ADVANCE
A NOVA | MASON PARTNERSHIP

A.S. Science / B.S. Astronomy Pathway
2021-2022

A.S. Science

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	**MTH 167 or Science**	5	PHY 231 General University Physics I	PHYS 160-161-266	Nat Science
4	**MTH 263**	4	MTH 263 Calculus I	MATH 113	Quantitative
5	**ENG 112**	3	ENG 112 College Composition II	ENGH XXX	General Elective
6	**MTH 264**	4	MTH 264 Calculus II	MATH 114	Major
7	**Science Course #1**	5	PHY 232 General University Physics II	PHYS 260-261-XXX	Nat Science
8	**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
9	**ITE 115, ITE 119, or General Education**	3	PHYS 251 Introduction to Computer Techniques in Physics (co-enrollment course)[1]	PHYS 251	Info Tech
10	**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
11	**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
12	**Math or Science #1**	4	MTH 265 Calculus III	MATH 213	Major
13	**Math or Science #2**	3	MTH 267 Differential Equations	MATH 214	Major

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	**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
17	**Math or Science #3**	4	PHY 243 Modern Physics[2] ***(Spring only)***	PHYS L308	Major
18	**Science Course #2**	4	ASTR 210 Introduction to Astrophysics **AND** ASTR 124 Introduction to Observational Astronomy[1] ***(Typically only offered in Spring terms)***	ASTR 210 ASTR 124	Major
A.S. SCIENCE DEGREE TOTAL		**61**			

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

B.S. Astronomy

	MASON DEGREE REQUIREMENT	Credits	Course	MASON CORE/DEGREE EQUIVALENT
19	**Gen Ed: Written Communication (UL)**	3	ENGH 302 Advanced Composition	Written Comm
20	**Required Physics Courses**	3	PHYS 301 Analytical Methods of Physics	Major
21	**Required Physics Courses**	3	PHYS 303 Classical Mechanics	Major
22	**Required Physics Courses**	3	PHYS 305 Electromagnetic Theory	Major
23	**Required Astronomy Courses**	3	ASTR 328 Stars	Major
24	**General Elective**	3	General Electives (Upper-level See: Advisor)	General Elective
25	**Additional Astronomy Courses**	3	Approved Astronomy and Physics course[3]	Major
26	**Required Astronomy Course**	3	ASTR 401 Computer Simulation in Astronomy	Major
27	**Astronomy and Physics Courses**	3	Approved Astronomy and Physics course[3]	Major
28	**Astronomy and Physics Courses**	3	Approved Astronomy and Physics course[3]	Major
29	**Additional Astronomy Courses**	3	Approved Astronomy and Physics course[3]	Major
30	**General Elective**	3	General Electives (Upper-level See: Advisor)	General Elective
31	**Astronomy and Physics Courses**	3	Approved Astronomy and Physics course[3]	Major
32	**Astronomy and Physics Courses**	3	Approved Astronomy and Physics course[3]	Major
33	**Gen Ed: Synthesis/Core Requirement**	4	ASTR 402 RS: Methods of Observational Astronomy	Synthesis & Writing Intensive
34	**Required Physics Courses**	1	PHYS 416 Special Topics in Undergraduate Physics	Major
35	**General Elective**	3	General Electives (Upper-level See: Advisor)	General Elective
36	**Astronomy and Physics Courses**	3	Approved Astronomy and Physics course[3]	Major
37	**General Elective**	3	General Elective (See: Advisor)	General Elective
38	**General Elective**	3	General Elective (See: Advisor)	General Elective
B.S. ASTRONOMY DEGREE TOTAL		**120**		

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

Important Academic Information:

[1]It is recommended that students take PHYS 251 in their 3rd semester and ASTR 124/210 in their 4th semester if attending full-time.

[2]PHY 243 is only offered in the spring semester. If PHY 243 is not available, students should take CHM 111, BIO 101, GOL 105, PHY 150 and will need to take PHYS 308 at Mason in the first "General Elective" space. Consult your Success Coach for more information.

[3]For approved Astronomy and Physics courses, please visit: https://catalog.gmu.edu/colleges-schools/science/physics-astronomy/astronomy-bs/#requirementstext

Additional General Notes & Resources:

- Students must complete a total of 52 credits in physics and astronomy and 14 credits in mathematics with a minimum GPA of 2.00.
- 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.