ADVANCE
A NOVA | MASON PARTNERSHIP

A.S. Science: Mathematics Specialization / B.A. Mathematics Pathway
2021-2022

A.S. Science: Mathematics Specialization

ADVANCE Program Milestones

ADVANCE Milestone Requirements: All ADVANCE students must adhere to the following requirements. For Milestones #1-#3, failure to meet these milestones will prevent a student from matriculating to Mason and/or result in termination from ADVANCE. For Milestones #4-#6, failure to meet these milestones may delay matriculation to Mason.

1. Students must complete their NOVA degree within 4 years of being admitted into ADVANCE. Students are highly encouraged to be continuously enrolled at NOVA/Mason to support progress towards degree completion.

2. Students must maintain a minimum 2.5 cumulative GPA at NOVA and must have a minimum 2.5 GPA upon matriculation to Mason.

3. Students who wish to enroll at Mason for the fall semester must apply for NOVA graduation by March 1 for spring graduation or June 1 for summer graduation. Students who wish to enroll at Mason for the spring semester must apply for NOVA graduation by October 1 for winter graduation.

4. Students must begin developmental coursework in no later than the first semester in ADVANCE at NOVA.

5. Students must take first college-level MTH course and ENG 111 in the semester immediately following the completion of any MDE or EDE courses (excluding summer).

6. 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.**

	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	General 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 288** ***(NOVA Catalog: CSC 200 or MTH Elective)***	3	MTH 288 Discrete Mathematics	MATH 125	Major
5	**MTH 263**	4	MTH 263 Calculus I	MATH 113	Quantitative
6	**CSC 201**	4	CSC 201 Computer Science I	CS 112	Info Tech
7	**ENG 112**	3	ENG 112 College Composition II	ENGH XXX	General Elective
8	**MTH 264**	4	MTH 264 Calculus II	MATH 114	Major
9	**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** 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 PSYC 100 PSYC 211 SOCI 101 ANTH 114	Soc/Behav
10	**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
11	**MTH 265**	4	MTH 265 Calculus III	MATH 213	Major
12	**Math Elective #1**	3	MTH 266 Linear Algebra	MATH 203	Major

13	**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 103/105 CHEM 103 EVPP 110 GEOL 101 PHYS 103	Nat Science
14	**Social/Behavioral Sciences #2**	3	GEO 220 World Regional Geography **OR** PLS 140 Introduction to Comparative Politics **OR** PLS 241 International Relations I	GGS 101 GOVT 133 GOVT 132	Global
15	**CST Course**	3	CST 100 Principles of Public Speaking **OR** CST 110 Introduction to Communication	COMM 100 COMM 101	Oral Comm
16	**Math Elective #2**	3	MTH 267 Differential Equations	MATH 214	Major
17	**Science Course #2**	4	BIO 101 General Biology I **OR** BIO 102 General Biology II **OR** CHM 101 Introductory Chemistry I **OR** ENV 121 General Environmental Science I **OR** ENV 122 General Environmental Science II **OR** GOL 105 Physical Geology **OR** GOL 106 Historical Geology **OR** PHY 101 Introduction to Physics I **OR** PHY 102 Introduction to Physics II	BIOL 103/105 BIOL 102 CHEM 103 EVPP 108/109 EVPP 112/113 GEOL 101 GEOL 102/104 PHYS 103 PHYS 104	Nat Science
18	**General Education Elective** ***(If MTH 167 not selected, must choose different discipline than Soc/Behav above)***	3-5	MTH 167 PreCalculus with Trigonometry ***(if not placed directly into MTH 263)*** **OR** 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** PSY 200 Principles of Psychology **OR** PSY 230 Developmental Psychology **OR** SOC 200 Principles of Sociology **OR** SOC 211 Principles of Anthropology I	MATH 105 ECON 104 ECON 103 GGS 103 HIST 121 HIST 122 GOVT 103 PSYC 100 PSYC 211 SOCI 101 ANTH 114	General Elective or COS Soc/Behav
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.A. Mathematics

	MASON DEGREE REQUIREMENT	Credits	Course	MASON CORE/DEGREE EQUIVALENT
20	**College Requirement: Foreign Language**	6	Approved foreign language course[1] ***Students may opt to take a two course, 101/102 sequence if available***	Major
21	**General Electives**	3	General Electives (Upper-Level See: Advisor)	General Elective
22	**Mathematics Core**	3	MATH 322 Advanced Linear Algebra	Major
23	**College Requirement: COS Phil/Reli & Non-Western**	3	Approved Phil/Reli and Non-Western class[2] (Upper-level See: Advisor)	COS Phil/Reli & Non-Western
24	**College Requirement: Foreign Language**	3	Approved foreign language course[1]	Major
25	**General Electives**	3	General Electives (Upper-level See: Advisor)	General Elective
26	**Gen Ed: Written Communication (Upper-level)**	3	ENGH 302 Advanced Composition (Natural Science Section)	Written Comm
27	**Mathematics Core**	3	MATH 300 Introduction to Advanced Mathematics	Major

28	**General Electives**	3	General Electives (Upper-level See: Advisor)	General Elective
29	**Mathematics Electives**	3	Any MATH course numbered above 300 - excluding MATH 400	Major
30	**Mathematics Electives**	3	Any MATH course numbered above 300 - excluding MATH 400	Major
31	**College Requirement: Foreign Language**	3	Approved foreign language course[1]	Major
32	**General Electives**	3	General Electives (Upper-level See: Advisor)	General Elective
33	**General Electives**	3	General Electives (Upper-level See: Advisor)	General Elective
34	**General Electives**	3-5	General Electives (Upper-level See: Advisor)	General Elective
35	**Mathematics Electives**	3	Any MATH course numbered above 300 - excluding MATH 400	Major
36	**Mathematics Electives**	3	Any MATH course numbered above 300 - excluding MATH 400	Major
37	**Gen Ed: Synthesis**	3	Approved synthesis course (MATH 400 recommended)[3]	Synthesis
B.A. MATHEMATICS DEGREE TOTAL		**120**		

Important Academic Information:

[1]For approved Foreign Language Courses, please visit - https://catalog.gmu.edu/colleges-schools/science/mathematical-sciences/mathematics-ba/#requirementstext

[2]For approved Non-Western Culture courses for the COS College Requirement, please visit - https://catalog.gmu.edu/colleges-schools/science/mathematical-sciences/mathematics-ba/#requirementstext

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

Additional General Notes & Resources:

• 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.

• Students interested in pursuing licensure to teach at the secondary level may add the Undergraduate Certificate: Secondary Education - Mathematics to this degree. For more information visit: https://education.gmu.edu/secondary-education-6-12/academics/ . Some certificate courses can be used to fulfill general elective requirements, but additional credits may be needed to complete the certificate. Students interested in teacher licensure should meet with a Mason pre-teacher advisor. Contact information: https://cehd.gmu.edu/teacher/advising/advising-appointment/

• ADVANCE students who earn at least a 2.85 cumulative GPA and no more than 9 credits of unrepeated D/F grades may be eligible to receive a waiver for any lower-level Mason Core courses not already completed. To be eligible for the core waiver, students must also complete the requirements of the AA or AS degree listed on their pathway, and apply to graduate from NOVA by the deadline (see milestone #3). Students must meet these criteria by the time of matriculation to Mason and provide the Office of Admissions a final, official transcript reflecting the degree conferral date.

• 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.