

# MASTER OF SCIENCE IN HEALTH SCIENCES IN THE FIELD OF MOLECULAR DIAGNOSTIC SCIENCE (STEM)

Molecular diagnostic testing uses highly sensitive and specific laboratory techniques to detect and identify biomarkers at the nucleic acid (DNA and RNA) level. Common molecular-based applications include medical diagnosis, establishing prognosis, monitoring the course of disease, and selecting optimal therapies. The master of science in health sciences in molecular diagnostic sciences prepares both MLS certified and noncertified individuals for careers in clinical or public health laboratories, research institutions, law enforcement agencies, as well as biotechnology or pharmaceutical companies.

The proposed curriculum has been designed so that students can complete the entire program in two academic years and offers the flexibility of allowing students to enroll either on a full-time or part-time basis. Furthermore, the program of study provides practical experience to individuals with no previous clinical molecular diagnostic experience in the form of a molecular diagnostics practicum course.

This is a STEM designated program.

Visit the program website (<https://smhs.gwu.edu/bulletin/smhs/graduate-programs/ms-molecular-diagnostics/>) for additional information.

## ADMISSIONS

Admissions Fall - July 20

Deadlines:

Spring - December 1

Summer - March 20

The application and all supporting documentation (fees, statement of purpose, letters of recommendation, transcripts) must be received by the deadline in order for the application to be reviewed.

Standardized Not required

Test Scores:

Recommendations: Two (2) recommendations required:

**Prior Academic Records:** Transcripts required from all colleges and universities attended, 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.

If academic records are in a language other than English, a certified English language translation must be provided in addition to the original transcripts; translations alone will not be accepted.

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. Please see the list of acceptable foreign credential evaluation services (<https://www.naces.org/members>).

**Statement of Purpose:** Please include a 250-500 word essay describing your reasons for undertaking study at the George Washington University, your academic objectives, career development plan, and related qualifications, including collegiate, professional, and community activities, relevant to your program of interest. Include any substantial accomplishments not already mentioned on the application form.

**Degree and GPA Requirements:** A bachelor's degree from a regionally accredited college or university.

3.0 GPA or above on a 4.0 scale

**Additional Requirements:** Resume/CV

Completed courses should include: 3 credits English; 3 credits of college math (algebra, statistics, or higher). Additionally, students must have completed a combination of 30 semester hours or 45 quarter hours of biological, chemical and/or medical science courses with a grade of C or higher that includes the following courses: general biology I and II with hands-on lab; general or inorganic chemistry with hands-on lab. Please be prepared to provide unofficial transcripts to determine program admissibility.

**International applicants:** International students should check with individual programs regarding eligibility for visa sponsorship. Generally, online and hybrid programs are not eligible for student visa sponsorship from GW. This includes transfer students from any other institution with an existing visa.

Applicants who have not completed a post-secondary degree from an institution where English is the sole language of instruction must submit TOEFL, IELTS, PTE Academic, or the Duolingo English Test scores to be considered for admission. The following are the minimum scores for admission consideration:

- Academic IELTS: An overall band score of 7.0, with no individual band score below 6.0.

- TOEFL: 600 paper-based or 100 internet-based.

- PTE: Overall score of 68

- DET: Overall score of 120

Undergraduate applicants who meet one of the following conditions can be considered for admission without submitting TOEFL, PTE or IELTS or DET scores:

-You have earned an associate's degree or higher from an institution where English is the sole language of instruction

-You are a citizen of an English-speaking country as defined on the SMHS International Applicant page (<https://smhs.gwu.edu/international-applicants> (<https://smhs.gwu.edu/international-applicants/>)).

Scores cannot be more than two years old. To ensure TOEFL scores are sent to GW, use institutional code 5246. An institutional code is not required to send IELTS or PTE scores to GW. DET scores must be submitted via the Duolingo English Test system directly to GW.

Based on their application and the results of the English proficiency examination students can be required to take English for Academic Purposes (EAP) during their first year of study at GW. GW evaluates each application holistically and applicants can be recommended for EAP even if they meet the requirements for exemption. Students placed in EAP courses should anticipate additional tuition expenses as well as possible extension of time needed to complete their degree programs.

### Supporting documents not submitted online should be mailed to:

George Washington University

ATTN: Transcript Processing Center  
1415 W 22<sup>nd</sup> St.  
Suite 220  
Oak Brook, IL 60523

Documents may be submitted electronically  
to: [transcripts@hsprograms.gwu.edu](mailto:transcripts@hsprograms.gwu.edu).

### Contact for questions:

[hsphora@gwu.edu](mailto:hsphora@gwu.edu)  
202-994-0384 (phone)  
Hours: 9:00 am to 5:00 pm, Monday through Friday

## REQUIREMENTS

The following requirements must be fulfilled: 36 credits, including 33 credits in required courses and one 3-credit elective course.

Code	Title	Credits
<b>Required</b>		
HSCI 6263	Biostatistics Translational Research	
MLS 6216	Microbial Pathogenesis	
MLS 6217	Medical Biotechnology	
MLS 6218	Genetics	

MLS 6219	Molecular Biology
MLS 6158	Advanced Laboratory Management and Operations
MLS 6166	Molecular Diagnostics Practicum *
MLS 6242	Molecular Pathology
MLS 6244	Research Ethics and Integrity
MLS 6245	Current Topics in Medical Laboratory Science
MLS 6246	Capstone Project

### Elective

One 3-credit MLS or HSCI course selected in consultation with the academic advisor.

\* May be substituted with an elective course for students with current clinical molecular laboratory experience.