**BACHELOR OF SCIENCE IN HEALTH SCIENCES WITH A MAJOR IN MOLECULAR DIAGNOSTIC SCIENCES**

The bachelor of science in health sciences with a major in molecular diagnostic sciences is offered both in fully online and hybrid formats. The program provides students with the theoretical knowledge and practical skills needed for positions in diagnostic clinical molecular laboratories, public health laboratories, biotechnology companies, government agencies, law enforcement agencies, and research institutes. In addition, students who complete the program are eligible to take the Molecular Biology Board of Certification examination offered by the American Society for Clinical Pathology (ASCP).

Visit the program website (https://bls.smhs.gwu.edu/programs/bshs-molecular-diagnostic-sciences/) for more information.

**ADMISSIONS**

<table>
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<tr>
<th>Admission Deadlines</th>
<th>Fall: July 15</th>
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<tr>
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<td>Spring: November 15</td>
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<td>Summer: March 15</td>
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**Standardized test scores:** SAT/ACT optional

**Recommendation(s) required:** Letter of recommendation from an academic instructor who can strongly attest to your academic ability, and/or an individual who served in a supervisory capacity for you, and who can strongly attest to your work ethic.

**Prior academic records:** Transcripts are required from all colleges and universities attended (including via dual enrollment), whether or not credit was earned, the program was completed, or the credit appears as transfer credit on another transcript. Transcripts must be forwarded in their original sealed envelopes. Official transcript may also be sent electronically directly from the institution.

Applicants may receive credit for college-level coursework through International Baccalaureate (IB) or College Board Advanced Placement (AP) examinations. Official score results must be forwarded directly from the College Board.

# Please refer to GW Undergraduate Admissions (https://undergraduate.admissions.gwu.edu/) for information on maximum credits, minimum scores, and GW course equivalents for AP and IB credits.

**Statement of purpose** All applicants are required to submit a 250-500 word essay describing your reasons for undertaking study at the George Washington University. Focus on your academic objectives, career goals and related qualifications, including collegiate, professional, and extra-curricular activities relevant to your program of interest. Include any substantial accomplishments not already mentioned on the application form as well as obstacles you have overcome that influenced your desire to pursue this program of study.

**Additional requirement offered at VSTC or a fully online format for applicants with MLT certification.** Applicants with MLT certification are required to submit verification of national (ASCP, AMT, or AAB) MLT certification in order to be considered for the fully online format.

**Prerequisites:** At least 45 semester hours of college with a minimum cumulative and science GPA of 2.5 from a regionally accredited institution of higher learning. Students applying under a Guaranteed Admission Agreement must have a cumulative GPA of 2.75. All should include the following coursework:

- English composition (3 credits)
- General Biology with lab (8 credits) Hands on lab required
- General or inorganic chemistry with lab (8 credits) Hands on lab required
- Microbiology with lab (4 credits) Hands on lab required
- Organic chemistry or biochemistry (3 credits)
College mathematics (college algebra, statistics or above—3 credits)

International applicants only

The hybrid and fully online options are not visa eligible. Permanent residents or those with a valid visa (e.g. work), if eligible, may apply to the hybrid program.

International students with an MLT certification may apply to the online program without needing a visa if they have an approved clinical site in their geographic region.

Official transcripts from institutions outside the U.S. must be accompanied by an official transcript evaluation from an accredited independent evaluating agency. Please be sure you request a detailed evaluation that includes all course titles, credit hours, grades, U.S. degree equivalency, grade-point averages (GPA), and date of degree conferral. For a list of acceptable foreign credential evaluation services, please click here (https://www.naces.org/members.php).

Applicants who are not U.S. citizens are required to submit official test scores for either Test of English as a Foreign Language (TOEFL), or Pearson Test of English (PTE) Academic or the academic International English Language Testing System (IELTS). The following are the minimum scores for admission consideration: TOEFL: 100 on the Internet-based exam, PTE: overall score of 68, or IELTS: an overall band score of 7.0, with no individual band score below 6.0.

International applicants who meet the following conditions may be considered for admission without submitting TOEFL, PTE or IELTS or scores:

- They are a citizen of countries where English is the official language (as identified by GW ISO list of Exempt countries) OR;
- They hold at least a bachelor degree from a country where English is the official language as well as language of instruction OR;
- They hold at least a bachelor degree from an institution accredited by a U.S. regional accrediting agency.

Supporting Documents not Submitted Online should be Mailed to:
Office of Admissions
Health Sciences Programs
The George Washington University
2600 Virginia Avenue
Suite 104
Washington, DC 20037

Alternatively, official electronic transcripts can be sent to hsphora@gwu.edu

Contact for Questions:
hsphora@gwu.edu – 202-994-0384 (phone) – 202-994-0870 (fax)

9:00am - 5:00pm, Monday through Friday

REQUIREMENTS

The following requirements must be fulfilled: 120 credits in required and elective courses; at least 60 of these credits must be taken at GW.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td></td>
<td><strong>General Education Requirement</strong></td>
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<tr>
<td></td>
<td>3 credits of English composition</td>
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<td></td>
<td>8 credits in biology (lecture and lab)</td>
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<tr>
<td></td>
<td>4 credits in microbiology (lecture and lab)</td>
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<tr>
<td></td>
<td>8 credits in chemistry (lecture and lab)</td>
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<td></td>
<td>3 credits in organic chemistry or biochemistry</td>
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<tr>
<td></td>
<td>3 credits in college mathematics (algebra, statistics, or higher)</td>
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<tr>
<td></td>
<td>3 credits in humanities</td>
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<td></td>
<td>6 credits in social sciences</td>
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<tr>
<td>MLS 3001W</td>
<td>Professional Ethics for Medical Laboratory Scientists</td>
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<tr>
<td></td>
<td>And one of the following courses:</td>
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<tr>
<td>HSCI 2112W</td>
<td>Writing in the Health Sciences</td>
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<tr>
<td>HSCI 4112W</td>
<td>Research and Writing in Health Sciences</td>
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<tr>
<td>MLS 2007W</td>
<td>Microbes and Society</td>
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<td></td>
<td><strong>Required for the major</strong></td>
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<tr>
<td>HSCI 1106</td>
<td>Introduction to Biotechnology for Health Sciences</td>
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<tr>
<td>HSCI 3117</td>
<td>Principles of Biostatistics for Health Sciences</td>
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<tr>
<td>HSCI 4106</td>
<td>Introduction to Epidemiology for Health Sciences</td>
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<tr>
<td>MLS 3000</td>
<td>Clinical Laboratory Mathematics</td>
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<tr>
<td>MLS 4141</td>
<td>Immunology and Serology</td>
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<tr>
<td>MLS 4151</td>
<td>Molecular Diagnostics</td>
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<tr>
<td>MLS 4158</td>
<td>Laboratory Management and Operations</td>
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<tr>
<td>MLS 4170</td>
<td>Introduction to Molecular Biology</td>
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</table>
MLS 4171  Human Genetics
MLS 4172  Molecular Diagnostics Capstone
MLS 4217  Molecular Techniques
MLS 4242  Applications of Molecular Testing
MLS 4266  Molecular Diagnostics Practicum

**Additional requirements for the fully-online BSHS program**

- 9 credits in elective courses selected in consultation with the advisor.

**Additional requirements for the hybrid BSHS program**

- MLS 4251  Molecular Diagnostics Laboratory
- MLS 4252  Applications of Molecular Testing Laboratory

**Additional school-specific requirements and electives**

Depending on their prior academic record, students complete additional coursework to fulfill school-specific requirements in consultation with their academic advisor. Such courses, as well as appropriate elective selections, are taken from the following list. Alternative electives may be approved by the Program Director.

**Clinical and laboratory sciences**

- HSCI 2102  Pathophysiology
- HSCI 3106  Microbiology for Health Sciences
- HSCI 3108  Microbiology for Health Sciences Laboratory
- HSCI 3501  Human Anatomy and Physiology I
- HSCI 3502  Human Anatomy and Physiology II
- MLS 3003  Biochemistry for Laboratory Science
- MLS 4116  Clinical Bacteriology I
- MLS 4117  Clinical Bacteriology II
- MLS 4119  Parasitology, Mycology, and Virology
- MLS 4164  Clinical Microbiology Practicum

**Health data analytics**

- INFR 4101  Introduction to Medical Informatics
- INFR 4110  Biomedical Data Science

**Topics in healthcare**

- CERT 3005  Topics in Biomedical Science
- COHM 4110  Strategic Communication for Healthcare Professionals
- EHS 2109  Infectious Diseases and Bioterrorism
- HSCI 2105  Current Issues in Bioethics
- HSCI 3114  Management of Health Science Services
- MLS 2005  Plagues, Pandemics, and Epidemics

*Advanced standing from eligible transfer credit may also be considered. Credit from non-traditional sources, i.e., other than from academic coursework, may be considered on a case-by-case basis; this may include military coursework, credit-by-exam, and non-college based health programs.

**COMBINED PROGRAM**

- Dual Bachelor of Science in Health Sciences with a major in molecular diagnostic sciences and Master of Science in Health Sciences in the field of clinical microbiology (http://bulletin.gwu.edu/medicine-health-sciences/undergraduate-programs/bshs-molecular-diagnostic-sciences-mshs-clinical-microbiology/)