

# GENETIC COUNSELING (MS)

Visit program website. (<https://geneticcounseling.ucsf.edu/>)

## Degree Offered: MS

### Program Leadership:

Cynthia Morgan, MS, CGC, Program Director

Allyson Scott, MS, CGC, Associate Director

Julie Harris-Wai, PhD, MPH, Research Director

Jason Carmichael, MS, CGC, Assistant Director, Fresno

### Admissions Inquiries:

GCPProgram@ucsf.edu

## Program Description

The Genetic Counseling Program is a 21-month program of study leading to a Master of Science in Genetic Counseling. This is program for those who wish to be at the forefront of the genetic counseling profession and harness the potential of genomic medicine to advance healthcare.

The training program consists of three major components: foundational didactic education, clinical training, and research. The didactic curriculum embraces the latest advances in contemporary genetics while maintaining deep roots in humanistic counseling theory, and a commitment to the ethical application of genomic medicine. Clinical training experiences are available in a variety of campus genetics clinics and laboratories and expose students to the rich ethnocultural and socioeconomic diversity of the Bay Area. Partnerships with Bay Area genetics clinics provide students additional clinical training opportunities beyond the campus boundaries. Close proximity to Silicon Valley and the high concentration of biotechnology companies also allows for students to train in some of the nation's most recognized genetics private industry organizations. The research experience is highlighted through a scholarly capstone project of the student's own design, allowing students to develop a deep understanding of the research process while advancing the field of genetic counseling.

The Genetic Counseling Program provides a unique opportunity for one student, with a special interest in community practice, to spend their entire second year of clinical training in the Fresno region. UCSF maintains a branch training campus in Fresno, California at Community Regional Medical Center (CRMC). CRMC is a large tertiary care medical center providing complex care to residents of the central San Joaquin Valley. Fresno is a rural agricultural city located half way between San Francisco and Los Angeles.

## Faculty

The Genetic Counseling Program faculty consists of a diverse mix of veteran genetics educators from throughout the UCSF campus. As a strong partner in San Francisco area genetic counseling programs since the 1970s, UCSF brings decades of experience training genetic counselors to all facets of the program, from veteran educators, to knowledgeable research mentors and skilled clinical training supervisors.

## Career Outcomes

Graduates from the Genetic Counseling Program are prepared to pursue numerous career paths after graduation, including clinical care, industry, research, advocacy and others. Successful completion of the program will confer eligibility to sit for the American Board of Genetic Counseling certification examination.

The Genetic Counseling Program is primarily based at the Mission Bay campus.

The Genetic Counseling program is offered by the UCSF Graduate Division. The Program is jointly administered by the Institute for Human Genetics and UCSF School of Medicine, Department of Pediatrics, Division of Medical Genetics. It is delivered by faculty and staff members in the UCSF School of Medicine.

## Admission Requirements

Applicants to the Genetic Counseling program will need to demonstrate successful completion of the following college-level courses (minimum of one quarter or semester) or their equivalents:

- Introductory Genetics (for Science majors)
- Organic Chemistry or Biochemistry
  - Must include content on structure and function of biomolecules (e.g., nucleic and ribonucleic acids, proteins, lipids)
- Biology (2 quarters/semesters)
- Introductory Statistics or Biostatistics
- Introductory Psychology or Counseling
- Biochemistry is highly recommended
- Cellular and/or Molecular Biology are highly recommended
- Anatomy and/or physiology are highly recommended

Applicants competitive for admission will also be able to demonstrate a good beginning knowledge of the genetic counseling profession and can clearly articulate how this career path aligns with their personal and professional goals. This type of knowledge is often obtained from direct experience(s) with the genetic counseling profession, experiences in fields that complement genetic counseling and/or research about the field. Examples of ways applicants often achieve a real-life understanding of the profession include, but are not limited to:

- Advocacy or education experience in a volunteer or paid position involving counseling or social services, such as working in a crisis intervention center, student health center, family planning clinic, disability services organization, or serving as a resident adviser or peer counselor.
- Direct contact with genetic counselors: interviewing or shadowing working genetic counselors. Opportunities for direct patient observation may be limited by HIPAA (patient confidentiality) regulations. Participating or observing in genetic counseling related activities (case conferences, professional conferences).
- Employment, internship or volunteer work in genetic counseling or genetics setting such as a clinic, laboratory, public health organization, non-profit advocacy group.
- Attendance at genetic counseling interest events, conferences or workshops. Viewing the NSGC Master Genetic Counselor series.

## Learning Outcomes

The learning outcomes for our program are based on attainment of the Practice Based Competencies (<https://www.gceducation.org/forms-resources/>) (PBCs) established by the Accreditation Council for Genetic Counseling (ACGC). These describe 22 practice-based competencies that an entry-level provider must demonstrate to successfully practice as a genetic counselor. The PBCs are categorized in four distinct domains: Genetics Expertise and Analysis; Interpersonal, Psychosocial and Counseling Skills; Education; Educational Development and Practice.

## Degree Requirements

The Genetic Counseling Program maintains academic standards that are in compliance with the UCSF Graduate Division (<https://senate.ucsf.edu/graduate-council-regulations/#4>). To successfully complete the program, students must fulfill the following degree requirements:

- Complete all required coursework with a C grade or higher; or successfully complete a remediation plan in the event of a course grade below a C.
- Maintain a cumulative GPA of 3.0 or higher.
- Pass clinical placements while demonstrating progress in achieving the Practice Based Competencies (<https://www.gceducation.org/practice-based-competencies/>) established by the Accreditation Council for Genetic Counseling (ACGC).
- Successfully complete a capstone research project.
- By the end of the program, demonstrate attainment of the Practice Based Competencies (<https://www.gceducation.org/practice-based-competencies/>) established by the Accreditation Council for Genetic Counseling (ACGC).
- Attend all classes, participate actively in all courses, and maintain the highest standards of academic integrity, professionalism and cultural humility in all facets of the academic program.

## Core Courses

Course	Title	Units
<b>Year 1</b>		
<b>Fall Quarter</b>		
GENCOUNSEL 201	Human Genetics	2.5
GENCOUNSEL 202	Clinical Cytogenetics	2
GENCOUNSEL 203	Research Methods for Genetic Counselors I	2
GENCOUNSEL 204	Principles of Counseling & the Lived Experience of Illness	2
GENCOUNSEL 205	Advanced Medical Genetics I	2.5
GENCOUNSEL 207	Clinical Embryology for Genetics Clinicians	1
<b>Units</b>		<b>12</b>
<b>Winter Quarter</b>		
GENCOUNSEL 208	Research Methods for Genetic Counselors II	2
GENCOUNSEL 209	The Genetic Counseling Session: From Theory to Practice	2
GENCOUNSEL 210	Reproductive Genetics	2
GENCOUNSEL 211	Advanced Medical Genetics II	2.5
GENCOUNSEL 212	Graduate Seminar in Genetics I	1
GENCOUNSEL 213	Precision Medicine and Variant Interpretation	2
GENCOUNSEL 214	Externship I	1.5
<b>Units</b>		<b>13</b>
<b>Spring Quarter</b>		
GENCOUNSEL 215	Hereditary Cancer Genomics	2
GENCOUNSEL 216	Social, Ethical & Legal Issues in Genetics	2
GENCOUNSEL 217	Graduate Seminar in Genetics II	1
GENCOUNSEL 218	Advanced Medical Genetics III	2.5
GENCOUNSEL 219	Foundational Counseling Skills	2
GENCOUNSEL 220	Externship II	1.5
GENCOUNSEL 224	Capstone Research Project	1.5
<b>Units</b>		<b>12.5</b>
<b>Year 2</b>		
<b>Summer</b>		
GENCOUNSEL 224	Capstone Research Project	1.5
GENCOUNSEL 225	Clinical Rotation I	8.5
<b>Units</b>		<b>10</b>

<b>Fall Quarter</b>		
GENCOUNSEL 221	Integral Topics to Genetic Counseling	2
GENCOUNSEL 224	Capstone Research Project	1.5
GENCOUNSEL 226	Clinical Rotation II	8
GENCOUNSEL 228	Clinical Rotation IV	8
<b>Units</b>		<b>19.5</b>
<b>Winter Quarter</b>		
GENCOUNSEL 222	Advanced Counseling Skills	2
GENCOUNSEL 224	Capstone Research Project	1.5
GENCOUNSEL 227	Clinical Rotation III	8
GENCOUNSEL 230	Process Group II	0.5
<b>Units</b>		<b>12</b>
<b>Spring Quarter</b>		
GENCOUNSEL 223	Professional Formation	2
GENCOUNSEL 224	Capstone Research Project	1.5
GENCOUNSEL 228	Clinical Rotation IV	8
GENCOUNSEL 231	Process Group III	0.5
<b>Units</b>		<b>12</b>
<b>Total Units</b>		<b>91</b>