

ADVANCE

A NOVA | MASON PARTNERSHIP

A.S. Science Mathematics Specialization/B.S.
Computational and Data Sciences

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 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	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 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	3	CDS 130 Computing for Scientists	CDS 130	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 245 Statistics I	STAT 250	DEGREE
18	General Education Elective	4	CDS 101/102 Introduction to Computational and Data Sciences + Lab	CDS 101 CDS 102	DEGREE
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>

	MASON DEGREE REQUIREMENT SEQUENCE	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	DEGREE	
21	Core Required Courses	1	CDS 151 Data Ethics in an Information Society	DEGREE	
22	Gen Ed: Written Communication (UL)	3	ENGH 302 Advanced Composition (Natural Science Section)	Written Comm	
23	Core Required Courses	3	CDS 301 Scientific Information and Data Visualization	DEGREE	
24	Core Required Courses	3	CDS 303 Scientific Data Mining	DEGREE	
25	Core Required Courses	3	CDS 302 Scientific Data and Databases	Writing Intensive	
26	Core Required Courses	3	CDS 230 Modeling and Simulation I	DEGREE	
27	Mathematics Courses	3	MATH 446 Numerical Analysis I	DEGREE	
28	Extended Core Courses	3	Approved Extended Core Courses*	DEGREE	
29	Extended Core Courses	3	Approved Extended Core Courses*	DEGREE	
30	Science and Engineering Courses	3	Any College of Science or Volgenau School of Engineering Course (Upper-level)	DEGREE	
31	General Electives	3	General Electives (Upper-level See: Advisor)	DEGREE	
32	Extended Core Courses	3	Approved Extended Core Courses*	DEGREE	
33	Extended Core Courses	3	Approved Extended Core Courses (Upper-level)*	DEGREE	
34	General Electives	3	General Electives (Upper-level See: Advisor)	DEGREE	
35	Extended Core Courses	3	Approved Extended Core Courses (Upper-level)*	DEGREE	
36	Science and Engineering Courses	3	Any College of Science or Volgenau School of Engineering Course (Upper-level)	DEGREE	
37	General Electives	3	General Electives (Upper-level See: Advisor)	DEGREE	
38	General Electives	3	General Electives (Upper-level See: Advisor)	DEGREE	
39	Gen Ed: Synthesis	3	Approved synthesis course**	Synthesis	
B.S. COMPUTATIONAL & DATA SCIENCES DEGREE TOTAL		121			

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

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

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

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