

# ADVANCE

A NOVA | MASON PARTNERSHIP

A.S. Science Mathematics Specialization/B.S.  
Mathematics – Mathematical Statistics  
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.
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 <b>OR</b> 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 <b>OR</b> HIS 102 History of Western Civilization II <b>OR</b> 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 <b>OR</b> ECO 202 Principles of Microeconomics <b>OR</b> GEO 210 Introduction to Cultural Geography <b>OR</b> HIS 121 United States History I <b>OR</b> HIS 122 United States History II <b>OR</b> PLS 135 American National Politics <b>OR</b> PLS 211 United States Government I <b>OR</b> PSY 200 Principles of Psychology <b>OR</b> PSY 230 Developmental Psychology <b>OR</b> SOC 200 Principles of Sociology <b>OR</b> 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 <b>OR</b> ART 101 History and Appreciation of Art I <b>OR</b> ART 102 History and Appreciation of Art II <b>OR</b> CST 130 Introduction to Theatre <b>OR</b> CST 151 Film Appreciation I <b>OR</b> MUS 121 Music Appreciation I	ARTH 101 ARTH 200 ARTH 201 THR 101 ENGH L372 MUSI 101 Arts
9	Science Course #1	5	PHY 231 General University Physics I	PHYS 160-161-266 NAT SCIENCE
10	MTH 265	4	MTH 265 Calculus III	MATH 213 DEGREE
11	Science Course #2	5	PHY 232 General University Physics II	PHYS 260-261-XXX NAT SCIENCE
12	CST Course	3	CST 100 Principles of Public Speaking <b>OR</b> CST 110 Introduction to Communication	COMM 100 COMM 101 Oral Comm
13	Social/Behavioral Sciences #2	3	GEO 220 World Regional Geography <b>OR</b> PLS 140 Introduction to Comparative Gov't <b>OR</b> 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	CSC 201 or MTH 288 or MTH	3	MTH 288 Discrete Mathematics	MATH 125 DEGREE

16	MTH Course #1	3	MTH 266 Linear Algebra	MATH 203	DEGREE
17	MTH Course #2	3	MTH 267 Differential Equations	MATH 214	DEGREE
18	General Education Elective	3	MATH 290 Introduction to Advanced Mathematics	MATH 290	Writing Intensive
19	Humanities/Fine Arts #2	3	ENG 236 Introduction to the Short Story <b>OR</b> ENG 241 Survey of American Literature I <b>OR</b> ENG 242 Survey of American Literature II <b>OR</b> ENG 251 Survey of World Literature I <b>OR</b> ENG 252 Survey of World Literature II <b>OR</b> ENG 253 Survey of African-American Literature I	ENGH 202	Literature
<b>A. S. SCIENCE (MATH) DEGREE TOTAL</b>		<b>63</b>			

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

	MASON DEGREE REQUIREMENT SEQUENCE	Credits	Course	MASON CORE/DEGREE EQUIVALENT	
20	Additional Science	4	PHYS 262 University Physics III <b>AND</b> PHYS 263 University Physics III Lab	DEGREE	
21	Mathematics Core	3	MATH 322 Advanced Linear Algebra	DEGREE	
22	Gen Ed: Written Communication (UL)	3	ENGH 302 Advanced Composition (Natural Science Section)	Written Comm	
23	Concentration Course	3	MATH 315 Advanced Calculus I	DEGREE	
24	Concentration Course	3	MATH 351 Probability	DEGREE	
25	Concentration Course	3	MATH 352 Statistics	DEGREE	
26	Concentration Course	3	MATH 453 Advanced Mathematical Statistics in Actuarial Sciences	DEGREE	
27	General Electives	3	General Electives (Upper-level See: Advisor)	DEGREE	
28	Concentration Course	3	STAT 362 Introduction to Computer Statistical Packages	DEGREE	
29	Concentration Course	3	STAT 455 Experimental Design <b>OR</b> STAT 463 Introduction to Exploratory Data Analysis <b>OR</b> STAT 474 Introduction to Survey Sampling	DEGREE	
30	General Electives	3	General Electives (Upper-level See: Advisor)	DEGREE	
31	General Electives	3	General Electives (Upper-level See: Advisor)	DEGREE	
32	General Electives	3	General Electives (Upper-level See: Advisor)	DEGREE	
33	General Electives	3	General Electives (See: Advisor)	DEGREE	
34	General Electives	3	General Electives (See: Advisor)	DEGREE	
35	Concentration Course	3	MATH 551 Regression and Time Series	DEGREE	
36	Concentration Course	3	STAT 455 Experimental Design <b>OR</b> STAT 463 Introduction to Exploratory Data Analysis <b>OR</b> STAT 474 Introduction to Survey Sampling	DEGREE	
37	General Electives	3	General Electives (See: Advisor)	DEGREE	
38	Gen Ed: Synthesis	3	Approved synthesis course (MATH 400 recommended)*	Synthesis	
<b>B.S. MATHEMATICS DEGREE TOTAL</b>		<b>121</b>			

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

\*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.

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