ADVANCE
A NOVA | MASON PARTNERSHIP

A.S. Science Mathematics Specialization/B.S. Statistics – Statistical Analytics Concentration

2019-20

A.S. Science Mathematics Specialization Pathway 2019-2020

ADVANCE Program Milestones

1. Students must take SDV 100 or SDV 101 in the first semester at NOVA.
2. Students must begin Developmental coursework in the first semester in ADVANCE at NOVA.
3. Students must take first college-level MTH course and ENG 111 in the semester immediately following the completion of any MTE or ENF courses (excluding summer).
4. In the first 30 credits, students must:
- **a. Complete ENG 111 and ENG 112 with a C or better.**
- **b. Complete the first college-level MTH course with a C or better.**
- **c. Engineering students must begin the calculus sequence and complete Calculus I and II with a B or better.**

5. Students must complete at least six degree-applicable credits with a C or better each fall and spring semester.
6. Students must maintain a 2.5 cumulative GPA.
7. Students must apply for NOVA graduation and complete their Associate's degree.

	NOVA DEGREE REQUIREMENT SEQUENCE	Credits	Courses	MASON TRANSFER EQUIVALENT	MASON CORE/DEGREE EQUIVALENT
1	**SDV Course**	1	SDV 100 College Success Skills **OR** SDV 101 Orientation to XXX	UNIV 100	Elective
2	**ENG 111**	3	ENG 111 College Composition I	ENGH 101	Written Comm
3	**HIS Course**	3	HIS 101 History of Western Civilization I **OR** HIS 102 History of Western Civilization II **OR** HIS 112 History of World Civilization II	HIST 101 HIST 102 HIST 125	Western Civ
4	**MTH 263**	4	MTH 263 Calculus I	MATH 113	Quant
5	**Social/Behavioral Sciences #1**	3	ECO 201 Principles of Macroeconomics **OR** ECO 202 Principles of Microeconomics **OR** GEO 210 Introduction to Cultural Geography **OR** HIS 121 United States History I **OR** HIS 122 United States History II **OR** PLS 135 American National Politics **OR** PLS 211 United States Government I **OR** PSY 200 Principles of Psychology **OR** PSY 230 Developmental Psychology **OR** SOC 200 Principles of Sociology **OR** SOC 212 Principles of Anthropology II	ECON 104 ECON 103 GGS 103 HIST 121 HIST 122 GOVT 103 GOVT 103 PSYC 100 PSYC 211 SOCI 101 ANTH 114	Soc/Behav
6	**ENG 112**	3	ENG 112 College Composition II	ENGH XXX	Elective
7	**MTH 264**	4	MTH 264 Calculus II	MATH 114	DEGREE
8	**Humanities/Fine Arts #1**	3	ART 100 Art Appreciation **OR** ART 101 History and Appreciation of Art I **OR** ART 102 History and Appreciation of Art II **OR** CST 130 Introduction to Theatre **OR** CST 151 Film Appreciation I **OR** MUS 121 Music Appreciation I	ARTH 101 ARTH 200 ARTH 201 THR 101 ENGH L372 MUSI 101	Arts
9	**Science Course #1**	4	BIO 101 General Biology I **OR** CHM 101 General Chemistry I **OR** ENV 121 General Environmental Science I **OR** GOL 105 Physical Geology **OR** PHY 101 Introduction to Physics I	BIOL 103 CHEM 103 EVPP 110 GEOL 101 PHYS 103	NAT SCIENCE
10	**MTH 265**	4	MTH 265 Calculus III	MATH 213	DEGREE
11	**Science Course #2**	4	BIO 102 General Biology II **OR** CHM 102 General Chemistry II **OR** ENV 122 General Environmental Science II **OR** GOL 106 Historical Geology **OR** PHY 102 Introduction to Physics II	BIOL 104 CHEM 104 EVPP 111 GEOL 102 PHYS 104	NAT SCIENCE
12	**CST Course**	3	CST 100 Principles of Public Speaking **OR** CST 110 Introduction to Communication	COMM 100 COMM 101	Oral Comm

13	**Social/Behavioral Sciences #2**	3	GEO 220 World Regional Geography **OR** PLS 140 Introduction to Comparative Gov't **OR** PLS 241 International Relations I	GGS 101 GOVT 133 GOVT 132	Global
14	**ITE 115 or CSC 200**	4	CSC 201 Computer Science I	CS 112	Info Tech
15	**MTH Course #1**	3	MTH 266 Linear Algebra	MATH 203	DEGREE
16	**MTH Course #2**	3	STAT 260 Introduction to Statistical Practice I	STAT 260	DEGREE
17	**Humanities/Fine Arts #2**	3	ENG 236 Introduction to the Short Story **OR** ENG 241 Survey of American Literature I **OR** ENG 242 Survey of American Literature II **OR** ENG 251 Survey of World Literature I **OR** ENG 252 Survey of World Literature II **OR** ENG 253 Survey of African-American Literature I	ENGH 2XX ENGH 2XX ENGH 2XX ENGH 2XX ENGH 2XX ENGH 2XX	Literature
18	**CSC 201 or MTH 288**	3	MTH 288 Discrete Mathematics	MATH 125	DEGREE
19	**General Education Elective**	4	CSC 202 Computer Science II	CS 211	DEGREE
A. S. SCIENCE (MATH) DEGREE TOTAL		**62**			

For academic policies and procedures, please see NOVA catalog - http://www.nvcc.edu/catalog/index.html

NOTE: Students must earn a C or better on all major requirements, including any course(s) required for prerequisites.

	MASON DEGREE REQUIREMENT SEQUENCE	Credits	Course	MASON CORE/DEGREE EQUIVALENT
20	**Statistics Core**	3	STAT 362 Introduction to Computer Statistical Packages	DEGREE
21	**Statistics Core**	3	STAT 334 Introduction to Probability Models and Simulation **OR** STAT 346 Probability for Engineers	DEGREE
22	**Computational Skills Core**	1	CS 105 Computer Ethics and Society **OR** CDS 151 Data Ethics in an Information Society	DEGREE
23	**Concentration Requirement**	3	CS 310 Data Structures	DEGREE
24	**Technical Electives**	3	Any approved Technical Electives*	DEGREE
25	**Gen Ed: Written Communication (UL)**	3	ENGH 302 Advanced Composition (Natural Science Section)	Written Comm
26	**Statistics Electives**	3	Any STAT course numbered 440-499**	DEGREE
27	**Statistics Core**	3	STAT 354 Probability and Statistics for Engineers and Scientists II **OR** STAT 360 Introduction to Statistical Practice II	DEGREE
28	**Statistics Core**	3	STAT 456 Applied Regression Analysis	DEGREE
29	**Concentration Requirement**	3	CS 330 Formal Methods and Models	DEGREE
30	**Concentration Requirement**	3	OR 481 Numerical Methods in Engineering	DEGREE
31	**Statistics Electives**	3	Any STAT course numbered 440-499**	DEGREE
32	**Statistics Core**	3	STAT 463 Introduction to Exploratory Data Analysis	DEGREE
33	**Concentration Requirement**	3	STAT 472 Introduction to Statistical Learning	DEGREE
34	**Concentration Requirement**	3	CS 450 Database Concepts **OR** CDS 302 Scientific Data and Databases	DEGREE
35	**Statistics Core**	3	STAT 489 Pre-Capstone Professional Development	Writing Intensive
36	**Concentration Requirement**	3	CS 484 Data Mining OR CDS 303 Scientific Data Mining	DEGREE
37	**Technical Electives**	3	Any approved Technical Electives*	DEGREE
38	**Statistics Electives**	3	Any STAT course numbered 440-499**	DEGREE
39	**Gen Ed: Synthesis/Statistics Core**	3	STAT 490 Capstone in Statistics	Synthesis
B.S. STATISTICS DEGREE TOTAL		**120**		

Denotes a course that must be taken at George Mason University. Please see your Success Coach to enroll.

***For approved Technical Electives, please visit - https://catalog.gmu.edu/colleges-schools/engineering/statistics/statistics-bs/#requirementstext**

****May not be used to fulfill other degree requirements.**

For academic policies and procedures, please see Mason catalog - https://catalog.gmu.edu/policies/

Students seeking a bachelor's degree must apply at least 45 credits of upper-level courses (numbered 300 or above) toward graduation requirements