GENETIC COUNSELING (MS)

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

Degree Offered: Master of Science (MS)

Program Leadership:
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Program Description

The Genetic Counseling Program is a full-time, 21-month program of study leading to a Master of Science in Genetic Counseling. This is a 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 integrates the latest advances in contemporary genetics while maintaining deep roots in humanistic counseling theory and a strong commitment to the ethical application of genomic medicine. Clinical training experiences are available in a variety of campus genetics clinics and laboratories, offering students exposure to the Bay Area's diverse ethnocultural and socioeconomic communities. Partnerships with Bay Area genetics clinics provide students additional clinical training opportunities beyond the campus boundaries. Close proximity to Silicon Valley and a hub of biotechnology companies also provides students opportunities to train at some of the nation's most renowned genetics organizations in the private sector. The research experience is showcased through a scholarly capstone project of the student's own design. The capstone project provides an opportunity to gain a deep understanding of the research process while contributing to advancements in the field of genetic counseling.

The Genetic Counseling Program also provides a unique and exciting opportunity for one student with a strong interest in community-based practice to complete the second year of clinical training in the Fresno region of California. UCSF extends its training reach to a branch campus at Community Regional Medical Center (CRMC) in Fresno. CRMC is a major tertiary care center providing complex care to the diverse residents of the central San Joaquin Valley. This setting provides immersive clinical experience in an underserved region where access to genetics services can be especially impactful. Located midway between San Francisco and Los Angeles, Fresno is a major agricultural and regional health care hub, offering exposure to rural health care delivery within a large medical center environment.

The Genetic Counseling Program is primarily based at UCSF's Mission Bay campus.

Faculty

The Genetic Counseling Program faculty is composed of a diverse group of experienced genetics educators from across the UCSF campus. With a strong history of involvement in San Francisco-area genetic counseling programs since the 1970s, UCSF brings decades of expertise to every aspect of the program. From seasoned educators to knowledgeable research mentors and skilled clinical training supervisors, our faculty is dedicated to providing comprehensive training for future genetic counselors. Find a list of current course instructors (https://geneticcounseling.ucsf.edu/instructional-faculty) on the program website.

Career Outcomes

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

Admission Requirements

Individuals from all academic backgrounds may apply for admission to the Genetic Counseling Program. The program values diversity and recognizes that students from a broad range of perspectives improves both the practice of health care and the educational experience for everyone. Applicants to the program will need to demonstrate successful completion of the following college-level courses (minimum of one quarter or semester) or their equivalents to ensure adequate foundational knowledge for our curriculum:

- 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 educational experience in a volunteer or paid position involving counseling or social services (e.g., at a crisis intervention center, student health center, family planning clinic, disability services organization, or in roles such as resident advisor or peer counselor).
- Direct contact with genetic counselors, such as interviewing or shadowing practicing genetic counselors. Please note that opportunities for direct patient observation may be limited due to HIPAA (patient confidentiality) regulations. Participation in or observation of genetic counseling–related activities (e.g., case conferences or professional meetings) is also valuable.
- Employment, internship, or volunteer experience in a genetic counseling or genetics-related setting (e.g., a clinic, laboratory, public health organization, or nonprofit advocacy group).
- Attendance at other genetic counseling-related events, such as interest group meetings, conferences, or workshops. Applicants are also encouraged to view and critically reflect on professional development resources, such as the NSGC Master Genetic Counselor

series (https://www.nsgc.org/Online-Education-Center/Online-Education-Inventory/JEMF-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). The PBCs describe 7 practice-based competencies and 25 sub-competencies necessary for practice as an entry-level genetic counselor. The competencies are categorized in the following distinct domains: Genetics and Genomics Expertise, Risk Assessment, Counseling, Communication, Research, Healthcare Systems, and Professional Identity.

Degree Requirements

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

1. 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.
2. Maintain a cumulative GPA of 3.0 or higher.
3. Successfully complete all clinical placements and demonstrate progressive achievement of the Practice Based Competencies (https://www.gceducation.org/forms-resources/) established by the Accreditation Council for Genetic Counseling (ACGC).
4. Successfully complete a capstone research project.
5. Successfully complete all Supplemental Experiences and associated requirements.
6. Demonstrate attainment of the ACGC Practice Based Competencies (https://www.gceducation.org/forms-resources/) by the end of the program.
7. Attend all classes and required activities; actively participate in coursework and class discussions; and uphold the highest standards of academic integrity, professionalism, and cultural humility throughout the program.

All courses listed below are required. Courses and course sequence are subject to change.

Core Courses

Course	Title	Units
Year 1		
Fall Quarter		
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
	Units	**12**
Winter Quarter		
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 214	Externship I	1.5
GENCOUNSEL 215	Clinical Cancer Genetics	2
	Units	**13**
Spring Quarter		
GENCOUNSEL 213	Precision Medicine and Variant Interpretation	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
GENCOUNSEL 232	Cardiovascular Genetics & Reimbursement in Genomic Medicine	2
	Units	**14.5**
Year 2		
Summer		
GENCOUNSEL 224	Capstone Research Project	1.5
GENCOUNSEL 225	Clinical Rotation I	8.5
	Units	**10**
Fall Quarter		
GENCOUNSEL 221	Integral Topics to Genetic Counseling	2
GENCOUNSEL 224	Capstone Research Project	1.5
GENCOUNSEL 226	Clinical Rotation II	8
GENCOUNSEL 229	Process Group I	0.5
	Units	**12**
Winter Quarter		
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
	Units	**12**
Spring Quarter		
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
	Units	**12**
	Total Units	**85.5**