

## A.S. Biology

### 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 <b>OR</b> 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	5	MTH 167 Pre-Calculus with Trigonometry <sup>1</sup>	MATH 105	General Elective
4	CHM 111	4	CHM 111 General Chemistry I	CHEM 211-213	Nat Science & Major
5	HIS Elective	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
6	ENG 112	3	ENG 112 College Composition II	ENGH XXX	General Elective
7	MTH 263	4	MTH 263 Calculus I	MATH 113	Quantitative
8	CHM 112	4	CHM 112 General Chemistry II	CHEM 212-214	Major
9	BIO 101 (NOVA Catalog: BIO 101 or BIO 110)	4	BIO 101 General Biology I <sup>2</sup>	BIOL 103/105	Nat Science
10	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
11	MTH 264 (MTH 245 allowed)	3-4	MTH 264 Calculus II <b>OR</b> MTH 245 Statistics I	MATH 114 STAT 250	General Elective
12	PHY 201 or GOL 105 (NOVA Catalog: BIO 102 or BIO 120)	4	PHY 201 General College Physics I <sup>2,3</sup> <b>OR</b> GOL 105 Physical Geology <sup>2</sup>	PHYS 243-244 GEOL 101	Major
13	CST Course	3	CST 100 Principles of Public Speaking <b>OR</b> CST 110 Introduction to Communication	COMM 100 COMM 101	Oral Comm

14	Social/Behavioral Sciences #1	3	ECO 201 Principles of Macroeconomics <b>OR</b> ECO 202 Principles of Microeconomics <b>OR</b> HIS 121 United States History I <b>OR</b> HIS 122 United States History II <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 211 Principles of Anthropology I	ECON 104 ECON 103 HIST 121 HIST 122 PSYC 100 PSYC 211 SOCI 101 ANTH 114	Soc/Behav
15	BIO 206	4	BIO 206 Cell Biology	BIOL 213	Major
16	MTH 245 or Lab Science	4	PHY 201 General College Physics I <sup>3</sup> <b>OR</b> PHY 202 General College Physics II <sup>3</sup> <b>OR</b> GOL 105 Physical Geology <b>OR</b> GOL 106 Historical Geology <b>OR</b> PHY 150 Elements of Astronomy	PHYS 243-244 PHYS 245-246 GEOL 101 GEOL 102/104 ASTR 111-112	Major
17	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
18	Social/Behavioral Sciences #2	3	GEO 220 World Regional Geography <b>OR</b> PLS 140 Introduction to Comparative Politics <b>OR</b> PLS 241 International Relations I	GGG 101 GOVT 133 GOVT 132	Global & COS Soc/Behav

**A.S. BIOLOGY DEGREE TOTAL 61-62**

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

## B.A. Biology

Students may select a concentration in Biological Illustration. See your Mason Biology advisor for more information.

	MASON DEGREE REQUIREMENT	Credits	Course	MASON CORE/DEGREE EQUIVALENT
19	Biology Core Courses	4	BIOL 214 Biostatistics for Biology Majors	Major
20	Biology Core Courses	4	BIOL 311 General Genetics	Major
21	College Requirement: Philosophy or Religious Studies & Non-Western	3	Approved PHIL/RELI & Non-Western course <sup>4</sup> (Upper-level)	COS Phil/Rel & Non-Western
22	College Requirement: Foreign Language	6	Approved foreign language course <sup>5</sup> <i>(Students may opt to take a two course, 101/102 sequence if available)</i>	COS Foreign Lang.
23	Biology Core Courses	4	BIOL 300 BioDiversity <sup>2</sup>	Major
24	College Requirement: Foreign Language	3	Approved foreign language course <sup>5</sup>	COS Foreign Lang.
25	Gen Ed: Written Communication (UL)	3	ENGH 302 Advanced Composition	Written Comm
26	Biology Electives	4	Any upper-level BIOL courses with lab	Major
27	Biology Core Courses	5	BIOL 308 Foundations of Ecology & Evolution	Writing Intensive
28	Gen Ed: Synthesis	3	Approved Synthesis Course <sup>4</sup>	Synthesis
29	College Requirement: Foreign Language	3	Approved foreign language course <sup>5</sup>	COS Foreign Lang.
30	Biology Electives	4	Any upper-level BIOL courses	Major
31	General Elective	3	General Electives (Upper-level See: Advisor)	Major
32	General Elective	3	General Electives (Upper-level See: Advisor)	Major
33	General Elective	3	General Electives (Upper-level See: Advisor)	Major
34	General Elective	3	General Electives (Upper-level See: Advisor)	Major
35	Gen Ed: Information Technology	3	Approved IT Course (Upper-level) <sup>4</sup>	Info Tech

**B.A. BIOLOGY DEGREE TOTAL 122 - 123**

**Important Academic Information:**

<sup>1</sup>Students who are placed directly into MTH 263 may take GOL 105, GOL 106, PHY 201, PHY 202, PHY 231, PHY 232, or PHY 150 instead of MTH 167.

<sup>2</sup>Students pursuing the Biology, BA should complete BIO 101 and an additional Natural Science (PHY 201 or GOL 105) in line 12. However, if a student has already taken BIO 110, they should take BIO 110 and BIO 120, which fulfills Mason's BioDiversity (BIOL 300) requirement, and complete the additional Natural Science at Mason. BIOL 300 is replaced by an upper level general elective at Mason.

<sup>3</sup>Students intending to pursue a career in a clinical profession (pre-med, pre-physical therapy, pre-dental, etc.) should elect to take PHY 201 and PHYS 202.

<sup>4</sup>For approved Mason Core courses, please visit - <https://catalog.gmu.edu/mason-core/>

<sup>5</sup>For approved Foreign Language Courses, please visit - <https://catalog.gmu.edu/colleges-schools/science/biology/biology-ba/#requirements>

**Additional General Notes & Resources:**

- Students must complete the degree requirements with: A minimum GPA of 2.00 in the BIOL courses listed in the degree program and a minimum GPA of 2.00 in the supporting courses listed in the degree program

Additionally:

1. Biology majors must earn a minimum grade of 'C' in all of the biology core courses. A grade of 'C' or better must be earned in BIOL 213 Cell Structure and Function (Mason Core) in order to advance to other core requirements.

2. Students may not count BIOL 124 Human Anatomy and Physiology and/or BIOL 125 Human Anatomy and Physiology toward any biology major requirement.

3. Students who take BIOL 310 Biodiversity and BIOL 330 Biodiversity Lab and Recitation may not count BIOL 303 Animal Biology and/or BIOL 304 Plant Biology toward any biology major requirement.

4. BIOL 493 Honors Research in Biology, BIOL 495 Directed Studies in Biology, and BIOL 497 Special Problems in Biology do not satisfy the requirements of the BA degree which state that students must complete at least one upper division course that includes a laboratory. The courses do, however, count as non-laboratory electives.

- Students interested in Pre-Health Professions (Pre-Med, Pre-Dentistry, Pre-Podiatry, Pre-Optometry, Pre-Veterinary, Pre-Pharmacy, Pre-Physician Assistant, Pre-Occupational Therapy, and Pre-Physical Therapy) are strongly encouraged to meet with the Health Professions Advisor regarding the appropriate prerequisite courses for their field of choice. For more information, please visit: <https://prehealth.gmu.edu/>

- Students interested in pursuing licensure to teach at the secondary level may add the Undergraduate Certificate: Secondary Education - Biology 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 unrepeatable 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.