	Discrete Mathematics 1	3	MTH 147	Fundamentals of Statistics	3
ENL 101	Critical Reading & Writing I (US 1A)	3	ENL 102	Critical Reading & Writing II (US 1B)	3
CAS 101	Introduction to the Arts & Sciences (US 1E)	1		Humanities/Social Science elective	3
		Total: 14			Total: 16
					Freshman Total: 30
Sophomore Year					
First Semester			Second Semester		
MTH 211	Analytic Geometry & Calculus III	4	MTH 231	Elementary Statistics I: Exploratory Data Analysis	3
MTH 221	Linear Algebra	3	MTH 280	Introduction to Scientific Computation	3
**	Natural Science I	4	**	Natural Science II	4
PHL 215	Introduction to Ethics (US 4A)	3	ENL 200	Studies in Literature	3
				US 2B elective	3
		Total: 14			Total: 16
					Sophomore Total: 30
					Cumulative Total: 60
Junior Year					
First Semester			Second Semester		
MTH 331	Probability	3	MTH 332	Mathematical Statistics	3
MTH 333	Statistical Computing	3	MTH 463	Mathematical Modeling	3
ENL 266	Technical Communication	3		Humanities/Social Science Elective	3
ENL 218	Literature and Society	3		Humanities/Social Science Elective	3
*	MTH/CIS/DSC Elective	3	*	MTH/CIS/DSC Elective	3
		Total: 15			Total: 15
					Junior Total: 30
					Cumulative Total: 90
Senior Year					
First Semester			Second Semester		
MTH 431	Applied Statistical Investigation (US 5A)	3	MTH 432	Applied Statistical Consulting (US 5B)	3
MTH 420	High Performance Scientific Computing	3	MTH 474	Numerical Optimization	3
MTH 473	Numerical Linear Algebra	3		US 4C Elective	3
	US 3B Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective (US 4B)	3	*	MTH/CIS/DSC Elective	3
		Total: 15			Total: 15
					Senior Total: 30
					Cumulative Total: 120

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Required Mathematics Cores:
MTH 147 ____ MTH 151 (US1D) ____ MTH 152 ____ MTH 181 ____ MTH 182 ____
MTH 211 ____ MTH 221 ____ MTH 231 ____ MTH 280 ____ MTH 331 ____ MTH 332 ____
MTH 333 ____ MTH 420 ____ MTH 431(US 5A) ____ MTH 432 (US 5B) ____
MTH 463 ____ MTH 473 ____ MTH 474 ____ (US 4C)
Additional Required Courses: ENL 101 ____ ENL 102 ____ ENL 200 ____ ENL 266 ____
ENL 218 ____ PHL 215 ____ CAS 101 ____
Plus:
* 9 units of MTH / CIS / DSC electives , which include all upper level classes in Mathematics, Computer Science or Data Science (MTH 212, MTH 311, MTH 312, MTH 353, MTH 361, MTH 362, MTH 421, MTH 441, MTH 499, DSC 201, DSC 301, CIS 115, CIS 180, CIS 181, CIS 215, or CIS 360 can be used)
** 8 units of Science electives, 2 of the following: BIO 121, BIO 122, CHM 155, CHM 156, PHY 113, PHY 114
*** 3 units of Technical electives , which may include any major level class in Computer science, Physics, or Engineering (CIS 115, CIS 180, CIS 181, or CIS 215, or CIS 360 can be used).
Students must take 6 units of literature (US 3A) and 18 units of Humanities and Social Science (at least 6 of each and no more than 6 in one department).
At the discretion of the Mathematics Department Chair, the requirements 5A & 5B in the mathematics department can be substituted with courses fulfilling 5A & 5B in other disciplines.
Students must earn a grade of C- or higher in each mathematics course which is counted toward the completion of mathematics requirements of the major.
Students must complete the total of 30 units at the 300 level or higher . Mathematics electives, Technical electives, and Science & Engineering electives count here, too.
Students must satisfy the University Studies requirements. Some Science, Literature, Humanities, and Social Sciences courses also satisfy University Studies requirements. Details are at the University Studies Site: http://www.umassd.edu/universitystudies/
Comment: