

# ADVANCE

A NOVA | MASON PARTNERSHIP

A.S. Science / B.S. Medical Laboratory  
Science Pathway  
2022-2023

## 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-#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).

**ADVANCE Program-Specific Requirements:** This program is restricted in the number of students that may be accepted. Responsibility for applying to schools of medical laboratory sciences and gaining admission rests with the student; however, guidance is provided by the medical laboratory sciences program director. Admission to medical laboratory sciences schools is selective, so candidates should strive for strong academic standing (2.5 science GPA or higher). Students who fail to gain admission to a NAACLS-approved school are unable to complete this degree program. Such students may transfer to Biology, BA or the Biology, BS without loss of credits.

Application to medical laboratory sciences schools should be initiated about a year before the desired entrance date. This fact, coupled with the large number of required courses in the pre-professional curriculum, makes it imperative that students in the program consult regularly with their Mason advisor. All medical laboratory sciences majors and prospective majors are urged to enroll in MLAB 200 Introduction to Medical Laboratory Science as early as possible. This course provides information on the profession, as well as the educational demands placed on candidates.

|    | NOVA DEGREE REQUIREMENT               | Credits | Courses   | MASON TRANSFER EQUIVALENT   | MASON CORE/DEGREE EQUIVALENT |
|----|---------------------------------------|---------|---|---|------------------------------|
| 1  | SDV Course                            | 1       | SDV 100 College Success Skills <b>OR</b><br>SDV 101 Orientation to XXX  | UNIV 100  | General Elective             |
| 2  | ENG 111                               | 3       | ENG 111 College Composition I   | ENGH 101  | Written Comm                 |
| 3  | ITE 152 or General Education Elective | 4       | CHM 111 General Chemistry I   | CHEM 211-213  | Nat Science                  |
| 4  | MTH 167                               | 5       | MTH 167 Pre-Calculus with Trigonometry <sup>1</sup>   | MATH 105  | General Elective             |
| 5  | MTH 263                               | 4       | MTH 263 Calculus I  | MATH 113  | Quantitative                 |
| 6  | ENG 112                               | 3       | ENG 112 College Composition II  | ENGH XXX  | General Elective             |
| 7  | MTH 264 (MTH 245 allowed)             | 3-4     | MTH 264 Calculus II <b>OR</b><br>MTH 245 Statistics I   | MATH 114<br>STAT 250  | General Elective             |
| 8  | Science Course #1                     | 4       | CHM 112 General Chemistry II  | CHEM 212-214  | Major                        |
| 9  | Math or Science #1                    | 4       | BIO 101 General Biology I   | BIOL 103/105  | Nat Science                  |
| 10 | Social/Behavioral Sciences #1         | 3       | ECO 201 Principles of Macroeconomics <b>OR</b><br>ECO 202 Principles of Microeconomics <b>OR</b><br>GEO 210 People and the Land: An Introduction to Cultural Geography <b>OR</b><br>HIS 121 United States History to 1877 <b>OR</b><br>HIS 122 United States History Since 1865 <b>OR</b><br>PLS 135 U.S. Government and Politics <b>OR</b><br>PSY 200 Principles of Psychology <b>OR</b><br>PSY 230 Developmental Psychology <b>OR</b><br>SOC 200 Introduction to Sociology <b>OR</b><br>SOC 211 Cultural Anthropology | ECON 104<br>ECON 103<br>GGS 103<br>HIST 121<br>HIST 122<br>GOVT 103<br>PSYC 100<br>PSYC 211<br>SOCI 101<br>ANTH 114 | Soc/Behav                    |

|    |                               |   |   |  |             |
|----|-------------------------------|---|---|--|-------------|
| 11 | HIS Course                    | 3 | HIS 101 Western Civilizations Pre-1600 CE <b>OR</b><br>HIS 102 Western Civilizations Post-1600 CE <b>OR</b><br>HIS 112 World Civilizations Post-1500 CE   | HIST 101<br>HIST 102<br>HIST 125                                     | Western Civ |
| 12 | Humanities/Fine Arts #1       | 3 | ART 100 Art Appreciation <b>OR</b><br>ART 101 History of Art: Prehistoric to Gothic <b>OR</b><br>ART 102 History of Art: Renaissance to Modern <b>OR</b><br>CST 130 Introduction to Theatre <b>OR</b><br>CST 151 Film Appreciation I <b>OR</b><br>MUS 121 Music in Society  | ARTH 101<br>ARTH 200<br>ARTH 201<br>THR 101<br>ENGH L372<br>MUSI 101 | Arts        |
| 13 | Math or Science #2            | 4 | BIOL 214 Biostatistics for Biology Majors   | BIOL 214   | Major       |
| 14 | Math or Science #3            | 4 | BIO 206 Cell Biology  | BIOL 213   | Major       |
| 15 | Social/Behavioral Sciences #2 | 3 | GEO 220 World Regional Geography <b>OR</b><br>PLS 140 Introduction to Comparative Politics <b>OR</b><br>PLS 241 Introduction to International Relations   | GGG 101<br>GOVT 133<br>GOVT 132                                      | Global      |
| 16 | CST Course                    | 3 | CST 100 Principles of Public Speaking <b>OR</b><br>CST 110 Introduction to Human Communication  | COMM 100<br>COMM 101   | Oral Comm   |
| 17 | Humanities/Fine Arts #2       | 3 | ENG 225 Reading Literature: Culture and Ideas <b>OR</b><br>ENG 245 British Literature <b>OR</b><br>ENG 246 American Literature <b>OR</b><br>ENG 255 World Literature <b>OR</b><br>ENG 258 African American Literature <b>OR</b><br>ENG 275 Women's Literature <b>OR</b><br>Any 200-Level ENG Literature course <sup>2</sup> | ENGH 202 or<br>FRLN L330 (ENG<br>255 only)                           | Literature  |
| 18 | Science Course #2             | 4 | BIO 256 General Genetics <sup>3</sup>   | BIOL L311  | Major       |

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

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

## B.S. Medical Laboratory Science

Students must complete the requirements outlined below, choosing one Professional Study/Concentration option: Generalist; Molecular Biology; Microbiology; Histotechnology

*Not choosing a concentration ("Professional Study: Generalist Option") will provide students generalist training. Upon graduation, the board certification test may be taken and would allow graduates to practice in any area of a hospital or laboratory. Choosing a concentration will allow students to complete their clinical rotations in that specific area. Upon graduation, the Molecular Biology or Microbiology (depending upon the concentration chosen) board certification test may be taken.*

|    | MASON DEGREE REQUIREMENT                    | Credits | Course   | MASON CORE/DEGREE EQUIVALENT |
|----|---|---------|--|------------------------------|
| 19 | MLAB and BIOL Additional Courses            | 1       | MLAB 200 Introduction to Medical Laboratory Science  | Major                        |
| 20 | Gen Ed: Information Technology              | 3       | CDS 130 Computing for Scientists   | Info Tech                    |
| 21 | MLAB and BIOL Additional Courses            | 4       | BIOL 305 Biology of Microorganisms <b>AND</b><br>BIOL 306 Biology of Microorganisms Laboratory                   | Major                        |
| 22 | Chemistry                                   | 5       | CHEM 313 Organic Chemistry I <b>AND</b><br>CHEM 315 Organic Chemistry Lab I                                      | Major                        |
| 23 | Gen Ed: Written Communication (Upper-level) | 3       | ENGH 302 Advanced Composition  | Written Comm                 |
| 24 | MLAB and BIOL Additional Courses            | 4       | BIOL 430 Advanced Human Anatomy and Physiology I <sup>4</sup>  | Major                        |
| 25 | Chemistry                                   | 4-5     | CHEM 314 Organic Chemistry II <b>AND</b><br>CHEM 318 Organic Chemistry Lab II <b>OR</b><br>BIOL 483 Biochemistry | Major                        |
| 26 | MLAB and BIOL Additional Courses            | 2       | MLAB 300 Science Writing   | Writing Intensive            |
| 27 | Gen Ed: Synthesis                           | 3       | Approved Synthesis Course <sup>5</sup>   | Synthesis                    |
| 28 | MLAB and BIOL Additional Courses            | 4       | BIOL 431 Advanced Human Anatomy and Physiology II <sup>4</sup>   | Major                        |

|    |                                   |    |  |       |
|----|-----------------------------------|----|--|-------|
| 29 | MLAB and BIOL Additional Courses  | 4  | BIOL 452 Immunology <b>AND</b><br>BIOL 453 Immunology Laboratory | Major |
| 30 | Professional Study: Concentration | 12 | Approved Professional Study course (See: Advisor) <sup>6</sup>   | Major |
| 31 | Professional Study: Concentration | 12 | Approved Professional Study course (See: Advisor) <sup>6</sup>   | Major |
| 32 | Professional Study: Concentration | 3  | Approved Professional Study course (See: Advisor) <sup>6</sup>   | Major |
| 33 | Professional Study: Concentration | 3  | Approved Professional Study course (See: Advisor) <sup>6</sup>   | Major |

#### **B.S. MED LAB SCIENCE**

**DEGREE TOTAL 128-130**

**Denotes a course that must be taken at George Mason University while attending NOVA. Failure to complete your co-enrollment course(s) while attending NOVA can significantly affect your timeline for Mason graduation. Please see your ADVANCE Coach for more information and to enroll.**

#### **Important Academic Information:**

<sup>1</sup>Students who are placed directly into MTH 263 may take PHY 201 instead of MTH 167.

<sup>2</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>3</sup>Students may need permission to register for BIO 256. Please contact your ADVANCE Coach if you have any questions.

<sup>4</sup>Students may substitute lower-level BIOL 124 and BIOL 125 for the upper level BIOL 430 and BIOL 431 requirement, although this may have implications if a student later changes majors. Students should contact their Mason advisor to discuss this option before selecting BIOL 124 and BIOL 125.

<sup>5</sup>For approved Mason Core courses, please visit - <https://catalog.gmu.edu/mason-core/>

<sup>6</sup>For approved Professional Study concentration courses, please visit: <https://catalog.gmu.edu/colleges-schools/science/biology/medical-laboratory-science-bs/#requirementstext>

#### **Additional General Notes & Resources:**

- This program requires the equivalent of three years of full-time pre-professional study at the college level preceding a senior year of professional education in an affiliated school of medical laboratory science. All affiliated schools (see below) are accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS):
  1. Students must complete MLAB 200 Introduction to Medical Laboratory Science and present their biology coursework and supporting requirements with a minimum GPA of 2.00.
  2. A grade of 'C' or better must be earned in BIOL 213 Cell Structure and Function (Mason Core) in order to advance to other major requirements. Students may repeat BIOL 213 Cell Structure and Function (Mason Core) once and a second time only with permission of the Department of Biology.
  3. Medical laboratory science majors must earn a minimum of 'C' in all biology core courses.
- Senior Year: Students should be aware that the senior year spent off campus requires the following special interpretation of university policies. Transfer students must present at least 16 credits of 300 to 400-level biology or chemistry coursework taken at Mason. Students may present no more than 6 credits of 'D' grades in biology and chemistry courses required in three years of pre-professional study. No unsatisfactory grades may be presented for courses in the senior year of professional study. Transfer students entering with more than 45 transfer credits are often unable to complete the pre-professional phase of their program in the usual three years of full-time study. Senior students are registered at the university through special procedures. For details, consult the program director.
- ADVANCE students who earn at least a 2.85 final, 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 Mason 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 provide the Office of Admissions with a final, official transcript reflecting the degree conferral date and a cumulative NOVA GPA at or above 2.85.
- 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.