ADVANCE
A NOVA | MASON PARTNERSHIP

A.S. Science: Mathematics Specialization / B.S. Mathematics Pathway
2020-2021

A.S. Science: Mathematics Specialization

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 MTT 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.
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	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	Quantitative
5	**Social/Behavioral Sciences #1**	3	ECO 201 Principles of Macroeconomics **OR** ECO 202 Principles of Microeconomics ***(required for Actuarial Concentration)*** **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 211 Principles of Anthropology I	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	Major
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***	4-5	CHM 111 General Chemistry I* **OR** GOL 105 Physical Geology* **OR** PHY 231 General University Physics I*	CHEM 211-213 GEOL 101 PHYS 160-161-266	Nat Science
10	**MTH 265**	4	MTH 265 Calculus III	MATH 213	Major
11	**Science Course #2***	4-5	CHM 112 General Chemistry II* **OR** GOL 106 Historical Geology* **OR** PHY 232 General University Physics II*	CHEM 212-214 GEOL 102 PHYS 260-261-XXX	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	**CSC 201**	4	CSC 201 Computer Science I	CS 112	Info Tech
15	**ITE 115 or CSC 200 (or MTH 288)**	3	MTH 288 Discrete Mathematics	MATH 125	Major
16	**Math Elective #1**	3	MTH 266 Linear Algebra	MATH 203	Major
17	**Math Elective #2**	3	MTH 267 Differential Equations	MATH 214	Major
18	**General Education Elective**	3-5	MTH 167 Precalculus with Trigonometry ***(if not placed directly into MTH 263)*** **OR** MTH 245 Statistics I ***(recommended for Mathematical Statistics concentration)*** **OR** CST 229 Intercultural Communication **OR** ECO 202 Principles of Microeconomics **OR** PHI 111 Logic I **OR** PSY 200 Principles of Psychology **OR** REL 100 Introduction to the Study of Religion **OR** SOC 200 Principles of Sociology	MATH 105 STAT 250 COMM L305 ECON 103 PHIL 173 PSYC 100 RELI 100 SOCI 101	Elective
19	**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 202	Literature
A. S. SCIENCE (MATH) DEGREE TOTAL		**61 - 63**			

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

B.S. Mathematics

Concentrations: Actuarial Mathematics, Applied Mathematics, Mathematical Statistics, and No Concentration.

	MASON DEGREE REQUIREMENT	Credits	Course	MASON CORE/DEGREE EQUIVALENT
20	**Concentration Course**	3-4	Concentration Course**	Major
21	**Mathematics Core**	3	MATH 322 Advanced Linear Algebra	Major
22	**Gen Ed: Written Communication (UL)**	3	ENGH 302 Advanced Composition (Natural Science Section)	Written Comm
23	**Concentration Course**	3	Concentration Course**	Major
24	**Concentration Course**	3	Concentration Course**	Major
25	**Concentration Course**	3	Concentration Course**	Major
26	**Mathematics Core**	3	MATH 300 Introduction to Advanced Mathematics	Writing Intensive
27	**General Electives**	3	General Electives (Upper-level See: Advisor)	Major
28	**Concentration Course**	3	Concentration Course**	Major
29	**Concentration Course**	3	Concentration Course**	Major
30	**General Electives**	3	Concentration Course**	Major
31	**General Electives**	3	Concentration Course**	Major
32	**General Electives**	3	Concentration Course**	Major
33	**General Electives**	3	General Electives (See: Advisor)	Major
34	**General Electives**	3	General Electives (See: Advisor)	Major
35	**General Electives**	0-2	General Electives (See: Advisor)	Major
36	**Concentration Course**	3	Concentration Course**	Major
37	**Concentration Course or General Electives**	3	Concentration Course** or General Electives (See: Advisor)	Major
38	**Concentration Course or General Electives**	3	Concentration Course** or General Electives (See: Advisor)	Major

39	**Gen Ed: Synthesis**	3	Approved synthesis course (MATH 400 recommended)***	Synthesis
B.S. MATHEMATICS DEGREE TOTAL		**120-121**		

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

***Students must complete a two-course sequence in the same subject.**

****For concentration course requirements see: https://catalog.gmu.edu/colleges-schools/science/mathematical-sciences/mathematics-bs/#requirementst**

*****For approved Mason Core courses, please visit - https://catalog.gmu.edu/mason-core/**

General Note: A maximum of 6 credits of grades below 2.00 in coursework designated MATH or STAT may be applied toward the major. Students intending to enter graduate school in mathematics are strongly advised to take MATH 315 Advanced Calculus I and MATH 321 Abstract Algebra. Students may not receive credit for both MATH 214 Elementary Differential Equations and MATH 216 Theory of Differential Equations; both MATH 213 Analytic Geometry and Calculus III and MATH 215 Analytic Geometry and Calculus III (Honors); both MATH 351 Probability and STAT 344 Probability and Statistics for Engineers and Scientists I; and both MATH 352 Statistics and STAT 354 Probability and Statistics for Engineers and Scientists II.

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.