GENETIC COUNSELING (GENCOUNSEL)

GENCOUNSEL 201 Human Genetics (2.5 Units) Fall
Instructor(s): Marta Sabbadini
Prerequisite(s): None
Restrictions: Genetic Counseling Program students only
Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course is an advanced exploration of the fundamental principles in human molecular genetics and the molecular basis of disease. These topics are illustrated through discussion of gene and genome structure, regulation of gene expression, DNA damage and repair, human genetic variation, the basis of heredity such as Mendelian and non-Mendelian inheritance patterns, mechanisms of genetic disease and an introduction to genomic testing methodologies.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 202 Clinical Cytogenetics (2 Units) Fall
Instructor(s): Jingwei Yu
Prerequisite(s): None
Restrictions: Genetic Counseling Program students only
Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

The course content will introduce cytogenetics/genomics theories, chromosome morphology and organization, cytogenetic naming conventions, transmission of cytogenetic anomalies, assessment of recurrent risks and the analytical tools used for diagnosis and investigation of human genetic variations. Counseling scenarios will provide insight into the applications of classroom content to actual cases. Opportunities to visit the cytogenetic laboratory will also be available.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 203 Research Methods for Genetic Counselors I (2 Units) Fall
Instructor(s): Julie N Harris-Wai
Prerequisite(s): None
Restrictions: Genetic Counseling Program students only
Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

Research Methods I is an introduction to the Genetic Counseling Capstone Project and orientation to the ethical and logistical conduct of research. This is the first in a series of two courses meant to guide students towards developing their capstone project proposal.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 204 Principles of Counseling & the Lived Experience of Illness (2 Units) Fall
Instructor(s): Summer Segal
Prerequisite(s): None
Restrictions: Genetic Counseling Program students only
Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course will introduce the fundamental principles of genetic counseling and facilitate understanding of the lived experience of illness at various ages and life stages. Emphasis will be placed upon the psychosocial implications of genetic disease and its impact on normative individual and family development.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes
GENCOUNSEL 205 Advanced Medical Genetics I (2.5 Units) Fall
Instructor(s): Cynthia S Morgan
Prerequisite(s): None

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course is the first of a three-part series and seeks to provide students with the fundamentals of applied medical genetics. Students will be introduced to medical genetics terminology, the genetics medical evaluation and a broad range of genetic conditions and syndromes from a systems-based approach. An emphasis will be placed on critical thinking and an applied framework to evaluating genetic conditions. Resources for case management and patient support will also be integrated throughout.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 206 Genes, Populations and Pedigrees (2 Units) Fall
Instructor(s): Cynthia S Morgan
Prerequisite(s): None

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course will utilize the fundamental concepts of population genetics to illustrate allele distribution and factors influencing allele and disease frequency. These theoretical concepts will then be applied to clinical scenarios as students learn to obtain medical histories, construct pedigrees using proper conventions, identify inheritance patterns and perform risk calculations, including advanced mathematical techniques for risk assessment.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 207 Clinical Embryology for Genetics Clinicians (1 Units) Fall
Instructor(s): Cynthia S Morgan
Prerequisite(s): None

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course will familiarize students with key aspects of human prenatal development from conception through birth. Particular focus is given to formation of the embryologic germ layers, developmental mechanisms and organ system formation in order to provide an understanding of the embryological basis of congenital anomalies and genetic malformation syndromes.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 208 Research Methods for Genetic Counselors II (2 Units) Winter
Instructor(s): Julie N Harris-Wai
Prerequisite(s): GENCOUNSEL 203

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course introduces students to the fundamentals of research study design, methods and data collection. It serves as an introduction to quantitative, qualitative, intervention, and mixed methods research, as well as evaluation approaches. This course builds on the training and topics covered in GENCOUNSEL 203. Students will gain competencies for conducting research and evaluation in order to prepare for their capstone project and cultivate lifelong fundamental research and evaluation skills.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes
GENCOUNSEL 209 The Genetic Counseling Session: From Theory to Practice (2 Units) Winter

Instructor(s): Cynthia S Morgan  
Prerequisite(s): GENCOUNSEL204

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

Building upon the theoretical foundation introduced in GENC204, this course focuses on the practical aspects of the clinical encounter. The course is structured around key components of a genetic counseling session. Students will learn skills and techniques for engaging and interviewing clients, communicating complex information, assessing risk perception, facilitating decision making, performing a psychosocial assessment and utilizing alternative service delivery models.

School: Graduate Division  
Department: Genetic Counseling Program

May the student choose the instructor for this course? No  
Does enrollment in this course require instructor approval? No  
Course Grading Convention: Letter Grade

Graduate Division course: Yes  
Is this a web-based online course? No  
Is this an Interprofessional Education (IPE) course? No  
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 210 Reproductive Genetics & the Business of Healthcare (2 Units) Winter

Instructor(s): Allyson M Scott  
Prerequisite(s): None

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course introduces reproductive genetic counseling along with the business of healthcare. Pregnancy, infertility, screening vs. diagnostic testing options, abnormal outcomes, fetal interventions and terminations will be addressed. Psychosocial and ethical dilemmas unique to reproductive genetics allows for rich discussion. Additionally, an introduction to billing and reimbursement, coding, public versus private payers, credentialing and healthcare system delivery models is provided.

School: Graduate Division  
Department: Genetic Counseling Program

May the student choose the instructor for this course? No  
Does enrollment in this course require instructor approval? No  
Course Grading Convention: Letter Grade

Graduate Division course: Yes  
Is this a web-based online course? No  
Is this an Interprofessional Education (IPE) course? No  
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 211 Advanced Medical Genetics II (2.5 Units) Winter

Instructor(s): Cynthia S Morgan  
Prerequisite(s): GENCOUNSEL 205

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course builds on GENCOUNSEL205. Conditions with more complex and non-Mendelian inheritance patterns will be introduced, as well as non-traditional fields of medical genetics. Students will learn from and interact with topic experts using a case-based learning format. Resources for case management and patient support will also be integrated throughout the curriculum. Critical thinking and an applied framework for evaluating medical genetics conditions will be emphasized.

School: Graduate Division  
Department: Genetic Counseling Program

May the student choose the instructor for this course? No  
Does enrollment in this course require instructor approval? No  
Course Grading Convention: Letter Grade

Graduate Division course: Yes  
Is this a web-based online course? No  
Is this an Interprofessional Education (IPE) course? No  
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 212 Graduate Seminar in Genetics I (1 Units) Winter

Instructor(s): Allyson M Scott  
Prerequisite(s): None

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This seminar is a combination of practical topics and an examination of current literature in the field of genetic counseling and genomic medicine. The intent is to build professional skills, while also raising academic interest in clinical genetics. Class review of journal articles will enable students to become better consumers of the scientific literature, consider important components when developing research methodologies, critique research-based writing and cultivate presentation skills.

School: Graduate Division  
Department: Genetic Counseling Program

May the student choose the instructor for this course? No  
Does enrollment in this course require instructor approval? No  
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

Graduate Division course: Yes  
Is this a web-based online course? No  
Is this an Interprofessional Education (IPE) course? No  
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes
GENCOUNSEL 213 Precision Medicine and Variant Interpretation (2 Units) Winter
Instructor(s): Marta Sabbadini
Prerequisite(s): None

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course provides an introduction to the latest techniques for discovering and interpreting genomic alterations; especially as applied to clinical care. The multidisciplinary application of genomic sequencing will be addressed with a primary focus on exome sequencing and variant interpretation. Students will develop critical thinking skills related to testing strategies and genomic data interpretation.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 214 Externship I (1.5 Units) Winter
Instructor(s): Cynthia S Morgan
Prerequisite(s): None

Restrictions: Genetic Counseling Program students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

Externship I is an opportunity to give first year students clinical exposure prior to embarking on clinical rotations. Under the supervision of genetic counselors or medical geneticists, students will develop practical genetic counseling skills through authentic patient encounters or pre-curated exercises. The focus of the Externship Program is the application of coursework to the clinical setting and the acquisition of basic, practical skills relevant to any area of practice.

School: Graduate Division
Department: Genetic Counseling Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 215 Hereditary Cancer Genomics (2 Units) Spring
Instructor(s): Cynthia S Morgan
Prerequisite(s): None

Restrictions: Genetic Counseling students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course provides an understanding of the role of genes in acquired, familial and inherited forms of cancer. Discussion of common types of cancer as well as rare hereditary cancer syndromes by body system are explored. The course also addresses surgical options, cancer treatment(s), the psychosocial aspects of cancer, risk assessment, germline testing, genomic tumor profiling and cell-free tumor analysis.

School: Graduate Division
Department: Graduate Division
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

GENCOUNSEL 216 Social, Ethical & Legal Issues in Genetics (2 Units) Spring
Instructor(s): Julie N Harris-Wai
Prerequisite(s): None

Restrictions: Genetic Counseling Students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course covers ethical and social issues in genetics and genomics relating to research and clinical practice. A case-based approach assists students developing basic skills in ethical reasoning. Assigned readings, genetics- and bioethics-related news stories, in-class discussions, and lectures will help participants situate questions of practice within broader social and political debates.

School: Graduate Division
Department: Graduate Division
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes
GENCOUNSEL 217 Graduate Seminar in Genetics II (1 Units) Spring  
*Instructor(s): Allyson M Scott*  
Prerequisite(s): GENCOUNSEL 212: Graduate Seminar in Genetics I

Restrictions: Genetic Counseling students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This seminar is a combination of practical topics and an examination of current literature in the field of genetic counseling and genomic medicine. The intent is to build professional skills, while also raising academic interest in clinical genetics. Class review of journal articles will enable students to become better consumers of the scientific literature, consider important components when developing research methodologies, critique research-based writing and cultivate presentation skills.

**School:** Graduate Division  
**Department:** Genetic Counseling Program  
**May the student choose the instructor for this course?** No  
**Does enrollment in this course require instructor approval?** No  
**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)  
**Graduate Division course:** Yes  
**Is this a web-based online course?** No  
**Is this an Interprofessional Education (IPE) course?** No  
**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes

GENCOUNSEL 218 Advanced Medical Genetics III (2.5 Units) Spring  
*Instructor(s): Cynthia S Morgan*  
Prerequisite(s): GENCOUNSEL 211: Advanced Medical Genetics II

Restrictions: Genetic Counseling students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This is the final Advanced Medical Genetics course. Discussion of conditions with complex and non-Mendelian inheritance patterns continues along with an intro to metabolic diseases and therapeutic interventions. Students will learn from and interact with topic experts using a case-based learning format. Resources for case management and patient support will also be integrated throughout the curriculum. Critical thinking and an applied evaluation framework for genetic conditions is emphasized.

**School:** Graduate Division  
**Department:** Genetic Counseling Program  
**May the student choose the instructor for this course?** No  
**Does enrollment in this course require instructor approval?** No  
**Course Grading Convention:** Letter Grade  
**Graduate Division course:** Yes  
**Is this a web-based online course?** No  
**Is this an Interprofessional Education (IPE) course?** No  
**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes

GENCOUNSEL 219 Foundational Counseling Skills (2 Units) Spring  
*Instructor(s): Summer Segal*  
Prerequisite(s): None

Restrictions: Genetic Counseling students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course provides the foundational knowledge and skills necessary for effective client-centered counseling. Focus is placed upon establishing and maintaining a therapeutic relationship through practices that promote the counselor’s self-awareness, as well as the capacity to empathically attune and attend to clients’ needs. Common counselor relational dynamics and client coping strategies will be addressed. Students will learn psychosocial interventions promoting adaptation to illness.

**School:** Graduate Division  
**Department:** Genetic Counseling Program  
**May the student choose the instructor for this course?** No  
**Does enrollment in this course require instructor approval?** No  
**Course Grading Convention:** Letter Grade  
**Graduate Division course:** Yes  
**Is this a web-based online course?** No  
**Is this an Interprofessional Education (IPE) course?** No  
**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes

GENCOUNSEL 220 Externship II (1.5 Units) Spring  
*Instructor(s): Cynthia S Morgan*  
Prerequisite(s): GENCOUNSEL 214: Externship I

Restrictions: Genetic Counseling students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

This course is a continuation of Externship I and will build upon the skills acquired during that course. Under the supervision of established genetic counselors or medical geneticists, students will prepare for the professional role through pre-curated exercises, increasing their interaction with patients and actively participating in professional care. Students will spend approximately 4 hours per week in Externship II.

**School:** Graduate Division  
**Department:** Genetic Counseling Program  
**May the student choose the instructor for this course?** No  
**Does enrollment in this course require instructor approval?** No  
**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)  
**Graduate Division course:** Yes  
**Is this a web-based online course?** No  
**Is this an Interprofessional Education (IPE) course?** No  
**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes
GENCOUNSEL 224  Capstone Research Project  (1.5 Units)  Fall, Winter, Spring, Summer

Instructor(s): Julie N Harris-Wai
Prerequisite(s): None

Restrictions: Genetic Counseling students only

Activities: Lecture, Seminar, Clinical, Fieldwork, Independent Study, Project, Web work, Workshop, Practical Experience, Special Projects, Lab skills, Lab science, Conference, Discussion

The Capstone Project allows students to gain experience in research project development and implementation, institutional research requirements, research methodology and data analysis, evidence-based approaches to problem solving, professional writing, and self-directed learning in order to increase their professional growth and contribute to the field of genetic counseling. It will also permit students to deeply explore fields of interest and collaborate with faculty from many disciplines.

School: Graduate Division
Department: Genetic Counseling Program

May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes
Repeat course for credit? Yes