BACHELOR OF SCIENCE IN HEALTH SCIENCES WITH A MAJOR IN MEDICAL LABORATORY SCIENCE

Offered online or hybrid (online/on campus)

Medical laboratory science combines medicine, basic sciences, and clinical sciences. Professionals in the field investigate and determine the causes of disease using the latest biomedical instruments and molecular techniques to perform both routine and complex testing.

The bachelor of science in health sciences (BSHS) with a major in medical laboratory science (MLS) is a degree completion program offered in two formats: online or a hybrid of online and on-campus study. Both program formats also are offered as a second bachelor’s degree.

BSHS in Medical Laboratory Science—Fully Online. The online BSHS in MLS is for students who have successfully completed a medical laboratory technician (MLT) program and currently are board certified MLTs.

BSHS in Medical Laboratory Science—Hybrid. The hybrid BSHS in MLS is for students who have completed at least 45 college credits or who have earned an associate’s degree along with the required prerequisite science and general education courses.

Second bachelor’s degree program

The BSHS in MLS program is offered in both formats as a second bachelor’s degree to students who already hold a baccalaureate degree from a regionally accredited college or university with the required prerequisite and general education coursework. For the online program, students also must have completed a medical laboratory technician (MLT) program and currently be board certified MLTs.

All BSHS in MLS programs are accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) (http://www.naacls.org/).

Visit the program website (https://mls.smhs.gwu.edu/programs/bshs-medical-laboratory-sciences/) for additional information.

ADMISSIONS

Admission Deadlines

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<tr>
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<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) 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.

Non-traditional credit sources may be considered on a case-by-case basis (i.e. military coursework, credit-by-exam, and non-college based health programs). Information on transfer credit eligibility may be found in the Bulletin under Regulations (see Transfer Credit/Advanced Standing for Undergraduates), including minimum letter grade requirements

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: 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.
All students must meet Essential Functions requirements, and successfully meet the criminal background check and drug screen requirements. (https://smhs.gwu.edu/academics/health-sciences/academics/admissions/background-checks-and-drug-screenings/)

A resumé or curriculum vitae is required.

A minimum cumulative AND science GPA of 2.5

The minimum acceptable grade is C for coursework to be applied toward an undergraduate degree (grades of C- and below do not transfer to GW SMHS programs)

PrerequisitesAt 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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>English composition (3 credits)</td>
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<tr>
<td></td>
<td>General Biology with lab (8 credits) Hands on lab required</td>
<td></td>
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<tr>
<td></td>
<td>General or inorganic chemistry with lab (8 credits) - Hands on lab required</td>
<td></td>
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<tr>
<td></td>
<td>Microbiology with lab (4 credits) Hands on lab required</td>
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<td></td>
<td>Organic chemistry or biochemistry (3 credits)</td>
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<tr>
<td></td>
<td>College mathematics (college algebra, statistics or above–3 credits)</td>
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</tr>
</tbody>
</table>

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's 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 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's degree from a country where English is the official language as well as language of instruction OR; They hold at least a bachelor's 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, including a minimum of 60 credits in required courses completed at GW and up to 60 transfer credits in courses taken elsewhere. Eligible students admitted through approved SMHS Guaranteed Admission Agreements (http://smhs.gwu.edu/academics/health-sciences-programs/guaranteed-admission-agreements/) partnerships may complete a minimum of 52 required credits at GW; eligibility is determined on a case-by-case basis.

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<tr>
<td></td>
<td>General Education Requirement</td>
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<tr>
<td></td>
<td>3 credits in English composition</td>
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</table>
8 credits in biology with lab $^{1,2}$
8 credits in general or inorganic chemistry with lab $^{1,2}$
4 credits in microbiology with lab $^{1,2}$
3 credits in organic chemistry or biochemistry $^1$
3 credits in college math (algebra, statistics, or higher)
3 credits in humanities
6 credits in social sciences

Requirements for the major

MLS 3001W  Professional Ethics for Medical Laboratory Scientists
MLS 4116  Clinical Bacteriology I
MLS 4117  Clinical Bacteriology II
MLS 4119  Parasitology, Mycology, and Virology
MLS 4130  Hematology I
MLS 4131  Hematology II
MLS 4141  Immunology and Serology
MLS 4145  Clinical Biochemistry I
MLS 4146  Clinical Biochemistry II
MLS 4150  Immunohematology
MLS 4151  Molecular Diagnostics
MLS 4158  Laboratory Management and Operations
MLS 4159  Capstone Seminar

And one course selected from the following:

HSCI 2112W  Writing in the Health Sciences
HSCI 4112W  Research and Writing in Health Sciences
MLS 2007W  Microbes and Society

Additional major requirements for the fully-online BSHS program

MLS 3000  Clinical Laboratory Mathematics
MLS 4136  Clinical Experience I
MLS 4137  Clinical Experience II
MLS 4138  Clinical Experience III
MLS 4139  Clinical Experience IV

Additional major requirements for the hybrid BSHS program

MLS 4160  Blood Bank Practicum
MLS 4161  Clinical Biochemistry Practicum
MLS 4162  Hematology Practicum
MLS 4164  Clinical Microbiology Practicum
MLS 4165  Urinalysis Practicum
MLS 4166  Coagulation Practicum
MLS 4216  Clinical Bacteriology Laboratory
MLS 4219  Parasitology, Mycology, and Virology Laboratory
MLS 4230  Hematology Laboratory
MLS 4246  Clinical Biochemistry Laboratory
MLS 4250  Immunohematology Laboratory
MLS 4251  Molecular Diagnostics 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. $^3$

Clinical and laboratory sciences

HSCI 2102  Pathophysiology
HSCI 3501  Human Anatomy and Physiology I
HSCI 3502  Human Anatomy and Physiology II
MLS 2000  Biology for Health Sciences
MLS 2001  Chemistry for Health Sciences
MLS 4170  Introduction to Molecular Biology
MLS 4171  Human Genetics
MLS 4217  Molecular Techniques
MLS 4242  Applications of Molecular Testing

Health data analytics

HSCI 3117  Principles of Biostatistics for Health Sciences
INFR 4101  Introduction to Medical Informatics
INFR 4105  Consumer Health Informatics
INFR 4110  Biomedical Data Science

Topics in healthcare

COHM 4110  Strategic Communication for Healthcare Professionals
EHS 2109  Infectious Diseases and Bioterrorism
HSCI 1106  Introduction to Biotechnology for Health Sciences
HSCI 2106  Current Issues in Bioethics
HSCI 4106  Introduction to Epidemiology for Health Sciences
MLS 2005  Plagues, Pandemics, and Epidemics

1 Medical laboratory technicians (MLTs) may receive transfer credit for biological sciences, general microbiology, general chemistry, and organic chemistry/biochemistry courses.
2 Hands-on lab required. Online lab is not acceptable.
3 Alternative electives may be selected from any undergraduate CERT, HSCI, or MLS course or those approved by the program director. Advanced standing from eligible transfer credit may also be considered.

SECOND BACHELOR’S

The BSHS in MLS program is offered as a second bachelor’s degree to students who already hold a baccalaureate degree from a regionally accredited college or university with the required prerequisite and general education coursework.

The following requirements must be fulfilled: 120 credits, including a minimum of 60 credits in required courses completed at GW and up to 60 transfer credits in courses taken elsewhere.

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Additional major requirements for the fully-online BSHS program

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<tr>
<td>MLS 3000</td>
<td>Clinical Laboratory Mathematics</td>
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<td>MLS 4166</td>
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## Additional school-specific requirements and electives

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### Health data analytics

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<tr>
<td>HSCI 3117</td>
<td>Principles of Biostatistics for Health Sciences</td>
</tr>
<tr>
<td>INFR 4101</td>
<td>Introduction to Medical Informatics</td>
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¹Medical laboratory technicians (MLTs) may receive transfer credit for biological sciences, general microbiology, general chemistry, and organic chemistry/biochemistry courses.

² Hands-on lab required. Online lab is not acceptable.

³Alternative electives may be selected from any undergraduate CERT, HSCI, or MLS course or those approved by the program director. Advanced standing from eligible transfer credit may also be considered.

## COMBINED PROGRAM

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

[Page 5] Bachelor of Science in Health Sciences with a Major in Medical Laboratory Science