

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

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.

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

ADMISSIONS

Admission Deadlines

Fall: July 15
 Spring: November 15
 Summer: March 15

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> (<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 applicants only This hybrid program is not visa eligible. Permanent Residents or those with a valid visa (e.g. work), if eligible, may apply.

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: 250 computer-based or 100 Internet-based, 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'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:

George Washington University

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

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

Contact for questions:

hsphora@gwu.edu
202-994-0384 (phone)
202-994-0870 (fax)
Hours: 9 am to 5 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 |
|------|-------|---------|
|------|-------|---------|

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 elective 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. | |

SECOND BACHELOR'S

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

| Code | Title | Credits |
|--|-------|---------|
| General Education and prerequisite courses | | |
| 3 credits in English composition | | |
| 8 credits in general biology I and II | | |
| 3 credits in quantitative reasoning (college algebra, statistics, or higher) | | |
| 6 credits in social sciences | | |
| 3 credits in humanities | | |
| 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 microbiology (lecture) | | |

| | |
|--|--|
| 1 credit in microbiology for health sciences laboratory (lab) | |
| 3 credits in organic or biochemistry (if taken at GW, MLS 3003 Biochemistry for Health Sciences) | |
| 3 credits in introduction to biotechnology for health sciences | |

Core courses for the major 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:

| | |
|------------------------------|--|
| 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 |
| 1 credit in elective courses | |

Microbiology Concentration:

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

5 credits in elective courses