

Genetic counseling is a small but rapidly growing health profession that started approximately 30 years ago. There are close to 3000 genetic counselors practicing in North America, and 32 two-year Master's degree training programs enroll about 200 students per year in the United States and Canada. Genetic counselors work with patients, families, health care providers and other members of the general public to assess and explain genetic risks, including family history and genetic testing results, and to psychologically adapt to this genetic information.

Genetic counselors work in a variety of roles, including as part of a health care team with patients and families in Obstetrics, Pediatrics, Oncology and other specialty medicine areas. In addition, many genetic counselors perform research, create educational materials, and work for commercial laboratories. Some of the roles of a genetic counselor include taking a detailed family and medical history, assisting a geneticist or another physician with developing a "differential diagnosis" and determining the best genetic test (if available), interpreting genetic testing results, and helping individuals and families adjust to information about their genetic risks.

The ideal genetic counselor is a person who loves science and working with people. Many genetic counseling applicants have a degree in biology, microbiology, molecular biology/genetics, or psychology, although applicants from all backgrounds are considered. The most competitive applicants will have completed all academic course requirements, maintained a GPA > 3.0, and have GRE scores > 70th percentiles. Applicants should also have experience with the genetic counseling profession (e.g. job shadowing or internships) and have experience and training in a volunteer counseling setting, such as a crisis center or peer counseling center.

### Required Courses

One Semester of Genetics	BIO 140 – Genetics
One Semester of Statistics	MATH 18 – Statistical Analysis of Scientific Data <b>or</b> MATH 32 – Statistics <b>or</b> PSY 10 – Analysis of Psychological Data
One Semester of Organic Chemistry with lab	CHEM 8 – Principles of Organic Chemistry (includes lab)
One Semester of Biochemistry	BIO 101 or CHEM 111 – Biochemistry I
Additional Courses	PSY 130 – Developmental Psychology PSY 133 – Abnormal Psychology PSY 140 – Clinical Psychology PSY 143 – Abnormal Child Psychology

\*Specific course prerequisites may vary somewhat for each school so please see individual school websites/catalogs for current information.

## **Training and Licensure**

Currently, numerous training programs offer master's degrees in genetic counseling in the United States. Coursework typically includes clinical genetics, population genetics, cytogenetics, and molecular genetics coupled with psychosocial theory, ethics and counseling techniques. Clinical placement in ABGC-approved medical genetics centers is an integral part of the degree requirements. Additional programs accept nurses seeking post-graduate degrees with specialty training in genetics.

After earning a degree, genetic counselors become certified by sitting for a certification exam administered by the American Board of Genetic Counseling (ABGC).

## **Testing and Application Process**

For most programs, the Graduate Record Exam (GRE) is required. Be sure to check each school's specific requirement regarding exam scores. Also, each school's application process is slightly different. In most cases, an application including statement of purpose with fee, transcripts and three letters of references are required. It is the students' responsibility to know and understand each school's requirements.

## **Schools in California**

CSU, Stanislaus  
Stanford University  
UC Irvine