

SECONDARY BACHELOR OF SCIENCE IN HEALTH SCIENCES WITH A MAJOR IN CLINICAL EMBRYOLOGY AND ASSISTED REPRODUCTIVE TECHNOLOGY, MICROBIOLOGY CONCENTRATION

Code	Title	Credits
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This is a degree completion program offered in fully online and hybrid online and on-campus formats.¹

Students must complete 120 credits consisting of 45 to 60 transfer credits to satisfy University General Education and program-specific prerequisite requirements and a minimum of 60 credits taken at GW.

University General Education Requirement

3 credits in critical thinking in the humanities

6 credits in critical thinking, quantitative reasoning, or scientific reasoning in the social sciences

3 credits in quantitative reasoning (college algebra, statistics, or higher)

3 credits in English composition

A course with an approved oral communication component. This requirement is satisfied by completing CERT 3005 in the required major curriculum.⁵

3 credits in quantitative reasoning (must be in mathematics or statistics).

3 credits in scientific reasoning (must be in natural and/or physical laboratory sciences). Satisfied with the prerequisite requirement for 8 credits in general chemistry with lab or 4 credits in microbiology with lab.

Writing in the disciplines (WID) coursework satisfied by MLS 2007W and MLS 3001W program requirements.

Program prerequisites

8 credits in general biology I and II^{2,3}

8 credits in chemistry I and II^{2,3}

4 credits in microbiology with lab^{2,3}

3 credits in organic chemistry or biochemistry^{2,6}

22 credits transferred in as elective courses.^{4,6}

Core courses for the major that must be taken at GW

Required for both the fully online and hybrid program options:

MLS 2007W	Microbes and Society
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
Required for the fully online option only:	
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
And 11 credits in elective courses.	
Required for the hybrid program option only:	
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

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Microbiology concentration requirements

Required		
MLS 2005	Plagues, Pandemics, and Epidemics	
MLS 4116	Clinical Bacteriology I	
MLS 4117	Clinical Bacteriology II	
MLS 4119	Parasitology, Mycology, and Virology	
MLS 4216	Clinical Bacteriology Laboratory	
MLS 4219	Parasitology, Mycology, and Virology Laboratory	
MLS 4164	Clinical Microbiology Practicum	
Electives		

7 to 12 credits in elective courses, depending on the number of credits transferred in at admission.

¹The fully online program option is for students who have successfully completed a medical laboratory technician (MLT) program within six months of application and/or are currently board certified MLTs. The hybrid option 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.

²Medical laboratory technicians (MLTs) can receive transfer credit for biological sciences, general microbiology, general chemistry, and organic chemistry/biochemistry courses.

³Hands-on lab required; an online lab is not acceptable.

⁴Alternative electives can be selected from any undergraduate Clinical Embryology and Reproductive Technology (CERT), Health Sciences Programs (HSCI), and Medical Laboratory Science (MLS) courses courses, or others approved by the program director. Advanced standing from eligible transfer credit also can be considered.

⁵This requirement is completed at GW post matriculation.

⁶This requirement can be completed with transfer credit or at GW.