GRADUATE SCHOOL

Overview

The Graduate School at the University of Colorado Anschutz Medical Campus oversees, facilitates, and enhances graduate education, while encouraging excellence in research, creative and scholarly work. We offer master's degrees, doctoral degrees, graduate certificates, and non-degree options in a wide variety of programs. Disciplines include Biomedical Sciences, Modern Human Anatomy, Genetic Counseling, Palliative Care, Nursing, Pharmaceutical Sciences, and Public Health. The Anschutz Medical Campus (CU Anschutz) is the largest academic health center in the Rocky Mountain region. The campus combines interdisciplinary teaching, research and clinical facilities to prepare the region's future health care professionals and be a national leader in life sciences research.

Diversity, Equity, & Inclusion

The Graduate School is committed to diversity and equity in the recruitment and retention of students. We actively seek persons from underrepresented populations, which include, but are not limited to, ethnic groups underrepresented in STEM, individuals with a disability, and those students who are economically disadvantaged, from rural areas, or first-in-family college graduates.

Graduate School Programs

- Graduate School Certificates (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/)
  - Anatomical Sciences Education (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/anatomical-sciences-education-certificate/)
  - Bioethics & Humanities in Health (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/health-ethics--humanities-certificate/)
  - Biomedical Science (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/biomedical-science-certificate/)
  - Community-Based Hospice & Palliative Medicine Fellowship (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/community-based-hospice--palliative-medicine-fellowship/)
  - Dissemination & Implementation Science (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/dissemination--implementation-science-certificate/)
  - Multidisciplinary Geriatrics (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/multidisciplinary-geriatrics-certificate-/)
  - Palliative Care (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/interprofessional-palliative-care-certificate/)
  - Personalized & Genomic Medicine (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/personalized--genomic-medicine-certificate/)
  - Research Management and Compliance (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/research-management-compliance-certificate/)
  - Translational Research on Alzheimer's Disease (Certificate) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-certificates/translational-research-alzheimers-disease-certificate/)
- Graduate School Masters Programs (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/)
  - Biomedical Sciences & Biotechnology (MS) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/biomedical-science--biotechnology-ms/)
  - Biostatistics (MS) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/biostatistics-ms/)
  - Clinical Science (MS) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/clinical-science-ms/)
  - Epidemiology (MS) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/epidemiology-ms/)
  - Genetic Counseling (MS) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/genetic-counseling-ms/)
  - Immunology and Microbiology (MS) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/immunology-microbiology-ms/)
  - Modern Human Anatomy (MS) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/modern-human-anatomy-ms/)
  - Palliative Care (MS) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/palliative-care-ms/)
  - Pharmaceutical Sciences (MS) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-masters-programs/pharmaceutical-sciences-ms/)
- Graduate School PhD Programs (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/)
  - Biomedical Sciences (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/biomedical-sciences-phd/)
  - Biostatistics (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/biostatistics-phd/)
  - Cancer Biology (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/cancer-biology-phd/)
  - Cell Biology, Stem Cells & Development (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/cell-biology-stem-cells-development-phd/)
  - Climate and Human Health (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/climate-human-health-phd/)

- Clinical Science (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/clinical-science-phd/)
- Computational Bioscience (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/computational-bioscience-phd/)
- Epidemiology (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/epidemiology-phd/)
- Health Services Research (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/health-services-research-phd/)
- Human Medical Genetics & Genomics (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/human-genetics--genomics-phd/)
- Immunology (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/immunology-phd/)
- Integrated Physiology (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/integrated-physiology-phd/)
- Medical Scientist Training Program (MD/PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/medical-scientist-training-program-mdphd/)
- Microbiology (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/microbiology-phd/)
- Molecular Biology (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/molecular-biology-phd/)
- Neuroscience (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/neuroscience-phd/)
- Nursing (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/nursing-phd/)
- Pharmaceutical Outcomes Research (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/pharmaceutical-outcomes-research-phd/)
- Pharmaceutical Sciences (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/pharmaceutical-sciences-phd/)
- Pharmacology and Molecular Medicine (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/pharmacology-phd/)
- Rehabilitation Science (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/rehabilitation-science-phd/)
- Structural Biology & Biochemistry (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/structural-biology-biochemistry-phd/)
- Toxicology (PhD) (http://catalog.ucdenver.edu/cu-anschutz/schools-colleges-programs/graduate-school/graduate-school-phd-programs/toxicology-phd/)

Courses

ANAT 6111 - Human Gross Anatomy (8 Credits)
The Human Gross Anatomy course examines the form and function of the human body at a macroscopic level. Systems-based and regional anatomy lectures are complemented by full-body cadaver dissection. Medical imaging labs provide the opportunity to learn ultrasound skills.
Requirements: Must be a degree-seeking student in MS Modern Human Anatomy program.
Grading Basis: Letter Grade
Typically Offered: Spring.

ANAT 6205 - Imaging and Modeling (4 Credits)
This course covers major medical and scientific imaging modalities with an emphasis on 3D scientific and medical visualization. Students will also receive instruction in advanced digital image processing and 3D modeling using industry-standard software such as MATLAB and Maya.
Prerequisite: Only ANAT degree-seeking students
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

ANAT 6208 - Foundations in 3D Modeling for Anatomical Sciences (1 Credit)
An introduction to the applications and techniques necessary for 3D scanning, modeling, and printing. This lab-based course will provide students with hands-on experience on acquiring and processing surface scan data along with strategies for printing and finishing objects using fused-deposition modeling and stereo lithography. Pre-requisite: ANAT 6205
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ANAT 6210 - Autodesk Maya for Anatomical Science (2 Credits)
Autodesk Maya for Anatomical Sciences teaches students to create professional animations illustrating concepts inherent in the study of medical science using Autodesk Maya. Pre-requisite: ANAT 6208.
Grading Basis: Letter Grade
Typically Offered: Fall, Summer.

ANAT 6220 - Unreal Engine for the Anatomical Sciences (2 Credits)
This course builds upon the foundational 3D modeling skills learned in ANAT 6260 and provides students with the practical experience, inspiration, and confidence to incorporate the Unreal Engine into their capstone. Students will deploy an app built with Unreal Engine. Pre-requisite: ANAT 6208 Prerequisite; ANAT-MS student or instructor permission.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ANAT 6310 - Neuroanatomy (4 Credits)
Structure & Function in the Human Nervous System. Basic neuroanatomy & neural systems with workshop focus employing facilitated discussions & problem-oriented cases. Laboratory sessions will employ brain specimens, models & image sets. Team-based projects are in-depth exploration of topics with development of collaborative presentations.
Requisite: Restricted to ANAT students only.
Grading Basis: Letter Grade
Typically Offered: Fall.

ANAT 6321 - Human Histology (4 Credits)
Histology is the study of the tissues. By exploring the human structure, function and organization at the histological level, students will gain important pattern recognition skills to integrate microscopic knowledge with macroscopic gross anatomy and other foundational anatomical sciences. (Will replace ANAT 6320) Prereq: Restricted to ANAT students only.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

ANAT 6330 - Human Embryology (3 Credits)
This graduate level, introductory human embryology course will emphasize developmental aspects of adult anatomy and congenital malformations. Educational value of three-or-four-dimensional models and other ancillary learning resources for human embryology will also be explored. Requisite: Restricted to ANAT students only.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

ANAT 6412 - Foundations of Teaching (1 Credit)
This course will provide students with training, practice, and constructive feedback in effective teaching skills in order to be successful in the biomedical professions. Topics include learning objectives, the neurobiology of learning, assessments, and effective communication within and outside the classroom.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

ANAT 6490 - Advanced Teaching in Anatomical Sciences (3 Credits)
This course offers a hands-on, supervised experience as an anatomical sciences educator. Readings and discussions will enhance your understanding of educational pedagogy. You will apply these skills as you develop and deliver lecture and lab content in a classroom setting. Instructor consent required.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring.

ANAT 6600 - Experimental Design and Research Methods (1 Credit)
In this course, students will foster and apply strategies that enable critical evaluation of any published research (including basic, clinical, and educational), as well as develop the skills necessary to conduct and appropriately analyze their own research data.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Summer.

ANAT 6750 - Special Topics: Modern Human Anatomy (1-6 Credits)
This course is offered in a variety of technical and thematic areas in modern human anatomy. The specific topics vary from year to year. Note: This course includes lectures, discussions and workshops.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

ANAT 6840 - Independent Study (1-6 Credits)
This course enables the student to pursue an investigation in a modern human anatomical field of choice toward completion of a capstone project with relatively minor supervision from faculty advisors.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

ANAT 6910 - Teaching Practicum (1-4 Credits)
Hands-on teaching course in which students apply pedagogical theories to practice in a professional program as a teaching assistant, lecturer or other instructional position. Prereq.: ANAT 6412. Course restricted to ANAT majors.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 4.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

ANAT 6911 - Advanced Teaching Practicum (1-4 Credits)
Hands-on teaching course in which students apply pedagogical theories to practice in a professional program as a teaching assistant, lecturer or other instructional position. Pre-requisite: ANAT degree-seeking student; ANAT 6412
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

ANAT 6931 - MSMHA Internship (1-6 Credits)
The internship provides hands-on learning opportunities and practical experience for graduate students in institutions related to anatomical sciences, imaging, technology/biotechnology, innovation, and entrepreneurship. Restricted to ANAT students only
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

ANAT 6950 - MSMHA Capstone Project (1-12 Credits)
The Capstone project is a scholarly and/or research-based pursuit of knowledge and content development in the area of anatomical sciences, modern imaging and modeling technologies, and educational science completed as part of the MS in Modern Human Anatomy. Prerequisite: Must be ANAT degree-seeking student.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 12.
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

BEHH 5010 - Foundations of Bioethics & Humanities in Health (3 Credits)
This course combines two essential areas of study: The first eight weeks focus on the foundations of bioethics, examining moral frameworks used in medical and health settings and their application to clinical, organizational, and population-based cases. The second eight weeks explore the foundations of narrative practice in medicine through engagement with various texts and other materials. Each section maintains its distinct focus while providing students with complementary perspectives on health and health care.
Grading Basis: Letter Grade
Typically Offered: Fall.

BEHH 5210 - The Art of Observation (1 Credit)
The Art of Observation is designed to sharpen the perceptual and analytical skills, which are essential for excellence in clinical practice in dentistry, medicine, and other professional fields. Participants will engage with a selection of visual art pieces and photographic works. Through guided interaction with these materials, students will hone their observational acuity, practice articulating their perceptions and insights, and engage in collaborative analysis reminiscent of differential diagnosis processes. This course teaches Visual Thinking Strategies (VTS), a protocol for facilitating group discussions around visual materials. Students will master the methodology of VTS, including careful material selection, silent observation periods, strategic questioning, neutral facilitation, and effective paraphrasing. The skills cultivated in this course directly translate to clinical scenarios, where the ability to pinpoint key clinical indicators, recognize symptomatic patterns, and interpret patient data flexibly and accurately is paramount for effective patient care. The goals are to increase compassion and empathy, encourage tolerance for ambiguity and diversity, recognize biases in interpretation and foster reflection and honest communication using the arts to gain these skillsets.
Grading Basis: Letter Grade
Typically Offered: Fall.

BEHH 5211 - The Art of Listening: Music and Medicine (1 Credit)
The Art of Listening is an innovative course that explores the profound intersection of musical and clinical listening skills to enhance practice in medicine, dentistry, and other healthcare fields. Drawing upon the unique resources of the Anschutz Campus, including a live performance by the Campus Chorus and/or Orchestra, this course develops healthcare professionals' abilities to listen deeply, empathetically, and analytically. Through immersive musical experiences and clinical scenarios, participants will develop a heightened awareness of auditory nuances, rhythms, and harmonies that parallel the complexities of human health and disease. The course emphasizes how musical immersion - can inform and enhance clinical listening skills. Students will learn to apply these techniques to medical contexts, developing their ability to hear both what is said and unsaid, recognize patterns, and maintain focused attention during patient encounters. Participants will explore how musical narratives unfold, mirroring the way patient histories are constructed and understood in clinical settings. Special attention is paid to the emotional and cultural aspects of music, encouraging students to reflect on how these elements influence perception and interpretation in healthcare. This approach fosters empathy and cultural competence, crucial attributes in today's diverse healthcare landscape. By combining experiential learning with practical clinical applications, the course aims to cultivate not just better listeners, but more attentive, empathetic, and perceptive healthcare professionals. Students will develop advanced listening skills essential for excellence in patient-centered care, while gaining a deeper appreciation for the role of music in healing and human connection.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5212 - Pain and Dentistry in the History of Western Art (1 Credit)
If you run a basic search for historical images of pain in Western art since 1500, a curiosity emerges: A significant proportion of the results relate to dentistry and dental pain. In other words, the history of dentistry and the history of pain form overlapping iconography in the history of Western art. Given the near universality of dental pain in human experience, the frequency of its representation is no mystery. However, one of the many paradoxes of pain is that although pain is universal, it is also quintessentially subjective: my pain is different from your pain, even if the cause of the pain is identical. Literature scholar Elaine Scarry notes another paradox: pain is simultaneously one of the most privately certain and publicly doubted experiences. In addition, some who experience pain do not seem to suffer, while others who suffer do not seem to experience pain. This interdisciplinary short course uses the dual iconography of pain and dentistry as a vehicle to explore the history of pain and its relationship to dentistry in the early modern and modern eras. Learners will acquire historical fluency in key themes and issues related to dental practice and patient experience that they can apply to contemporary dental medicine.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5213 - Reflections on Incarceration and Well-Being (1 Credit)
This discussion-based course focuses on understanding incarceration as a structural determinant of health. Through engaging with written work from incarcerated writers, as well as critical theories and empirical texts, students will explore issues related to how the system of incarceration affects individual, community, and societal health and well-being. Weekly discussions will include topics such as health and mortality data collection and communication, healthcare access and delivery, and conditions of confinement. They also include topics along axes of identity including birthing and parenting, aging inside, and incarceration of transgender individuals. Students will apply their learnings in-class to a final paper.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5214 - From Burned Out & Extracted to Regenerative Healing: William Carlos Williams' The Doctor Stories (1 Credit)
“Burnout is a Surrender,” said Dr. Martin Luther King. Reflecting on this Robert Coles writes that those who are burned out can “use such low points to become more realistic and reflective and, in the long run, sturdier.” In this spirit, spend a semester surrendering to the joys, hazards, and complexities of a life attending to patients by sitting with The Doctor Stories by William Carlos Williams. The goal of this course will be to provide opportunities for close presence to these stories. In doing so you may acquire a knack for what John Launer calls “a radical facilitative presence” - both for your own healing soul and for your patients. Each week you will read one story and follow a standard template to reflect on how the story provoked movement inside of you. Then throughout the week you will be asked to take 5 minutes each day to write down how a specific clinical encounter connects to the week’s story. We will meet in person to casually commune over our shared experience with these stories.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5215 - Global Health Humanities (1 Credit)
"Global Health Humanities" offers a unique interdisciplinary exploration of health, illness, and healing across cultures through the lens of the humanities. Participants will investigate how universal human experiences of health and illness are interpreted and expressed differently across diverse cultural contexts. Through analysis of narratives, historical accounts, and artistic representations, we will explore questions such as: How do cultural beliefs and practices influence perceptions of what is considered healthy or pathological in oral health? In what ways do storytelling and artistic expression reveal the lived experiences of mental illness in different societies? How have colonial legacies and global power dynamics shaped health inequities? A key focus will be on amplifying marginalized voices in global health. Students will engage with works by authors, artists, and thinkers from the Global South, as well as from historically underrepresented communities within the Global North. This approach will highlight how diverse cultural perspectives can enrich our understanding of health and contribute to more equitable and effective global health strategies.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5250 - Topics in Media, Medicine and Society (3 Credits)
This interdisciplinary course will explore the interconnections and intersections between medicine and media, investigating a significant collaborative enterprise that characterizes American culture.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5310 - Ethical Care in Patient's Living with Dementia (1 Credit)
The population in the United States aged 65 and older is expected to increase 47% by 2050. Advancements in technology and improvements in care have enabled our population to experience increased age-related disease because of an extended lifespan. Currently, nearly 55 million people worldwide are living with Dementia, with the number predicted to increase to 78 million in 2030. Individuals living with Dementia are often assumed to lack decision-making capacity. However, decision-making capacity is time and decision specific, so individuals with Dementia often have a wide range of decision-making capabilities. Patients in our care with limited capacity are often still able to express preferences and desires. This condition is complicated by the large transition to a model of aging in place. Aging in place refers to the ability of older individuals to live independently in their homes as they age, rather than moving to an assisted living or nursing facility. This model emphasizes creating a safe and supportive environment that allows individuals to maintain their autonomy and quality of life through connection to community resources, home modifications, support services, and technology. This course provides and in-depth examination of the ethical considerations surrounding the care of patients living with dementia. Participants will explore key concepts such as autonomy, informed consent, and the challenges of decision-making in the context of cognitive decline. Through case studies and interactive discussions, the course will address the balance between respecting patient rights and ensuring their safety and well-being. Participants will learn best practices for communicating with patients, involving families in care decisions, methods to improve the care setting and navigating complex ethical dilemmas. By the end of the course, participants will be equipped with knowledge and skills to deliver compassionate, ethical care that honors the dignity and individual
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5311 - Moral Distress in Healthcare (1 Credit)
As technology has continued to develop throughout the world and our ability to artificially sustain life has improved, the instances of ethical dilemmas and moral distress have only increased. When an ethics issue arises in healthcare, the ethics issue is typically known but the correct direction of action is unclear or not delineated. This frequently arises in the way of conflicting obligations. For example, a pregnant woman with decision making capacity is in our care and is denying medical interventions to save the fetus. Do we respect patient autonomy and the patients right to decide for themselves, or do we prioritize the good of the fetus? Moral distress is experienced by workers that encounter an ethics issue where the correct direction for action is clear, but the individual is unable to act. This can be due to institutional constraints, role constraints or even legal constraints based on the location of practice. Moral distress leads to emotional discomfort experienced by healthcare professionals when they are unable to act in accordance with their ethical beliefs and becomes especially apparent when conflict is faced between personal values, institutional policies, patient wishes, or resource constraints. When individuals come together and recognize issues of moral distress, we can work more effectively as a team to support one another. Since ethical dilemmas have the potential to lead to moral distress, it's important that medical professionals have some degree of ethical competence to recognize when issues may arise. This course explores the complex issue of moral distress in the healthcare setting, where professionals confront ethical dilemmas that challenge their values and principles. Participants will examine the causes of moral distress, including systemic issues, institutional policies, and personal beliefs, and recognize the influence of moral distress.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5350 - Narrative Principles and Practices in Healthcare (3 Credits)
This course introduces students to the intellectual and clinical discipline of narrative work in healthcare. Students will explore the theoretical foundations of narrative in healthcare and participate in structured workshops to improve close reading of texts and writing skills. Requisite: 008754
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5410 - Research Methods in Health Humanities (3 Credits)
The Health Humanities Research Methods course provides comprehensive training in qualitative and interpretive research approaches used to understand lived experiences of health, illness, and healthcare through humanities and social science perspectives. Students will gain theoretical foundations in phenomenology, narrative inquiry, ethnography, discourse analysis, and arts-based methods, with particular attention to ethical approaches for working with vulnerable populations in healthcare settings. The course emphasizes how different methodological traditions - from literary analysis to visual ethnography to oral history - can reveal unique insights into how people make meaning of health experiences and navigate healthcare systems. Through hands-on research exercises, students will practice multiple data collection methods including semi-structured interviews, participant observation, close reading, visual analysis, and participatory arts-based approaches. The course pays special attention to power dynamics in healthcare research, trauma-informed practices, and methods for amplifying traditionally marginalized voices. Students will develop practical skills in research design, data collection, interpretation, and presentation while considering how different methodological choices align with research questions about lived experiences of health and illness.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5450 - Addressing Health Stigma in Social Contexts (3 Credits)
This interdisciplinary course will equip students with the tools needed to understand health stigma, to construct an explanation as to why it is so common and to explain what, if anything, should be done to address such stigma. Requisite: 008754
Grading Basis: Letter Grade
Typically Offered: Spring.

BEHH 5550 - Independent Study in Health Humanities & Health Ethics (1-3 Credits)
This independent study will permit students to pursue specialized topics and/or previously studied topics in health humanities and health ethics in greater depth and with more flexible scheduling. Requisite: 008754
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

BEHH 5655 - Introduction to Public Health Ethics (3 Credits)
This course provides learners with an introduction to public health ethics. The material explores differences between public health ethics & health care ethics, important frameworks used in public health ethical analysis, and significant practice in analyzing public health ethics cases.
Grading Basis: Letter Grade
Typically Offered: Fall.

BEHH 5750 - Pain, Its Paradoxes & the Human Condition (3 Credits)
This course explores the lived experiences of pain, its paradoxes, and the extent to which it is a key feature of the human condition. Analyses will be drawn from history, religious studies, philosophy, literature, poetry, public health, medicine, and law.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BEHH 5850 - Clinical Ethics (3 Credits)
The purpose of this course is to introduce students to the theory, methods, history, and application of clinical ethics. Course sessions will include instructor- and student-led didactics. Students will be expected to discuss issues and cases in clinical ethics and critically analyze ethical topics and cases in oral and written formats.
Grading Basis: Letter Grade
Typically Offered: Fall.

BEHH 5910 - Race, History and Health in Brazil (3 Credits)
Brazil has a long and extensive history of African enslavement, and in the coastal city of Salvador, African influences are strong and palpable. A large diaspora from different regions of Africa was formed during the colonial period, and this has led to the constant expression--and celebration--of an African heritage in Salvador. Today, Afro-Brazilian cultural elements in music, religion, and capoeira, an Afro-Brazilian art form, are now realities around the world. Brazil's legacies of slavery, colonialism, and segregation, along with its stark socio-economic inequalities, have disproportionately affected the health and well-being of its Afro-Brazilian communities. At the same time, the country is known for its leadership in universalizing access to healthcare, including life-saving HIV treatments. Grassroots activists and organizations operate both alongside of and in opposition to state responses to ongoing epidemics, including COVID-19. Brazil's therapeutic landscape is further complicated by a sophisticated system of traditional medicine that serves as alternative and complementary treatments to widespread biomedical options. The country-and especially the city of Salvador--is thus a critical location for the study of race, history, and health. This course is a 10-day study abroad program in which students will be immersed in the history, culture, and everyday lives of Afro-Brazilians in Salvador, Brazil. The program combines homestays with Brazilian families with classroom and field experiences. Guest lectures from Brazilian experts will discuss topics such as the nation's history, health, politics, music, religion, education, and Carnival. Activities will focus on the interplay of race and health to better understand the lived experiences and rich past of Afro-Brazilians.
Grading Basis: Letter Grade
Typically Offered: Spring.

BEHH 5911 - Medicine, Nazism, & the Holocaust Study Abroad Course (3 Credits)
This immersive course explores the complex and challenging history of medicine, Nazism and the Holocaust – including site visits to Krakow, the Plaszow concentration camp, and the Auschwitz-Birkenau concentration and extermination camps – and the legacy of this history for health care and society today. Its central goal is to foster a deeper comprehension of this history and how it continues to affect contemporary medical and public health research, practice and policy. Through this lens, and in ways only accessible through the power of being present in the place where historical events unfolded, learners will gain invaluable insights into the potential impacts of racism, antisemitism, and authoritarian ideologies on health care and society. The transformative experience of visiting Krakow and Auschwitz with historians, health professionals and colleagues will equip learners with essential skills for personal and professional identity formation, including critical thinking, cross-cultural communication, and ethical reasoning in healthcare. Brief Course Description: This course includes pre-work and 2 pre-trip synchronous sessions, and then it centers around a 4-day immersive study abroad visit to Krakow, Poland. The onsite experiences include (1) a full-day walking tour with an historian of Krakow and the Plaszow concentration camp, (2) a full day at the Auschwitz-Birkenau camps, conducted in collaboration with the Auschwitz-Birkenau Memorial and Museum, (3) a day-long international conference featuring experts on the history of medical involvement in Nazism and the Holocaust, and (4) a day of workshops. Each day ends with an opportunity for group debriefing and unpacking the often-intense experiences of that day. Learners will engage in classroom and field activities led by international experts to unpack the complex interplay of medicine, public health, science and ethics during the Nazi regime and the Holocaust.
Grading Basis: Letter Grade
Typically Offered: Fall.

BSBT 6060 - Special Topics in Biomedical Science & Biotech (1-3 Credits)
Special topics of interest to graduate students in the biomedical sciences and biotechnology fields.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

BSBT 6061 - Project Management (2 Credits)
Provides training in initiating, executing & closing a project, including the management of scope, time, cost, human resources, communication, risk and more. Highly interactive intensive course prepares students for Certified Project Management exam (internationally recognized certification). Taught by Project Management Professional.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

BSBT 6064 - Scientific Writing (1 Credit)
Taught by a biomedical researcher and a professional writing instructor, this 15-hour (3-week) course focuses on developing a framework for successful scientific writing practices, including how to effectively structure arguments, how to write grant proposals and more.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

BSBT 6065 - Case Studies in Responsible Conduct of Research (1 Credit)
Anyone conducting research using federal funding must study RCR. You'll learn expectations and regulations that permeate science. You'll understand consequences of violations to individuals and society. We'll explore misconduct through interactive video, written and video case studies, and other engaging activities.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

BSBT 6067 - Statistics for Biomedical Sciences (2 Credits)
Learn how and when to apply statistical procedures to answer scientific questions relevant to biomedicine, and how to critically assess statistical data for validity.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

BSBT 6068 - Laboratory Research in Structural Biology (1-6 Credits)
The Course BSBT 6068, Laboratory Research, with allow graduate students to engage in laboratory research training in the biomedical sciences with focus on structural biology.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Typically Offered: Fall, Spring, Summer.

BSBT 6069 - Laboratory Research in Immunology and Microbiology (1-6 Credits)
The Course BSBT 6069, Laboratory Research, with allow graduate students to engage in laboratory research training in the biomedical sciences with focus on immunology and microbiology.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

BSBT 6070 - Mini-Research Rotations (1-3 Credits)
The Course BSBT 6070, Mini-Research Rotations, with allow graduate students to learn in three different laboratories about research in immunology and microbiology.
Grading Basis: Letter Grade with IP
Typically Offered: Fall, Spring.

BSBT 6071 - Introduction to R Programming (1 Credit)
Introduction to the statistical programming language R geared primarily to biomedical science students with little to no previous programming experience. Basic features of R as a programming language and as scientific computing platform. Basics of data cleaning, visualization, and analysis.
Grading Basis: Letter Grade
Typically Offered: Spring.

BSBT 6072 - Foundations in Biochemistry (1.5 Credits)
This short course provides a condensed and fast-paced overview of the fundamentals in biochemistry including research strategies and techniques. The course aims to enhance the students' ability to engage in critical scientific reasoning and problem-solving and to prepare students for the scientific analyses and discussions.
Grading Basis: Letter Grade
Typically Offered: Fall.

BSBT 6073 - Foundations in Molecular Biology (1.5 Credits)
This short course provides a condensed and fast-paced overview of the fundamentals in molecular biology including research strategies and techniques. The course aims to enhance the students' ability to engage in critical scientific reasoning and problem-solving and to prepare students for the scientific analyses and discussions.
Grading Basis: Letter Grade
Typically Offered: Fall.

BSBT 6074 - Foundations in Cell Biology (1.5 Credits)
This short course provides a condensed and fast-paced overview of the fundamentals in cell biology including research strategies and techniques. The course aims to enhance the students' ability to engage in critical scientific reasoning and problem-solving and to prepare students for the scientific analyses and discussions.
Grading Basis: Letter Grade
Typically Offered: Fall.

BSBT 6075 - Foundations in Genetics (1.5 Credits)
This short course provides a condensed and fast-paced overview of the fundamentals in genetics including research strategies and techniques. The course aims to enhance the students' ability to engage in critical scientific reasoning and problem-solving and to prepare students for the scientific analyses and discussions.
Grading Basis: Letter Grade
Typically Offered: Fall.

BSBT 6076 - Research Explorations (1 Credit)
This course allows for exploration of SBB research labs in a "mini-rotation" format, through meeting faculty, reading literature and participating in lab group meetings and research in order to choose a research lab and prepare a short research proposal.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BSBT 6078 - Seminar in Immunology and Microbiology (1 Credit)
This course provides students in the Bioinformatics in Immunology/Microbiology program an integration of didactic knowledge with research approaches to outstanding questions in the field. Students will attend department weekly seminar followed by structured discussion.
Prerequisites - IDPT 7810 & IMMU 7630
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BSBT 6079 - Leadership in a Global Environment (3 Credits)
The Leadership in a Global Environment course seeks to offer students a foundation for understanding the intricate and complex relationship between language, culture, communicative practices, and the role we play as individuals in the globalized work environment of today. In particular, this course is geared to emerging and developing global leaders. Today's leaders must be incredibly versatile. In fact, the entire management team needs to be able to link their industry science with value in the marketplace and tell a compelling story about what makes not just the innovation but also the company itself, special. Sometimes investors are very focused on the science of the products, and sometimes on the finance, so company leaders have to be prepared to talk about either or both. Today's leaders must be transversal: highly strategic and operational while able to understand and connect clinical, market access, commercial, finance, and strategy. The Leadership in a Global Environment course seeks to offer students a foundation for understanding the intricate and complex relationship between language, culture, communicative practices, and the role we play as individuals in the globalized work environment of today. In particular, this course is geared to emerging and developing global leaders. Today's leaders must be incredibly versatile. In fact, the entire management team needs to be able to link their industry science with value in the marketplace and tell a compelling story about what makes not just the innovation but also the company itself, special. Sometimes investors are very focused on the science of the products, and sometimes on the finance, so company leaders have to be prepared to talk about either or both. Today's leaders must be transversal: highly strategic and operational while able to understand and connect clinical, market access, commercial, finance, and strategy.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

BSBT 6110 - Introduction to Biocomputing (3 Credits)
This course provides students with hands on experience in basic computation, database, and programming skills set as a pre-requisite for a higher level data analysis course. The students will use example in the context of biomedical and genomic data set. Prerequisite: Undergraduate degree in science, technology, business, engineering or math.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

BSBT 6111 - Introduction to Biomedical Data Practices (2 Credits)
This course provides students with advance knowledge and topics in every aspects of data science.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

BSBT 6112 - Introduction to Biocomputing (2 Credits)
This course provides students with hands on experience in basic computation, database, and programming skills set as a pre-requisite for a higher level data analysis course. The students will use example in the context of biomedical and genomic dataset. Requisite: Must be simultaneously enrolled in BSBT 6113.
Grading Basis: Letter Grade
Typically Offered: Fall.

BSBT 6113 - Data Science with R (1 Credit)
In this 4 weeks semi-independent study course, you will learn how to use the "tidyverse" programming paradigm to perform data science operation using the programming language R. At the end of the course, you will learn the basic understanding of the fundamental elements of data science, including; wrangling, exploration, visualization and modeling.
Grading Basis: Letter Grade
Typically Offered: Fall.

BSBT 6310 - Practical Clinical Research Informatics (3 Credits)
This course provides students with hands on experience in clinical research informatics involving secondary use of electronic health record (EHR) data, clinical informatics databases, and basic clinical data science as preparation for more advanced informatics or data science coursework. Requisite:008754 A-GRAD
Grading Basis: Letter Grade
Typically Offered: Spring.

BSBT 6801 - Biomedical Entrepreneurship (3 Credits)
The course addresses the essential elements of bioscience and health innovation and entrepreneurship. Prerequisites: An undergraduate degree in science, technology, business, engineering or math. Cross-listed with ENTP 6801
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

BSBT 6804 - Bioinnovation Regulations (3 Credits)
This course is designed to familiarize biomedical scientists and those interested in the business of science with the fundamentals of U.S. and international regulatory affairs regarding drug discovery and medical devices. Focus is the development of products, such as drugs, devices, diagnostic tests, and health information software, to receive U.S. and international regulatory clearance or approval for commercialization.
Grading Basis: Letter Grade
Typically Offered: Fall.

BSBT 6805 - Bioinformatics (4 Credits)
This course will simultaneously introduce students to coding principles (using R) applied to common problems in bioinformatics and data analysis. To this end, students will learn how to import high-throughput data into R, pre-process that data to account for technical anomalies resulting from the acquisition modality (e.g., RNA-Seq, ChIP-Seq), and perform a sequence of statistical analysis (e.g., ANOVA) and data visualization (e.g., heatmaps). At the completion of this course, students will be equipped with coding templates in R that they can apply to data analysis for their own research purposes. Students will also be exposed to more advanced principles of data analysis, such as training machine learning algorithms. These include unsupervised and supervised algorithms, which are commonly used for general data exploration and training diagnostic/prognostic models, respectively. Prereq: • Mathematical Foundations: Students are expected to have a solid understanding of calculus and matrix algebra. These mathematical principles are essential for comprehending common data analysis techniques used in bioinformatics. • Programming Skills: Coding experience in any programming language is preferred but not required. The course will teach bioinformatics and coding concepts simultaneously, primarily using R as the programming language.
Grading Basis: Letter Grade
Typically Offered: Spring.

BSBT 6806 - Communication Skills (3 Credits)
Position yourself for success biomedical research and industry careers where effective communication is essential. Learn and practice the fundamentals of effective public speaking, presenting, interviewing, and personal branding. This is a graduate level course designed for individuals in research and industry fields who are looking to refine their communication skills.
Grading Basis: Letter Grade
Typically Offered: Spring.

BSBT 6939 - Internship - Technology and Innovation (3-6 Credits)
The internship provides hands-on learning opportunities for graduate students in institutions related to technology/biotechnology, computer science, engineering, innovation and entrepreneurship. Requisite: Enrollment with permission only. Instructor consent required.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 6.
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

BSBT 6950 - Laboratory Thesis Research (1-6 Credits)
Laboratory Thesis Research with allow graduate students to engage in laboratory research training in the biomedical science.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

BSBT 7646 - Tissue Biology and Disease Mechanism (1 Credit)
This course provides an overview of organ systems and 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. Prereq: IDPT 7811, 7812, 7813, 7814, 7815 (BIOM Sci Core Courses).
Grading Basis: Letter Grade
Typically Offered: Fall.

CAND 6940 - Candidate for Degree (1 Credit)
Prereq: Consent of Instructor.
Grading Basis: Satisfactory/Unsatisfactory w/IP
Repeatable. Max Credits: 3.
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

CHPM 7001 - Comm-Based Hospice and Pall Med Fellowship - A (8 Credits)
For physicians MSPC students who are accepted as CB-HPM Fellows. Graduate Medical Education and supervision for fellows to complete all clinical requirements for patient care and meet HPM Milestones. Pre- or Co-Requisite - PALC 6511/12
Grading Basis: Letter Grade with IP
Typically Offered: Fall.

CHPM 7002 - Comm-Based Hospice and Pall Med Fellowship - B (8 Credits)
For physicians MSPC students who are accepted as CB-HPM Fellows. Graduate Medical Education and supervision for fellows to complete all clinical requirements for patient care and meet HPM Milestones. Pre- or Co-Requisite PALC 6511/12
Grading Basis: Letter Grade with IP
Typically Offered: Spring.

CHPM 7003 - Comm-Based Hospice and Pall Med Fellowship - C (4 Credits)
For physicians MSPC students who are accepted as CB-HPM Fellows. Graduate Medical Education and supervision for fellows to complete all clinical requirements for patient care and meet HPM Milestones. Pre- or Co-Requisite - PALC 6511/12
Grading Basis: Letter Grade with IP
Typically Offered: Summer.

CHPM 7004 - Comm-Based Hospice and Pall Med Fellowship - D (8 Credits)
For physicians MSPC students who are accepted as CB-HPM Fellows. Graduate Medical Education and supervision for fellows to complete all clinical requirements for patient care and meet HPM Milestones. Pre- or Co-Requisite - PALC 6511/12
Grading Basis: Letter Grade with IP
Typically Offered: Fall.

CHPM 7005 - Comm-Based Hospice and Pall Med Fellowship - E (8 Credits)
For physicians MSPC students who are accepted as CB-HPM Fellows. Graduate Medical Education and supervision for fellows to complete all clinical requirements for patient care and meet HPM Milestones. Pre- or Co-Requisite - PALC 6511/12
Grading Basis: Letter Grade with IP
Typically Offered: Spring.

CHPM 7006 - Comm-Based Hospice and Pall Med Fellowship - F (4 Credits)
For physicians MSPC students who are accepted as CB-HPM Fellows. Graduate Medical Education and supervision for fellows to complete all clinical requirements for patient care and meet HPM Milestones. Pre- or Co-Requisite - PALC 6511/12
Grading Basis: Letter Grade with IP
Typically Offered: Summer.

CLSC 6060 - Analysis Modeling and Design (3 Credits)
Collaborative offering with Denver Campus, emphasizing information requirements analysis, logical system specification, detailed system design. Topics include structured system development methodologies, prototyping, file design, systems architecture, systems testing, software design strategies. Students use case tool to develop system specifications.. Crosslisted: ISMG 6060.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

CLSC 6080 - Database Management Systems (3 Credits)
Offered as a collaborative offering with UCD, this course focuses on the development and management of database systems to support business operations. Important subjects include semantic data modeling, normalization, SQL, fourth generation languages, and client-server database applications. Crosslisted: ISMG 6080.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

CLSC 6210 - Research Seminars in Clinical Science (1 Credit)
This course provides an overview of the types of clinical translational studies being conducted by senior CLSC doctoral students. The interactive seminar series structure allows for interdisciplinary scientific dialogue among students at various stages of training, mentors and faculty.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 3.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

CLSC 6211 - Immersion in Community Engagement (3 Credits)
The course focuses on community-based participatory research, community engagement and understanding health disparities through a community immersion experience. Restrictions: Students need to contact the CLSC program prior to registering.
Grading Basis: Letter Grade
Typically Offered: Summer.

CLSC 6260 - Conducting Clinical Trials for Investigators (2 Credits)
Course is for investigators conducting clinical trials. Course covers good clinical practices/regulations that surround setting up and running clinical trials. Clinical studies and popular press articles highlighting what can go wrong in clinical trials will be reviewed and discussed.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Summer.

CLSC 6270 - Critical Appraisal Seminars in Clinical Science (1 Credit)
This course provides an overview of the approaches for critically appraising common study designs published in the clinical and translational sciences literature, as well as other sources of information.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

CLSC 6300 - Scientific Grant Review Process: CCTSI Proposals MS (1 Credit)
Students will understand and participate in the process of scientific review of human subject research protocols submitted to the University of Colorado Denver Clinical Translational Research Centers at University Hospital and The Children's Hospital. Prereq: BIOS 6601, BIOS 6602 (or BIOS 6611, BIOS 6612) & CLSC 7500.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring.

CLSC 6460 - Rare Diseases Translational Research and Clinical Trial Applications (1 Credit)
The purpose of this course is to deepen understanding of human rare diseases and the translational research approaches to rare disease research. The course will broadly cover rare disease epidemiology, patient/subject identification and registries, data extraction from databases, subject recruitment, rare disease clinical trial designs, pediatric considerations, and grant funding. Prerequisites: Familiarity with biostatistics and study design is recommended.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

CLSC 6560 - Designs and Mixed Methods in Implementation Research (3 Credits)
This course provides an in-depth examination of study designs, comparative effectiveness research, and qualitative, quantitative and mixed methods approaches to dissemination and implementation research. The focus is application to health care and public health settings. Prerequisite: CLSC 7653.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

CLSC 6580 - Qualitative and Mixed Methods in Health Research (3 Credits)
This course provides an in-depth examination of qualitative and mixed methods approaches that are pertinent to health research.
Grading Basis: Letter Grade
Typically Offered: Spring.

CLSC 6650 - Guided Research Tutorial - Masters (1-3 Credits)
An independent study course developed by the student and the appropriate faculty member based on the area of study. Students meet regularly with the selected course instructor, the student and course instructor will develop a course plan prior to registration.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

CLSC 6653 - Key Concepts in Neurodevelopmental Disabilities I (2 Credits)
Course represents part one of two-part interdisciplinary course series focused on systems, options for diagnosis/assessment and alternatives for service provision related to children/youth/young adults with neurodevelopmental and related disabilities and their families to address this population's special health care needs. Prereq: A degree in healthcare profession or related field or instructor consent.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

CLSC 6654 - Key Concepts in Neurodevelopmental Disabilities II (2 Credits)
This course represents part two of a two-part interdisciplinary course series focused on service provision, intervention strategies and service provision related to children/youth/young adults with neurodevelopmental and related disabilities and their families to address this population's special health care needs. Prereq: A degree in health care profession or related field or instructor consent and completion of CLSC 6653.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

CLSC 6661 - Leadership Dialogues I (2 Credits)
This interdisciplinary leadership course focuses on leadership strategies needed for providing family-centered, culturally competent, community-based services for children with special needs and their families. Prereq: A degree in health care profession or related field or instructor consent.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

CLSC 6662 - Leadership Dialogues II (1 Credit)
This interdisciplinary leadership course focuses becoming change agents to better provide family-centered, culturally competent, community-based services for children with special needs and their families. Prereq: a degree in health care profession or related field or instructor consent. CLSC 6661
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring.

CLSC 6663 - Intervention for Individuals with Developmental Disabilities (3 Credits)
This interdisciplinary course reviews evidence-based practices in intervention for children with autism and other neurodevelopmental disorders, presented through lectures, critical readings of the literature, case discussions, and case presentations. Prereq: Degree in health care profession or related field or consent of instructor.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

CLSC 6668 - Screening/Assessment for Children/Youth with Autism/ Neurodevelopmental Disabilties (3 Credits)
This interdisciplinary course presents best practices in screening/ assessment for autism, focusing on: identification of symptoms of autism; differentation of autism from other disorders; recognition of symptoms; examination of culture on clinical presentation; and approaches to share observations. prereq: a degree in health care profession or related fields (or consent of instructor).
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

CLSC 6699 - Masters Research Project: Publishable Paper (1-6 Credits)
During course students working with his/her research mentor and research project committee to plan, execute, write Final Research Project in form of a publishable paper. In addition, students prepare for Final Research Project Examination. This is a capstone course. Prerequisite: Consent of program. BIOS 6601 and BIOS 6602 or BIOS 6611 and BIOS 6612, CLSC 7150, EPID 6630.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 6.
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

CLSC 6750 - Designing for Dissemination, Sustainability, and Equity (2 Credits)
This course provides an introduction to designing for the dissemination and sustainability of health innovations in clinical and translational research and practice, using a co-creation engagement approach, and with a focus on equity.
Grading Basis: Letter Grade
Typically Offered: Fall.

CLSC 6770 - Implementation Science Grant and Article Funding (2 Credits)
This course provides an in-depth examination of issues in submitting successful grant proposals in Dissemination & Implementation research. The course will build upon good general practices in grant and manuscript preparation and submission. Prerequisite: CLSC 7653
Grading Basis: Letter Grade
Typically Offered: Summer.

CLSC 6850 - Adv Topics: Dissemination and Implementation Sci (1 Credit)
Provides an overview of intermediate and advanced dissemination and implementation (D&I) science research methods in a small group discussion format. This interactive seminar series structure allows for interdisciplinary scientific dialogue among students at various stages. Prerequisite: CLSC 7653.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Typically Offered: Fall, Spring.

CLSC 6950 - Masters Research Project: Thesis (1-6 Credits)
During this course students plan, execute, and write the Final Research Project in the form of a Masters thesis. In addition, students will prepare for the Final Research Project Examination. This is a capstone course.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 6.
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

CLSC 7101 - Grant Writing I (1 Credit)
The purpose of this course is to develop and improve your skills in writing successful grant applications and participating in the critique and review process of grants. Prerequisites: BIOS 6601 and EPID 6630. Course Restrictions: CLSC students, unless written approval of Course Director.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

CLSC 7102 - Grant Writing II (1 Credit)
The purpose of this course is to develop and improve your skills in writing successful grant applications and participating in the critique and review process of grants. Prerequisites: BIOS 6601, EPID 6630, CLSC 7101. Course Restrictions: CLSC students, unless written approval of Course Director.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

CLSC 7150 - Ethics and Responsible Conduct of Research (1 Credit)
Course provides overview of the field of ethics in clinical research. Topics include historical background, current regulations, IRB requirements on human subjects protection issues. Students will learn how to develop approaches to conduct ethical human subjects research in an optimal manner.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

CLSC 7152 - Ethics and Responsible Conduct of Research in the Digital Age (1 Credit)
This course will provide an overview of the evolving ethical issues in clinical, translational and public health research involving digital data and technologies.
Grading Basis: Letter Grade with IP
Typically Offered: Spring.

CLSC 7202 - Clinical Outcomes and Applications (2 Credits)
The Clinical Outcomes and Applications course introduces students to key concepts and methods in health outcomes research, focusing on how to measure, analyze, and apply outcomes data in research and health policy. Through a mix of lectures, case studies, and hands-on activities, students will learn to design research questions, evaluate study designs, and explore the real-world impact of outcomes research on healthcare delivery. Prereq: BIOS 6601 and BIOS 6602 or BIOS 6611 and EPID 6630.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

CLSC 7300 - Scientific Grant Review Process: CCTSI Proposals (1 Credit)
Students will understand and participate in the process of scientific review of human subject research protocols submitted to the University of Colorado Denver Clinical Translational Research Centers at University Hospital and the Children's Hospital. Prereq: BIOS 6601 BIOS 6602 or BIOS 6611 and BIOS 6612.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring.

CLSC 7650 - Guided Research Tutorial - Doctoral (1-3 Credits)
This is an independent study course developed by student and appropriate faculty member based on area of study. Students meet regularly with selected course instructor. The student and course instructor will develop course plan prior to registration of the course. Prereq: Consent of program approved course plan closed registration.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

CLSC 7653 - Dissemination and Implementation Research in Health (3 Credits)
Introduces dissemination and implementation (D&I) research and practice in the context of health (i.e. translational research in health). This is a graduate level course and students should have a working understanding of study designs and statistics.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

CLSC 7663 - Context & Adaptation in D&I Research (2 Credits)
This course covers concepts, frameworks, and methods for understanding and assessing context and guiding adaptations as relevant to dissemination and implementation (D&I) health research and practice. Prerequisite - CLSC 7653.
Grading Basis: Letter Grade
Typically Offered: Spring.

CLSC 8990 - Doctoral Thesis (1-10 Credits)
This course involves the student working with his/her research mentor and research project committee develop, design and execute a clinical science doctoral study as well as to write up the project as a thesis. Prerequesite: Program consent. BIOS 6601 or BIOS 6611, BIOS 6602 or BIOS 6680 and HSMP 6617, CLSC 7150, EPID 6630, BIOS 6648 or EPID 6626 or HSMP 6670. Restrictions: Only CLSC PhD students or collaborative CLSC and CSPH Health Services Research Students.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 99.
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

GENC 6101 - Psychosocial Aspects of Genetic Counseling 1 (2 Credits)
This is the first course in a two-semester sequence addressing basic psychosocial and counseling theories, approaches, and resources necessary for the provision of genetic counseling to clients and their families in prenatal, pediatric and adult clinical settings.Coreq: GENC 6105, GENC 6110. Restrictions: Matriculated students in Genetic Counseling MS Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

GENC 6102 - Psychosocial Aspects of Genetic Counseling II (2 Credits)
This is the second course in a two-semester sequence addressing basic psychosocial and counseling theories, approaches, and resources necessary for the provision of genetic counseling to clients and their families in prenatal pediatric and adult clinical settings. Prereq: GENC 6101. Co-Req: GENC 6105, GENC 6110. Restrictions: matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

GENC 6105 - Basic Interviewing Skills (1 Credit)
This course covers fundamental theories and principles of effective patient/client interviewing in genetic counseling practice. Lectures are combined with hands-on role plays and interviews so that students may gain applied experience and receive feedback to foster skills development throughout course. Coreq: GENC 6101, GENC 6110. Restriction: Matriculated student in Genetic Counseling M.S. Program
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

GENC 6110 - Topics in Medical Genetics I (3 Credits)
First course in a two-part course sequence regarding principles of clinical genetics and genetic counseling and development of clinical skills used in various medical genetics settings. Fall semester focuses on principles important in pediatric and general genetics settings. Restriction: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

GENC 6111 - Topics in Medical Genetics II (2 Credits)
Second course in two-course sequence regarding principles of clinical genetics and genetic counseling used in various medical genetics settings, and development of critical skills. Spring semester focuses on prenatal and adult genetics clinic settings. Prereq: GENC 6110. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

GENC 6120 - Clinical Cytogenetics and Molecular Genetics (3 Credits)
This course provides integrated instruction regarding human cytogenetic and molecular genetic principles, techniques, and diagnostic testing approaches used in clinical evaluation and risk assessment for genetic disorders/predispositions in prenatal and postnatal patient populations. Coreq: GENC 6121. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

GENC 6121 - Laboratory in Clinical Cytogenetics and Molecular Genetics (2 Credits)
Course provides introduction to specific methodologies and interpretation of studies used in diagnostic cytogenetics and molecular genetics laboratories. Principles discussed in the co-requisite clinical cytogenetics and molecular genetics course will be applied through demonstrations, hands-on experiments, discussion of illustrative cases. Coreq: GENC 6120. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

GENC 6123 - Applied Laboratory Genetic Counseling (1 Credit)
A required rotation in genetic testing laboratories. Genetic counseling students learn about the professional practice of laboratory-based genetic counselors and specific skills such as test ordering, variant interpretation, results report writing, communication with clients, and collaboration with other members of laboratory teams. Prereq: GENC 6120, GENC 6121. Restriction: Matriculated student in M.S. Genetic Counseling Program.
Grading Basis: Letter Grade
Typically Offered: Spring.

GENC 6130 - Cancer Genetics and Genetic Counseling (2 Credits)
Course in providing genetic counseling services to clients with or at risk for hereditary cancer predisposition. Topics include clinical oncology, epidemiology, molecular biology of cancer, risk assessment, genetic testing, ethical/legal issues, clinical research considerations, psychosocial impact/support, specific genetic counseling approaches. Prereq: GENC 6110, GENC 6120. Restrictions: Matriculated student in Genetic Counseling M.S.Program
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

GENC 6140 - Human Inborn Errors of Metabolism (2 Credits)
Course provides systematic review of major metabolic disorders, including their clinical phenotypes, diagnosis, and management. Physiological and laboratory testing principles important to understanding these disorders will be reviewed. Psychosocial impact of metabolic disorders and genetic counseling approaches will be discussed. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

GENC 6150 - Congenital Malformations and Disorders of the Newborn (1 Credit)
This survey course covers common major malformationsand non-metabolic genetic disorders identified by newborn screening programs. Clinical phenotypes, diagnosis, management and etiology are addressed. Psychosocial impact of these conditions and genetic counseling approaches will be discussed. Prereq: GENC 6110. Co-Req: GENC 6111. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

GENC 6170 - Introduction to Clinical Research for Genetic Counseling Students (1 Credit)
An introduction to clinical research including an overview of ethical principles, study methods and designs, practical execution, data analysis and presentation of results. Possible roles of a genetic counselor in the conduct of clinical research will be a course focus. Restrictions: Matriculated student in MS Genetic Counseling Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

GENC 6201 - Advanced Psychosocial Genetic Counseling (2 Credits)
This course examines advanced genetic counseling techniques as they relate to psychosocial theories, specific client characteristics and the client/counselor dynamic. Critical discussion of core topics and readings and case analysis will be used for instruction. Prereq: GENC 6101 and GENC 6102. Restrictions: Matriculated second year student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

GENC 6210 - Professional Issues in Genetic Counseling I (2 Credits)
First course in a two course sequence regarding professional practice issues of master's level genetic counselors. The Fall semester course focuses on professional standards, professional ethics, legal principles and health systems and policy issues relevant to genetic counselors. Prereq: GENC 6101, GENC 6105, GENC 6110. Restrictions: Second year student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

GENC 6211 - Professional Issues in Genetic Counseling II (2 Credits)
Second course in a two course sequence regarding professional practice issues of master's level genetic counselors. The Spring semester course focuses on disability issues, cultural competency, public health genetics, research methods in genetic counseling, and professional roles. Prereq: GENC 6210. Restrictions: Second year student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Spring.

GENC 6250 - Risk Calculation in Genetic Counseling (1 Credit)
This course covers pedigree analysis and risk calculation principles used by genetic counselors in clinical practice. Prereq: GENC 6110, GENC 6120. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall.

GENC 6910 - Applied General Genetics Clinic (3 Credits)
This is a clinical rotation for Genetic Counseling M.S. students through a general genetics clinic serving a variety of referral indications. Students will learn and practice case management, history taking, risk assessment, counseling and client advocacy skills. Prereq: GENC 6101, GENC 6105, GENC 6110. Restrictions: Matriculated in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade with IP
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

GENC 6911 - Applied Prenatal Genetics Clinic (3 Credits)
This is a clinical rotation for genetic counseling students through a prenatal diagnosis and genetics clinic. Students will learn/practice history taking, risk assessment, patient education and genetic counseling, case management, as well as observe prenatal diagnosis procedures. Prerequisites: GENC 6101, GENC 6105, GENC 6110. Restriction: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade with IP
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

GENC 6912 - Applied Metabolic Genetics Clinic (3 Credits)
This is a clinical rotation for genetic counseling students through a genetics clinic for inborn errors of metabolism. Students will work with patients referred for diagnostic evaluation, medical/nutritional management of specific conditions, and follow-up of positive newborn metabolic screening results. Prereq: GENC 6101, GENC 6105, GENC 6110. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade with IP
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

GENC 6913 - Applied Regional & Specialties Genetics Clinics (1-2 Credits)
This is a clinical rotation for genetic counseling students through regional outreach (telehealth) genetics clinics and specialty/multidisciplinary clinics serving patients with various genetic conditions. Prereq: GENC 6101, GENC 6105, GENC 6110. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 2.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

GENC 6914 - Applied Hereditary Cancer Clinic (1 Credit)
This is a clinical rotation for genetic counseling students through adult and pediatric hereditary cancer clinics for individuals seeking genetic counseling and testing for genetic cancer predisposition syndromes. Section 01 - Adult I, Section 02 - Adult II, Section 05 - Pediatric. Program. Prereq: GENC 6105, GENC 6110, GENC 6120, GENC 6130
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 3.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

GENC 6915 - Applied Adult Medical Genetics Clinic (1 Credit)
This is a clinical rotation for genetic counseling students through a medical genetics clinic and clinical research settings providing diagnosis, management, risk assessment and genetic counseling for adults. Prereq: GENC 6101, GENC 6105, GENC 6110. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade with IP
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

GENC 6919 - Applied Medical Genetics Clinic - Clinical Elective (1-3 Credits)
This is an elective clinical rotation for genetic counseling students desiring to arrange training in outside of core required clinical rotations or an additional, advanced rotation. Prereq: GENC 6101, GENC 6105, GENC 6110. Restrictions: Matriculated student in Genetic Counseling M.S. Program.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

GENC 6920 - Applied Medical Genetics-Laboratory Genetic Counseling Elective (1 Credit)
An elective rotation for students desiring an advanced, applied training experience with genetic counselors based in a genetics diagnostic laboratory. Restrictions: Matriculated student in GENC program who has completed required prerequisite courses listed; Permission of instructor. Prereq: GENC 6120; GENC 6121; GENC 6122
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

GENC 6940 - Capstone in Genetic Counseling (1 Credit)
Students will develop a proposal and complete an individualized scholarly project that contributes to the knowledge and/or practice of genetic counseling. GENC matriculated student with 2 semesters required coursework completed. Permission of instructor.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 3.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

GERI 6810 - Foundations in Geriatrics (2.5 Credits)
This course is designed for health professions graduate students who seek to obtain multidisciplinary knowledge of the aging process. The content provides an overview of the biological, psychological, and social dimensions of aging as they relate to best practices in geriatric healthcare.
Grading Basis: Letter Grade with IP
Typically Offered: Fall, Spring.

GERI 6811 - Foundations in Geriatrics - 2 (2.5 Credits)
This course is designed for health professions graduate students who seek to obtain multidisciplinary knowledge of the aging process. The content provides an overview of the biological, psychological, and social dimensions of aging as they relate to best practices in geriatric healthcare.
Grading Basis: Letter Grade with IP
Typically Offered: Fall, Spring.

GERI 6820 - Mini-Clinical Rotations (1 Credit)
This course is designed to provide health professions graduate students with knowledge of current diagnostic and treatment approaches appropriate for aging patients within a multidisciplinary environment.
Grading Basis: Letter Grade with IP
Typically Offered: Fall, Spring.

GERI 6821 - Mini-Clinical Rotations - 2 (1 Credit)
This course is designed to provide health professions graduate students with knowledge of current diagnostic and treatment approaches appropriate for aging patients within a multidisciplinary environment.
Grading Basis: Letter Grade with IP
Typically Offered: Fall, Spring.

GERI 6830 - Quality Improvement Learning Project (4 Credits)
This course is designed to empower health professions graduate students to lead Age-Friendly Health System transformation. The course will consider research findings and relevant evidence in a clinical geriatrics topic and guide students in a systematic approach to completing a Quality Improvement project, resulting in a scholarly product.
Grading Basis: Letter Grade with IP
Typically Offered: Fall, Spring.

GERI 6840 - Independent Study (1 Credit)
This course is designed to provide health professions graduate students with an opportunity to enhance their knowledge and clinical understanding of aging and/or to explore an area of interest related to gerontological research in depth.
Grading Basis: Letter Grade with IP
Typically Offered: Fall, Spring.

MIMS 6062 - Introduction to Science Communication (1 Credit)
This introductory course in science communication is designed to introduce the skills to effectively convey complex scientific concepts to diverse audiences, including the public, policymakers, and fellow scientists from different fields. Through a combination of brief lectures, in-class activities and practical assignments, students will learn key principles of clear and accurate scientific communication, the ethics of public science discourse, and strategies for engaging written, media and digital platforms. Emphasis is placed on adapting messages for different target audiences, crafting compelling narratives, and developing visual aids. By the end of the course, students will be prepared to communicate their research effectively across a range of platforms.
Grading Basis: Letter Grade
Typically Offered: Spring.

MIMS 6063 - Scientific Literature Analysis (1 Credit)
This course for Immunology and Microbiology Masters students will instruct in how to think critically about scientific literature with particular emphasis on how data is presented used to construct scientific arguments. Students will have practice both analyzing existing literature and scientific presentations, as well as presenting their own work.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

MIMS 6070 - Mini-Research Rotations (1-3 Credits)
The course MIMS 6070, Mini-Research Rotations, will allow graduate students to learn in three different laboratories about research in immunology and microbiology.
Grading Basis: Letter Grade with IP
Typically Offered: Fall, Spring, Summer.

MIMS 6071 - Introduction to R Programming for Immunologists and Microbiologists (1 Credit)
Introduction to the R programming language geared towards Immunology and Microbiology students with no prior programming experience. This course will provide instruction in R language syntax, data structures and visualization techniques.
Grading Basis: Letter Grade with IP
Typically Offered: Fall, Spring, Summer.

MIMS 6950 - Laboratory Thesis Research (1-6 Credits)
Laboratory Thesis Research with allow Immunology and Microbiology masters students students to engage in mentored laboratory research training ultimately producing a maters thesis based on their work.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Typically Offered: Fall, Spring, Summer.

PALC 6110 - Basic Pain Assessment & Management: IDT Care (3 Credits)
This course reviews basic pain pathophysiology, assessment, non#pharmacological interventions, and non#opioid and opioid pharmacological pain management. Integrated with IDT topics related to pain such as psychological, social & spiritual distress and ethical standards of practice.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6120 - Advanced Concepts in Pain Management (3 Credits)
This course focuses on methadone, opioid infusions, interventional pain management, and other complex modalities. This class focuses on ethics and psychosocial issues including pain in the face of addiction and public policy around opioids and REMS. Prerequisites: PALC 6110 and 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6210 - IDT Care for Symptoms: Part A (3 Credits)
Course covers the assessment and management of eight common non#pain symptoms (e.g. anorexia, asthenia, constipation and nausea/vomiting). Integrated with IDT topics related to symptom assessment/management such as psychological, social & spiritual distress and ethical standards of practice.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6220 - IDT Care for Symptoms: Part B (3 Credits)
This course covers the assessment and management of eight different common non#pain symptoms (e.g. dyspnea, cough, and insomnia). Integrated with IDT topics related to symptom assessment/management such as psychological, social & spiritual distress and ethical standards of practice.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6310 - Advanced Illness in Special Settings: Part A (3 Credits)
Assessment\ management of 8 chronic illnesses (cardiopulmonary, end stage liver and renal diseases) emphasis on early PC combined with disease focused therapy. Attention: prognostication and transitions into palliative/hospice care or discontinuing treatments including bioethical review and IDT support. Prerequisite: PALC 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6320 - Advanced Illness in Special Settings: Part B (3 Credits)
Assessment/management of cancer and HIV as chronic illness with emphasis on early palliative care combined with disease focused therapy. Attention to prognostication, transition into palliative/hospice care. Paired with Spiritual Care review of challenging spiritual issues, hope, miracles and rituals. Prerequisite: PALC 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6330 - Advanced Illness in Special Settings: Part C (3 Credits)
Assessment/management of neurodegenerative disorders as chronic illness with emphasis on early palliative care combined with disease focused therapy. Attention to prognostication and transitions into palliative/hospice care. Paired with bioethical review and comfort care for the imminently dying. Prerequisite: PALC 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6410 - Death & Dying: Unique Role of the AHP (3 Credits)
This course focuses on methadone, opioid infusions, interventional pain management, and other complex modalities. This class focuses on ethics and psychosocial issues including pain in the face of addiction and public policy around opioids and REMS. For AHP students only.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6510 - Palliative Care Core Concepts - Principles, & Communication (3 Credits)
Online and on-campus intensive (some physical presence required) on palliative care topics including: models of care, early palliative care integration, whole person assessment, meaning of illness, and demonstration of advanced communications skills. Special focus on treatment plans with simulated patients/families. Requirement: Restricted to PALC MS or certificate students
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6511 - Online: Core Concepts, Principles & Commun. Skills (2 Credits)
Online discussion of palliative care topics including: models of care, early palliative care integration, whole person assessment, meaning of illness, and demonstration of advanced communications skills. Special focus on treatment plans with simulated patients/families. Co-Requisite: PALC 6512
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6512 - Intensive: Core Topics, Principles & Commun. Skills (1 Credit)
On-campus, in-person intensive (physical presence required) discussion of palliative care topics including: models of care, early palliative care integration, whole person assessment, meaning of illness, and demonstration of advanced communications skills. Special focus on treatment plans with simulated patients/families. Co-Requisite: PALC 6511
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6520 - Communication Skill Refinement: IDT Collaboration (3 Credits)
Online and on-campus intensive (some physical presence require). Advanced topics in PC including refinement of advance PC skills covered Year 1 (e.g. communication) to ensure effectively application to your PC practice; demonstration of psycho#social#spiritual assessment integrated in treatment plans with simulated patients\families. Prerequisite: PALC 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6521 - Online: Comm. Skill Refinement: IDT Collaboration (2 Credits)
Online. Advanced topics in PC including refinement of advance PC skills covered Year 1 (e.g. communication) to ensure effectively application to your PC practice; demonstration of psycho#social#spiritual assessment integrated in treatment plans with simulated patients\families. Co-Requisite: PALC 6522
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6522 - Intensive: Comm. Skill Refinement: IDT Collaboration (1 Credit)
On-campus, in-person intensive (physical presence required). Advanced topics in PC including refinement of advance PC skills covered Year 1 (e.g. communication) to ensure effectively application to your PC practice; demonstration of psycho#social#spiritual assessment integrated in treatment plans with simulated patients\families. Co-Requisite: PALC 6521
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6531 - Online: Palliative Care Integrated in Your Community (2 Credits)
Online. Demonstrate advanced PC communications skills & management of complex pain and symptoms; apply ethical training and practical experience with supportive interventions to help preserve dignity, achieve closure and have peace at life's end. Co-Requisite: PALC 6532
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6532 - Intensive: Pall Care Integrated in Your Community (1 Credit)
On-campus, in-person intensive (physical presence required). Demonstrate advanced PC communications skills & management of complex pain and symptoms; apply ethical training and practical experience with supportive interventions to help preserve dignity, achieve closure and have peace at life's end. Co-Requisite: PALC 6531
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6910 - Systems Topics: Preparation to Capstone (3 Credits)
Palliative Care Research, Quality Improvement, Health Care Policy and Advocacy and Palliative Care Program development including institutional needs assessment and program planning. Instruction to become a PC Educator, development of professional resilience and role of medical humanities. Prerequisite: PALC 6511/PALC 6512
Grading Basis: Letter Grade with IP
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6950 - Capstone Project (3 Credits)
MS Palliative Care Capstone Project. Students will design, implement, evaluate, and present the result of a research, QI, education, advocacy, or medical humanities project during year 2 with mentorship from faculty. Results presented at final on-campus course (PALC 6530). Prerequisites: PALC 6910 and PALC 6520
Grading Basis: Letter Grade with IP
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Spring.

PALC 6960 - Masters Thesis in Palliative Care (1-3 Credits)
Masters thesis work in Palliative Care. Final results presented at final on-campus course (PALC 6530). Prerequisite: PALC 6910 and 6520
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 12.
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

TRAD 6210 - Translational Research - Alzheimer's Disease/Dementias (4 Credits)
The course will facilitate a solid understanding of translational research in Alzheimer's Disease and Alzheimer's Disease Related Dementias, including neuropsychological and neuropathological disease features, genetic risk factors, biomarkers and brain imaging tools, statistical analyses, therapeutical approaches and clinical trial design.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

TRAD 6211 - Research/Development in Alzheimer's Disease/ Dementias (1 Credit)
The course will discuss with industrial experts a wide variety of issues in connection with research and developments on Alzheimer's Disease and Alzheimer's Disease Related Dementias in an industrial setting.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

TRAD 6212 - Mini-Rotations AD/ADRD Translational Research (1 Credit)
The course will facilitate short three week mini-rotations in facilities that conduct translational research connected with Alzheimer's Disease or Alzheimer's Disease Related Dementias in academic or industrial settings.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BMSC 7650 - Research in Biomedical Sciences (1-3 Credits)
Research rotation for students in the biomedical sciences in PhD program. Prereq: Consent of Instructor. Previously offered as IDPT 7650
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 20.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

BMSC 7806 - Core I: Foundations in Biomedical Sciences (6 Credits)
Course will focus on the fundamental principles of biomedical sciences. Lectures and recitations/discussions will primarily address the basics of molecular biology, biochemistry, genetics, cell biology and energetic principles. Course is typically limited to ORE biomedical science PhD. Previously offered as IDPT 7806
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall.

BMSC 7810 - Core Topics in Biomedical Science (2 Credits)
Sections focus on different core topics in biomedical science, and will address subject areas such as protein structure and function, neurobiology, embryology, stem cell research, and cancer biology. Students can enroll in multiple Core Topic Courses topics in one semester. Previously offered as IDPT 7810.
Grading Basis: Letter Grade
Repeatable. Max Credits: 20.
AMC-PHD PhD Students only
Typically Offered: Fall.

BMSC 7811 - Responsible Conduct of Research (1 Credit)
This course provides training in the responsible conduct of biomedical research. It is geared towards early PhD graduate students and meets NIH guidelines. Ethical issues associated with specific topics commonly encountered by graduate students are presented and discussed. This course is designed for ORE PhD students.
Grading Basis: Letter Grade
Typically Offered: Fall.

BMSC 7812 - Rigor and Responsibility in Biomedical Research (1 Credit)
Course will integrate the concepts of rigor, repeatability and reproducibility by combining both wet and dry lab components focused on teaching these concepts and laboratory skills. We will seek to make these concepts routine considerations during the design and execution of any type of experiment. Instructor consent required.
Grading Basis: Satisfactory/Unsatisfactory
Typically Offered: Spring.

IDPT 7850 - Independent Study in Bioethics, Medical Humanities or Health Law (1-6 Credits)
Course is designed to meet the needs of students interested in conducting advanced studies of issues and topics in bioethics, medical humanities, or health law. Students will work under the direction of the course director on a specific research topic. Course Restrictions: Permission of the instructor. Repeatable for credit within the degree program, but not within the same term. Max credits - 6.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

IDPT 8890 - Clinical Experience for CTSI PhD Students (1 Credit)
Each student will identify a clinician mentor who will develop/direct clinical experience tailored to student's thesis research. It may include participation in relevant clinical conferences, a direct clinical experience, clinical research, and preparation of a clinical research protocol. Prereq: IDPT 7805 & 7646, EPID 6630, BIOS 6601 or equivalent. Restrictions: PhD Graduate Students.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6110 - Basic Pain Assessment & Management: IDT Care (3 Credits)
This course reviews basic pain pathophysiology, assessment, non#pharmacological interventions, and non#opioid and opioid pharmacological pain management. Integrated with IDT topics related to pain such as psychological, social & spiritual distress and ethical standards of practice.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6120 - Advanced Concepts in Pain Management (3 Credits)
This course focuses on methadone, opioid infusions, interventional pain management, and other complex modalities. This class focuses on ethics and psychosocial issues including pain in the face of addiction and public policy around opioids and REMS. Prerequisites: PALC 6110 and 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6210 - IDT Care for Symptoms: Part A (3 Credits)
Course covers the assessment and management of eight common non#pain symptoms (e.g. anorexia, asthenia, constipation and nausea/vomiting). Integrated with IDT topics related to symptom assessment/management such as psychological, social & spiritual distress and ethical standards of practice.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6220 - IDT Care for Symptoms: Part B (3 Credits)
This course covers the assessment and management of eight different common non#pain symptoms (e.g. dyspnea, cough, and insomnia). Integrated with IDT topics related to symptom assessment/management such as psychological, social & spiritual distress and ethical standards of practice.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6310 - Advanced Illness in Special Settings: Part A (3 Credits)
Assessment\ management of 8 chronic illnesses (cardiopulmonary, end stage liver and renal diseases) emphasis on early PC combined with disease focused therapy. Attention: prognostication and transitions into palliative/hospice care or discontinuing treatments including bioethical review and IDT support. Prerequisite: PALC 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6320 - Advanced Illness in Special Settings: Part B (3 Credits)
Assessment/management of cancer and HIV as chronic illness with emphasis on early palliative care combined with disease focused therapy. Attention to prognostication, transition into palliative/hospice care. Paired with Spiritual Care review of challenging spiritual issues, hope, miracles and rituals. Prerequisite: PALC 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6330 - Advanced Illness in Special Settings: Part C (3 Credits)
Assessment/management of neurodegenerative disorders as chronic illness with emphasis on early palliative care combined with disease focused therapy. Attention to prognostication and transitions into palliative/hospice care. Paired with bioethical review and comfort care for the imminently dying. Prerequisite: PALC 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6410 - Death & Dying: Unique Role of the AHP (3 Credits)
This course focuses on methadone, opioid infusions, interventional pain management, and other complex modalities. This class focuses on ethics and psychosocial issues including pain in the face of addiction and public policy around opioids and REMS. For AHP students only.
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6510 - Palliative Care Core Concepts - Principles, & Communication (3 Credits)
Online and on-campus intensive (some physical presence required) on palliative care topics including: models of care, early palliative care integration, whole person assessment, meaning of illness, and demonstration of advanced communications skills. Special focus on treatment plans with simulated patients/families. Requirement: Restricted to PALC MS or certificate students
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6511 - Online: Core Concepts, Principles & Commun. Skills (2 Credits)
Online discussion of palliative care topics including: models of care, early palliative care integration, whole person assessment, meaning of illness, and demonstration of advanced communications skills. Special focus on treatment plans with simulated patients/families. Co-Requisite: PALC 6512
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6512 - Intensive: Core Topics, Principles & Commun. Skills (1 Credit)
On-campus, in-person intensive (physical presence required) discussion of palliative care topics including: models of care, early palliative care integration, whole person assessment, meaning of illness, and demonstration of advanced communications skills. Special focus on treatment plans with simulated patients/families. Co-Requisite: PALC 6511
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6520 - Communication Skill Refinement: IDT Collaboration (3 Credits)
Online and on-campus intensive (some physical presence require). Advanced topics in PC including refinement of advance PC skills covered Year 1 (e.g. communication) to ensure effectively application to your PC practice; demonstration of psycho#social#spiritual assessment integrated in treatment plans with simulated patients\families. Prerequisite: PALC 6510
Grading Basis: Letter Grade
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6521 - Online: Comm. Skill Refinement: IDT Collaboration (2 Credits)
Online. Advanced topics in PC including refinement of advance PC skills covered Year 1 (e.g. communication) to ensure effectively application to your PC practice; demonstration of psycho#social#spiritual assessment integrated in treatment plans with simulated patients\families. Co-Requisite: PALC 6522
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6522 - Intensive: Comm. Skill Refinement: IDT Collaboration (1 Credit)
On-campus, in-person intensive (physical presence required). Advanced topics in PC including refinement of advance PC skills covered Year 1 (e.g. communication) to ensure effectively application to your PC practice; demonstration of psycho#social#spiritual assessment integrated in treatment plans with simulated patients\families. Co-Requisite: PALC 6521
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6531 - Online: Palliative Care Integrated in Your Community (2 Credits)
Online. Demonstrate advanced PC communications skills & management of complex pain and symptoms; apply ethical training and practical experience with supportive interventions to help preserve dignity, achieve closure and have peace at life's end. Co-Requisite: PALC 6532
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6532 - Intensive: Pall Care Integrated in Your Community (1 Credit)
On-campus, in-person intensive (physical presence required). Demonstrate advanced PC communications skills & management of complex pain and symptoms; apply ethical training and practical experience with supportive interventions to help preserve dignity, achieve closure and have peace at life's end. Co-Requisite: PALC 6531
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PALC 6910 - Systems Topics: Preparation to Capstone (3 Credits)
Palliative Care Research, Quality Improvement, Health Care Policy and Advocacy and Palliative Care Program development including institutional needs assessment and program planning. Instruction to become a PC Educator, development of professional resilience and role of medical humanities. Prerequisite: PALC 6511/PALC 6512
Grading Basis: Letter Grade with IP
A-GRAD Restricted to graduate students only.
Typically Offered: Fall, Spring, Summer.

PALC 6950 - Capstone Project (3 Credits)
MS Palliative Care Capstone Project. Students will design, implement, evaluate, and present the result of a research, QI, education, advocacy, or medical humanities project during year 2 with mentorship from faculty. Results presented at final on-campus course (PALC 6530). Prerequisites: PALC 6910 and PALC 6520
Grading Basis: Letter Grade with IP
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Spring.

PALC 6960 - Masters Thesis in Palliative Care (1-3 Credits)
Masters thesis work in Palliative Care. Final results presented at final on-campus course (PALC 6530). Prerequisite: PALC 6910 and 6520
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 12.
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

RPSC 7802 - Reproductive Development (1 Credit)
Focus of course is developmental biology of reproductive systems. Sex determination, fertilization, implantation, development of placenta and mammary glands will be covered in lectures and discussions of current literature. Course is designed to follow Endocrinology and Metabolism in Spring semester. Prereq: Core Courses IDPT 7811, 7812, 7813, 7814, 7815.
Grading Basis: Letter Grade
Typically Offered: Spring.

RPSC 8990 - Doctoral Thesis (1-10 Credits)
Doctoral thesis work in Reproductive Science. Prereq: Consent of instructor.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 10.
A-GRAD Restricted to graduate students only.
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

Policies

Academic Grievance and Appeals Process

The following procedures address those student appeals and grievances arising from suspension, termination/dismissal based on unsatisfactory academic performances as reported to the Graduate School by affiliated graduate programs. The Graduate School cannot reverse academic decisions made by programs, schools or colleges. The Graduate School is not involved in grievance processes related to issues not related to suspensions or dismissals, but will be happy to assist with mediating discussions or grievances between students and programs or schools/colleges.

The intent of the academic appeal procedure is to assure fairness and due process to all involved parties. Good faith efforts should always be made by students, faculty, and administration to settle all appeals, complaints, and grievances on an informal basis. These efforts will include conferences between those people who are directly involved in the conflict as well as others who are perceived as possibly helpful for solving the issue at hand.

Definitions

Suspensions and Terminations can be issued for a variety of reasons (see below) including lack of progress

Lack of Progress: Students failing to meet program progression criteria, such as failure to pass courses, not completing remaining work related to grades of incomplete in time, or some other programmatic issues, would fall into this category. Students in this category may be suspended or terminated/dismissed as defined by the corresponding criteria below.

- **Suspension**: Removal of the student from the graduate program for a defined period of time and/or the specification that a student must fulfill certain requirements before readmission or re-instatement will be considered. While suspended, the student is not entitled to attend classes, use University facilities, participate in University activities, or be employed as a student by the University. Special conditions may be stipulated for reinstatement at the conclusion of suspension. The student is not in good standing with the University during the term of the suspension. Per this policy, students terminated have the right to appeal their suspension in writing within one week.
- **Termination/Dismissal:** Terms used synonymously to refer to a student being withdrawn from a graduate program and Graduate School. Official notification is sent to students by email, on request or as necessary. Per this policy, students terminated have the right to appeal their dismissal in writing within one week. As with a suspension, the student is no longer entitled to attend classes, use University facilities, participate in University activities, or be employed by the University as a student.

Graduate programs and students should be in continuous communication. To assist this process, graduate programs have developed programmatic handbooks and students are responsible for

following the policies and procedures outlined in program handbooks and in the Graduate School's Policies and Procedures. Ignorance of the guidelines and procedures will not constitute an affirmative defense in an appeals process.

General procedures

1. Students should be informed in writing by the relevant instructor, faculty committee, Program Director, or appropriate Dean that he/she is not meeting the academic requirements to continue in the graduate program. Written notices of course failures, unsatisfactory program progress, and intent to request dismissal or suspension from the Graduate School are distributed by the specific Program Director to the involved student, the student's academic advisor, the program progression's committee (if available), and appropriate Deans.
2. Should the student disagree with the decision to terminate progression in the program based on unsatisfactory academic performance, the student should initiate a conference with the involved person(s) to determine if the disagreement can be resolved within 2 weeks.
3. If the results of the first conference are not acceptable to the student, the student informs the involved faculty within 1 week and requests a conference with the involved faculty and Program Director or school administrator. NOTE: This step is required only in situations in which the Program Director and/or school administrator have not already approved or concurred with the initial notice of failure or intent to suspend or dismiss from the program. If the student still does not agree with the decision of the graduate program, the student should follow whatever grievance or appeal procedures are in place within the school or college housing the program. The Graduate School Dean can be called on to advise in this process.
4. If the consensus of the program is still that the student should be terminated/dismissed or suspended, the Program Director or Chairperson notifies the Graduate School and appropriate school Dean and recommends the student's dismissal or suspension. The email or letter should outline the reason for the dismissal or suspension and steps taken up to that date. If suspension is recommended, the recommendation also includes specific criteria for the term of the suspension and requirements for reinstatement.
5. The Graduate School and appropriate school/college Deans will review the student's academic record and the information submitted by the program to ensure that the student has received due process. If the student's academic record and/or submitted information support termination/dismissal, the student will be dismissed from the program and the Graduate School. If suspension is recommended and supported by the academic record and submitted information, the student will be suspended per the request. The student will be notified of any termination/dismissal or suspension decisions by the program via email with delivery and read receipts.

Written Appeal Procedure

1. Should the student wish to appeal the Graduate School's decision, the student should submit a written response to the Dean of the Graduate School within 1 week of receiving the written notice of suspension or termination/dismissal. The appeal should include rationale for the appeal and desired outcome. The student may meet with the Office of Student Affairs and working with them, request a personal interview with the Graduate School Dean to discuss the situation after they have submitted their written appeal.
2. The final decision rests with the Dean of the Graduate School. At the Dean's discretion, he/she may discuss the Graduate School Dean's decision with the involved faculty and student's program, as well as any other persons affected by the recommended resolutions.
3. The Dean of the Graduate School will notify the student of final decision by email with delivery and read receipts. This will normally be within 10 working days of submission of the appeal or interview with the student (whichever falls last). In cases where consultation with others to mediate the outcome are necessary, this process could take longer and the Dean will notify the student of the reasons and timeline, when known. The decision of the Dean of the Graduate School is final.
4. The Dean shall notify the appropriate CU Registrar of the change in the student's academic status and order the Registrar to suspend the student's registration.

Academic Honor Code

Academic Integrity Expectations

Please refer to the Academic Honor and and Conduct Code definitions at the CU Anschutz Medical Campus Catalog Website (https://catalog.cuanschutz.edu/cu-anschutz/university-policies/).

This campus-wide policy statement on student academic honor and conduct at the University of Colorado Denver | Anschutz Medical Campus was developed in consultation with faculty and student representatives from each health sciences school, and representatives of the campus-wide Faculty Council and Student Senate. It provides general policies for all students on campus, in accordance with the Regents' resolution of March 17, 1988, while at the same time it directs the schools to develop specific procedures to implement the policy in accordance with their unique programs and student populations. While the process for resolving honor code violations may vary from school to school, the elements listed below will remain uniform. The health professions are based on a high degree of trust by the individuals they serve. Students entering the health professions have a particular obligation, therefore, to conduct themselves at all times in a manner that reflects honesty, integrity, and respect for others.

A. Academic Honor and Conduct Code:

Education at the University of Colorado Denver | Anschutz Medical Campus is conducted under the honor system. All students who have entered 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 also expected to have achieved a level of maturity which is reflected by appropriate conduct at all times.

Although it is not possible to list every situation that violates the University of Colorado Denver | Anschutz Medical Campus academic honor and conduct code, the following examples will provide a reference point.

- **Academic Honesty** - Students should adhere to the highest standards of academic honesty and integrity. Examples of behavior which violates these standards include: plagiarism (including improper use of web information), cheating illegitimate possession and/or use of examinations, and falsification of official records.
- **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 clinical setting; any action which compromises the quality of patient care;

violation of patient confidentiality; and other conduct unbefitting a health professional.

- **Alcohol and Drug Use** - Alcohol and/or drug abuse compromises the student's ability to learn and to practice as a health provider and, thus, is considered unprofessional conduct. Students who have a problem with alcohol and/or drugs should seek assistance from services available on campus. The sale of drugs or the possession of non-prescribed narcotics or other controlled substances is against the law. In order to minimize the potential for alcohol abuse at campus functions, students must work with University and/or their program administration to ensure compliance with the policies and procedures regarding functions where alcohol may be served.
- **Respect for the Rights and Property of Others** - Students should conduct themselves in a manner which recognizes the rights and property of others. Examples of inappropriate behavior include theft, damage to University facilities, harassment or physical assault, and any conduct which threatens the health or safety of others.

The primary responsibility for reporting violations of the student honor and conduct code rests with the individual student who has violated them However, fellow students and members of the faculty also share in this responsibility.

B. Relationship of Honor and Conduct Code to Local, State, and Federal Laws

The University adheres to all appropriate local, state, and federal laws, and cooperates with law officials in all matters. Any alleged violation of local, state, or federal laws will be referred to the appropriate law enforcement agency, and such laws have precedence over the provisions of this policy.

C. Honor and Conduct Committee

Each school will have a standing Student Honor and Conduct Committee and, as appropriate, individual programs may have standing committees. The composition of the committee will include faculty and student representatives, with the exact composition of the committee to be determined by the dean in consultation with the school's faculty and student governance groups. The primary function of this committee will be to examine alleged violations of the honor and conduct code, and to make recommendations to the dean on these matters as appropriate.

D. Check individual school policies for school-specific procedures.

Student Conduct

"By enrolling as a student in the university, a person shall assume obligations of performance and behavior established by the university relevant to its lawful missions, processes, and functions. As members of the academic community, students have responsibility, equivalent to that of the faculty, for study, learning, academic integrity, and protecting the university as a forum for the free expression of ideas."

(Laws of the Regents 7B Standards of Conduct)

Conflict of Interest Policy

Conflict of Interest Policy for Graduate Students who Hold Other Positions at CU Anschutz

Graduate students may hold employment positions within the University of Colorado Anschutz Medical Campus in addition to their positions as graduate students at CU Anschutz. When this situation occurs, there is the potential for conflicts of interest to arise. This policy governs such situations.

- A graduate student may not also be a regular faculty member (Instructor or above) in the same program in which s/he is enrolled as a student.
- If two individuals exist in a student-faculty relationship in a graduate program, they may not both hold faculty (Instructor or above) appointments in the same graduate program, even though that graduate program is different from the one in which the student is enrolled.
- Recent graduates can be granted a graduate faculty appointment in the graduate program from which they graduated. In this situation, the new faculty member must not direct courses taken by individuals who were students when the new faculty member was also a student. (In programs where independent student cohorts exist, then the new faculty member must not direct a course taken by students from his/her cohort.) The new faculty member may not serve on an examination committee of any individual who was a student in the program (regardless of cohort) when the new faculty member was still a student.
- A faculty member who employs a graduate student as a PRA:
  - Can be an "in" graduate faculty member of the student's program and can serve on the student's graduate degree examination committee(s) with the approval of the Graduate Program Director; or
  - Can serve as an additional (but not sole) "outside" graduate faculty member of the student's program and examination committee with the approval of the Graduate Program Director; but
  - Cannot serve as Chair of the student's examination committee(s).
- Despite the allowable participation on examination committees described above (#4), the Graduate School discourages such involvement and suggests that the employer not serve on the committee, but attend all committee meetings as an invited guest.

Student Email Policy

Purpose of the Policy

There is an expanding reliance on electronic communication among students, faculty, staff and administration at the University of Colorado Denver, Graduate School and in other schools on campus. Because of this increasing reliance and acceptance of electronic communication, email is considered an official means for communication within UCD Graduate School.

Implementation of this policy ensures that students have access to this critical form of communication. For the majority of students, this will not represent any change from what is currently done; it will, however, ensure that all students can access, and be accessed by, email as the need arises.

Scope

The student email policy provides guidelines regarding the following aspects of email as an official means of communication:

- University use of email;
- Assignment of student email addresses;
- Student use of and responsibilities associated with assigned email addresses; and

- Expectations of email communication between faculty and student and staff and student.

Policy

- **University use of email**

  Email is an official means for communication within UCD Graduate School. Therefore, the University of Colorado Denver Graduate School has the right to send communications to students via email and the right to expect that those communications will be received and read in a timely fashion.

- **Assignment of student email address**

  Information Systems (IS) will assign all students an official University email address. It is to this official address that the University of Colorado Denver Graduate School will send email communications; this official address will be the address listed in the University's Global Address List for that student.

- **Redirecting of email**

  UCD email cannot be electronically redirected to another email address. Support is available for setting email clients to read multiple accounts. Please go to the Health Sciences Library for information on how to set up your computer to receive multiple email accounts. The University will not be responsible for the handling of email by outside vendors or by departmental servers.

- **Expectations regarding student use of email**

  Not reading email does not absolve a student from the responsibilities associated with communication sent to his or her official email address. Students are expected to check their official email address on a frequent and consistent basis in order to stay current with University communications (at a minimum, once a week). Students have the responsibility to recognize that certain communications may be time critical. "I didn't check my email," error in forwarding email, or email returned to the University with "Mailbox Full" or "User Unknown" are not acceptable excuses for missing University communication sent via email.

- **Educational uses of email**

  Faculty will determine how email will be used in their classes. It is highly recommended that if faculty have email requirements and expectations they specify these requirements in their course syllabus. Faculty can make the assumption that students' official email addresses are being accessed, and faculty can use email for their courses accordingly

- **Appropriate use of student email**

  a. All use of email including use for sensitive or confidential information, will be consistent with the Administrative Policy Statement on Use of Electronic Email. See http://www.cusys.edu/policies/General/email.html

  b. Confidentiality regarding student records is protected under the Family Educational Rights and Privacy Act of 1974 (FERPA). All use of email, including use for sensitive or confidential information, will be consistent with FERPA.

  c. Email shall not be the sole method for any legal notification, action, or correspondence.

Procedures

The Office of the Assistant Vice Chancellor for Information Systems will review this policy as needed. Changes will be authorized by the approval of the Dean and the Assistant Dean.

References
This policy complies with the guidelines as found in:

- Family Educational Rights and Privacy Act, UCD Registrar
- CD's Information Technology Services, Rights and Responsibilities http://www.UCHSC.edu/is/policies/aup.htm (http://www.UCHSC.edu/is/policies/aup.htm)
- University of Colorado System, Use of Electronic Mail Policy: http://www.cusys.edu/policies/General/email.html (http://www.cusys.edu/policies/General/email.html)
- University of Colorado System, Student Rights to privacy of Educational Records: http://www.cusys.edu/policies/Academic/studentrights.html

Format Guidelines for Theses & Dissertations

Please reference the guide found on the Graduate School website, at https://graduateschool.cuanschutz.edu/docs/librariesprovider138/denver-anschutz-graduate-school/resources/format-requirements-and-guidelines.pdf (https://graduateschool.cuanschutz.edu/docs/librariesprovider138/denver-anschutz-graduate-school/resources/format-guide.pdf).

Graduate School Acceptable Use Policy

Introduction

The purpose of the acceptable use policy is to establish processes and guidelines to all staff members in **Graduate School**, including full time staff, part time staff, and temporary staff (includes contractors, temps and students). The user shall only be granted access to the minimum necessary data that they require to perform their duties.

Policy Statement

The use and access of **Graduate School** information systems is restricted to appropriately identified, validated and authorized individuals. The following subsections outline the requirements for gaining access to **Graduate School** information systems.

Workstation Use and Security

- Each workforce member must use a unique user name and strong password to access their workstation and subsequent data both locally and via server.
- Computer workstations accessing FERPA data must maintain security configurations that restrict access to data to only those workforce members that have been legitimately granted access. Recommended security configurations include, but are not limited to:
  - Enabling a password protected screen saver
  - Setting computers or applications to automatically terminate a computing session after a set period of idle time
  - The use of campus standard anti-virus products
  - Applying security patches to computer software applications and operating systems

- When Anschutz stores, shares, and syncs work files internally or externally, it is important that the confidentiality, integrity, and availability of that data be preserved. OneDrive can be used to store, share, and sync work files internally or externally with the following guidance.
  - https://www1.ucdenver.edu/offices/office-of-informationtechnology/software/how-do-i-use/onedrive (https://www1.ucdenver.edu/offices/office-of-informationtechnology/software/how-do-i-use/onedrive/)
  - https://www1.ucdenver.edu/docs/default-source/offices-oit-documents/ how-to-documents/onedrive-stayingsecure.pdf?sfvrsn=668bb7b8_4 (https://www1.ucdenver.edu/docs/default-source/offices-oit-documents/ how-to-documents/onedrive-stayingsecure.pdf?sfvrsn=668bb7b8_4)

Unit Responsibilities

- Unit educates their workforce members on the unit's specific procedures and requirements as necessary. Training requirements for gaining access to Unit Information Systems are listed below.
  - Required skillport courses in UCDAccess once beginning employment term:
    - CU: Information Security and Privacy Awareness (u00063)
    - CU: FERPA (u00049)
  - Per OIT's Active Directory compliance, users must create a password to meet OIT's standards for mail, AD, domain access, etc. This password is changed each quarter, and must be different from the previous 12 passwords. See password policy below:
- *Password must be at least 16 characters in length.*
- *Password must contain letters from at least three out of the following five categories: Uppercase alphabetic characters (A-Z); Lowercase alphabetic characters (a-z); Numerals (0-9); Non-alphanumeric characters (for example: !, $, #, or %); Unicode characters.*
- *Password must not contain any of user ID, first name, or last name when their length is larger than 2.*
- *Password must not be one of the 12 previous passwords.*

User Responsibilities

- CU Denver|Anschutz workforce members must observe the CU Denver Information Systems' Appropriate Use Policy (AUP) which outlines expectations regarding the ethical and permissible use of CU Denver|Anschutz computing resources.
- CU Denver|Anschutz workforce members must follow the provisions of the CU Denver|Anschutz OIT Security Computing policy in regard to guarding against, detecting, and reporting malicious software
- CU Denver|Anschutz workforce members shall not attempt to alter audit records or avoid accounting for computing services. (See CU Denver Information Systems' Appropriate Use Policy (AUP))
- CU Denver|Anschutz workforce members shall not use CU Denver|Anschutz resources to develop or execute programs that could infiltrate the systems or alter the software components of the workstations.
- CU Denver|Anschutz workforce members must follow the Portable Media Security Policy. Portable media can include, but is not limited to, laptops, mobile devices such as personal digital assistants (PDAs) or other types of wireless handheld devices, USB flash drives, memory sticks, and any other portable device used to store or transport data.
- CU Denver|Anschutz workforce members must follow the Visitor Control guidelines outlined in the Access Control Policy when visitors are on-site. g) All members of the CU Denver|Anschutz workforce are reminded to wear their badges while on University property.

Action

All suspected policy violations, workstation compromise, virus infections, and other conditions which might jeopardize CU Denver|Anschutz information systems, data, or business must be immediately reported to the OIT Security Office.

IT Access Control Policy

Introduction

The purpose of the access management section is to establish processes to control access and use of Graduate School information resources. Access management incorporates Role Based Access Controls (RBAC), privileged user access, access definitions, roles, and profiles. The user shall only be granted access to the minimum necessary information that they require to perform their duties.

Policy Statement

The use and access of Graduate School information systems is restricted to appropriately identified, validated and authorized individuals. The following subsections outline the requirements for gaining access to Graduate School information systems.

Additional Resources:

• OWASP Access Control Cheat Sheet: https://github.com/OWASP/CheatSheetSeries/blob/master/cheatsheets/Access_Control_Cheat_Sheet.md

• Access Control in Software Development: https://wiki.owasp.org/index.php/Category:Access_Control (https://wiki.owasp.org/index.php/Category:Access_Control/)

• OWASP Cheat Sheet Collection: https://github.com/OWASP/CheatSheetSeries (https://github.com/OWASP/CheatSheetSeries/)

Access Control Procedures

Systems must develop, adopt or adhere to a formal, documented access control procedure that addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance.

Account Management-User Access

- Access management to information systems to be granted (ex. passwords, etc)
  - Graduate School relies on OIT authentication systems (AD, etc.) to authorize users of the University of Colorado Denver|Anschutz computing resources.
  - The GS IT Admin adjusts user permissions based on requests of their supervisors for server shares.
  - Default passwords are to be changed or disabled, replaced with secure passwords
- Responsible party for monitoring and reviewing access rights
  - GS IT Admin reviews access rights upon every new hire, every termination, and at a bi-annual schedule, after each semester.
- Access and use of systems resources and subsequent monitoring (project space/ application/storage, remote access, mobile devices, etc.)

- Systems are audited internally every semester, reviewing security groups and users on GS domain
- Users with edit access on web pages are also reviewed
- Remote access is limited to access via GlobalProtect VPN hosted by OIT
- Off-boarding process for users that are no longer working on the project, terminated, or have a change in job role.
  - User's supervisor notifies and submits request to GS IT Admin
  - GS IT Admin removes user from security groups, using the concept of least privilege, or removing altogether if terminated
- GAIA access has always been granted to Departmental and Program administrators upon request (desire to use GAIA for data storage and reporting). Users are only given as much access as required (typically level 4 for admins). Faculty are also given access, but with a lower level (2).

Workstation Use and Security

- Each workforce member must use a unique user name and strong password.
- Computer workstations must maintain security configurations that restrict access to only those workforce members that have been legitimately granted access. Recommended security configurations include, but are not limited to:
  - Enabling a password protected screen saver;
  - Setting computers or applications to automatically terminate a computing session after a set period of idle time;
  - The use of campus standard anti-virus products;
  - Applying security patches to computer software applications and operating systems.

Physical Access

- Facility Access Controls
  - Facility security consists of:
    - On both campuses, the Graduate School is locked down outside the hours of 8am-5pm, requiring approved card access.
    - Upon entry, each office and subsequent equipment is further protected by physical lock-and-key.
- Access Control
  - Access determinations must be based on the workforce member's role or function within the unit. Determinations of access should take into account at what time(s) access will occur and under what conditions.
  - Unit managers or supervisors will work with the Badging and Security Services Security Badging Office/Electronic Security Department to request and recommend access for each member of the unit workforce. For specific access forms, contact the Badging and Security Services Security Badging Office/Electronic Security Department at (303) 724-0399.
  - If a workforce member's access needs change or end, the unit manager or supervisor must work with the Electronic Security Department to modify or terminate the member's access.
    - Anschutz Medical Campus
      - Associate Dean works with Electronic Security Department to enable/disable access based on new employment, termination, or move within CU.
      - The supervisor or HR advisor submits the request to Associate Dean, who funnels all requests accordingly
      - The unit manager or supervisor must ensure that access is limited to what is appropriate for the workforce member's job function.
  - Validation Procedures
    - Once an individual's facility access has been determined and recommended by the individual's supervisor, validation of identity is performed by the Badging Office.
    - All members of the CU Denver/Anschutz workforce are reminded to wear their badges while on University property.
  - Maintenance Records
    - The Badging and Security Services Security Badging Office/ Electronic Security Department is responsible for maintaining records on all installations, repairs, or replacements of access control devices at a building or campus-level.

User Responsibilities

- Graduate School educates their workforce members on the Graduate School's specific procedures and requirements as necessary. Each Unit will educate users on the Acceptable Use Policy specific to their environment.
  - See Acceptable Use Policy, section E
- Please explain your unit's training requirements for gaining access to Graduate School Information Systems.
  - See Acceptable Use Policy, section D

Graduate School Access Review

Review accounts on a periodic basis, but no less than every 6 months.

Graduate School Policy Review

Review and update policy and procedures on an Annual basis.

Document Retention

All unit procedures, documentation of decisions made, information system activity reviews, and investigations conducted pursuant to this policy must be retained for a period of no less than six (6) years from the date the policy was last in effect or from the date the decision or investigation was made.

Graduate School Policies & Procedures

Please reference the documentation on the Graduate School website at https://graduateschool.cuanschutz.edu/docs/librariesprovider138/denver-anschutz-graduate-school/resources/gs-policies-and-procedures.pdf?sfvrsn=303d71bb_8

Inclement Weather Policy

Snow Policy

In the event of inclement weather the Graduate School staff, its faculty and students will follow the University closure announcements and schedule. If the university remains open, the faculty, administrators, and staff will be expected to make every reasonable effort to maintain their regular work schedules, but are advised to exercise their judgment and avoid undue risks in traveling. Employees who anticipate arriving late or not arriving at work at all should notify their immediate supervisor.

Delayed Opening

In the event of a delayed opening, the specific time of opening will be announced to the campus community through the local media and via https:// www.cuanschutz.edu/police/anschutz-alerts (https://www.cuanschutz.edu/police/anschutz-alerts/). All faculty and staff are expected to arrive on campus by the delayed opening time. Students are expected to report to their regularly scheduled classes. In a delayed

opening, all classes scheduled prior to the set time of opening are cancelled for the day. Students will be responsible for any academic work missed due to absences caused by severe weather conditions. It is the individual student's responsibility to take the initiative to make up any missed class work. It is the faculty member's responsibility to provide a reasonable opportunity for students to complete assignments or examinations missed due to inclement weather. Faculty members have discretion in determining whether additional classes will be added for the class or if additional work is assigned due to a closure or delayed opening.

Early Closure

In the event that weather conditions become unfavorable during the day and necessitate the early closure of the campus or the school, classes will be cancelled for the remainder of the day. Should this decision be reached by the Graduate School Dean prior to a formal announcement being made for an early campus closure, an email will be sent to all graduate students, graduate program administrators, and notification posted on the Graduate School website regarding an early closure.

Vacation & Leave Policy

GRADUATE SCHOOL POLICY FOR PHD STUDENT VACATION AND LEAVE

The Graduate School at the University of Colorado Anschutz Medical Campus (CU Anschutz) has established the following leave policy for PhD students who receive full-support stipends from CU Anschutz PhD programs (hereafter referred to as "graduate students"). Full-time graduate students (as defined in the Graduate School Policies and Procedures (https://graduateschool.cuanschutz.edu/docs/librariesprovider138/denver-anschutz-graduate-school/resources/gs-policies-and-procedures.pdf)) in these programs are eligible for campus holidays, vacation, sick leave, and parental leave. Detailed below are the amounts of leave time allowable for students to maintain full-time student status, as well as leave reporting requirements.

LEAVE TYPES AND AMOUNTS

Vacation and Holidays. Graduate students shall receive all CU Anschutz campus holidays and may receive an additional 10 week days (excluding weekends) of vacation per academic year, with no year-to-year accrual. Graduate students shall continue to receive stipends during vacations and holidays. Graduate students taking courses are expected to attend all classes and take all exams as scheduled. The times between academic terms and the summers are all considered active parts of the training period and leave must be taken in accordance with this policy. Graduate students supported via extramurally funded projects or training grants must comply with sponsor requirements regarding effort.

Sick Leave. Graduate students may continue to receive stipends for 11 week days (excluding weekends and campus holidays) of sick leave per academic year, with no year-to-year accrual. Under exceptional circumstances, additional sick days may be granted following a written request from the student and approval by the student's thesis advisor (if determined) and graduate program director. Sick leave may be used for medical needs related to pregnancy and childbirth. Graduate students supported via extramurally funded projects or training grants must comply with sponsor requirements regarding effort.

Parental Leave. Graduate students may continue to receive stipends for 8 work weeks (excluding weekends and campus holidays) of parental leave per academic year for the adoption or the birth of a child. Either or both parents are eligible for parental leave. Graduate students must provide advance notification to their thesis advisor (if determined) and graduate program director prior to taking parental leave. Sick leave may supplement parental leave under the circumstances noted above. Graduate students supported via extramurally funded projects or training grants must comply with sponsor requirements regarding effort.

Unpaid Leave. Individuals requiring more than 11 week days (excluding weekends and campus holidays) of sick leave or more than 8 work weeks (excluding weekends and campus holidays) of parental leave per academic year must seek approval from their thesis advisor and their graduate program director for an unpaid leave of absence. A leave of absence must be requested by the student and approved by their thesis advisor (if known) and program in advance of taking the leave of absence. The leave period and conditions must be documented at the times of leave and of re-entry into the program. A copy of this agreement must be submitted to the Graduate School in advance of the leave of absence. Graduate students supported via extramurally funded projects or training grants must comply with sponsor requirements regarding effort.

Unused Leave at Termination. Upon graduation or termination, a graduate student forfeits all unused vacation, sick, and parental leave; there is no payout for remaining leave balances. Remaining leave balances cannot be transferred to other positions within the University of Colorado system.

LEAVE REQUESTS AND REPORTING

Graduate students are required to report leave requests (vacation, sick, and parental leave) in accordance with program-defined reporting processes. Reporting processes may include reporting requests to 1) their thesis advisor, 2) the program in which they reside, and/or 3) their thesis advisor's home department or unit. It is the graduate student's responsibility to identify the process for reporting leave.

Graduate students who have not yet joined a thesis lab (e.g., first-year graduate students) are advised to discuss with potential dissertation advisor's expectations regarding vacation and leave. After a graduate student has selected their thesis advisor and joined the advisor's research program, they must request and receive approval for vacation leave from their thesis advisor in advance of taking vacation leave. The graduate student must make all necessary arrangements in advance to cover any responsibilities that the graduate student has for the research program or for maintaining their ongoing experiments and/or resources (e.g., cell lines, animals). In all cases, graduate students supported via extramurally funded projects or training grants must comply with sponsor requirements regarding effort.

LEAVE DISPUTES

All leave disputes between graduate students and their thesis advisor and/or program must be resolved by graduate program leadership and/or the program's home school/college.

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