

Course Descriptions:

GCD 8001, 8002, 8003 - Genetic Counseling Clinical Internship: These courses are taken in the summer, fall, and spring semesters of the second year. Students will complete three core rotations and two specialty rotations during these courses. These courses must be taken for a grade (A-F). A grade of A or B is required in each of the clinical rotations in order to complete the clinical component of the program for graduation. Students are expected to complete a minimum of 20 hours per week in each internship rotation for a total of 800 hours over the program. Final oral exams will be given to all students who meet the course and clinical requirements by the spring of the second year. Final oral exams are required for graduation.

GCD 8073 - Genetics & Genomics in Human Health: This course focuses on the *clinical interpretation* of molecular data. We will do a high-level overview of some molecular techniques, but this is NOT a molecular methods course. Course objectives and goals: Understand the role of molecular testing in genetic counseling practice, gain competence in the use of ACMG guidelines for variant interpretation and report writing, and develop the skills needed to critically evaluate medical literature, clinical databases, and other resources used in variant interpretation.

GCD 8911 - Genetic Counseling Skills & Practice 1: This course is an introduction to the profession of Genetic Counseling. It is designed to focus on basic concepts used in clinical practice. Students will learn the necessary skills to prepare for and implement a genetic counseling session. The class will cover a variety of areas in the genetic counseling sub-specialty of perinatal genetics, as well as newborn screening for conditions such as cystic fibrosis and disorders of sexual differentiation. As a part of the course, students will work on communicating genetics and medical information. At the end of the semester, students will be equipped with tools to assess medical and family histories, present genetic cases, and role play genetic counseling sessions.

GCD 8912 - Genetic Counseling Skills & Practice 2: In this course, we will address practical genetic counseling topics. The class will cover a variety of domains from statistics, development and reproduction, cancer, neurological, and metabolic genetic counseling. As a part of the course, students will work on communicating genetics and medical information. This class will also equip students with tools to assess family

histories, present genetic cases, and role play genetic counseling sessions.

GCD 8913/8915 - Psychosocial Issues in Genetic Counseling 1 & 2: This year-long course is designed to introduce students to the psychosocial issues that commonly arise in genetic counseling, as well as develop students' individual counseling skills to assist them in effectively counseling patients. Students will learn to integrate basic counseling skills and theory into their genetic counseling through engaging in the literature on aspects of psychosocial genetic counseling, small and large group roles, and case presentations. Psychosocial topics covered in this course include person-centered theory, culturally inclusive counseling, family systems, crisis counseling, grief/loss, decision-making theories, health beliefs models, risk communication, and professional development and supervision.

GCD 8914 - Ethical & Legal Issues in Genetic Counseling: This course will provide a foundational knowledge of the ethical and legal considerations that are relevant to individuals working at the intersection of genetics and medical science.

GCD 8916 - Genetic Counseling Research Seminar: This course is designed to develop student knowledge and skills needed for addressing researchable questions encountered in genetic counseling. Major objectives are: (1) review empirical research methods in genetic counseling research, (2) practice developing research questions and designing studies to address these questions, (3) identify a topic and related research questions/objectives for the Plan B project, (4) develop a plan for addressing the Plan B research questions/objectives, (5) write a critical review of literature on a topic pertaining to the Plan B project, (6) write a draft of the Introduction to the Plan B paper.

GCD 8917/8918 - Medical Genetics for Genetic Counselors 1 and 2: This year-long course integrates basic biochemical, molecular, and genetic principles with human development and disease. Information from the traditional disciplines of biochemistry, genetics, cell biology, and developmental biology will be integrated so that a scientific foundation for clinical medicine will be deeper and more robust. The goal of the course is to provide students with a foundation of fundamental genetic principles that form the basis of medical genetics conditions.

GCD 8921 - Professional Development Seminar: This 2-semester course counts for 2 credits (1 credit in the fall and 1 credit in the spring). We will meet on alternating weeks (see course schedule for specific dates). Over these 2 semesters we will focus on developing awareness, attitudes, and skills to promote readiness for clinical placements in

the second year. Course content in the fall semester will focus on the impact of identity on the professional life of genetic counselors. After introducing the importance of metacognition and self-care to success in graduate school and the profession, the major topics of the course will be exploration of personal intersectional identity, understanding the lenses by which we view the world, tools for navigating cultural differences, and assessing systemic barriers to inclusion in healthcare. The spring semester will shift the primary focus to preparation for clinical placements. Major topics will include interprofessional collaboration, variations to traditional operating procedures (e.g., telemedicine, working with interpreters, industry careers), utilizing clinical supervision, and cultivation of reflective practice. Students will also continue to explore cultural competence with an immersive project.

GCD 8922 - Professional Development Seminar: This 2-semester course counts for 2 credits (1 credit in the fall and 1 credit in the spring). We will meet on alternating weeks (see course schedule for specific dates). Over these 2 semesters we will focus on preparing students for the transition to independent practitioners and leaders in the field. Throughout this year, each student will serve as a mentor to a student in the first year cohort, so this course will include training in mentorship skills and reflective practice around mentorship. The primary emphasis of the course content in the fall semester will be development of skills and materials to help secure initial job placement, including professional networking, job search strategies, preparing application materials (e.g., resume/CV, cover letters), interviewing, and financial planning. We will also explore individual leadership styles, professional leadership roles, innovation-thinking, and revisit self-care to incorporate the pressures of clinical practice and initial career decisions. The spring semester will shift the primary focus to preparation for Board exams and thinking about professional longevity. Board exam preparation will include test-taking and studying strategies as well as a practice exam. Professional longevity content will explore sources of burnout and career satisfaction, ways to diversify job responsibilities (e.g., teaching, research, supervision, public outreach), and work-life balance.

GCD 8993 - Directed Study – Cyto Lab Rotation: The main goal of this rotation is to provide the student with a solid foundation in cytogenetics and knowledge of how to approach genetic counseling of cases involving a chromosome abnormality. Upon completion of this rotation, the student will be able to: know the basic methodologies used in cytogenetic analysis including conventional G-banding studies, fluorescence in-situ hybridization, and genomic microarrays, understand the primary clinical indications for constitutional chromosome studies, be able to identify the major

constitutional chromosome abnormalities and apply and interpret the ISCN correctly, understand the complexities involved in counseling for constitutional chromosome abnormalities, know how to access and critique the published literature as well as human genome databases and apply this information appropriately to the clinical situation, and be able to correlate the cytogenetic and clinical findings and make referrals for appropriate further genetic testing for patients and families.

GCD 8994 - Research Project Paper: Students will sign up for a total of 4 credits for research in their second year. Typically students will sign up for 2 credits in fall and 2 credits in the spring. These credits can be adjusted to accommodate an additional outside course in the Spring. For details for Scholarly Project requirements, see *Scholarly Project Handbook*.

PSY 5137 - Behavioral Genetics: The course provides a broad overview of the application of genetic methods to the study of behavior, with a particular focus on human behavior. Emphasis is placed on the use of genetic designs and methods to address psychologically relevant questions concerning the nature and etiology of individual differences in behavior. Consequently, a significant portion of the course is devoted to learning human genetic methods, including traditional methodologies such as twin and adoption studies as well as “wet-lab” methods such as cytogenetics, molecular genetics, and large-scale association studies. The class seeks to provide students with the background they will need to critically evaluate the primary behavioral genetic research.