

## 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-#7, 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 spring graduation by March 1 or summer graduation by June 1. Students who wish to enroll at Mason for the spring semester must apply for NOVA fall graduation by October 1.
4. Students must begin developmental coursework 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 complete ENG 111 and ENG 112 with a C or better.
7. Students must complete a Mason Core Quantitative Reasoning course equivalent with a C or better no later than one semester before NOVA graduation. Refer to your pathway to select the appropriate MTH course(s).

	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 <sup>1</sup>	ENGH 101	Written Comm
3	MTH 167	5	MTH 167 Pre-Calculus with Trigonometry <sup>2</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 Western Civilizations Pre-1600 CE <b>OR</b> HIS 102 Western Civilizations Post-1600 CE <b>OR</b> HIS 112 World Civilizations Post-1500 CE ( <i>recommended</i> )	HIST 101 HIST 102 HIST 125	Global History
6	ENG 112	3	ENG 112 College Composition II <sup>1</sup>	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	4	BIO 101 General Biology I <sup>3</sup>	BIOL 103/105	Nat Science & Major
10	Humanities/Fine Arts #1	3-4	ART 100 Art Appreciation <b>OR</b> ART 101 History of Art: Prehistoric to Gothic <b>OR</b> ART 102 History of Art: Renaissance to Modern <b>OR</b> CST 130 Introduction to Theatre <b>OR</b> CST 151 Film Appreciation I <b>OR</b> MUS 121 Music in Society <b>OR</b> Foreign Language 201 ( <i>if student places into language at 201/202 level</i> ) <sup>4</sup>	ARTH 101 ARTH 200 ARTH 201 THR 101 ENGH L372 MUSI 101 GMU Equivalent	Arts or Foreign Language
11	MTH 245 or MTH 264 or Lab Science	4	MTH 264 Calculus II <b>OR</b> BIO 256 General Genetics	MATH 114 BIOL L311	General Elective or Major
12	PHY 201 or GOL 105 (NOVA Catalog: BIO 102 or BIO 120)	4	PHY 201 General College Physics I <sup>3,5</sup> <b>OR</b> GOL 105 Physical Geology <sup>3</sup>	PHYS 243-244 GEOL 101/103	Major
13	CST Course	3	CST 100 Principles of Public Speaking <b>OR</b> CST 110 Introduction to Human 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> GEO 210 People and the Land: An Introduction to Cultural Geography <b>OR</b> HIS 121 United States History to 1877 <b>OR</b> HIS 122 United States History Since 1865 <b>OR</b> PLS 135 U.S. Government and Politics <b>OR</b> PSY 200 Principles of Psychology <b>OR</b> PSY 230 Developmental Psychology <b>OR</b> SOC 200 Introduction to Sociology <b>OR</b> SOC 211 Cultural Anthropology	ECON 104 ECON 103 GGS 103 HIST 121 HIST 122 GOVT 103 PSYC 100 PSYC 211 SOCI 101 ANTH 114	Soc/Behav
15	BIO 206	4	BIO 206 Cell Biology	BIOL 213	Major
16	Science Course (NOVA Catalog: MTH 245 or Lab Science)	4	PHY 201 General College Physics I <sup>5</sup> <b>OR</b> PHY 202 General College Physics II <sup>5</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 101/103 GEOL 102/104 ASTR 111-112	Major
17	Humanities/Fine Arts #2	3-4	ENG 225 Reading Literature: Culture and Ideas <b>OR</b> ENG 245 British Literature <b>OR</b> ENG 246 American Literature <b>OR</b> ENG 255 World Literature <b>OR</b> ENG 258 African American Literature <b>OR</b> ENG 275 Women in Literature <b>OR</b> Any 200-Level ENG Literature course <sup>6</sup> <b>OR</b> Foreign Language 202 (if student places into language at 201/202 level) <sup>4</sup>	ENGH 202 or FRLN L330 (ENG 255 only) GMU Equivalent	Literature or Foreign Language
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 Introduction to International Relations	GGS 101 GOVT 133 GOVT 132	Global Understanding

**A.S. BIOLOGY DEGREE TOTAL 62-64**

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 <b>OR</b> General Electives (Upper-level See: Advisor) (if BIO 256 is completed at NOVA)	Major
21	College BA Requirement	3	Select additional Upper Level Mason Core Arts, Literature, Global Understanding, or Social and Behavioral Sciences <sup>7</sup> (Course must be in a different discipline than selected at NOVA; See: Advisor)	COS BA Requirement
22	College Requirement: Foreign Language	0-6	Approved foreign language course <sup>4,7</sup> (required at Mason if foreign language is not completed at NOVA)	COS Foreign Lang.
23	Biology Core Courses	4	BIOL 300 BioDiversity <sup>3</sup>	Major
24	College Requirement: Foreign Language or Gen Ed: Arts	3	Approved foreign language course <sup>4,7</sup> <b>OR</b> Approved Arts course <sup>8</sup> (if foreign language was taken at NOVA)	COS Foreign Lang. or Arts
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>8</sup>	Synthesis
29	College Requirement: Foreign Language or Literature	3	Approved foreign language course <sup>4,7</sup> <b>OR</b> Approved Literature Course <sup>8</sup> (if foreign language was taken at NOVA)	COS Foreign Lang. or Literature

30	Biology Electives	4	Any upper-level BIOL courses	Major
31	College BA Requirement	3	Select additional Upper Level Mason Core Arts, Literature, Global Understanding, or Social and Behavioral Sciences <sup>7</sup> ( <i>Course must be in a different Mason Core category than selected in line 21 and in a different discipline than selected at NOVA; See: Advisor</i> )	COS BA Requirement
32	General Elective	3	General Electives (Upper-level See: Advisor)	General Electives
33	General Elective	3	General Electives (Upper-level See: Advisor)	General Electives
34	General Elective	3	General Electives (Upper-level See: Advisor)	General Electives
35	General Elective	1-3	General Electives	General Electives
36	Gen Ed: Information Technology	3	Approved Info Tech Course (Upper-level) <sup>8</sup>	Info Tech

### B.A. BIOLOGY DEGREE TOTAL 120 - 123

#### Important Academic Information:

<sup>1</sup>Students who complete ENG 111 after Spring 2024 will earn ENGH elective for ENG 111 and ENGH 101 for ENG 112.

<sup>2</sup>Students may also use MTH 161/162.

<sup>3</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>4</sup>Students who place into world language courses at the 201 or 202 level may complete these requirements at NOVA. Students who opt to complete the language courses at NOVA must complete the Arts and Literature Mason Core requirements at Mason (unless students have a Mason Core waiver). Consult with your ADVANCE Coach or Biology advisor.

<sup>5</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>6</sup>200-level ENG literature classes include: ENG 225, ENG 230, ENG 236, ENG 237, ENG 245, ENG 246, ENG 250, ENG 255, ENG 256, ENG 257, ENG 258, ENG 271, ENG 275, and ENG 279.

<sup>7</sup>For approved additional Mason Core courses for the COS College BA Requirement and approved Foreign Language courses, please visit: <https://catalog.gmu.edu/colleges-schools/science/biology/biology-ba/#requirementstext>. If foreign language completed at Mason, students may opt to take a two course, 101/102 sequence if available.

<sup>8</sup>For approved Mason Core courses, please visit - <https://catalog.gmu.edu/mason-core/>

#### 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/>
- Students who complete a VCCS transfer associate degree (AS, AA, & AFA) will receive a waiver of the Foundation and Exploration (lower division) Mason Core general education categories. To be eligible for the waiver, the students must provide the Mason Office of Admissions with a final, official transcript reflecting the degree conferral date. As a prerequisite for ENGH 302, ENGH 101 is not waived. Students must complete ENGH 100 or ENGH 101, or an equivalent, with a C or higher.
- 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.