

**2009-10 UNIVERSITY OF COLORADO DENVER SCHOOL OF MEDICINE
FOURTH YEAR ELECTIVES FOR MEDICAL STUDENTS**

University of Colorado Denver medical students receive first priority in registering for clinical elective rotations. If there is space available, medical students from other LCME accredited medical schools who have completed their required third year core clerkships are welcome to apply as externs for sub-internships and other electives. Such externs must meet the usual course prerequisites.

Course numbers with a ► before them are not available to students from osteopathic schools.

ALL ELECTIVES ARE FOUR WEEKS IN LENGTH

ANESTHESIOLOGY ELECTIVES

ANES 8000 Clinical Anesthesiology

Students will work one-on-one with anesthesia faculty and residents to gain further practical experience in all aspects of peri-operative care; improving skills gained in the third year and developing a deeper understanding of the breadth of anesthetic practice.

ANES 8001 Surgery Intensive Care

During this Sub-I multi disciplinary rotation, students actively participate in patient management, perform procedures, present clinical topics, discussion pathophysiology of the critically ill. Clinical excellence and an in-depth paper (2000-2500 words) are honors grade requirements.

ANES 8002 Anesthesiology Subspecialties

Course exposes students to subspecialty areas in Anesthesiology. Students will attain additional experience in selected areas of anesthetic practice. Options include Acute and Chronic Pain, L & D, Cardiothoracics, Neurosurgery, Transplants and Pre-Anesthesia Testing.

DERMATOLOGY ELECTIVES

DERM 8000 Clinical Dermatology

This course is designed to provide a broad overview of medical, surgical and pediatric dermatology. Students will become familiar with the differential diagnosis and treatment of common skin disease, and procedural dermatology including skin biopsies and cryosurgery.

DERM 8600 Research in Dermatology

Restrictions: Course Director approval required.

Research elective allows the student to design and implement a research project and to understand the significance and pitfalls of the results. Students are expected to participate in research seminars and to present their results.

FAMILY MEDICINE ELECTIVES

FMMD 8002 Family Medicine Subinternship

Experience CU Family Medicine! Students will be members of the inpatient service team at the Anschutz Inpatient Pavilion, take call, and will spend 2 half days per week at the A.F. Williams Family Medicine Center (outpatient clinic).

FMMD 8007 Out-Patient Family Medicine

Course is an outpatient family medicine at A.F. Williams Family Medicine Center and Denver Health's Lowry Family Medicine Clinic. Multidisciplinary faculty including pharmacologists, behavioral scientist, and experienced family physicians and residents caring for a diverse group of patients.

MEDICINE ELECTIVES

MED 8001 Medicine Subinternship

The sub-intern functions as an intern and is responsible for the admission, evaluation, and continuing care of patients under the supervision of a Resident and an Attending. Sub-internships are offered at DHMC, RMC, P/SL, UCH and VAMC.

► MED 8004 Cardiology

Application will be reviewed by Course Director prior to acceptance.

Designed to offer a broad general exposure to adult cardiology, including history, physical examination, and an introduction and review of standard noninvasive testing. Rotations will be at UCH, DVAMC and DHMC with assignments based on timing of request and availability.

MED 8006 Allergy/Clinical Immunology

Application will be reviewed by Course Director prior to acceptance.

Offered at UH and NJMC. Allergy and clinical immunology with direct patient contact in allergy and immunology clinics. Opportunities to participate in inpatient consultations, observe clinical immunology laboratory techniques, and library research.

MED 8007 Clinical Renal

A four-week elective course in electrolyte, hypertensive, acute and chronic renal failure, glomerular (including diabetes) disorders, and hospital services. The students will see consults on all services, learn to maintain and analyze flow sheets, review problems with residents and fellows.

► MED 8009 Clinical Infectious Diseases

UCH and DHMC. Hospital assigned. Hospitalized patients with a variety of infectious diseases are available for study. Diagnosis, pathophysiology, immunology, epidemiology, and management, including use of antimicrobial agents are emphasized. Students attend and participate in ward rounds and conferences.

► MED 8012 Clinical Rheumatology

Students will learn how to recognize, diagnose, and treat common rheumatic disorders. Students will attend all formal teaching conferences in the Division of Rheumatology and attend 6 or more outpatient clinics each week.

MED 8013 Endocrinology

Introduction to evaluation and management of endocrine disorders via outpatient clinics and inpatient consults at VAMC, DHMC, UCH. Endocrine-focused history-taking and physical examination with a complete problem-oriented approach to patient care. Multiple conferences and close interaction with fellows and attendings.

► MED 8014 Hematology / Oncology

Students are exposed to a wide range of patients seen in consultation for hematologic and oncologic problems. Students may also elect to attend the numerous subspecialty outpatient clinics for patients with various malignancies.

MED 8017 Hospice/Palliative Care

This is an introduction to hospice and palliative care. You will become a member of the interdisciplinary team at the Hospice of Saint John, focusing on the physical, social, psychological, and spiritual aspects of patient care for the terminally ill.

MED 8025 Medical Oncology

Students will learn the basic aspects of medical oncology by evaluation of patients in the general oncology, breast, lung cancer, prostate, melanoma, leukemia and lymphoma clinics. They will attend the weekly multi-disciplinary tumor conferences.

MED 8033 Subinternship Inpatient medicine Saint Joseph Hospital

Student functions as an intern-equivalent, responsible for evaluation and continuing care of patients under supervision of a resident and attending. Student will enhance skills in reporting, interpreting clinical information, communication, and in-patient management plans. Students will present EBM-research clinical question.

MED 8033 Subinternship Critical Care at Saint Joseph Hospital

Student functions as an intern-equivalent and admits patients during overnight call every third day. Student will attend daily ICU interdisciplinary rounds and enhance skills in reporting, interpreting clinical information, communication, patient management plans. Students will present EBM-research clinical question.

MED 8036 Subinternship Critical Care at DHMC

The subinternship in medical critical care offers phase 4 medical students an opportunity to develop expertise in the diagnosis and management of critically ill patients. Students will also receive training in the performance of common ICU procedures.

MED 8037 Subinternship Critical Care at University of Colorado Hospital

The CC sub-internship will provide training in the care of critically ill ICU patients. Emphasized skills will include management of respiratory and cardiac failure, hemodynamic instability, severe electrolyte abnormalities and common ICU procedures.

MED 8038 CAM Wellness Elective

In-depth exploration of CAM therapies and personal wellness will be facilitated through didactic sessions, field trips, online learning, reflection, and self-directed project. Students will work collaboratively in groups and the time will be tailored to individual goals.

NEUROLOGY ELECTIVES**► NEUR 8000 Neurology**

This elective offers students further clinical experience with patients who have neurologic disorders. A program is prepared at one of three teaching institutions (University of Colorado Hospital, Denver Veterans Affairs Medical Center, or Denver Health Medical Center) for this rotation.

OBSTETRICS AND GYNECOLOGY ELECTIVES**OBGY 8000 General Obstetrics Subinternship**

Offered at DHMC only. Includes experience in prenatal, intrapartum, postpartum, and family planning. Student works under clinical supervision of residents and attending staff.

OBGY 8001 General Gynecology Subinternship

Offered at DHMC only. Includes experience in outpatient gynecology, family planning, operative gynecology and postoperative care. Student works under supervision of residents and attending staff.

► OBGY 8005 Gynecologic Oncology

Student will attend GYN oncology clinics and scrub on all GYN oncology surgery, functioning as acting intern. All pathology will be reviewed with GYN oncologist. Literature review on selected subject required. Clinical research opportunities available.

► OBGY 8009 Gynecology Subspecialties

Student attends outpatient gynecologic diagnostic clinics, colposcopy and laser surgery, urogynecology, urodynamics, hysteroscopy, and pelvic pain. Student works under supervision of Gyn staff. Directed study and clinical research. Attendance at colposcopy biopsy review conference, preoperative and Gyn teaching conferences required.

► OBGY 8011 Family Planning

This elective is designed to make the student proficient in providing family planning services: contraception, options counseling and termination procedures. Substantial emphasis will also be placed on participation in ongoing research activities of the division.

► OBGY 8012 UH Gyn Subinternship

This course is designed to allow students to become integrally involved with the general gynecology service. Students will partake in all clinical activities of the service, including operative procedures, management of inpatient gynecology conditions, and emergency room consultation.

OPHTHALMOLOGY ELECTIVES

► OPHT 8000 Ophthalmology

Application will be reviewed by Course Director prior to acceptance.

Restrictions: not offered section 9

This elective is designed for senior students seriously considering a career in Ophthalmology. Students rotate at each hospital with in-depth exposure to each subspecialty area. Students are expected to participate with in- and out-patient care, call activities, teaching rounds, conferences.

ORTHOPEDIC ELECTIVES

ORTH 8000 Orthopaedic Surgery

Application will be reviewed by Course Director prior to acceptance.

This course is designed as an elective in Orthopaedic Surgery for students desiring residency training in Orthopaedics or another surgical specialty. The student will function as a “sub intern” on a resident/faculty team.

► ORTH 8005 Sports Medicine

Restrictions: Approval of course director required.

Course provides clinical experience in musculoskeletal sports medicine. Students will primarily be based in the CU Sports Medicine Clinic. Opportunities include participation in the clinic, operating room and the training room.

OTOLARYNGOLOGY ELECTIVES

OTOL 8000 Clinical Otolaryngology

Restrictions:

Recommended for students considering an ENT career. Offers in-depth clinical and operative exposure. Also useful for those seeking primary care to further hone head and neck exam skills and treatment of ENT pathology. Option available to do Honors paper.

OTOL 8600 Research Otolaryngology

Restrictions: Approval of course director required.

Objectives: 1) work in supervised environment to gain appreciation for research design, criticism and statistical analysis; 2) complete research project with potential to publish in peer-reviewed journal.

PATHOLOGY ELECTIVES

PATH 8001 Pathology

This elective gives senior students comprehensive instruction in using laboratory tests. It reviews physiologic and biochemical phenomena on which laboratory tests are based and emphasizes approaches to interpret laboratory data, awareness of indications and pitfalls of laboratory tests.

PATH 8600 Research in Pathology

Prerequisites: Department approval must be obtained and all arrangements made at least two months in advance.

PEDIATRIC ELECTIVES

PED 8000 Pediatric Subinternship

Restrictions: A 2-month advance notice is required to drop this course.

Designed for the student who are interested in further training in pediatrics. Student will be integrated as a functional member of a pediatric ward team.

PED 8004 Pediatric Cardiology

Evaluation of children with heart disease by history, physical examination, electrocardiography, roentgenography, echocardiography, and cardiac catheterization will be stressed. The student will make rounds with the cardiology team, see consults, attend outpatient clinics, and participate in cardiac catheterizations and conferences.

PED 8007 Child Abuse and Neglect

Application will be reviewed by Course Director prior to acceptance.

Restrictions: not available section 9

Held at TCH and Kempe Center. Basic principles of Child Abuse and Neglect; participate in team evaluation of outpatient and inpatient child abuse cases, and attend court with team members. Primarily observational and includes independent study. One case write-up required.

► PED 8008 Birth Defects/ Genetics

Rotation includes experience in the General Genetics, Inherited Metabolic Diseases, Muscle, Neurocutaneous and outreach clinics. Students will participate in diagnosis, pedigree assessment and management. Students will participate in consultations with faculty, attend conferences, visit laboratories; an oral presentation is required.

PED 8009 Pediatric Infectious Disease

This course provides experience in the pathophysiology, diagnosis, and therapy of childhood infections. Students evaluate in-patients and present cases at daily teaching rounds. Experience in the diagnostic Microbiology laboratory is provided. There is a weekly HIV/infectious diseases clinic.

PED 8011 Pediatric Pulmonary Disease

Basic background knowledge in pediatric pulmonary physiology and disease will be provided. The student will attend rounds, clinics, and weekly conferences and participate in hospital consultations. Students will be expected to present a seminar/case discussion on a pediatric pulmonary topic.

PED 8012 Pediatric Neurology

Child Neurology provides students with the opportunity to gain experience evaluating children with a wide variety of neurological problems. Students will round on hospital and clinic patients, complete assigned readings and attend Neurology grand rounds.

PED 8013 Pediatric Endocrinology

A large variety of patients with abnormalities of growth and pubertal development, thyroid disorders, and diabetes mellitus are reviewed and treated each week. Seminars on selected topics are scheduled three times per week.

PED 8015 Pediatric Neonatology Subinternship

Restrictions: Students should have obtained an Honors or High Pass/Near Honors in core Pediatrics rotation; visiting students will be placed in the NICU at University of Colorado Hospital or Denver Health Medical Center in preference over The Children's Hospital, due to patient mix anticipated and presence of more pediatric residents at those locations. Student will participate actively in the care of critically-ill infants including work rounds, attending rounds, conferences and night call. Experience will be gained in procedures and ventilator management.

PED 8018 General Academic Pediatrics

This course offers exciting experience in ambulatory pediatrics at The Children's Hospital. There are 9 educational conferences per week. No night call.

PED 8020 Adolescent Medicine

Restrictions: not offered sections 5, 9, and 29

Application will be reviewed by Course Director prior to acceptance.

Provides basic knowledge and clinical skills in diagnosis and management of medical problems during adolescence, including development of skills in interviewing and counseling adolescents in various health care settings. Students will prepare and present a seminar/case discussion on this topic.

► **PED 8022 Pediatric Gastroenterology**

Restrictions: not available section 9

Clinical rotation on pediatric gastroenterology outpatient service and procedure unit and scheduled conferences. This rotation is designed for students with a specific interest in pediatrics and/or gastroenterology. Research and inpatient experiences available upon advance request.

PED 8026 Pediatric Nephrology

Students will actively participate in the care and evaluation of patients under the direction of the attending and participating resident. Common problems such as hematuria, proteinuria, electrolyte disturbances, chronic renal insufficiency, hypertension, hemodialysis, peritoneal dialysis, and renal transplantation are addressed.

PHYSICAL MEDICINE AND REHABILITATION ELECTIVES

PHMD 8000 Physical Medicine & Rehabilitation

This elective provides experience in the diagnosis and treatment of patients with pathology of the neurologic and musculoskeletal systems. 4 different locations (VA, Denver Health, University Hospital, The Children's Hospital) allow treatment of a variety of conditions related to rehabilitation.

PHMD 8600 Research Physical Medicine

Prerequisite: Fourth year level Physical Medicine & Rehabilitation clerkship. Obtain departmental approval and all arrangements made at least two months in advance. Contact Mariama Sannoh at Mariama.Sannoh@ucdenver.edu or 303-724-2974

PREVENTIVE MEDICINE ELECTIVES

PRMD 8003 Specialty Preventive Medicine

Application will be reviewed by Course Director prior to acceptance.

Designed for students interested in exploring the field of preventive medicine. Tailored education experiences in the Denver area in a variety of settings. Speak with the course director (Tim Beyers, M.D., M.P.H., 303-724-1283) to design this elective.

PSYCHIATRY ELECTIVES

PSCH 8000 Subinternship in Psychiatry

Student selects primary clinical focus. Direct patient care with appropriate supervision in a variety of settings: adult or child inpatient, adult outpatient, emergency and consultation psychiatry, or community psychiatry. Student presents at rounds and attends teaching conferences.

PSCH 8001 Big 6 Substance Abuse/Dependence

Application will be reviewed by Course Director prior to acceptance.

In treatment programs, experts' tutorials, and readings, students learn approaches to six common primary-care substance problems, such as addiction in pain disorders or pregnancy, smoking with tobacco-induced illness, and substance involved adolescents. Students write a paper on the six clinical problems.

PSCH 8600 Research in Psychiatry

Research electives in various areas of Psychiatry including child and infant.

PSCH 8610 Research Drug/Alcohol

Regarding substance dependence our faculty studies: phenotypic descriptions, adolescent-onset genetics, comorbid conduct disorder and ADHD, brain imaging, stopping HIV spread, and clinical trials. Literature reviews, data collection, analysis, and writing of scientific papers are emphasized.

RADIOLOGY ELECTIVES

RAD 8000 Diagnostic Radiology

Restrictions: not available section 29 and 33

An introduction to the interpretation of images and the role of diagnostic imaging in patient care. Clinical observation, lectures, and independent study at UH/AOP. Only 2 days of absence permitted for any reason.

RAD 8002 Nuclear Medicine

Nuclear Medicine encompasses the various uses of radioactive compounds in medical diagnosis and therapy. Students participate in the supervision and interpretation of nuclear medicine procedures under the guidance of the staff/residents at the AOP. Students will attend daily conferences.

RAD 8007 Interventional Radiology

Interventional Radiology is the treatment of disease conditions using minimally invasive means. These procedures are performed with X-rays, US, and CT guidance. The student will round with the team, participate in procedures, and attend daily conferences. Standard student evaluation used.

RAD 8600 Research in Radiology

Student responsible for obtaining written evaluation.

RADIATION ONCOLOGY ELECTIVES**► RAO 8005 Radiation Oncology**

The student will learn the basic tools and techniques of radiation oncology, evaluate patients before and after treatment, learn specialized exam techniques, participate in consultations and multi-modality cancer treatment planning. Students will attend and participate in multidisciplinary tumor conferences.

► RAO 8600 Research in Radiation Oncology

Prerequisite: Fourth year level Radiation Oncology clerkship

This elective is designed to acquaint the student with current research developments, knowledge and techniques in radiation oncology.

SURGERY ELECTIVES**SURG 8000 General Surgery Subinternship at University of Colorado Hospital**

Students perform intern responsibilities on General Surgical Service at University of Colorado Hospital. Students alternate night call, write orders on assigned patients, and participate in preoperative, operative and postoperative care of inpatients.

SURG 8004 Emergency Medicine at University of Colorado Hospital

Students are primary caregivers in a level II trauma center with a variety of patients and individual teaching time with attendings and senior residents. An excellent experience for students seeking instruction in the assessment and management of the undifferentiated patient.

PLEASE NOTE: If you will be applying for Emergency Medicine Residency, that program is at Denver Health Medical Center (not University of Colorado Denver School of Medicine). Please see their website:

www.denverem.org.

SURG 8008 Cardiothoracic Surgery Subinternship

Adult cardiac and general thoracic surgery and critical care monitoring on the Cardiothoracic Service at UH and Denver VAMC. Students will participate in preoperative, operative and postoperative care.

SURG 8010 Burn Critical Care/Surgery

Acting sub-intern on Burn Service, working with Burn and related Surgical Critical Care cases. A high level of patient care responsibility, including bedside procedures, burn care and line charges. Work with attending faculty, and gain a multidisciplinary approach to burns.

►SURG 8011 Hand Surgery

The students will participate in all aspects of the hand service including the emergency room, outpatient clinics, inpatient/outpatient operative and non-operative treatment. Emphasis is on acute hand and upper extremity diseases, trauma, their treatment and rehabilitation.

SURG 8015 Pediatric Surgery

Student will assume major clinical responsibility for pediatric surgical patients, will work with house staff, share patient care and work-ups, act as liaison to families, attend operations and teaching conferences, and actively participate in the surgical management of infants and children.