

PRE-GENETIC COUNSELING

Genetic counselors use genetic information from an individual and/or family to evaluate their risks for genetic conditions. Genetic Counselors must have the **science skills to assess genetic information**, as well as the **communication skills** to educate and counsel their patients about their results.

Undergraduate Credit Required	Bachelor's degree
Entrance Exam	GRE
Professional Schooling Required	21-24 month depending on the institution; Master's degree
Local Professional Schools	UPenn, University of Pittsburg, Thomas Jefferson University
Professional Organization Websites	National Society for Genetic Counselors (nsgc.org)
Major	Students can major in any subject at WCU for Genetic Counseling. The most common majors that align with genetic counseling program pre-requisites are Biology: Cell and Molecular Biology, Biology: Integrative Concentration, Biochemistry, or Psychology (emphasis in genetics is suggested).

REQUIRED AND SUGGESTED ELECTIVES FOR WCU UNDERGRADUATE STUDENTS

The following course recommendations are general requirements for Genetic Counseling programs. For the specific requirements for your school of choice and whether AP/IB credit is accepted, please refer to that school's admissions website or contact those schools for a list of entrance requirements.

GENETIC COUNSELING SCHOOL REQUIREMENTS

Biological Sciences with labs (min. 3 courses)

BIO 110 General Biology I, BIO 111 General Biology II, BIO 211 Cell Biology		
Course	Term	Grade

Genetics (required)

Course	Term	Grade
BIO 210		

Molecular Genetics and Human Genetics (highly recommended)

Course	Term	Grade
BIO 431		
BIO 440		

General Chemistry with lab

Course	Term	Grade
CHE 103 & CRL 103		
CHE 104 & CRL 104		

Organic Chemistry with lab

Course	Term	Grade
CHE 231 & CRL 231		
CHE 232		

Biochemistry (1 course)

Course	Term	Grade
CHE 476		

English Composition (3 to 6 hrs)

Course	Term	Grade
WRT 120		
WRT 2XX		

Statistics (please contact school for specific admissions requirement)

Course	Term	Grade
MAT 121 or 125		
BIO 310 (recommended)		

Physics with lab (recommended)

General Physics PHY 130 AND 140 or Physics 170 AND 180

Course	Term	Grade
PHY 130 or 170		
PHY 140 or 180		

PSY 100 (Intro Psych) PSY 210 (Developmental Psych), PSY 375 (Abnormal Psych)

Course	Term	Grade

Course Plan of Pre-Genetic Counseling Requirements	
<u>Semester 1</u>	<u>Semester 2</u>
CHE 103	CHE 104
CRL 103	CRL 104
BIO 110	BIO 111
WRT 120	WRT 2XX
MAT 121	MAT 145
<u>Semester 3</u>	<u>Semester 4</u>
CHE 231	CHE 232
CRL 231	PHY 140
PHY 130	BIO 211
BIO 210	General/Major Electives
General/Major Electives	
<u>Semester 5</u>	<u>Semester 6</u>
CHE 476	BIO 431
Bio 440	General/Major Electives
General/Major Electives	
<u>Semester 7</u>	<u>Semester 8</u>
General/Major Electives	General/Major Electives

BEYOND ACADEMICS

Pre-Genetic Counseling students are encouraged to participate in experiences such as leadership roles, volunteer work, research, and shadowing, which will help prepare them for pathology assistant school and the medical profession. Such experiences demonstrate a commitment to and knowledge of the profession. All students are **STRONGLY** encouraged to **shadow medical professionals, volunteering with Genetic Counselors**, get involved with research and pursue internships. Additionally, involvement with clubs such as Pre-Med Club, and Minorities in Medicine, will help students to learn more about the medical profession. Activities beyond the classroom play a significant role in a student's application to a professional school program.

APPLICATION AND ADMISSION

Applications are made directly with the schools you would like to attend. Early application is recommended as many programs take only a handful of students. Schools will then contact you to verify receipt of your application and inform you of any additional materials they require to complete your application.

ENTRANCE EXAM

The Graduate Record Exam (GRE) is required for most programs: ets.org/gre.

EARN A GENETIC COUNSELING DEGREE

Genetic counseling degree programs are available as master's programs (MS) and are the minimum education requirement for a genetic counselor. Most MS in Genetic Counseling programs include clinical internships/rotations and/or other fieldwork experiences, such as advocacy experience. The various rotations and fieldwork experiences usually allow students to explore different specializations within the field, such as pediatrics, OB/GYN, and more. Genetic counselors obtain certification through the American Board of Genetic Counseling and must pass an exam after their master's program.