ADVANCE
A NOVA | MASON PARTNERSHIP

A.S. Science: Mathematics Specialization / B.S. Computational and Data Sciences Pathway
2021-2022

A.S. Science: Mathematics Specialization Pathway

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 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 **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
6	**ENG 112**	3	ENG 112 College Composition II	ENGH XXX	General Elective
7	**MTH 264**	4	MTH 264 Calculus II	MATH 114	Major
8	**CSC 200 or MTH Elective**	3	CDS 130 Computing For Scientists	CDS 130	Info Tech
9	**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
10	**MTH 265**	4	MTH 265 Calculus III	MATH 213	Major
11	**MTH Course #1**	3	MTH 266 Linear Algebra	MATH 203	Major
12	**Science Course #1**	5	PHY 231 General University Physics I	PHYS 160-161-266	Nat Science

13	**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
14	**CSC 201**	4	CDS 101/102 Introduction to Computational and Data Sciences + Lab	CDS 101 CDS 102	Major
15	**CST Course**	3	CST 100 Principles of Public Speaking **OR** CST 110 Introduction to Communication	COMM 100 COMM 101	Oral Comm
16	**MTH Course #2**	3	MTH 288 Discrete Mathematics	MATH 125	Major
17	**Science Course #2**	5	PHY 232 General University Physics II	PHYS 260-261-XXX	Nat Science
18	**General Education Elective**	3	MTH 245 Statistics I	STAT 250	Major
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		**63**			

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

B.S. Computational and Data Sciences

	MASON DEGREE REQUIREMENT	Credits	Course	MASON CORE/DEGREE EQUIVALENT
20	**Statistics Course**	3	STAT 350 Introduction to Statistics II **OR** STAT 344 Probability and Statistics for Engineers and Scientists I **OR** STAT 346 Probability for Engineers	Major
21	**Core Required Courses**	1	CDS 151 Data Ethics in an Information Society	Major
22	**Gen Ed: Written Communication (Upper Level)**	3	ENGH 302 Advanced Composition (Natural Science Section)	Written Comm
23	**Core Required Courses**	3	CDS 301 Scientific Information and Data Visualization	Major
24	**Core Required Courses**	3	CDS 303 Scientific Data Mining	Major
25	**Core Required Courses**	3	CDS 302 Scientific Data and Databases	Writing Intensive
26	**Core Required Courses**	3	CDS 230 Modeling and Simulation I	Major
27	**Mathematics Courses**	3	MATH 446 Numerical Analysis I	Major
28	**Extended Core Courses**	3	Approved Extended Core Courses[1]	Major
29	**Extended Core Courses**	3	Approved Extended Core Courses[1]	Major
30	**Science and Engineering Courses**	3	Any College of Science or Volgenau School of Engineering Course (Upper-level)	Major
31	**General Electives**	3	General Electives (Upper-level See: Advisor)	General Elective
32	**Extended Core Courses**	3	Approved Extended Core Courses[1]	Major
33	**Extended Core Courses**	3	Approved Extended Core Courses (Upper-level)[1]	Major
34	**General Electives**	3	General Electives (Upper-level See: Advisor)	General Elective
35	**Extended Core Courses**	3	Approved Extended Core Courses (Upper-level)[1]	Major
36	**Science and Engineering Courses**	3	Any College of Science or Volgenau School of Engineering Course (Upper-level)	Major
37	**General Electives**	3	General Electives (Upper-level See: Advisor)	General Elective
38	**General Electives**	3	General Electives (Upper-level See: Advisor)	General Elective
39	**Gen Ed: Synthesis**	3	Approved Synthesis course[2]	Synthesis
B.S. COMPUTATIONAL & DATA SCIENCES DEGREE		**121**		

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

Important Academic Information:

[1]For approved Extended Core Courses, please visit - https://catalog.gmu.edu/colleges-schools/science/computational-data-sciences/computational-data-sciences-bs/#requirementstext

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

Additional General Notes & Resources:

• 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.