Graduate Programs in Epidemiology

2023-2024
Student and Advisor Handbook
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Welcome to the Colorado School of Public Health!

This is an extraordinary time to be working on community and population health. There is a rejuvenated realization that many of the determinants of health lay not in medical care, but in our social and physical communities, the exposures we receive from the environment, the health care systems that we have access to, and the choices we make in our daily behaviors.

We are a collaborative school of public health, with a strong partnership between three major public universities, and also with our ties to and belief in the importance of communities using scientific evidence to develop their own priorities and strategies for achieving health.

As you embark on your studies, I encourage you to reach out to faculty for mentorship. There are vast opportunities for you to be involved in education, research and practice. I encourage you to get involved beyond the classroom. It is our vision that together we will learn and work to allow all members of our communities to reach their highest potential for healthy, productive lives.

As the Associate Dean for Academic and Student Affairs, I encourage you to explore all of the opportunities that the Colorado School of Public Health has to offer.

Sincerely,

Danielle (Dani) R. Brittain, PhD
Associate Dean for Academic and Student Affairs
Welcome to the Epidemiology Department!

You are joining an enthusiastic group of colleagues working together to improve population health through discovery, education and community engagement. Faculty in the Epidemiology Department conduct innovative research in diverse areas including etiology and prevention of diabetes in youth and adults, genetic epidemiology, infectious disease, injury prevention, nutrition and environmental health to list just a few. Our goal is to train the next generation of scientist leaders in the ever-evolving and essential field of epidemiology. We work with our students to apply their research interests to a variety of health problems in Colorado and across the world. We are a tight-knit department with high levels of student engagement. Our students not only receive training to guide a dynamic career, but also establish friendships and collegial relationships that last a lifetime.

As the co-directors of the Epidemiology MS and PhD programs, we sincerely welcome you to the Colorado School of Public Health.

Sincerely,

Alison G Abraham, PhD, MS, MHS, and Randi K Johnson, PhD, MPH
Handbook Changes Policy

This handbook complements the policies and procedures of the Graduate School. It includes information specific to the Colorado School of Public Health and the Epidemiology Graduate Programs. Please retain it for reference on academic policies, thesis, graduation, and other topics. This handbook was accurate and up to date when printed in August 2023. It does not constitute a contract with the University of Colorado Denver, either expressed or implied. The Graduate School and the Epidemiology Graduate Programs reserve the right at any time to change, delete, or add to any of the provisions at their discretion. Furthermore, the provisions of this document are designed to serve as firm guidelines rather than absolute rules, and exceptions may be made on the basis of extenuating circumstances.

Websites
School Site: https://coloradosph.cuanschutz.edu/

Program Site: https://coloradosph.cuanschutz.edu/education/departments/epidemiology

ColoradoSPH Academic and Student Affairs Resources: https://coloradosph.cuanschutz.edu/resources/for-current-students

Graduate School Policies and Resources: http://www.ucdenver.edu/academics/colleges/Graduate-School/Pages/default.aspx

Statement about COVID-19 at ColoradoSPH

The Colorado School of Public Health ended its vaccination requirement, effective July 1, 2023. ColoradoSPH is operating on a hybrid model, with some areas operating remotely and in-person activity permitted, as specified by the school or unit. Masks are not required of vaccinated and boosted individuals at this time. ColoradoSPH students and ColoradoSPH at CU Anschutz staff and faculty are no longer required to be vaccinated against COVID-19.

For the latest updates related to university operations and for resources, please visit the COVID-19 page of your home campus' website.

CUAnschutz: https://www.cuanschutz.edu/coronavirus
CSU: https://covid.colostate.edu/
UNC: https://www.unco.edu/student-health-center/health-topics/covid-information.aspx

The CU Anschutz Medical Campus guidance policies remains in effect for everyone – regardless of vaccination status – who has COVID-19-like symptoms, tests positive or may have been exposed to a COVID-19 case. Anyone fitting these categories is asked to follow the protocol listed for each category under the Guidance section of the COVID-19 Protocols & Resources website: https://www.cuanschutz.edu/coronavirus.

For the most up-to-date information about COVID-19 metrics, best practices, and data at the CU Anschutz Campus, please visit https://www.cuanschutz.edu/coronavirus/covid-19-dashboard.
Overview
The Colorado School of Public Health is a collaborative school of public health with the University of Colorado, Colorado State University, and the University of Northern Colorado. It is the first school of public health in a nine-state region of the Rocky Mountain West.

Emerging infectious diseases, chronic diseases, emergencies, lifestyles, the environment, disparities and various other factors impact the health of our communities. The Colorado School of Public Health aims to meet the challenges that our communities face by preparing a public health work force with the skills, research, knowledge, and values necessary to advance the health of our communities. The combined faculty, located at the three partner institutions, is at the forefront of various health issues and research, proactively addressing and improving the lives of our children, adults and aging populations.

As part of the commitment to meeting the training and research needs of the public health workforce, the Colorado School of Public Health offers educational programs that include masters, doctoral, residency, and certificate programs. Descriptions and materials are available through the Colorado School of Public Health website.

Mission Statement
The mission of the Colorado School of Public Health is to promote the physical, mental, social and environmental health of people and communities in the Rocky Mountain Region and globally. The mission will be accomplished through collaborations in education, population-based research, and community service that bring together institutions, agencies, and diverse populations.

Vision Statement
The Colorado School of Public Health, a collaborative, multi-disciplinary, multi-institutional, learning, research and service environment, will inspire academicians, practitioners and students of public health to work collaboratively to assure that all people and communities are healthy and their environment sustainable.

Diversity Statement
The Inclusion, Diversity and Health Equity mission of the Colorado School of Public Health is to build a diverse and representative academic community, which recognizes the importance of social and economic justice in relation to health. The Colorado School of Public Health will work to build an inclusive, culturally competent institution, which includes the environment, policies and procedures, faculty, staff, leadership and student body.

Land Acknowledgement
As we gather, we honor and acknowledge that the University of Colorado’s four campuses are on the traditional territories and ancestral homelands of the Cheyenne, Arapaho, Ute, Apache, Comanche, Kiowa, Lakota, Pueblo, and Shoshone Nations. Further, we acknowledge the 48 contemporary tribal nations historically tied to the lands that we now call Colorado.

Please see the full CU Systemwide Lands Recognition statement: 
https://president.cu.edu/statements/cu-systemwide-lands-recognition-statement

Revised July 2023
Labor Acknowledgement
As we gather, it is important to acknowledge that much of what has been built in this country, including culture, economic and physical structures, was made possible by the labor of enslaved peoples, specifically Africans, and their ascendants. Those who were exploited, oppressed, and suffered through the horrors of transatlantic trafficking, chattel slavery, and Jim Crow. As such, we are indebted to their labor and sacrifice and acknowledge that we are still experiencing reverberations of this violence today through continued acts of violence, systemic structural bias and racism, and sanctioned exploitation.

Accreditation
The Colorado School of Public Health was first accredited from the Council on Education for Public Health (CEPH) 2010. CEPH is an independent agency recognized by the U.S. Department of Education to accredit schools of public health and public health programs outside of schools of public health. As an accredited school of public health, graduates at the masters and doctoral levels are eligible to sit for the Public Health Certification examination.
### Administration

#### University Leadership & Academic Partners

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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Donald M. Elliman Jr.</td>
<td>Chancellor, University of Colorado Anschutz Medical Campus</td>
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<tr>
<td>Joyce McConnell, JD, LLM</td>
<td>President, Colorado State University</td>
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<tr>
<td>Andrew Feinstein, PhD</td>
<td>President, University of Northern Colorado</td>
</tr>
<tr>
<td>Ned Calonge, MD, MPH</td>
<td>Associate Dean for Public Health Practice</td>
</tr>
<tr>
<td>Dani (Danielle) Brittain, PhD</td>
<td>Associate Dean for Academic and Student Affairs</td>
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<tr>
<td>Sam MaWhinney, ScD</td>
<td>Associate Dean for Faculty Affairs</td>
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<tr>
<td>Gary Heise, PhD</td>
<td>Interim Director, University of Northern Colorado</td>
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<tr>
<td>Tracy Nelson, PhD, MPH</td>
<td>Director, Colorado State University</td>
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<tr>
<td>Michelle Kuba, MPH</td>
<td>Assistant Dean of Operations</td>
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#### Colorado School of Public Health Leadership

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<tr>
<th>Name</th>
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<tr>
<td>Cathy Bradley, PhD</td>
<td>Dean</td>
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<tr>
<td>Dani (Danielle) Brittain, PhD</td>
<td>To Be Named</td>
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<tr>
<td>Sam MaWhinney, ScD</td>
<td>Gary Heise, PhD</td>
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<tr>
<td>Christine Gillen, MS</td>
<td>Tracy Nelson, PhD, MPH</td>
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<td>Cerise Hunt, PhD, MSW</td>
<td>Michelle Kuba, MPH</td>
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#### Department Chairs

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<th>Name</th>
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<tr>
<td>Mike Van Dyke, PhD, CIH</td>
<td>Interim Chair, Environmental and Occupational Health</td>
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<tr>
<td>Jenn Leiferman, PhD</td>
<td>Chair, Community and Behavioral Health</td>
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<tr>
<td>Debashis Ghosh, PhD</td>
<td>Chair, Biostatistics and Informatics</td>
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<tr>
<td>Jill Norris, PhD, MPH</td>
<td>Chair, Epidemiology</td>
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<tr>
<td>Glen Mays, PhD</td>
<td>Chair, Health Systems, Management &amp; Policy</td>
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#### Colorado School of Public Health Staff

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<tr>
<td>Katherine Brumfield, MA</td>
<td>Career Services Manager</td>
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<tr>
<td>Tonya Ewers</td>
<td>Director of Communications &amp; Marketing</td>
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<tr>
<td>TBD</td>
<td>Executive Assistant to the Dean</td>
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<tr>
<td>Katie Guthmiller</td>
<td>Recruitment &amp; Outreach Program Manager</td>
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<tr>
<td>Laura Hager</td>
<td>Associate Director for Admissions and Student Affairs</td>
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<tr>
<td>Thuy Nguyen, MPS</td>
<td>Assistant Director of Human Resources</td>
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<tr>
<td>TBD</td>
<td>Admissions Processing Specialist</td>
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<tr>
<td>Brenda Witt</td>
<td>Academic Affairs Program Manager</td>
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#### Graduate School

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<tr>
<td>Jen Richer, PhD</td>
<td>Dean</td>
</tr>
<tr>
<td>Bruce Mandt, PhD</td>
<td>Associate Dean and Director</td>
</tr>
<tr>
<td>PostDoc Office &amp; Career Development Office</td>
<td>Recruitment, Marketing &amp; Communications</td>
</tr>
<tr>
<td>Kathryn Wennertstrom</td>
<td>Director, Finance and Accounting</td>
</tr>
<tr>
<td>Teresa Bauer-Sogi</td>
<td>Manager of Academic Services</td>
</tr>
<tr>
<td>Kristine Sikora, PhD</td>
<td>Associate Dean and Director</td>
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<tr>
<td>Patricia Goggans</td>
<td>Events Coordinator</td>
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Revised July 2023
Computer Labs

Research and study opportunities are enhanced through the various resources available to students, including: student computing labs (Ed1 CTL P26-1501, Ed2 N CTL P28-2201 & RC1 N CTL P18-1309) and student rooms in the Education 1, Education 2, and the Research 1 North Buildings.

Student Mailboxes

Student mailboxes are used to send important information to students and should be checked on a regular basis. The EPI student mailboxes are located on the 3rd Floor of Bldg. 500 to the left of the main elevators.

Scheduling Rooms for Meetings or Defense

All room scheduling and reservations on the Anschutz Medical Campus can be requested through the EMS system: https://schedule.ucdenver.edu/EMSWebApp/

To schedule the conference rooms (Ward Darley, Teleconference Room, or Dean’s Conference Room) on the 3rd Floor of the Fitzsimons Building or another room at the Anschutz Medical Campus for a committee meeting or defense, use the EMS system or contact the Academic Affairs Specialist.
Family Educational Rights and Privacy (FERPA)

Purpose of FERPA
FERPA deals specifically with the education records of students, affording them certain rights with respect to those records. For purposes of definition, education records are those records, which are:

1. Directly related to a student and,
2. Maintained by an institution or a party acting for the institution.

FERPA gives students who reach the age of 18 or who attend a post-secondary institution the right to inspect and review their own education records. Furthermore, the right to request amendment of records and to have some control over the disclosure of personally identifiable information from these records, shift from the parent to the students at this time.

FERPA applies to the education records of persons who are or have been in attendance in post-secondary institutions, including students in cooperative and correspondence study programs, video conference, satellite, internet or other electronic forms. FERPA does not apply to records of applicants for admission who are denied acceptance or, if accepted, do not attend an institution.

Directory Information
FERPA directory information is information contained in your education record that generally would not be considered harmful or an invasion of privacy if disclosed. Under current CU Denver policy, the following information is designated as directory information:

1. name
2. address, telephone number, and email address
3. dates of attendance
4. registration status
5. class
6. major
7. awards
8. honors
9. degrees conferred
10. photos

Although these items are designated by CU Denver as directory information, only a limited amount of this information is routinely disclosed by CU Denver officials and the University retains the discretion to refuse to disclose directory information if it believes such disclosure would be an infringement of your privacy rights.

Nondisclosure of Directory Information
Students may ask the university not to publicly disclose directory information. Please note, however, that if you are seeking employment, the Registrar's Office cannot release your enrollment, degree status or major to anyone unless you come to the Registrar's Office with a photo ID.
Forms to prevent disclosure of directory information can be obtained at The Anschutz Medical Campus Registrar's Office or via the Registrar's website at http://www.ucdenver.edu/student-services/resources/registrar/Pages/default.aspx. Questions regarding your rights under FERPA should be directed to the Registrar's Office:

Anschutz Medical Campus:
Phone: 303-724-8059
Fax: 303-724-8060
Email: Registrar@CUAnschutz.edu

For additional information regarding FERPA, please visit the complete policy on the Registrar’s website at:

https://www.ucdenver.edu/registrar/student-resources/ferpa

**Immunization Policy**

To ensure that a minimum standard of public health and safety is provided for our faculty and students, all students matriculating into any ColoradoSPH program are required to provide proof of immunizations for measles, mumps, rubella, and tuberculosis through CastleBranch. Other immunizations via CastleBranch are due at least two weeks prior to the start of a student’s first term in the program. Students who do not submit immunization records at the specified time may experience a hold on future registration and/or be administratively withdrawn from classes until proof of immunizations has been received.

**Health Insurance Requirement**

All CU Anschutz Medical Campus students enrolled in a degree-seeking program and financial aid eligible certificate programs taking 1 or more credit hours are automatically enrolled into the student health insurance plan unless a waiver is submitted and approved by the stated deadline. The insurance waiver form may be found on the health insurance website and must be completed once per academic year to waive both medical and/or dental insurance. Please check with the student health office on your home campus for more information. Details regarding eligibility, forms, deadlines, and cost can be found here:

https://www.cuanschutz.edu/student/health-wellness/student-health-insurance

**Background Check Policy**

Students matriculating into any ColoradoSPH degree-seeking program are required to pass a criminal background investigation. The background check is conducted during the admissions process. Students are required to pay a non-refundable processing fee for conducting the background check. Students who work at the university also need to submit the processing fee and complete the student background check, as additional criteria are specified beyond that required for employment. This must be completed before course registration can begin.

**Student Academic Honor and Conduct Code**

Education at the Colorado School of Public Health (ColoradoSPH) is conducted under the honor system. **Matriculation at the Colorado School of Public Health implies the acceptance of, and adherence to, the Student Academic Honor and Conduct Code.** All students who have entered graduate and health professional programs should have developed the qualities of honesty and integrity, and each student should apply these principles to his or her academic and subsequent professional career. All students are expected
to have achieved a level of maturity reflected by appropriate conduct at all times. The Honor and Conduct Code of UC Denver, and the Academic Appeals Process of the Graduate School also govern epidemiology Graduate students. Please see the Graduate School policies here:

https://graduateschool.ucdenver.edu/forms-resources/resources

Although it is not possible to list every situation that violates the Student Academic Honor and Conduct Code, the following examples provide a frame of reference:

1. Academic Honesty

Students should adhere to the highest standards of academic honesty and integrity. Examples of behavior that violate these standards include, but are not limited to: plagiarism (including the undocumented or improperly documented use of internet and web-based information), cheating, copying solutions from solutions manuals or from tutors, and using it as your own work, citing references not used in your work, illegitimate possession and/or use of examinations, violation of the ethical standards for conducting research, and falsification of official records.

2. Professional Conduct

As future health professionals, students should also adhere to the highest standards of professionalism. Examples of unprofessional conduct include misrepresentation of effort, credentials, or achievement in either the academic or professional setting; any action that compromises the quality or safety of patients, study participants, or the public; violation of patient or study participant confidentiality; institutional review board (IRB) violations; forgery, alteration, or misuse of any university document, record, or instrument of identification; disorderly, lewd or indecent conduct; disrespectful communications in all forms including verbal, written, and email; failure to be accountable or take responsibility for one's actions; and any other conduct unbefitting a professional public health practitioner, researcher, or educator.

3. Alcohol and Drug Use

Excessive alcohol and/or drug use compromises the student's ability to learn and to practice as a public health professional and thus is considered unprofessional conduct. Students who misuse alcohol and/or drugs should seek assistance from services available on campus or elsewhere. The sale of drugs or the possession of narcotics (unless prescribed by a medical doctor) is against the law. To minimize the potential for excessive alcohol use at campus functions, students must adhere to current University policy governing the consumption of alcohol on campus.

4. Respect for the Rights and Property of Others

Students should always conduct themselves in a manner that recognizes the rights and property of others. Examples of prohibited behavior include: theft, damage to University or personal property of others, disruption of educational or other activities on campus, illegal use of University facilities, sexual harassment, physical assault, violation of academic honesty standards in a way that affects other students or faculty, such as in a group or collaborative project, and any conduct that threatens the health or safety of others.

5. Adhere to all state and local public health and safety orders and campus public health and safety policies.

Students are responsible for knowing and following all health and safety orders and policies.
Any student found to have committed acts of misconduct (including, but not limited to cheating, plagiarism, misconduct of research, breach of confidentiality, or illegal or unlawful acts) will be subject to the procedures outlined in the Honor Code. Additional information regarding the ColoradoSPH Honor Code can be found online at:

https://coloradosph.cuanschutz.edu/education/calendars-policies

**Academic Grievance Policy**

The Colorado School of Public Health recognizes that a student may have grievances about different aspects of his or her academic program. ColoradoSPH is committed to addressing these grievances promptly and professionally and reaching a fair resolution through a formal and unbiased process. In the statements below, Associate Dean refers to the ColoradoSPH Associate Dean for Academic Affairs.

**Student Rights**

All ColoradoSPH students have the right to:

1. Competent instruction
2. Access to instructors outside of class during a specified set of office hours or by appointment
3. Clearly understand the grading system by which he or she will be judged, and expect that the grading system as determined by the instructor will be adhered to for the duration of the course
4. Be treated with respect and equality
5. Be treated fairly according to standards stated within the student handbook and each course syllabus

If a student feels as if they have been denied one of the above rights, that student may file a formal Grievance with the school.

The full Academic Grievance policy can be found online at:
http://coloradosph.cuanschutz.edu/education/calendars-policies

**Other Resources for Incident Reporting**

- **Office of Professional Excellence (OPE) for lapses in professionalism**

  Description: A private resource to obtain a fair and equitable process and resolution for all matters pertaining to professionalism concerns regarding students, residents, fellows, staff members, and faculty in any school or college on AMC. The goal is to help those who have
been involved in an incident to return to being valued and productive members of the Anschutz Medical Campus community.

Contact: To provide a safe environment for reporting a lapse in professionalism, there are a variety of ways to contact the OPE. Note: While the OPE will take all measures to ensure the privacy of information, complete confidentiality cannot be guaranteed.

Phone: 303-724-4PRO (4776)
E-mail: Professionalism@cuanschutz.edu
Online Report Form

- **CU Denver OMBUDS Office for any type of interpersonal conflict**

  Description: Provides an alternative forum for prompt, impartial, and confidential discussion for individuals to review options for the informal resolution of differences. OMBUDs assists people with disagreements and a variety of conflict-related issues, such as working conditions, interpersonal interactions, grades, policies and procedures, sexual harassment, discrimination, and disciplinary actions. The Ombuds Office possesses no formal decision-making authority, but rather provides options and resources in attempting to resolve their conflicts.

  Contact:
  Phone: (303) 724-2950
  Email: Melissa.Connell@cuanschutz.edu and Lisa.Neale@cuanschutz.edu

- **University of Colorado Anschutz Medical Campus Incident Reporting for bias and discrimination incidents**

  Description: A mechanism to report bias incidents. Although the university will take steps to ensure the privacy of reporters and other involved parties, the University cannot guarantee confidentiality. In some cases, where individuals are identified, and violations of state or federal law may have occurred, the university may have to report those incidents to other agencies. Note that on the form, you do not need to provide identifying information, and there is an option to request follow-up.

  Contact:
  Online Report Form

- **Office of Equity for DEI-related issues, including micro-aggressions**

  Description: Initial consultation with the Office, followed by restorative action if requested.
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Contact:
Phone: 303-315-0120
Email: william.dewese@cuanschutz.edu and nelia.viveiros@cuanschutz.edu

- Department of Epidemiology Health Equity Council email box for any type of incident.

Description: A group email box that reaches members of the Health Equity Council (3 faculty, 2 PhD students, 1 postdoc, 1 staff member). All incidents will be triaged and discussed at monthly meetings, with follow-up to the sender to determine next steps.

Contact:
Email: DEI-Incident-Reporting@ucdenver.edu

** Emails sent to the email box are not anonymous. If anonymity is desired, send email to Cassandra Thao (Cassandra.Thao@CUAnschutz.edu) who will remove identifying information and forward an anonymized message to the email box.

Non-Discrimination Policy Statement
The University of Colorado, including the Colorado School of Public Health, will not discriminate against any applicant, student or employee because of race, color, religion, sex, national origin, age, disability, creed, sexual orientation, or veteran status. The University of Colorado and the Colorado School of Public Health will take affirmative action to ensure that applicants, students and employees are treated without regard to their race, color, religion, sex, national origin, age, disability, creed, sexual orientation, or veteran status. The University of Colorado Non-Discrimination Policy can be found at:

https://www.cu.edu/regents/Policies/Policy10A.htm

Sexual Misconduct Policy Statement
It is the policy of ColoradoSPH to maintain the community as a place of work, study, and residence free of sexual harassment or exploitation of students, faculty, staff or administrators. All forms of sexual misconduct, including sexual harassment, are prohibited on campus and in any of the School’s programs. ColoradoSPH is committed to taking appropriate action against any member of the University community who violates the policy. No retaliation will be taken against any individual for making a legitimate complaint. It is a violation of the ColoradoSPH policy to knowingly make a false accusation. For more information, please refer to the Title IX overview:

equity.ucdenver.edu

Policy on Pregnancy and Parenting
The Colorado School of Public Health does not discriminate against any student on the basis of pregnancy, parenting status, or related conditions. Absences due to medical conditions relating to pregnancy will be excused for as long as deemed medically necessary by the student’s doctor and the student will be given the opportunity, wherever possible, to make up missed work. Students needing assistance can seek accommodations from the Disability Services Offices (Sherry Holden, sherry.holden@ucdenver.edu) or the Title IX Coordinator for ColoradoSPH (Dani Brittain, danielle.brittain@cuanschutz.edu)
Email Policy
Email is an official means of communication for ColoradoSPH students. All official email related to enrollment at ColoradoSPH (including, but not limited to, financial aid, billing, transcripts, school announcements.) will be sent to each student’s assigned CU email address (name@cunanschutz.edu), regardless of the student’s home campus. Students are responsible for checking their CU email on a regular basis. The student Academic Honor and Conduct Code should be followed when using university email and other forms of university electronic communication and devices.

Students with a home campus of CSU or UNC should also frequently check their home campus email accounts, as any correspondence specifically from their home campus will be sent to that email address.

For questions regarding your CU email account, please contact the Anschutz Medical campus OIT Department at (303) 724-HELP or visit their website at:

https://4help.oit.ucdenver.edu/CherwellPortal/IT#0

Identification/Access Badges
Students are required to have an electronic security photo ID badge for the safety and protection of all faculty, staff, and students on campus. Additionally, this badge allows students access to buildings and computer labs, as well as parking surfaces.

Badge applications for the CU Anschutz Medical Campus are issued to the ID Badge Office by the education staff prior to the start of a student’s first semester in the program. Students should pick up their badges at one of the badging pickup days or make alternate arrangements with the Office of Academic and Student Affairs (coloradosph.studentaffairs@cuanschutz.edu)

Establishing Residency
The requirements for establishing residency for tuition purposes are defined by Colorado law. The statutes require that a qualified individual must be domiciled in Colorado for the twelve (12) consecutive months immediately preceding the term for which resident status is claimed.

A person's tuition classification status is initially determined from the Verification of Residency form submitted during the application process for admission. If a person is classified as a “nonresident,” he or she must wait until eligible for a change in tuition classification and then file a petition for the change. Petitions that are denied may be appealed.

For more information regarding establishing residency, please visit:

CU Anschutz Medical Campus Registrar's website:
https://www.ucdenver.edu/anschutz/studentresources/Registrar/StudentServices/Residency/Pages/Residency.aspx

Tuition and Fees
Each semester, ColoradoSPH students receive a single bill for ColoradoSPH tuition and fees from the CU Anschutz Medical Campus Bursar's Office, regardless of their home campus affiliation (CU, CSU, UNC). At the time of matriculation, all students are charged the university matriculation fee,
background check fee, and enrollment deposit. Fees associated with the student’s primary campus, such as academic support fees and RTD fees are also assessed.

When students take courses at a campus other than their primary campus, there are no additional general fees for taking courses outside of the primary campus, but course-specific fees may still apply. All students, regardless of their home campus, must follow the CU Anschutz payment policies and deadlines. Additional information regarding fee and billing policies can be found on the bursar’s website at: https://www.cuanschutz.edu/student-finances/billing-payments

A breakdown of tuition and fees per campus can be found on the ColoradoSPH website at: https://coloradosph.cuanschutz.edu/admissions/tuition-aid/cost-of-attendance

Students must follow the published drop/add deadlines to receive a tuition refund for any dropped courses. For courses dropped before the semester’s drop/add deadline, full tuition and fees will be refunded. Courses dropped after the semester’s drop/add deadline will be considered withdrawals and will not be refunded tuition and fees. For more information on dropping or withdrawing from a course, see “Registration Policies” in this handbook.

The Academic Calendar, which specifies deadlines, including the drop/add deadline, can be found on the ColoradoSPH website at: https://coloradosph.cuanschutz.edu/education/calendars-policies

For students who have been approved to take a course(s) at the downtown CU Denver campus, the ColoradoSPH tuition rate will be charged for those courses, unless the student is enrolled in a dual degree program with the downtown campus. The ColoradoSPH tuition rate may be different than the downtown UCD campus rate.

**Employee Tuition Benefit**

Employees of the University of Colorado and their dependents may be eligible for up to nine credit hours per year to be used towards University of Colorado courses on a space-available basis. When using the tuition benefit, registration can occur the week prior to the first day of classes in order for tuition to be waived. Students who violate this policy are at risk of losing their tuition benefit. For the entire policy, restrictions and forms, please visit the Payroll and Benefit Services website:

https://www.cu.edu/pbs/tuition-benefit/

Employees on the CSU and UNC campuses using their employee tuition benefits may transfer in a maximum of 20 credits of approved public health coursework taken at a ColoradoSPH partner institution during the time of employment. Of these 20, a maximum of 10 non-degree credits are allowed prior to program matriculation. Please note that CU Denver/Anschutz Medical Campus waivers may only be applied to courses at CU Denver/Anschutz Medical Campus. ColoradoSPH’s CU Denver students cannot use waivers for CSU and UNC courses. (Employees at CSU and UNC have their own system for tuition waivers.)

**Financial Aid**

All financial aid, regardless of a student’s home campus, is processed through the CU Anschutz Medical Campus Financial Aid Office. All ColoradoSPH students interested in applying for financial aid should do so through the CU Anschutz Medical Campus. Detailed information can be found at:

https://online.cu.edu/financialaid
For financial aid purposes, full-time status is considered five credits per term; part-time is considered 3 credits per term.

**Advisors**

The program directors will serve as academic advisors to each student upon entry into the program. This is not a permanent assignment. Students may request to change advisors and often do so when putting together their examination committees. The faculty member selected to supervise the thesis, research paper or dissertation automatically becomes the student's academic advisor/mentor.

Students should meet with their advisor/mentor at least once per semester before starting work on a thesis/dissertation and should keep their advisor/mentor and the program director informed of study plans. Meetings with the advisor/mentor should occur at least weekly once work on the thesis/dissertation begins.

**Grading Policy**

The program adheres to the Graduate School grading policies as outlined in the Graduate School Handbook. In addition, the program has the following grading policies:

1. All coursework must be completed on time. A student may be assigned an “I” (incomplete) grade, with advance agreement from the instructor, which will convert to an F grade after one year, if the coursework has not been completed. An incomplete grade may not be used to retake a course for a better grade.

2. MS Thesis, MS Research Paper, and Dissertation credits are assigned the grade IP until the final written paper is complete. At that time, a letter grade will be assigned retroactively.

3. In order to maintain satisfactory academic progress, advance to candidacy, and earn a graduate degree, students are required to maintain at least a “B” (3.00) average in all course work attempted while enrolled in the Graduate School. Courses in which grades below “B-” (2.7) are received are not accepted for any MS or PhD degree. Students that receive such grades may repeat that course once within 24 months with the approval of the graduate program. All grades received will appear on the student’s transcript and will be included in the GPA calculation. If the course is a prerequisite for other courses, the student must obtain special permission from the instructor to enroll in an advanced course in the sequence before retaking the prerequisite.

**Leave of Absence Policy**

Leaves of Absence (LOA) are arranged with and approved by program directors with the request, then forwarded to the Graduate School for final approval. A leave of absence may be approved for a maximum of one year. Personal LOAs are reviewed and approved entirely through the program and the Graduate School; medical LOAs are managed through the Office of Case Management on the student’s home campus in collaboration with the program and the Graduate School. An approved LOA pauses the student’s academic record and automatically extends the time limit for completing a degree by the equivalent amount of time that the student spends on leave. Requests for LOA that exceed one (1) year may be approved with sufficient justification to the Dean of the Graduate School. Students who do not return from their approved LOA will be considered to have withdrawn from their program and will either be required to formally re-apply for admission, or, at the discretion of the program, may be re-
Academic Information

Academic Calendar
Please visit the website for the current academic calendar:
https://coloradosph.cuanschutz.edu/education/calendars-policies

ColoradoSPH Course Book
The ColoradoSPH Course Book, which provides descriptions of all approved courses at all three campuses, is available at:
https://coloradosph.cuanschutz.edu/education/courses-and-registration

Registration
Course offerings, course book, academic calendar and registration dates are available on the website:
https://coloradosph.cuanschutz.edu/education/courses-and-registration

All students of the Colorado School of Public Health register for courses through UCD Access. Students must have a CU email address to access the registration system.

https://portal.prod.cu.edu/UCDAccessFedAuthLogin.html

Dropping & Adding a Course
The drop/add period extends two weeks after the first day of the fall and spring semesters and one week after the start of the summer semester. To drop or add a class during the drop/add period, please log onto the registration portal – UCD Access – at:
https://portal.cusys.edu/UCDAccessFedAuthLogin.html

Dropping courses after the drop/add deadlines will result in 0% tuition and fee reimbursement and a corresponding grade of “W” (withdrawal) will be reflected on the transcript.

Permission to register or drop a course after the add/drop period will be granted only in extenuating circumstances and requires the approval of the Assistant Dean of the Graduate School.

The drop/add deadlines can be found on the Academic Calendar at:
https://coloradosph.cuanschutz.edu/education/calendars-policies

Course Withdrawal Policy & Timeframe
If a student wishes to withdraw from a course, they should obtain a withdrawal form from the CU Anschutz Medical Campus Registrar’s office or website:
https://www.ucdenver.edu/registrar/student-resources/forms

Withdrawal from a course is a formal discontinuation of the course after the drop/add period, and
Colorado School of Public Health
Epidemiology Graduate Programs | 2023 - 2024 Student and Advisor Handbook

results in a grade of “W” on the student’s official transcript. If attendance in a current course is
discontinued without an official withdrawal, the student’s transcript will reflect the grade earned for
that course. **Withdrawals from courses are not eligible for tuition reimbursements.**

- 100% reimbursement will be granted if a course is dropped before classes begin or during the
drop/add period (see ColoradoSPH Academic Calendar for semester deadlines)
- There will be no reimbursement for withdrawal after the drop/add period and a grade of “W”
  (withdrawal) will be reflected on the transcript.

Auditing Courses
The CU Anschutz Medical Campus does not allow auditing of courses. Students may register for a
course for “No Credit,” but must pay the full tuition and fees. Students must designate “No Credit” by
the appropriate deadlines as set forth by the Registrar’s Office. No Credit forms are available from the
CU Anschutz Medical Campus Registrar’s Office:

https://www.ucdenver.edu/Registrar/student-resources/forms

Registering for Courses on Other CU Campuses
ColoradoSPH students are able to register for UC Denver (downtown) campus courses with the UCD
Access registration system, given that any prerequisite requirements are met. Registration can only be
done during the drop/add period at the host (downtown) campus. The ColoradoSPH tuition rate
will be assessed for any courses taken downtown, unless the student is enrolled in a dual degree
program with the downtown campus. If the student wishes to apply a course taken at UCD downtown
toward MPH program requirements, he or she must secure faculty advisor approval **prior** to taking the
course. See “Electives outside ColoradoSPH” below.

Students who would like to enroll for a course on the Boulder or Colorado Springs campuses **do not**
register on UCD Access. Instead, they must complete the **Intercampus Registration Form** found on the
UCDenver Campus Registrar’s Office at:

https://www.ucdenver.edu/Registrar/student-resources/forms

Approval from both the host and home campuses is required. After all signatures have been obtained,
the completed form should be return to the CU Anschutz Medical Campus Registrar’s Office for
processing. Students must be registered for at least one course on their home campus in order to add a
concurrent class on either the Boulder or Colorado Springs campuses.

Incomplete Coursework
In the case that a student cannot complete a course during the regular semester, the student may
request an “incomplete” grade in the course, which will enable the student to complete the course
during the following semester. Requests should be made using the “Request for a grade of incomplete”
form, which can be found on the “Forms” page:

https://coloradosph.cuanschutz.edu/resources/for-current-students/academic-forms

Students who have been approved for an “incomplete” and need to continue the course should **not** re-
register for the course on UCD Access or duplicate tuition will be charged. If an ‘incomplete” grade has
been approved and continued access to online materials (i.e., Canvas) is needed, please contact the
Office of Student Affairs. **Students should not re-register for the course.**
Students have one year to finalize incomplete coursework and solidify their grade. If the coursework is not completed in that timeframe, a grade of “F” will automatically be applied to the student’s transcript.

Transfer Credits
Graduate School rules allow students to transfer up to 12 semester credits towards a MS degree and 30 semester hours toward the PhD degree for courses taken either at another university or as a non-degree student at UCD. Courses taken at any CU campus by students enrolled in a program are not considered transfer credits.

Transfer of credit from other universities must meet the following criteria:

1. The course must be graduate level, i.e., offered within the degree program at the 5000-level or above.
2. If offered outside a degree program, (including transfer credits), the courses must be 5000-equivalent level or higher and are approved for a specific degree program.
3. The grade must be at least a B- for MS students and at least a B for PhD students.
4. The student must have at least a 3.0 GPA in our program after at least one semester in the program.
5. The work must have been completed within the past seven years.
6. The student must submit a syllabus or examples of assignments from the course to the program director demonstrating the relevancy of the content to students Epidemiology MS or PhD degree program. The onus is on the student to prove relevancy of material.
7. The request for transfer must be made on a form obtained from the Graduate School. The form must be completed by the student, endorsed by the advisor and the program director, and sent to the Graduate School along with an official transcript showing the course.

Courses from a Prior CU degree
CU courses taken for a prior CU graduate program can be counted towards another degree without waiving or replacing those credits with an additional course. There are limits to the number of credits that can be applied from a prior CSPH degree. For example, up to 30 credits from courses that were applied towards a Masters can be counted towards the PhD.

Foundational Public Health Knowledge Requirement
It is a requirement of the school’s accreditation that all ColoradoSPH MS and PhD students are grounded in foundational public health knowledge. This is a curriculum requirement of the MS program, and a prerequisite to the PhD program. To satisfy this requirement, all MS and PhD students must complete the following courses:

- Foundations in Public Health (PUBH6600- 2 credits)
- Public Health Concepts for Non-MPH (EHOH 6601- 1 credit)
- Epidemiology (EPID 6630- 3 credits)

Students with a prior MPH degree or a graduate-level degree from a CEPH-accredited institution are eligible to waive this requirement.

Epidemiology MS students who are approved to waive this requirement must replace the associated
MS Program Guidelines

Program Overview
The Masters program in Epidemiology is tailored for students who seek careers as data analysts, data managers, research coordinators or program managers working with collaborative teams in academic research or public health practice. The program focuses on foundational epidemiology concepts and analytic skills with an emphasis on epidemiologic methods, which, along with the practical research and programming experience provided by the thesis experience, differentiates the program from the MPH.

MS Requirements
Coursework Prerequisites
Students are required to have taken one semester of calculus (calc I) and have taken courses in biological sciences. Students should have a baccalaureate degree in a scientific field from an accredited college or university or completion of work equivalent to the baccalaureate or master's degree in a scientific field given at University of Colorado. Minimum undergraduate GPA of at least 3.0 on a 4 point scale. While not required, a previous statistics or biostatistics course with a grade of B or higher and prior exposure to statistical software are highly recommended for students entering the program.

Course Requirements
The following tables list the credit hours required to complete the MS program in Epidemiology. Students who have had some of the required (or equivalent) courses prior to admission into the program may be allowed to substitute credit hours using those courses.

<table>
<thead>
<tr>
<th>Course Requirements</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Epidemiology Coursework</td>
<td>12 total</td>
</tr>
<tr>
<td>EPID 6626 (Research Methods)</td>
<td>3</td>
</tr>
<tr>
<td>EPID 6630 (Epidemiology)</td>
<td>3</td>
</tr>
<tr>
<td>EPID 6631 (Analytical Epidemiology)</td>
<td>3</td>
</tr>
<tr>
<td>EPID 7631 (Advanced Epidemiology 1)</td>
<td>3</td>
</tr>
<tr>
<td>Topic-Based Epidemiology Coursework</td>
<td>7 total</td>
</tr>
<tr>
<td>EPID 6635 (Infectious Disease Epidemiology)</td>
<td>2</td>
</tr>
<tr>
<td>EPID 6624 (Public Health Surveillance)</td>
<td>2</td>
</tr>
<tr>
<td>EPID 6634 (Applied Global Health Epidemiology)</td>
<td>2</td>
</tr>
<tr>
<td>EPID 6636 (Chronic Disease Epidemiology)</td>
<td>3</td>
</tr>
<tr>
<td>EPID 6637 (Injury Epidemiology and Control)</td>
<td>2</td>
</tr>
<tr>
<td>EPID 6640 (Investigation of Disease Outbreaks)</td>
<td>2</td>
</tr>
<tr>
<td>EPID 6641 (Epidemiology of Foodborne and Diarrheal Diseases)</td>
<td>2</td>
</tr>
<tr>
<td>EPID 6643 (Epidemiology and Prevention of TB/HIV/STDs)</td>
<td>2</td>
</tr>
<tr>
<td>EPID 6644 (Maternal Child Health Epidemiology)</td>
<td>3</td>
</tr>
<tr>
<td>EPID 7605 (Research Methods with Secondary Data Sources)</td>
<td>3</td>
</tr>
<tr>
<td>EPID 7615 (Pharmacoepidemiology)</td>
<td>2-4</td>
</tr>
<tr>
<td>EPID 7640 (Genetic Epidemiology)</td>
<td>2</td>
</tr>
<tr>
<td>Core Biostatistics Coursework</td>
<td>9 total</td>
</tr>
<tr>
<td>BIOS 6611 (Biostatistical Methods I)</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 6612 (Biostatistical Methods II)</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td>BIOS 6680</td>
<td>SAS Database Design and Management</td>
</tr>
</tbody>
</table>

**General Public Health Coursework**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBH 6600</td>
<td>Foundations in Public Health</td>
<td>2</td>
</tr>
<tr>
<td>EHOH 6601</td>
<td>Public Health Concepts for Non-MPH</td>
<td>1</td>
</tr>
</tbody>
</table>

**Additional Coursework**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLSC 7151</td>
<td>Ethics and Responsible Conduct of Research</td>
<td>1</td>
</tr>
<tr>
<td>Electives*</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

**Thesis/Research Paper**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPID 6641/EPID 6950</td>
<td>Thesis/Research Paper</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Semester Credit Hours**

38

*All ColoradoSPH courses are potential electives. Contact your Program Director if you have a question about a specific course.

### MS Example Sequence

#### Year 1

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>BIOS 6611</td>
<td>Biostatistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EPID 6630</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EHOH 6601</td>
<td>Public Health Concepts for Non-MPH</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>BIOS 6680</td>
<td>SAS Database Design and Management</td>
<td>3</td>
</tr>
<tr>
<td>Spring</td>
<td>BIOS 6612</td>
<td>Biostatistical Methods II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EPID 6631</td>
<td>Analytic Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PUBH 6600</td>
<td>Foundations of Public Health</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Year 2

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>EPID 6626</td>
<td>Research Methods in Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EPID 6644</td>
<td>Maternal and Child Health Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EPID 7631</td>
<td>Advanced Epidemiology 1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Spring</td>
<td>CLSC 7151</td>
<td>Ethics and Responsible Conduct of Research</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>EPID 6637</td>
<td>Injury &amp; Violence Epidemiology and Prevention</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>EPID 6635</td>
<td>Infectious Disease Epidemiology</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Year 3

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer/Fall</td>
<td>EPID 6651</td>
<td>OR EPID 6950 (Thesis/Research Paper)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Final Comprehensive Exam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Electives

Students may take elective course work at the Colorado School of Public Health and in other departments and campuses of the University of Colorado. Students should receive approval from their academic advisor and program director/or as to the appropriateness of courses for elective credit.

### Epidemiology Discussion Group/Journal Club

Epidemiology MS students are required to attend the weekly Epidemiology Discussion Group (EDG) that meets in person during the school year. In person attendance is expected, but virtual attendance may be temporarily approved for extenuating circumstances. Students in their second year of study or higher will be required to present once per year at the discussion group to hone presentation skills and get feedback on research projects; students are highly encouraged to invite faculty to provide critical feedback and review. Once per month, a faculty run journal club will take place during the EDG time to provide students with the opportunity to critically evaluate the literature across a variety of health topics. Students will be expected to
read the article prior to journal club and participate in the discussion.

Research Proposal
MS Students must produce a scholarly work that can take the form of either a publishable research paper or a formal thesis. After completing the first year of coursework, students should assemble a thesis or research paper committee. The committee should have at least three members and the majority of the members, including the chair, must be from the Epidemiology core-training faculty (see below). The primary mentor and committee chair must be tenured or tenure-track Full, Associate, or Assistant professors who hold doctoral degrees (PhD, DPhil, EdD, or PsyD). If the student wishes for a full, associate, or assistant professor with a professional or clinical degree to serve as a mentor or chair, it is their responsibility to petition the Graduate School for special permission. The student should arrange committee meetings at least twice a year to discuss progress and a timeline for completing the thesis or research paper and should meet with their mentor/advisor more often.

A proposal is developed based on the NIH format, outlining the background, significance, and specific aims for the proposed research. In addition, a detailed methods section should be developed to demonstrate understanding of study design issues and the analytic approach along with any preliminary findings. The student then gives a presentation of the proposal to the committee (this is not a formal Graduate School exam). When the committee approves the proposal, the members of the committee sign the proposal acceptance form. The acceptance form is forwarded to the academic affairs specialist and placed in the student’s file.

Note: Students must receive approval of their committee from the Program Director at least 3 months prior to applying for admission to candidate and scheduling their defense.

Application for Admission to Candidacy
When nearing completion of their thesis project, students must complete the application for admission to candidacy for the MS degree. The student obtains signatures from the mentor/advisor of the MS committee. The student then forwards the form to the Program Director for verification of the courses listed that are to be applied towards the degree and signature. The student then submits the form to the Academic Affairs Specialist at least two weeks in advance, and by the Graduate School deadline for that term, whichever is earlier, before scheduling the final exam. Once all signatures have been obtained the Academic Affairs Specialist will submit the form to the Graduate School at least two weeks prior to the exam or by the Graduate School deadline for that term, whichever is earlier. The required form can be obtained from the Graduate School website:

https://graduateschool.ucdenver.edu/forms-resources/resources

In addition to the Application for Admission to Candidacy, students must also submit an application for graduation through the UCD Access student portal before the posted deadline for the graduation semester.

Choosing a Research Paper or Thesis Format
Students may choose to present their scholarly work as either a publishable research paper or a formal thesis. The research paper or thesis must be submitted to and approved by the examination committee before scheduling the final examination. All Graduate School guidelines and specifications must be followed. A MS research paper is submitted to a journal. A MS thesis is submitted to the Graduate School according to their format. Formatting guidelines and examples for the thesis can be found here.
MS Degree Final Examination

All candidates for the MS degree are required to take a final examination after all other requirements for the degree have been completed and approval for graduation has been granted. The final examination is a presentation and defense of the thesis or research paper, as well as oral examination by the committee.

The examination committee will conduct the final examination orally. The defense consists of a seminar of 40-50 minutes, is generally open to the public unless otherwise specified, and is followed by an oral examination by the committee. All members of the committee must be present for the examination. Below is a list of the possible outcomes:

**Pass** – You must receive the affirmative votes of the majority of the members of your committee in order to pass.

**Pass with conditions** – The committee may feel that although you have passed the examination you should complete additional work on the thesis. These conditions will be specified and must be satisfied within 60 days of the defense. Failure to satisfy these conditions will result in failure of the examination.

**Fail** – If you fail the examination, per Graduate School rules you may be subject to immediate dismissal from the program. At the program’s discretion, you may be allowed to retake the examination once. The retake will be in a format designated by the committee and must be completed by the end of the next academic semester, excluding the summer term. It is important to note that students will be required to meet registration and enrollment requirements for the semester in which they re-take the examination.

Scheduling the Final Examination

Students must submit the Exam Request form. Students must also obtain the Program Director’s signature on the form. Students then submit the form to the Academic Affairs Specialist at least two weeks before the exam date. The Academic Affairs Specialist will submit the form to the Graduate School at least two weeks prior to the exam. The Exam Request form can be found on the Graduate School website:

https:// graduateschool.ucdenver.edu/forms-resources/resources

Graduation

Students must apply for a diploma for their intended semester of graduation by submitting an “Intent to Graduate” form through the UCD Access student portal by the specified deadline for the graduation term.

Ceremonies

A campus-wide commencement ceremony is held twice a year in May and December for the CU Anschutz Medical Campus. In addition, the Graduate School and ColoradoSPH offer separate convocation ceremonies for their graduates in May. All graduates for that academic year, or the previous August or December, are invited to attend the campus-wide, Graduate School, and ColoradoSPH convocation ceremonies.

Official regalia must be worn to participate in these ceremonies. Additional details will be posted on the
Time Limit
Master’s students, whether enrolled full-time or part-time, have seven (7) calendar years from matriculation (the semester of formal admission to the Graduate School) to complete all degree requirements, including the filing of the thesis with the Graduate School, if the program requires a thesis. If a student leaves the program (i.e. becomes discontinued through formal withdrawal or non-enrollment), the time spent away does not count toward the time limit if the student is readmitted at a later date. Students who fail to complete the degree in this seven (7) year period are subject to termination from the Graduate School upon the recommendation of the Program Director and concurrence of the Dean. For a student to continue beyond the prescribed time limit, the Program Director must petition the Dean for an extension and include 1) reasons why the program faculty believes the student should be allowed to continue in the program and 2) an anticipated timeline for completion of the degree. Normally, extensions for time to degree are for one year or less, but under rare circumstances, a second extension may be requested. The Extension of Time Limit Form is posted on the Graduate School website. Approved Leaves of Absence automatically extend the time limit for earning a degree by the equivalent amount of time that the student is on leave.

Departmental Copy of Thesis or Research Paper
The program requests that a professionally bound or electronic copy of the thesis or research paper be provided to the department.

PhD Program Guidelines

Program Overview
The PhD program in Epidemiology trains highly skilled individuals in epidemiologic research and its application to population health science to prepare graduates for research and teaching careers. The curriculum includes training in advanced epidemiologic methods for clinical, observational and community-based research including study design, statistical analysis, biological principles and disease etiology to meet the rigors of the scientific community. The program's etiologic orientation is based on the premise that knowledge of genetic, behavioral, environmental, and physiologic factors contribute to understanding the underlying causes of complex human diseases needed to develop effective preventive measures.

PhD Requirements
Coursework Prerequisites
Students are required to have taken one semester of calculus with a grade of B or higher, a previous biostatistics course with a grade of B or higher, prior coursework or experience with statistical software, (e.g. SAS, R, etc) and prior coursework in biological sciences prior to entrance in the program. All prerequisite coursework must be completed at or above the undergraduate level. Prospective students must also have a Master's degree or equivalent work experience. Students without sufficient epidemiology, public health or biological training may be accepted into the program contingent upon the completion of specified courses. It is a requirement of the school's accreditation that PhD students are grounded in foundational public health knowledge. To satisfy this requirement, all PhD students must complete the following courses:

- Foundations in Public Health (PUBH6600- 2 credits)
- Public Health Concepts for Non-MPH (EHOH 6601- 1 credit)
Epidemiology (EPID 6630-3 credits)

Students with a prior MPH degree or a graduate-level degree from a CEPH-accredited institution may be eligible to waive this requirement. See “Foundational Public Health Knowledge Requirement” in this handbook.

Course Requirements
The following table lists the credit hours required to complete the PhD program. If the above-described prerequisites are not met, they will need to be completed in addition to the required coursework for the PhD.

<table>
<thead>
<tr>
<th>Course Requirements</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Epidemiology Coursework</strong></td>
<td>6 total</td>
</tr>
<tr>
<td>EPID 7631 (Advanced Epidemiology 1)</td>
<td>3</td>
</tr>
<tr>
<td>EPID 7632 (Advanced Epidemiology 2)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Core Biostatistics Coursework</strong></td>
<td>6 total</td>
</tr>
<tr>
<td>BIOS 6611 (Biostatistical Methods I)</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 6612 (Biostatistical Methods II)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Research Methods Coursework</strong></td>
<td>13 total</td>
</tr>
<tr>
<td>EPID 7605 (Research Methods with Secondary Data Sources)</td>
<td>3</td>
</tr>
<tr>
<td>EPID 7911 (Epidemiologic Field Methods)</td>
<td>3</td>
</tr>
<tr>
<td>EPID 7912 (Developing a Research Grant)</td>
<td>3</td>
</tr>
<tr>
<td>Analytic Methods in Epidemiology*</td>
<td>4</td>
</tr>
<tr>
<td><strong>Additional Coursework</strong></td>
<td>13 total</td>
</tr>
<tr>
<td>CLSC 7151 (Ethics and Responsible Conduct of Research)</td>
<td>1</td>
</tr>
<tr>
<td>Biomedical Sciences**</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td><strong>Dissertation</strong></td>
<td>30 total</td>
</tr>
<tr>
<td>EPID 8990</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total Semester Credit Hours</strong></td>
<td>68</td>
</tr>
</tbody>
</table>

* A minimum of 4 credits of advanced analytic coursework in biostatistics or epidemiologic methods from the ColoradoSPH

** A minimum of 6 credits of basic science coursework at the graduate level related to the student’s thesis topic.

PhD Example Sequence

<table>
<thead>
<tr>
<th>Year 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
</tr>
<tr>
<td>BIOS 6611 (Biostatistical Methods I) (3)</td>
</tr>
<tr>
<td>EPID 7631 (Advanced Epidemiology 1) (3)</td>
</tr>
<tr>
<td>Elective</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
</tr>
<tr>
<td>BIOS 6612 (Biostatistical Methods II) (3)</td>
</tr>
<tr>
<td>EPID 7605 (Research Methods in with Secondary Data Sources) (3)</td>
</tr>
<tr>
<td>EPID 7632 (Advanced Epidemiology 2) (3)</td>
</tr>
<tr>
<td>Preliminary Examination</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
</tr>
<tr>
<td>EPID 7911 (Epidemiologic Field Methods)</td>
</tr>
<tr>
<td>Analytic Methods in Epidemiology</td>
</tr>
<tr>
<td>Elective</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
</tr>
<tr>
<td>CLSC 7151 (Ethics and Responsible Conduct of Research) (1)</td>
</tr>
</tbody>
</table>
Electives
Students may take elective course work at the Colorado School of Public Health and in other departments and campuses of the University of Colorado. Students should receive approval from their academic advisor and program director as to the appropriateness of courses for elective credit.

Epidemiology Discussion Group/Journal Club
Epidemiology PhD students are required to attend the weekly Epidemiology Discussion Group (EDG) that meets in person during the school year. In person attendance is expected, but virtual attendance may be temporarily approved for extenuating circumstances. Students in their second year of study or higher will be required to present once per year at the discussion group to hone presentation skills and get feedback on research projects; students are highly encouraged to invite faculty to provide critical feedback and review. Once per month, a faculty run journal club will take place during the EDG time to provide students with the opportunity to critically evaluate the literature across a variety of health topics. Students will be expected to read the article prior to journal club and participate in the discussion.

Field Methods Project(s)
This course is intended to give PhD students the opportunity to work closely with faculty on current epidemiologic projects to develop skills in the operational aspects of field research. Such skills include proposal writing, budget development, staff hiring and training, protocol and instrument development and implementation, quality control procedures, data collection and management, community liaison and report writing. The project may be for one or more semesters. Students will register for 1, 2, or 3 credits with a total of 3 credits required for the PhD degree. Registration need not be continuous. Once you have completed a project with one faculty member, the program encourages students to work with a different faculty member on the next project. It is the student’s responsibility to establish an educational contract for specific learning objectives and products for the project with the project mentor director before registering for course credits. The student will carry out the project in collaboration with the project mentor and the project mentor will assign the course grade.

Please note: It is not possible to receive course credit and money for the same project. Thus, persons employed on a project have to use their own time, and conduct a project they would not otherwise complete for their employer.
Preliminary Examination

Acceptance of a graduate student into a program of study leading to the doctoral degree is not implied by admission to the Graduate School, but occurs upon successful completion of the preliminary examination. Students must take a written preliminary examination at the end of Year 1 in the program. The exam covers material from EPID 7605, 7631 and 7632, and BIOS 6611 and 6612. Any deviation from this has to be approved by the program director. This examination must be passed for the student to continue in the program. Students who do not pass the exam (or a section thereof) are required to retake the exam (or section) the next time the exam is offered. The student may be required to retake or TA a course (without compensation) to review material. The exam may be retaken once and is generally given each year in June. Students who do not pass all sections of the preliminary exam after the second attempt will be dismissed from the program.

Teaching Requirement

All epidemiology PhD students are required to be a teaching assistant (TA) for at least two core epidemiology program courses within the Department of Epidemiology to meet the requirements of the degree program. Students may request to TA specific courses to meet their requirement. However, assignments are at the discretion of the TA committee and courses must be approved by the Epidemiology Department Curriculum Committee as meeting educational requirements for the TAship. Students must take the online TA prep course prior to being a TA.

Biomedical Science Requirement

All doctoral students will be expected to develop knowledge of at least one field of human biology or medicine. Such fields include, but are not limited to: human genetics, biophysics, medical physiology, clinical pathology, anatomy, human ecology, and health demography. These courses can be taken at the School of Medicine, School of Pharmacy, or in other basic science doctoral programs at CU Denver. Students may also take courses at the Downtown or Boulder campuses to meet the requirement. The purpose of this work is to provide a broader educational experience and to help prepare students for the comprehensive examination. The work is intended to help the student develop the ability to formulate cogent research questions, and to communicate and interpret quantitative results to health professionals. Examples of biomedical science electives can be found at the end of the handbook.

Comprehensive Examination and Dissertation Defense Committee

Students select at least five members to serve as an examination committee for the Comprehensive Examination and Dissertation Defense. This committee is required to meet at least twice a year.

Note: Students must receive approval of their committee from the Program Director at least 3 months prior to scheduling the comprehensive examination. All members must have, or be eligible for, a Graduate School faculty appointment. Please see the Epidemiology Core Program Faculty Policy at the end of this handbook.

For any committee member who does not yet have a Graduate School faculty appointment, the student must forward a copy of the committee member’s current curriculum vitae (CV) to the Academic Affairs Specialist who will process the appointment. The student’s main technical advisor/mentor may not be the Chair of the examining committee. The primary mentor, co-mentor (if applicable) and committee chair must be tenured or tenure-track Full, Associate, or Assistant Professors who hold doctorate degrees (PhD, DPhil, DSc, EdD, or PsyD). In addition, the committee, as a whole, must meet the following minimum criteria:

1. Two members of the committee must be part of the Epidemiology Core Program Faculty. One
of these two members will become the Chair of the dissertation committee. The other will serve as the mentor for the project. Both faculty members serve as the student's academic advisors for the duration of the dissertation project.

2. One member of the committee must be from the Department of Biostatistics and Informatics.

3. One member must be from outside the School. An outside member is defined as a person without a primary faculty appointment at the Colorado School of Public Health. This could include persons with no appointment in the School or with either a clinical or secondary appointment in the School.

4. The remaining slot on the committee can be filled by anyone who meets criteria 1-3 above.

Application for Admission to Candidacy
Students must complete the application for admission to candidacy for the PhD degree. The student obtains signatures from the Advisor and Chair of the PhD committee. The student then forwards the form to the Program Director for verification of the courses listed that are to be applied towards the degree and signature. The student then submits the form to the Academic Affairs Specialist at least two weeks in advance, and by the Graduate School deadline for that term, whichever is earlier, before scheduling the comprehensive exam. Once the student obtains all signatures the Academic Affairs Specialist will submit the form to the Graduate School at least two weeks prior to the exam or by the Graduate School deadline for that term, whichever is earlier. The required form can be found on the Graduate School website:

https://graduateschool.ucdenver.edu/forms-resources/resources (Application for Candidacy Form)

Scheduling the Comprehensive Exam
The Exam Request form is required to schedule the comprehensive exam. Students must obtain the Program Director's signature on the form. Students then submit the form to the Academic Affairs Specialist at least two weeks before the exam date. The Academic Affairs Specialist will submit the form to the Graduate School at least two weeks prior to the comprehensive exam date. The Exam Request form can be found on the Graduate School website.

https://graduateschool.ucdenver.edu/forms-resources/resources (Exam request form)

Comprehensive Examination
The Dissertation Committee will administer oral and written comprehensive examinations when a student has chosen a dissertation topic and is ready to initiate the project. The comprehensive exams must be taken no later than the end of the third year, except under extenuating circumstances. The written exam will consist of a literature review and research proposal. The oral examination consists of a presentation and discussion of the student's dissertation proposal. In addition, the student should demonstrate in-depth knowledge of the biological and methodological issues pertinent to the student’s project. The literature review and dissertation proposal should be submitted in writing to the dissertation committee at least 3-5 weeks before the oral exam. The literature review and proposal should be written in NIH research proposal format outlining the background, significance and specific aims for the proposed research. In addition, a detailed methods section should demonstrate an understanding of study design issues and the analytic approach along with any preliminary findings. NIH page restrictions do not apply. When both the written and oral parts of the comprehensive examination have been passed, and the other Graduate School requirements are complete, students can proceed with their dissertation. The required forms can be obtained from the Graduate School website:
Below is a list of the possible outcomes for your comprehensive exam:

**Pass**: you receive the affirmative votes of the majority of the members of your committee in order to pass.

**Pass with conditions**: the committee may feel that although you have passed the examination you should complete additional work on the thesis. These conditions will be specified and must be satisfied within 4 months of the exam.

**Fail**: if you fail the examination, per Graduate School rules you may be subject to immediate dismissal from the program. At the program’s discretion, you may be allowed to retake the examination once. The retake will be in a format designated by the committee and must be completed within 12 months. It is important to note that students will be required to meet registration and enrollment requirements for the semester in which they re-take the examination.

**Continuous Registration Requirement - Post Comps**

Following successful completion of the Graduate School comprehensive exam, students must register for at least 1 dissertation credit, EPID 8990, each semester (excluding the summer semester). If the dissertation defense is during the summer semester, the student must register for at least 1 dissertation credits for that semester. A maximum of 10 dissertation credits can be taken in any semester, unless approval is received from the Assistant Dean of the Graduate School. *Only 10 of the dissertation credits taken prior to the comprehensive examination will count towards the required 30. At least 20 dissertation credits, out of the 30, must be taken after the comprehensive exam.*

**Note**: *Once a student has completed 30 dissertation credits, then the student is only required to register for one dissertation credit for fall and spring semester. Summer registration is only required if the student plans to do their examination during summer semester.*

**Post-Comp Committee Meetings**

Students are required to meet with their Dissertation Committee at least twice each year.

**Dissertation**

A dissertation based upon original investigation and showing mature scholarship must be written and approved by your examining committee. Students must register for a total of 30 semester hours of doctoral dissertation credit, with no more than 10 credits taken in any one semester, unless approval is received from the Assistant Dean of the Graduate School.

The dissertation may take a variety of forms with generally three separate publishable scholarly works or aims, but must adhere to format guidelines. The written dissertation document must be submitted at least 3 weeks prior to the final examination and formally approved by the dissertation committee before the final examination. All Graduate School guidelines and specifications must be followed as outlined on the Graduate School website:

[https://graduateschool.ucdenver.edu/forms-resources/resources](https://graduateschool.ucdenver.edu/forms-resources/resources)  (Format Guide for Theses and Dissertations)
The Exam Request form is required to schedule the dissertation defense. Students must obtain the Chair and Program Director’s signatures on the form. Students then submit the form to the Academic Affairs Specialist at least two weeks before the exam date. The Academic Affairs Specialist will submit the form to the Graduate School at least two weeks prior to the dissertation defense date. The Exam Request form can be found on the Graduate School website:

https://graduateschool.ucdenver.edu/forms-resources/resources (Exam request form)

**Defense**

The examination committee will conduct a final examination of the dissertation and related topics orally. The defense consists of a 40-50 minute seminar, open to the public, followed by an oral examination by the committee. All members of the committee must be present for the examination. Below is a list of the possible outcomes for your defense:

- **Pass** – You receive the affirmative votes of the majority of the members of your committee in order to pass.
- **Pass with conditions** – The committee may feel that although you have passed the examination you should complete additional coursework on the thesis. These conditions will be specified and must be satisfied within 60 days of the defense.
- **Fail** – If a student fails the examination, s/he may not continue in the program.

Several forms will be provided to you by the Graduate School for your Defense including the Thesis Approval Form. After you have incorporated any additional edits requested by your committee at your defense, a final version of your dissertation will need to be submitted through Proquest.

A helpful video on how to format and submit your dissertation is provided [here](#).

**Graduation**

Students must apply for a diploma for their intended semester of graduation by submitting an "Intent to Graduate" form through the UCD Access student portal by the specified graduation term deadline.

**Ceremonies**

A campus-wide commencement ceremony is held twice a year in May and December for the CU Anschutz Medical Campus. In addition, the Graduate School and ColoradoSPH offer separate convocation ceremonies for their graduates in May. All graduates for that academic year, or the previous August or December, are invited to attend the campus-wide, Graduate School, and ColoradoSPH convocation ceremonies.

Official regalia must be worn to participate in these ceremonies. Additional details will be posted on the website and emailed to students prior to the event.

**Time Limit**

Doctoral students, whether enrolled full-time or part-time, must complete all degree requirements within eight (8) calendar years of matriculation. Students who fail to complete the degree in this eight (8) year period are subject to termination from the Graduate School upon the recommendation of the Program Director and concurrence of the Dean. For a student to continue beyond the prescribed time limit, the Program Director must petition the Graduate School Dean for an extension and include 1)
Colorado School of Public Health
Epidemiology Graduate Programs | 2023 - 2024 Student and Advisor Handbook

reasons why the program faculty believes the student should be allowed to continue in the Program
and 2) an anticipated timeline for completion of the degree. Extensions for time to degree are normally
issued for one year or less, but under rare circumstances, a second extension may be granted. The
Extension of Time Limit Form is posted on the Graduate School website. Approved Leaves of Absence
automatically extend the time limit for earning a degree by the equivalent amount of time that the
student is on leave.

**Departmental Copy of Dissertation**

The Program requests that a bound hard copy or electronic copy of the dissertation be provided for the
department.

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**Examples of Biomedical Science Courses**

These are just a few examples of courses which meet the biomedical minor requirement. Please refer to
the current UCD AMC Graduate School course book for more detailed course descriptions and specific
information regarding prerequisites and the semester the course is being offered. The current UCD
AMC Graduate School course book may be found at:

http://www.ucdenver.edu/anschutz/studentresources/Registrar/CourseListings/Pages/default.aspx

*Note: Some of the course descriptions include comments from Epidemiology doctoral students who have
taken the course. Look for an * for their evaluation.*

**CANB 7600 – Cancer Biology**

This course integrates the examination of cancer at molecular, cellular, tissue and organismal levels.
Course open to all graduate students from any program with an interest in mechanisms and models of
cancer and will give broad appreciation for current issues/problems.

**CANB 7620 – Histophysiology**

Discussions of cell interactions, tissue physiology, and renewal based upon the histologic cell types and
structures present. Where pertinent, pathologic alterations will be introduced to facilitate
identification of the important normal functions/structures.

**CLSC 7500 – Practical Application of Molecular and Cell Biology Techniques for the Clinical
Investigator**

Designed to teach clinical investigators basic molecular and cellular biology techniques. Format will be
hands-on with lectures designed to illustrate significance and clinical application of techniques. Weekly
special topics lectures will cover cutting edge technologies and their application.

*Epidemiology doctoral student evaluation: Highly recommended.*

**HMGP 7600 – Survey of Human Genetics**

Survey of human genetics, including Mendelian and other types of inheritance, chromosomes and
cytogenetics, molecular and biochemical basis of genetic disease, quantitative genetics and gene
mapping, developmental and cancer genetics, clinical genetics, and genetic screening and prenatal
diagnosis.
*Epidemiology doctoral student evaluation: HMGP 7600 is a great course, which covers many aspects of human genetics. It is very interesting and helpful to any student who is interested in genetic epidemiology. However, it assumes a fairly high background level of genetics knowledge. This course more or less assumes that you have background knowledge of at least one semester of an undergraduate course specifically in genetic; Recommended - Lots of information, good overview of the field. Many instructors lecture; It was far more challenging and required significantly more background then traditional "survey" courses. Should probably be considered a preliminary exam prep course for HMGP students. However it was a beneficial course and it was possible for someone with minimal background to pass and learn a good deal of genetics.

IDPT 6006 – Obesity and Cardiovascular Disease

The course will cover how obesity relates to cardiovascular disease including basic and clinical mechanisms on the pathophysiology of vascular biology, insulin resistance, risk factors, and outcomes, and how therapeutic interventions modify cardiovascular disease risk.

IDPT 7646 – Tissue Biology and Disease Mechanisms

This course provides an overview of organ systems and disease through 1) a survey of the major systems, including the cellular and molecular mechanisms underlying their function and repair, integrated with 2) common diseases, current therapies, and their mechanistic basis.

IMMU 7630 – Overview of Immunology

An overview course in immunology for non-Immunology-program graduate students. The focus is human relevance and the practical use of immunology in a variety of fields. Students gain experience applying immunological knowledge to their own area of interest.

*Epidemiology doctoral student evaluation of the former course, IMMU 7629: This is a basic course in cellular and clinical immunology. It is a lecture course with one comprehensive final exam. This course is an excellent introduction to the principles of human immunology and gives a good overview of some basic research methodologies used in the field. Anyone with some basic biology background should be able to follow the course material. Students who have not had upper-level cellular biology or biochemistry may have to do some extra reading for the exams, but all of the course material is very well referenced. The instructor for this course is Dr. John Cohen. His lectures alone make the class worthwhile; Best course, I’ve taken. Tremendous instructor – draws connections on many topics, contributes to an overall understanding of Human Biology. Provides an overview of immunology for non-Immunology-program graduate students. The focus is human relevance and the practical use of immunology in a variety of fields. Students gain experience applying immunological knowledge to their own area of interest.

IMMU 7662 – Immunology

This course covers the basic principles of the immune system. Included are discussions on (i) the innate and adaptive immune responses, (ii) the molecular and cellular basis of immune specificity and (ii) aspects of clinical immunology.

IPHY 6601 - Human Physiology

This course in Physiology is designed to provide an understanding of the functions of cells, tissues, and organs in the human body and the overall integration of organ functions in the body as a whole.
IPH 7840 – Advanced Topics in Cell Signaling
Students select topics of interest in the area of cell signaling and receive one-on-one instruction from expert faculty. Each one-credit topic will be taught for 5 weeks. Course work will include reading and discussing papers as well as practical exercises.

MICB 7701 – Molecular Virology and Pathogenesis
Topics in this course include viral structure and genome organization, replication and expression of viral genomes, mechanism of action of tumor viruses, molecular aspects of virus-host cell interactions, animal models of infectious diseases and pathogenesis of human viruses.

MICB 7702 – Molecular Mechanisms of Bacterial Disease
Course will provide an introduction to the biology of pathogenic bacteria and an in-depth discussion of several paradigms of bacterial diseases, which will illustrate important concepts, and molecular mechanisms of bacterial pathogenesis and evasion of the host defenses.

MICB 7704 – Host Response to Infectious Disease
This interactive graduate course, which provides an overview and specific examples of the host response to infectious disease. Current research and future directions in the field are discussed. Students are assessed via presentations, participation, and an exam.

MICB 7705 - Medical Microbiology
This course will focus on Microbiology and Infectious Diseases. Course content will focus on: pathogenicenic bacteria, viruses, fungi, parasites; emphasis on microbial virulence determinants, host-pathogen interactions emphasizing host immune responses, signs, and symptoms of disease presentation, epidemiology, and diagnosis of infectious diseases.

NRSC 7501 – Introduction to Neuroscience
Introduction to study of the nervous system from the level of the brain to an understanding of how neurons are specialized for communication and information processing.

PHSC 7310 – Fundamentals of Pharmaceutical Sciences
Core course explores key aspects of Pharmaceutical Sciences. Major themes will focus on macromolecular interactions, pharmaceutics, pharmacokinetics, pharmacodynamics, apoptosis, signal transduction and immunology. Critical thinking and problem solving skills will be emphasized via lectures, discussions, and computer-based data analyses.

PHSC 7350 – Proteins
Chemical and physical basis for protein structure, folding, function and stability; role of molecular dynamics, use of molecular simulations in investigations of protein-ligand and protein interactions; methods and principles of protein/peptide purification and enzyme catalysis, including electron transfer and mutagenesis.

PHSC 7405 – Hands-On Metabolomics Workshop
A 4-day intensive hands-on workshop that provides a comprehensive view of metabolomics. Participants will learn introductory metabolomics science and applicable protocols/technologies.
Appropriate for individuals with little to no experience in mass spectrometry and who will use this technology in their research.

**TXCL 7322 – Molecular and Target Organ Toxicology**
The course is designed to provide a foundation in molecular mechanisms of toxicity. Biochemical mechanisms underlying toxicity will be analyzed and integrated with discussions of reactive metabolites, oxidative stress, signal transduction, cell death and organ specific toxicity.

**TXCL 7323 – Environmental and Target Organ Toxicology**
The course is designed to provide a fundamental understanding of environmental-related toxicants (e.g. solvents, pesticides, metals, radiation) with emphases on the molecular mechanisms underlying their organ specific toxicity and on risk assessment.

**TXCL 7326 – Current Concepts and Comprehensive Reviews of Physiology**
This course will consist of a comprehensive overview of the physiology of nervous cardiovascular, respiratory, renal, gastrointestinal, endocrine, and reproductive systems. Graduate students enrolled in this course will receive assignments concerning organ-specific, cell-cell interactions in overall physiology.

**TXCL 7560 – Drug Metabolism and Pharmacogenetics 1**
This course will focus on the reactions that the exogenous compounds undergo in mammalian systems and the mechanisms of these reactions. Enzyme kinetics and unusual (idiosyncratic) drug responses that have a hereditary basis will be discussed. This interrelationship between genes and drug metabolism along with studies on polymorphic differences in genes encoding drug-metabolizing enzymes will also be discussed.

**TXCL 7561 – Drug Metabolism and Pharmacogenetics**
This course will focus on the reactions that the exogenous compounds undergo in mammalian systems and the mechanisms of these reactions. Enzyme kinetics and unusual (idiosyncratic) drug responses that have a hereditary basis will be discussed.

**TXCL 7564 - Environmental Risk assessment and Applied Toxicology**
Provides students with experience in risk assessment, environmental toxicology for public health and regulatory decision making. Topics include comprehensive human health risk assessments, baseline/probabilistic statistics, ecological risk assessment activities associated with emergency action, medical monitoring, and role toxicology plays in the courtroom.

**TXCL 7575 – Drug Development for the Toxicologist**
Overview of drug development process. Course will provide understanding of regulatory obligations required for submitting an N.D.A. as well as discussions related to additional corporate roles including activities for in vivo study conduct & due diligence review for licensing opportunities.

**TXCL 7655 – Pharmacokinetics and Toxicokinetics**
This is a course on the pharmacokinetic analysis of xenobiotics. Absorption, distribution, metabolism, and elimination of drugs will be discussed with focus on mathematical descriptions.
Epidemiology Core Program Faculty Policy

To serve as the primary mentor or chair for an Epidemiology MS or PhD thesis, a faculty member must be part of the Epidemiology Core Program Faculty. Core Faculty members have a “Regular” Appointment in the Graduate School where the primary is “EPID”. Other Regular series faculty may be eligible pending a discussion with the Program Director and/or Graduate School. Current Graduate School appointments and types can be found here:

https://gs.ucdenver.edu/graduate-faculty-directory/

This quick reference table describes Graduate School qualification for each member of an MS or PhD thesis committee:

https://www1.ucdenver.edu/docs/librariesprovider138/denver-anschutz-graduate-school/resources/graduate-faculty-quick-reference-table.pdf?sfvrsn=ef0622b9_2