

BACHELOR OF SCIENCE IN HEALTH SCIENCES WITH A MAJOR IN CLINICAL EMBRYOLOGY AND ASSISTED REPRODUCTIVE TECHNOLOGY (STEM)

The bachelor of science in health sciences with a major in clinical embryology and assisted reproductive technology program is designed to prepare graduates with the theoretical knowledge and practical skills for positions in assisted reproductive technology laboratories, biotechnology companies, research institutes and hospitals. In addition, program graduates will be eligible to take the embryology and andrology board of certification examination (ELS and ALS) offered by the American Association of Bioanalysis (AAB). The curriculum will also ensure that graduates will be prepared to pursue an advanced degree beyond the baccalaureate if they so choose.

This is a STEM designated program.

Visit the program website (<https://bls.smhs.gwu.edu/programs/bshs-clinical-embryology-and-assisted-reproductive-technology/>) for additional information.

ADMISSIONS

Admission Fall: July 20

Deadlines

Spring: December 1

Summer: March 20

Standardized SAT/ACT optional test scores

Recommendation required One 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.

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 requirements 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>)

Transfer coursework must be earned with a C or better (C- grades and lower do not transfer to GW SMHS).

A resumé or curriculum vitae is required.

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. Prerequisite coursework must include the following:

English Composition (6 credits)

General Biology (lecture and 'hands-on' lab) (8 credits)

College Mathematics (algebra, statistics, or higher 3 credits)

Humanities (3 credits)

Social and Behavioral Science (3 credits)

International Students: 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 would include transfer students from any other institution with an existing visa.

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#Pearsons#Test of English (PTE), Academic the academic International English Language Testing System (IELTS) or the Duolingo English Test (DET). The following are the minimum scores for admission consideration:#TOEFL: 600 on paper based, 250 on computer-based, or 100 Internet-based, PTE: overall score of 68, IELTS: an overall band score of 7.0, with no individual band score below 6.0, or DET overall score of 120. *Scores can be no older than 2 years.

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

George Washington University
 ATTN: Transcript Processing Center
 1415 W 22nd St.
 Suite 220
 Oak Brook, IL 60523

Documents may be submitted electronically to: transcripts@hsprograms.gwu.edu.

Contact for questions:

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: 120 credits, including 45 to 60 transfer credits to satisfy general education, advanced standing requirements, and a minimum of 60 credits taken at GW.

Code	Title	Credits
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General Education and prerequisite courses

- 6 credits in English composition
- 8 credits in general biology I and II
- 3 credits in humanities
- 3 credits in quantitative reasoning (college algebra, statistics, or higher)
- 6 credits in social sciences
- 19 to 24 credits in elective and/or additional required courses

Required courses that can be transferred in or taken at GW

- 3 credits in chemistry or biochemistry
- 4 credits in microbiology with lab
- 3 credits in biotechnology

Major courses that must be taken at GW

CERT 3004	Endocrinology for Health Sciences
CERT 3005	Current Topics in Biomedical Sciences
CERT 4010	Clinical Human Embryology
CERT 4011	Human Embryology Laboratory
CERT 4012	Clinical Human Andrology
CERT 4013	Human Andrology Laboratory
CERT 4014	Human Reproductive Cryobiology
MLS 2007W	Microbes and Society
MLS 3000	Clinical Laboratory Mathematics
MLS 3001W	Professional Ethics for Medical Laboratory Scientists
MLS 4141	Immunology and Serology
MLS 4151	Molecular Diagnostics
MLS 4158	Laboratory Management and Operations
MLS 4171	Human Genetics
MLS 4251	Molecular Diagnostics Laboratory

Electives

21 to 26 credits in CERT, HSCI, or MLS elective courses.

Concentration option

Students who wish to complete a concentration must take the required courses within the concentration as their elective credits.

Molecular Biology concentration

Required

MLS 4170 Introduction to Molecular Biology

MLS 4172 Molecular Diagnostics Capstone

MLS 4217 Molecular Techniques

MLS 4242 Applications of Molecular Testing

MLS 4252 Applications of Molecular Testing Laboratory

MLS 4266 Molecular Diagnostics Practicum

Electives

1 to 6 credits in electives courses.

Microbiology concentration

Required

MLS 2005 Plagues, Pandemics, and Epidemics

MLS 4116 Clinical Bacteriology I

MLS 4117 Clinical Bacteriology II

MLS 4119 Parasitology, Mycology, and Virology

MLS 4164 Clinical Microbiology Practicum

MLS 4216 Clinical Bacteriology Laboratory

MLS 4219 Parasitology, Mycology, and Virology Laboratory

Electives

5 to 10 credits in elective courses.

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

8 credits in general biology with lab

3 credits in quantitative reasoning (must be in algebra or statistics at the college level or above)

37 credits in elective courses and/or additional required courses

Required and elective courses that can be transferred in or taken at GW

3 credits in introduction to biotechnology for health sciences

3 credits in microbiology (lecture)

1 credit in microbiology for health sciences laboratory (lab)

3 credits in organic chemistry or biochemistry (MLS 3003 Biochemistry for Health Sciences if taken at GW.)

Core courses for the major (60 credits) that must be taken at GW

CERT 3004 Endocrinology for Health Sciences

CERT 3005 Current Topics in Biomedical Sciences

CERT 4010 Clinical Human Embryology

CERT 4011 Human Embryology Laboratory

CERT 4012 Clinical Human Andrology

CERT 4013 Human Andrology Laboratory

CERT 4014 Human Reproductive Cryobiology

MLS 2007W Microbes and Society

MLS 3000 Clinical Laboratory Mathematics

MLS 3001W Professional Ethics for Medical Laboratory Scientists

MLS 4141 Immunology and Serology

MLS 4151 Molecular Diagnostics

MLS 4158 Laboratory Management and Operations

MLS 4171 Human Genetics

MLS 4251 Molecular Diagnostics Laboratory

Optional concentration

Students who wish to complete a concentration in either molecular biology or microbiology must take the required courses and number of elective credits listed below.

Molecular biology concentration

SECONDARY BACHELOR'S

This is a secondary degree completion program.

The following requirements must be fulfilled: 120 credits, at least 60 of which must be taken at GW.

Code	Title	Credits
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General Education and prerequisite courses

3 credits in English composition

3 credits in critical thinking in the humanities

Required

MLS 4170 Introduction to Molecular Biology

MLS 4172 Molecular Diagnostics Capstone

MLS 4217 Molecular Techniques

MLS 4242 Applications of Molecular Testing

MLS 4252 Applications of Molecular Testing
Laboratory

MLS 4266 Molecular Diagnostics Practicum

Elective

One 1-credit elective course

Microbiology Concentration

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

5 credits in elective courses