

GENETIC COUNSELING GRADUATE PROGRAM

UNIVERSITY OF COLORADO DENVER
ANSCHUTZ MEDICAL CAMPUS (UCD-AMC)

Welcome

The University of Colorado Denver Graduate Program in Genetic Counseling provides comprehensive master's level training that addresses the complex individual, family and societal impact of human genetic advances and their translation into quality health care services and informed health policy. Students learn effective, compassionate and creative approaches to assist patients, health care providers and the public to understand and appropriately utilize genetic information and testing to promote informed health care choices and well being.

The graduate program was founded in 1971. Our alumni practice in all regions of the country and all specialties of genetic counseling. They are employed in hospitals, academic and private genetics centers, clinical research programs, diagnostic laboratories, biotechnology companies, and public health departments, among other settings.

The program is fully accredited by the American Board of Genetic Counseling. The program's philosophy is to provide in-depth classroom education in the scientific and psychosocial aspects of human genetic conditions concurrently with early, hands-on clinical experiences. Students combine theory with practice throughout the core 5 semester, 21 month curriculum. Students gain experience in laboratory settings and with research activities, and may arrange advanced clinical rotations or other individualized experiences to meet their professional interests and career goals.

If you are committed to high standards of academic performance and patient care, as well as the challenges of personal and professional growth in the exciting, expanding field of genetic counseling, we look forward to your application!

Carol Walton, M.S., C.G.C.
Director, Graduate Program in Genetic Counseling

Application Deadline:

The online application and all application materials must be postmarked by January 1, 2012, to be considered for the Fall 2012 admission cycle. Admission is for Fall semester only. No rolling or deferred admission is offered.

Revised 8/1/11

Genetic Counseling

Genetic counselors work in clinical, teaching, administrative, commercial, government, private practice and consulting environments. As members of health care teams, they provide information and support to individuals and families affected with or at risk for birth defects, genetic conditions, or genetic predispositions to diseases such as cancer. They investigate the concerns about traits present in the family, interpret information about these conditions, analyze inheritance patterns and risks of recurrence, review available testing and management options with the family, provide supportive counseling, identify community and support group resources, and act as patient advocates. Genetic counselors may serve as professional liaisons for laboratories to ensure that health care providers order and interpret genetic tests appropriately. They may also serve as educators and resource people for other health care professionals and for the general public. Many genetic counselors facilitate support groups, participate in health care policy development regarding genetic services and related issues, and engage in research activities related to the field of medical genetics and genetic counseling.

For more information about the genetic counseling profession, visit the home page of the *National Society of Genetic Counselors* at www.nsgc.org

How to reach us:

All applications are now submitted electronically via the Online Application Web Site at:

https://soa.prod.cu.edu/degreeprog/applyDEGREEPROG_CUDEN/login.action

Mailing address for application supporting materials:

UCD Graduate Program in Genetic Counseling
Clinical Genetics, Mail Stop 8400
13121 E. 17th Ave.
Aurora, CO 80045

Telephone: (303) 724- 2370 **Fax:** (720) 777-7322

Genetic Counseling Program web site:

<http://www.ucdenver.edu/geneticcounseling>

For General Information about UCD-AMC, visit the Graduate School, University of Colorado Denver - Anschutz Medical Campus Web Site:

<http://ucdenver.edu/academics/colleges/Graduate-School/ACADEMIC-PROGRAMS/AMC-ADMISSIONS/Pages/default.aspx>

ADMISSION REQUIREMENTS

Applicants to the Graduate Program in Genetic Counseling must meet admission requirements of both the Graduate School and the Genetic Counseling Program. These are detailed below and on the next page.

Graduate School Admission Requirements

- 1) **Fulfillment of the academic requirements for regular admission to the Graduate School:**
 - **A baccalaureate degree or its equivalent** from a college or university of recognized standing in the biological sciences, psychology, social work, nursing or a related field.
 - **A MINIMUM undergraduate grade point average of 3.0** on a 4.0 scale.
- 2) **Completion of the online application form and submission of supporting materials.** Access the online application web site at

https://soaprod.cusys.edu/degreeprog/applyDEGREEPROG_CUDEN/login.action
- 3) **FOUR letters of recommendation are required.** Recommendations should be requested from individuals who know the applicant in an academic or professional context and can directly attest to the applicant's academic performance, professional abilities, and potential as a graduate student and genetic counselor. Recommendations from family members and personal friends are discouraged. Preferably, at least two of these recommendations should be from academic sources (past course professors, major advisor, research mentor, thesis advisor). **Please remind recommenders that some specific narrative discussion about the candidate's qualifications is extremely helpful**, in addition to the ratings requested on the recommendation form. Please allow your recommenders adequate time to write and submit your recommendations. **Recommendations submitted after our January 1, 2011 postmark deadline will not be accepted. All recommendations are subject to verification of authenticity.**
 - ***We strongly encourage applicants and their recommenders to utilize the online recommendation system, whenever possible.*** This system enables the recommender to complete a secure, online recommendation and submit it electronically, securely, and directly to the online system (no envelopes or postage required). Please follow instructions provided by the online application system. ***Please note that recommenders do not receive a link giving them access to the online system until you as the applicant submit your application. You are encouraged to not wait until too close to the application deadline to submit your application, so as to allow your recommenders adequate time to receive system access and complete their recommendations.***
 - ***We recognize that not all recommenders may have online computer access, so recommendations may still be submitted by mail. Please follow these instructions for mailed submissions:***
 - The applicant should download the recommendation form from the online application site, fill out the top section of the recommendation form (including the signed waiver agreement), and then give it to each recommender. The recommender should complete and sign the form. The recommender should use the back of the form OR attach an additional letter of recommendation on official letterhead to provide the narrative evaluation requested (this is extremely helpful to the admissions committee reviewers).
 - Recommenders should mail the recommendation in a signed and sealed envelope directly to our office (see address on page 1 of this brochure). Recommendations that have been in the possession of the applicant cannot be accepted.
 - An official set of recommendation letters sent directly from a school career center is acceptable. These cannot be accepted if they have been in the possession of the applicant.
- 4) **TWO official copies of each transcript must be sent directly from all colleges and universities attended** (degree and non-degree), regardless of the number of courses taken. If the applicant has completed a study abroad program, transcripts from the host institution overseas should also be requested, even if these courses are reported on the main undergraduate transcript. Transcripts which have been in the possession of the applicant, enclosed with other supporting materials, or that are marked "issued to student" cannot be accepted.

All supporting materials must be sent directly from their originating source (recommender, university registrar/transcript office, Educational Testing Service (ETS), etc.). Materials sent from the applicant, including transcripts or letters issued in a sealed envelope by the school to the applicant, cannot be accepted.

Additional Genetic Counseling Program Admission Requirements

1) Prerequisite Courses:

- **Biology** (full year freshman level course sequence)
- **General/Inorganic Chemistry** (full year freshmen level course sequence)
- **General Biochemistry** (comprehensive upper level course (i.e. both semesters of a full year course sequence *or* a comprehensive/accelerated one semester course); Organic Chemistry is also strongly recommended and, at most colleges, is required as a prerequisite to General Biochemistry)
- **General Genetics** (upper level course including fundamentals of genetics of prokaryotes and eukaryotes, Mendelian principles, molecular genetics principles, gene expression, recombinant DNA technology, population & quantitative genetics, laboratory techniques). Please note that an upper division "Human Genetics" or "Molecular Genetics" course does not fulfill this prerequisite on its own, though such courses are useful supplements to the prerequisite general genetics course for students seeking a strong genetics background as a basis for graduate studies in genetic counseling.
- **General Psychology** course

Prerequisite courses must be completed or in progress at the time of application to the program; if courses will be taken during spring term (i.e. during the application process), please submit a current transcript verifying enrollment in the course(s) or a proof of enrollment letter from the school's registrar.

Prerequisites cannot be waived or taken concurrently with the genetic counseling program.

Also highly recommended: Anatomy & Physiology, Molecular/Cellular Biology, Introductory Statistics

2) Official Graduate Record Examination scores from the General GRE Exam taken within 5 years of the application, and sent directly from ETS (scores older than 5 years are no longer available from ETS)

- The General GRE exam is changing as of August 1, 2011. Scores will be accepted from either the previous or the revised version of the GRE. Regardless of the version taken, section sub-scores must each be at the 50th percentile or greater. If scores from multiple attempts of the GRE are submitted, the scores from the most recent exam taken will be considered the official set of scores by the graduate school. Visit <http://www.ets.org/gre> for more information about the revised GRE exam.
- A GRE subject exam is not required.
- **NOTE: The University of Colorado has four campuses. Be sure to send GRE score reports to the University of Colorado Health Sciences Center Denver (Anschutz Medical Campus), GRE code #4877, department code #0210 (Genetics).**
- It takes 4 to 6 weeks for official GRE scores to reach us from the time they are ordered or the exam is taken; hence, we do not recommend that you wait until December 2011 to take the GRE. We will not review your application without GRE scores. *It is helpful if you can include a photocopy/scan of your student score report with your application to expedite the initial review process.* However, photocopies will not be accepted in lieu of official scores issued to us directly by ETS by 1/1/2012.

3) Experience in counseling and laboratory settings, and a strong understanding of the genetic counseling field, are highly recommended.

- Volunteer or paid positions with Planned Parenthood, crisis hotlines, group homes, peer/community counseling centers, or with clinical research subjects are examples of relevant experience in counseling and advocacy. Technician work in settings such as DNA or cytogenetic laboratories, or teaching assistant positions in biology or genetics lab courses, are also desirable experiences.
- Importantly, applicants should demonstrate a clear understanding of the genetic counseling field and of their own personal goals and motivation for pursuing a career in genetic counseling. Most applicants have spoken to or met with genetic counselors to gain additional information about the career field, and many have interned with or otherwise participated in activities of a clinical genetics center as part of their career exploration. A searchable directory of genetic counselors willing to talk to potential applicants considering this career field is available at www.nsgc.org.

CANDIDATE SELECTION AND INTERVIEWS:

Admission to the genetic counseling program is highly competitive. Currently, the program admits six new students per year.

- Admitted candidates generally have qualifications exceeding the minimum standards indicated. Thus, meeting the minimum standards does not guarantee an interview or an offer of admission to the program.

An on-campus interview is required. All interviews are by invitation only, regardless of your proximity to the Denver/Aurora metro area.

- The Admissions Committee will make its initial selections based on review of the applicants' files.
- Selected applicants will be invited to interview on campus on specific dates in March or April.
- Offers of admission are made on a uniform, national notification date in late April, which is set each year by joint agreement of the North American genetic counseling program directors.

REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE:



The genetic counseling program requires a minimum of 44 core semester hours for completion of the degree plan (subject to change without notice). Students must earn at least a B minus grade in all required courses; course grades below B minus cannot be applied toward the graduate degree.

The University of Colorado Graduate School has two options for completion of the M.S. degree:

Plan I (thesis option): Minimum 30 semester hours, including 4-6 semester hours of thesis work. Students electing the thesis option are waived from completion of the Capstone project. Genetic counseling students electing the thesis option must pass a written final comprehensive examination in year two of the program, followed by an oral examination which includes case-based questions as well as the thesis defense, administered upon completion of the thesis.

Plan II (non thesis): Minimum 30 semester hours. Most students in the genetic counseling program select degree Plan II. Genetic counseling students electing the non-thesis option must complete a Capstone (scholarly) project, as well as pass a written final comprehensive examination in year two of the program, followed by an oral examination that is case-based and requires application of knowledge from courses and clinical rotations.

All students in the Genetic Counseling Program must complete the minimum 44 required core semester hours, regardless of whether or not a thesis option is elected. Students may take additional, elective courses, but electives are not required since the program's requirements exceed the minimum 30 credit requirement of the Graduate School. If a thesis is chosen by the student, the core program requirements and a minimum of 4-6 *additional* thesis credits are required. An additional semester in residence may be required in order to complete thesis requirements, at the discretion of the student's thesis committee, based on the scope of the project and the student's progress toward its completion.

CURRICULUM

Coursework includes instruction in the principles of human genetics, clinical genetics, cytogenetics, molecular genetics, biochemical/metabolic genetics, cancer genetics, risk calculation; psychosocial, interviewing and counseling theories and techniques; and ethical, legal, social and professional issues in genetic counseling practice. Coursework is completed during both years of the graduate program.

Laboratory Experience is obtained via an integrated cytogenetics and molecular genetics laboratory course taken in year one of the program. Additional laboratory experiences can be arranged for the interested student.

Required Clinical Rotations include General Genetics Clinic, Prenatal Diagnosis Clinic, Metabolic Clinic, Regional Outreach Clinics, Pediatric and Adult Specialty Clinics, Adult Medical Genetics Clinic, and Hereditary Cancer Clinic. Students assume responsibility, under the supervision of their clinical supervisors in each setting, for appropriate care of all clients to whom they are assigned. Case activities include pre-clinic case preparation and literature review, obtaining intake histories and family histories (pedigrees), participating in dysmorphology examinations, and provision of genetic counseling regarding diagnosis, genetics, testing options, psychosocial impact and adjustment, and support needs and resources. Students present cases for discussion at post-clinic case conferences, complete post-clinic follow-up regarding test results, document cases in electronic medical records systems, and write correspondence to patients/families and their medical providers. Interested students may arrange a clinical rotation outside of Colorado during the summer semester between years 1 and 2 if an appropriate host center can be identified. Summer placements are arranged so that the student's case involvement meets American Board of Genetic Counseling training requirements.

The **Capstone Project** is undertaken in year 2 of the program as an individualized scholarly project that contributes to the knowledge and/or practice of genetic counseling. Students wishing to pursue more intensive research may instead elect degree plan I with a **Thesis**.

Additional activities: Required activities include participation in post-clinic case conferences, Perinatal Case Conference and Fetal Board ultrasound conference, Genetics Grand Rounds, Genetic Counseling Journal Club, Genetics Case Conference, and educational presentations to secondary school students and lay community groups.

Continuity Clinic: Each student attends additional clinical settings on a long-term basis to obtain further experience in genetic counseling and administration of a genetics clinic. Examples of clinical settings that students attend on a continuity basis include Neurocutaneous Clinic, Hemophilia Clinic, Sickle Cell Clinic, and some Regional Outreach Clinics.

TUITION

The tuition rates for the 2011-12 academic year are \$505 per semester credit hour for Colorado residents and \$987 per semester credit hour for non-Colorado-residents. Genetic counseling students take a minimum of 25 semester hours during their first year (including summer) and the balance during their second year. Most non-Colorado-resident U.S. students may receive in-state tuition rates in their second year if they establish Colorado residency following their first year of graduate school. Residency guidelines are available by calling the Registrar's Office at (303) 724-8059.

FEES

Health Insurance and Student Health Service Fees: Annual premiums for required student health insurance and student health services total approximately \$2,500-3,200 per year depending on the plan selected. Though health coverage is mandatory, purchase of the student health insurance plan may be waived with proof of comparable health insurance at the time of enrollment at UCD.

Admission Deposit: \$200 from incoming students (refundable once student has matriculated).

FEES (Continued)

Additional fees* include:

- Background check for incoming students - \$65.00
- Matriculation fee for incoming students - \$140 if not previously enrolled at CU; \$15 if previous CU student
- Student Activity/Senate: \$20/year
- Academic Support Services: \$75.00 per semester
- RTD pass: \$48.00 per semester

*Fee amounts may change at any time without prior notice.

FINANCIAL AID

There is no formal monetary support for students in the Genetic Counseling Program. Every effort is made to help students find part-time positions on campus, such as in laboratories, clinical research or clerical areas. Some students work part-time off-campus.

The campus Financial Aid Office contacts incoming students upon formal admission to UCD. If you are applying to the graduate program and anticipate needing Federal student loans, work-study or other aid, the Financial Aid office advises that you file a FAFSA form by April 1 (priority consideration). **The Title IV code for UCD-AMC is 004508.** *Questions?* Please contact the UCD – Anschutz Medical Campus Financial Aid Office at (303) 556-2886 or <http://www.ucdenver.edu/student-services/resources/CostsAndFinancing/AnschutzMedicalCampus/FinancialAid/Pages/FinancialAid.aspx>



DENVER and AURORA METROPOLITAN AREA

Students at the Anschutz Medical Campus enjoy all the resources, diversity and beauty of the adjacent cities of Denver and Aurora, which are at the hub of a six county metropolitan area of over 2 million people extending along the eastern foothills of the magnificent Rocky Mountains. Recreational and cultural activities abound. The surrounding areas have extensive networks of urban and mountain parks with paths for jogging, hiking and biking. Several major ski and snowboarding areas are only a 1-2 hour drive away. The Denver Performing Arts Center attracts national theater tours and also hosts the Denver Symphony Orchestra. The Denver Botanic Gardens, Denver Zoo and a number of excellent history and art museums are popular diversions. The area also hosts several major league sports franchises, including the Colorado Rockies, Denver Broncos, Colorado Avalanche, Colorado Rapids and Denver Nuggets. Boulder, home to the main campus of the University of Colorado, is only 30 miles away and boasts numerous cultural events, CU college athletics, and an eclectic downtown area.

ANSCHUTZ MEDICAL CAMPUS

The Genetic Counseling Program moved to the new state-of-the-art Anschutz Medical Campus (AMC) in 2007. AMC was constructed from the ground up as a modern, integrated academic medical community dedicated to the education of health sciences students in many disciplines, provision of quality patient care across the lifespan, and research in the clinical and basic sciences. Genetic counseling students enjoy the convenience of attending their classes, laboratories, seminars and many of their clinical rotations in modern educational and medical facilities that are within steps of each other at the Anschutz Medical Campus.



The Genetic Counseling Program is located within the Division of Clinical Genetics and Metabolism on the fourth floor of the Education 2 South building at AMC.

The student office space includes networked computers, telephones with voice mail, and student mailboxes. Wireless internet access is also available throughout the building. The Division of Clinical Genetics and Metabolism serves thousands of patients of all ages each year through a network of genetics and specialty multidisciplinary clinics at Children's Hospital Colorado on the AMC campus and at regional outreach clinics throughout Colorado. Many of the genetic counselors, clinical and metabolic geneticists, and other program training faculty are based here, facilitating frequent and convenient interaction with the genetic counseling students.

The Education 2 complex contains modern classrooms, dozens of small group study rooms, student lounge spaces, and a large central lounge area with a coffee cart that encourage interaction among students and faculty from all graduate and health professional programs at AMC. Wireless internet is available throughout this facility and most other buildings on campus.

HEALTH SCIENCES LIBRARY

Two blocks away from the Education 2 building is the new Health Sciences Library at AMC. The beautiful 113,000 square foot facility holds 215,000 book and journal volumes. The 60 computers in the main reference area provide students with immediate access to print and electronic resources. Amenities include wireless internet throughout the building, 30 group study rooms, a quiet reading area with mountain views, an art gallery, and a coffee shop and café on the main floor.



CHILDREN'S HOSPITAL COLORADO

Just across the street from Education 2 South is the magnificent Children's Hospital Colorado (CHC), which is consistently ranked as one of the top pediatric specialty hospitals in the nation (read more about it and take a virtual tour at www.childrenscolorado.org). CHC provides cutting edge pediatric care in its family centered inpatient facilities and kid-friendly outpatient clinics, where our genetic counseling students receive much of their clinical training.

Genetic counseling students have access throughout their training to additional CHC patient care resources such as the Clinical Library and the Family Health Library. The hospital's conference center hosts regular grand rounds and perinatal case conference meetings as well as other educational events attended by students, faculty and members of the local genetics community. The full service cafeteria, with its spacious outdoor patio, and a coffee bar and ice cream shop in the main lobby are convenient destinations for meals or a study break.

HOUSING AND TRANSPORTATION

A wide range of rental apartments, condominiums and houses is available in the Denver and Aurora areas. In general, area rental housing is affordable and there is a style to fit any preference and price range, from units in historic buildings to single family homes and large, modern apartment complexes with many amenities.

Although there is no university-sponsored on-campus housing for students, the UCD-AMC Student Assistance Office at web site: <http://www.ucdenver.edu/life/services/student-assistance/Pages/default.aspx> maintains a housing guide with information about rentals in the vicinity. There are some private apartment complexes on the north side of AMC campus and in neighborhoods within biking distance of campus, as well as many other nice, affordable rental options within about a 15 minute drive or bus ride. A roommate matching service is also available to facilitate connections among UCD students who wish to share housing.

Anschutz Medical Campus is a stop on several RTD bus lines serving the metro area, including Boulder, and students receive the RTD EcoPass as part of their student fees each semester. Daily or monthly parking permits can be purchased by students commuting to campus by auto. AMC is located near the major intersection of Colfax Avenue and Interstate 225, providing convenient highway access to the entire metro area. Denver International Airport (DIA) is an easy 20 minute drive from the campus.

DESCRIPTIONS OF COURSES:

GENC 6101/6102 Psychosocial Aspects of Genetic Counseling I & II A two semester course sequence addressing basic psychosocial and counseling theories, approaches, and resources necessary for the provision of genetic counseling to clients and their families in prenatal, pediatric and adult clinical settings. The first semester focuses on human and family development, pregnancy and perinatal loss, and grief theory. The second semester focuses on family systems, crisis theory and intervention, grief and coping responses, and integration of psychosocial approaches into genetic counseling practice.

GENC 6105 Basic Interviewing Skills A course covering the fundamental theories and principles of effective patient/client interviewing in genetic counseling practice. Lectures are combined with hands-on role plays and interviews so that students may gain applied experience and receive feedback to foster skills development.

GENC 6110/6111 Topics in Medical Genetics I & II A two semester course sequence regarding principles of clinical genetics and genetic counseling, and development of knowledge and clinical skills used in pediatric, prenatal and adult clinical settings.

GENC 6120 Clinical Cytogenetics and Molecular Genetics A lecture course providing integrated instruction regarding human cytogenetic and molecular genetic principles, techniques, and diagnostic testing approaches used in clinical evaluation and risk assessment for genetic disorders/predispositions in prenatal and postnatal patient populations.

GENC 6121 Laboratory in Clinical Cytogenetics and Molecular Genetics A laboratory course providing an introduction to specific methodologies and interpretation of studies used in diagnostic cytogenetics and molecular genetics laboratories. Principles discussed in the co-requisite Clinical Cytogenetics and Molecular Genetics course will be applied through demonstrations, hands-on experiments, and discussion of illustrative cases.

GENC 6122 Seminar in Clinical Cytogenetics and Molecular Genetics This third course in the cytogenetics/ molecular course sequence requires students to apply theories and principles of cytogenetics and molecular genetics to analysis of cases that present in the daily operations of diagnostic laboratories and to formal critique of current research literature. Additionally, students present a formal seminar integrating cytogenetic and molecular genetic principles.

GENC 6130 Cancer Genetics and Genetic Counseling A course in the provision of genetic counseling services to clients with or at risk for hereditary cancer predisposition. Topics include clinical oncology, epidemiology, molecular biology of cancer, risk assessment, genetic testing, ethical/legal considerations, psychosocial impact and support, and specific approaches used in cancer genetic counseling.

GENC 6140 Human Inborn Errors of Metabolism A course providing systematic review of major metabolic disorders, including their clinical phenotypes, diagnosis, and management. Physiological and laboratory testing principles important to the understanding of these disorders are reviewed, and the psychosocial impact of metabolic disorders and specific genetic counseling approaches will be discussed.

GENC 6150 Congenital Malformations and Disorders of the Newborn A survey course covering common major malformations and non-metabolic genetic disorders identified by newborn screening programs. Clinical phenotypes, diagnosis, management and etiology of these conditions, as well as psychosocial impact and specific genetic counseling approaches, are discussed.

GENC 6170 Introduction to Clinical Research for Genetic Counseling Students A course covering key methods, study design, ethics and regulatory issues important to the conduct of research in genetic counseling. Research roles in genetic counseling are explored.

GENC 6201 Advanced Psychosocial Genetic Counseling A course examining advanced genetic counseling techniques as they relate to psychosocial theories, specific client characteristics, and the client/counselor dynamic, via critical discussion of core topics and readings, and application of theories to analysis of students' cases.

GENC 6210/6211 Professional Issues in Genetic Counseling I & II A two semester course sequence regarding professional practice issues of master's level genetic counselors. The fall semester course focuses on professional standards, professional ethics, legal principles, and health systems and policy issues relevant to genetic counselors. The spring semester course focuses on disability issues, cultural competency, public health genetics, and the expanding professional roles.

GENC 6250 Risk Calculation in Genetic Counseling A practical course covering pedigree analysis, population genetics, clinical epidemiology and risk calculation principles used by genetic counselors in clinical practice.

GENC 6940 Capstone in Genetic Counseling Students design and complete an individualized scholarly project that contributes to the knowledge and/or practice of genetic counseling (for students pursuing the Plan II non-thesis option).

GENC 6950 Master's Thesis Master's thesis research credits (for Plan I thesis option).

DESCRIPTIONS OF COURSES (CONTINUED):

GENC 6910 Applied General Genetics Clinic A required clinical rotation through a general genetics clinic serving a variety of referral indications. Students will learn and practice case management, history taking, risk assessment, counseling, and client advocacy skills.

GENC 6911 Applied Prenatal Genetics Clinic A required clinical rotation through a prenatal diagnosis and genetics clinic. Students will learn and practice history taking, risk assessment, patient education and genetic counseling regarding prenatal screening and fetal diagnostic testing procedures and results, and case management, as well as observe procedures.

GENC 6912 Applied Metabolic Genetics Clinic A required clinical rotation through a clinic for inborn errors of metabolism. Students will work with patients referred for diagnostic evaluation, medical and nutritional management of specific conditions, and follow-up of positive newborn metabolic screening results.

GENC 6913 Applied Regional & Specialties Genetics Clinics A required clinical rotation through regional outreach genetics clinics in Colorado and through pediatric and adult specialty/multidisciplinary clinics for various genetic conditions.

GENC 6914 Applied Hereditary Cancer Clinic A required clinical rotation for genetic counseling students through a Hereditary Cancer Clinic providing genetic counseling and testing for genetic cancer predisposition syndromes.

GENC 6915 Applied Adult Medical Genetics Clinic A required clinical rotation for genetic counseling students through a medical genetics clinic and cardiovascular clinical research program providing diagnosis, management, risk assessment and genetic counseling for adults affected with or at risk for genetic disorders and genetic predispositions to disease.

GENC 6919 Applied Medical Genetics Clinic – Clinical Elective An elective clinical rotation for students desiring to arrange training in settings outside of core required clinical rotations or an additional, advanced rotation.

GENC 6920 Applied Medical Genetics – Laboratory Elective An elective rotation for students desiring to arrange an advanced, applied training experience with genetic counselors based in a genetics diagnostic laboratory.



University of Colorado Hospital and Anschutz Centers for Advanced Medicine:

- Adult Medical Genetics Clinic
- Hereditary Cancer Clinic, University of Colorado Cancer Center
- Prenatal Diagnosis and Genetics Center

Kaiser Permanente of Colorado, Denver metro locations

Rocky Mountain Cancer Centers, Hereditary Cancer Program

CORE CLINICAL TRAINING SITES:

Children's Hospital Colorado:

- Division of Clinical Genetics and Metabolism
 - General Genetics Clinic
 - Inherited Metabolic Disorders Clinic
 - Neurocutaneous Clinic
 - Skeletal Dysplasia Clinic
 - Craniofacial Clinic
 - Neuromuscular Disorders Clinic
 - Hereditary Hearing Loss Clinic
 - Genetic Eye Disorders Clinic
 - 22q11.2 Deletion Clinic
 - Regional Outreach Clinics – designated sites in Colorado
- Rehabilitation Center - Spina Bifida Clinic
- Hematology
 - Sickle Cell Clinic
 - Regional Hemophilia and Thrombosis Center

GENETIC COUNSELING PROGRAM TEACHING & CLINICAL FACULTY

Program Director: Carol S. Walton, M.S., C.G.C.

Program Medical Director: Renata C. Gallagher, M.D., Ph.D.

Division of Clinical Genetics and Metabolism, The Children's Hospital/UCD-AMC:

- Janet Thomas, M.D.
- Anne Chun-Hui Tsai, M.D.
- Johan Van Hove, M.D., Ph.D.
- Gary Bellus, M.D., Ph.D.
- Gunter Scharer, M.D., Ph.D.
- David K. Manchester, M.D.
- Margarita Saenz, M.D.
- Janet Stewart, M.D., Spina Bifida Clinic
- Cynthia Freehauf, R.N., M.S., C.G.C.
- Laurie Bernstein, R.D., M.S.

Adult Clinical Genetics, University of Colorado Hospital

- Matthew Taylor, M.D., Ph.D.

Colorado Genetics Laboratory (Cytogenetics):

- Karen Swisshelm, Ph.D.
- Janine Gessner, M.S., C.G.C.
- Susan Toomey, M.S.
- Billie Carstens, B.S., ClSp(CG)

UCD-AMC DNA Diagnostic Laboratory:

- Elaine Spector, Ph.D.

Prenatal Diagnosis/Genetics, University of Colorado

- Marsha Wheeler, M.D.
- John Hobbins, M.D.

Denver Health Medical Center

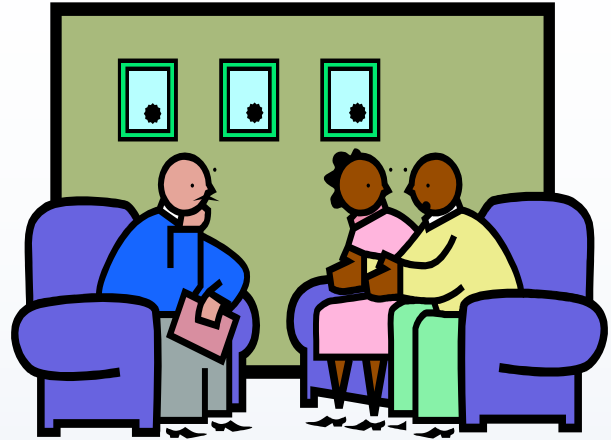
- Lizbeth McCarthy, M.D.

Hereditary Cancer Clinic, University of Colorado

- Catherine Klein, M.D.

Psychosocial and Interviewing Skills Curriculum:

- Carol Heinisch, M.S., M.S.W., L.C.S.W.
- Sandy Linn, R.N., M.S., C.G.C.
- Ann Petrila, M.S.W., M.P.A., L.C.S.W.



Genetic Counseling Clinical Supervisors and Course Lecturers:

- Lisen Axell, M.S., C.G.C.
- Kathleen Brown, M.S., C.G.C.
- Curtis Coughlin II, M.S., C.G.C.
- Amy Dameron, M.S., C.G.C.
- Wendy Garlitz, M.S., C.G.C.
- Melissa Gibbons, M.S., C.G.C.
- Katherine Howard, M.S., C.G.C.
- Jean Jirikowic, M.S., C.G.C.
- Janell Kierstein, M.S., C.G.C.
- Diane Klepacka, M.S., C.G.C.
- Kristina Kocsis, M.S., C.G.C.
- Lisa Ku, M.S., C.G.C.
- Cathlin Kucera, M.S., C.G.C.
- Shonee Lesh, M.S., C.G.C.
- Jennifer March, M.S., C.G.C.
- Lisa Mullineaux, M.B.A., M.S., C.G.C.
- Michele Rapp, M.S., C.G.C.
- Kami Wolfe Schneider, M.S., C.G.C.
- Shannon Scrivner, M.S., C.G.C.
- Cara Snyder, M.S., C.G.C.
- Michelle Springer, M.S., C.G.C.
- Emily Todd, M.S., C.G.C.
- Bethany Tucker, M.S., M.B.A., C.G.C.
- Cari Wells, M.S., C.G.C.
- Erica Wright, M.S., C.G.C.

**GENERAL INSTRUCTIONS regarding the ONLINE APPLICATION and SUPPORTING MATERIALS
(For all DOMESTIC and INTERNATIONAL APPLICANTS)**

Please use the on-line application site at

https://soaprod.cusys.edu/degreeprog/applyDEGREEPROG_CUDEN/login.action

to begin your application process. Please read all instructions in this brochure and on the on-line application site as you complete the various sections of the application. You will automatically be provided with links directing you to the online recommendation system and instructions for downloading any supplementary forms.

Please remember that you may save and re-enter the on-line application site at any time using your password, and that you do not need complete your online application all in one sitting.

VERY IMPORTANT: All supporting materials must be sent to the Genetic Counseling Program office at the address provided on page 1 of this brochure, not to the Graduate School office that may be shown on some forms. Please provide your school transcript office and any recommenders who are not using the online recommendation with the correct address so their mailed materials are received in a timely manner.

APPLICATION CHECKLIST for DOMESTIC APPLICANTS:
(International Applicants please see next page)

A complete Domestic application must include the following items:

Application form (submitted online):

- Online Application form:** Includes general Demographics and Contact Information, Institutions Attended, Courses in Progress, Test Scores, Names of 4 references and several list and essay questions addressing your past achievements, experience relevant to your proposed study in the field of genetic counseling, and future plans for graduate study and a professional career in genetic counseling. Please answer each of these questions thoughtfully and completely. Do not substitute a previously prepared standard "personal statement" document in place of these individual essay questions, as each is asking you for somewhat different information. Together, your responses to all of these questions constitute your personal statement to the Admissions Committee. You will be asked to attach files in one of several acceptable file formats containing your essay style responses to these questions. You may also attach a file containing your CV or resume, if you desire, though this should not replace your responses to these questions.
- Colorado residency form**, whether or not you are claiming Colorado residency at this time

Required Supporting Materials (if submitted via mail, use the address on page 1 of this brochure)

- 4 letters of recommendation, submitted via the online recommendation system (online submission is strongly preferred whenever possible), OR mailed directly from each recommender** in a sealed and signed envelope.
- Two official copies of your transcript sent directly from every college/university** you attended, even if you only took one class there. These cannot be marked "issued to student" or mailed to us from you.
- Official GRE General Test score report** . This must be requested directly from ETS and sent to University of Colorado Health Sciences Center (Anschutz) (institution code #4877) to the Genetics department (dept. code #0210). *To expedite preliminary review of your application, please send us a photocopy/scan of the unofficial GRE score report you received after taking the test.* However, this will not be accepted in lieu of the official report for final review and decisions regarding your application. Scores from exams taken more than 5 years ago and no longer available directly from ETS will not be accepted; you must re-take the GRE exam in this case.
- Check or money order for \$65.00 in U.S. funds** made out to the University of Colorado. Your online application will not be considered active until payment is received (postmark deadline January 1, 2012). **Online Credit Card payment** via the online application site is also available and is strongly encouraged for fastest payment of your application fee and activation of your application.

Please **do not** mail videotapes, manuscripts, or other supplementary items not requested by the application, as these **will not** be reviewed by the Admissions Committee and cannot be returned to you.

APPLICATION INSTRUCTIONS AND CHECKLIST for INTERNATIONAL APPLICANTS:

Applicants who do not have United States citizenship or permanent resident visa status, including those who are currently in the U.S. on any type of temporary visa, are required to apply as International Applicants. Most of the application materials are the same as described for Domestic Applicants (previous page). In addition, you must:

- **Submit official TOEFL scores** if your native language is not English or if you have not earned a degree at an institution where English was the language of instruction. The minimum TOEFL score required for admission is 550 (paper) / 213 (computer) / 80 (internet) [Please note: 570/230/89 are the preferred competitive minimum scores].
- **Provide adequate proof of financial support** for your course of study at UCD-AMC. Refer to specific guidelines on the "Financial Statement for Foreign Applicants" forms, to which the online application site will direct you.
- **Request Two (2) certified copies of official records (transcripts)** to be sent directly from each institution of higher education where you enrolled in courses or earned the bachelor's degree or other post-secondary certificates or degree(s). These records should include courses completed, grades or marks obtained, certificates or degrees awarded, and, if possible, an indication of the student's performance in relation to other members of the class. Transcripts in languages other than English must be accompanied by certified English translations.
- **Request that an outside professional evaluation of your higher education credentials be sent. This is REQUIRED except for courses taken in the U.S. or Canada, or for degrees earned in the U.S. or Canada.** This evaluation must include an analysis of courses, grades and grade point average, and U.S. degree equivalency. Three recommended credential evaluation companies are:
 - **World Education Services:** <http://www.wes.org/splash.html> (Highly recommended)
 - **American Association of Collegiate Registrars and Admissions Officers:** <http://ies.aacrao.org/>
 - **International Education Research Foundation:** <http://www.ierf.org> (Ask for "Detail Report")

International Application Deadline: Materials from international applicants are more extensive and generally require more review regarding eligibility for graduate study at UCD-AMC. **Thus, we strongly advise you to file your application by December 1, 2011,** rather than using the regular January 1, 2012 postmark deadline.

INTERNATIONAL APPLICANT CHECKLIST

A complete International application must include the following items:

Application form (submitted online):

- Online Application form:** Includes general Demographics and Contact Information, Institutions Attended, Courses in Progress, Test Scores, Names of 4 references and several list and essay questions addressing your past achievements, past experience relevant to your proposed study in the field of genetic counseling, and future plans for graduate study and a professional career in genetic counseling. Please answer each of these questions thoughtfully and completely. Do not substitute a previously prepared standard "personal statement" document in place of these individual essay questions, as each is asking you for somewhat different information. Together, your responses to all of these questions constitute your personal statement to the Admissions Committee. You will be asked to attach files in one of several acceptable file formats containing your essay style responses to these questions. You may also attach a file containing your CV or resume, if you desire, though this should not replace your responses to these questions.
- Colorado residency form,** regardless of whether you are claiming Colorado residency at this time

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- 4 letters of recommendation, submitted via the online recommendation system (online submission is strongly preferred whenever possible), OR mailed directly from each recommender** in a sealed and signed envelope.
- Two official copies of your transcript sent directly from every college/university** you attended, even if you only took one class there. These cannot be marked "issued to student" or mailed to us from you.
- Academic Credentials report** (from professional credentials review company – see above)
- Official GRE General Test score report** . This must be requested from ETS and sent to University of Colorado Health Sciences Center (institution code #4877) to the Genetics department (dept. code #0210). To expedite preliminary review of your application, please send us a photocopy/scan of the unofficial GRE score report you received after taking the test. However, this will not be considered in lieu of the official report. Scores from exams taken more than 5 years ago and no longer available directly from ETS will not be accepted; you must re-take the GRE exam in this case.
- Official TOEFL score report** sent directly from ETS to the institution and Genetics department codes indicated above.
- Proof of Adequate Financial Support documentation (forms available from online application site)**
- Check or money order for \$65.00 in U.S. funds made out to the University of Colorado drawn on a U.S. bank.** Your online application will not be activated for review until payment is received. **Online Credit Card payment** via the online application site is encouraged for fastest payment of your application fee and activation of your application.