## SCHOOL OF MEDICINE

### PHASE I – REQUIRED CURRICULUM FALL SEMESTER 2006

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IDPT 5000</td>
<td>Foundations of Doctoring I</td>
<td>1.6 cr./sem.</td>
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<td></td>
<td>Course Director, Brian Dwinnell, M.D. Course Coordinator, Tina Roquemore, 303-315-1546. The course is designed to expose students to basic clinical skills necessary for physicians. The course includes a weekly preceptorship along with instruction in physical exam, communication skills and professionalism.</td>
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<tr>
<td>IDPT 5001</td>
<td>Human Body</td>
<td>7.0 cr.</td>
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<td>Co-Course Directors, Michael Carry, Ph.D. 303-315-8949 and Richard Fisher, M.D., 303-315-1972. This course covers the anatomy and embryology of the back, extremities, trunk, head and neck. Students will dissect human cadavers and study computer generated cross-sections and radiological images. Clinical case discussions will be integrated with physical exam material.</td>
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<tr>
<td>IDPT 5002</td>
<td>Molecules to Medicine</td>
<td>8.0 cr.</td>
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<td>Co-Course Directors, Robert Low, M.D., Ph.D., 303-724-4307, Michael Glode, M.D, 303-724-3853 and Michael Wang, M.D. 303-869-3492. Molecules to medicine is an integrated approach to cell biology, biochemistry, molecular biology and human genetics presented in a context that emphasizes clinical issues.</td>
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<tr>
<td>IDPT 5015</td>
<td>Basic Cardiac Life Support</td>
<td>0.3 cr.</td>
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<td>Course Director, Todd Larabee, M.D. 303-372-5500. Course Coordinator, Cathy Maciel, 303-372-5500. Course will be taught, utilizing a lecture, demonstrations on mannequins and a practice session. Course conducted on a Saturday in fall. Students read required text prior to course, pass a written examination, demonstrate near perfect performance skills essential to BCLS.</td>
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### PHASE I – REQUIRED CURRICULUM SPRING SEMESTER 2007

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<tr>
<td>IDPT 5000</td>
<td>Foundations of Doctoring I</td>
<td>1.6 cr./sem.</td>
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<td>Course is a continuation of the fall semester course.</td>
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<tr>
<td>IDPT 5003</td>
<td>Blood and Lymph</td>
<td>4.0 cr.</td>
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<td>Co-Course Directors, Tim Garrington, M.D. 303-764-8365 and Jill Slansky, Ph.D. 303-398-1887. Blood and Lymph covers the basic and clinical concepts underlying immunology, hematology, rheumatology, and malignancies of the blood. Histology, genetics, biochemistry, and ethical issues are integrated into the course concepts. Contact hours are divided equally between lecture and discussion groups.</td>
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<tr>
<td>IDPT 5004</td>
<td>Disease and Defense</td>
<td>5.0 cr.</td>
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<td>Co-Course Directors, Ronald E. Gill, Ph.D. 303-724-4230 and Marsha Anderson, M.D. 303-861-6877. Course material covers principles of biometrics, pharmacology, pathology and infectious disease. Topics include mechanisms of tissue damage and repair. Dermatology is presented as an “Organ System”, including structural and function, pathology, pathophysiology and pharmacology.</td>
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<tr>
<td>IDPT 5005</td>
<td>Cardiovascular/Pulmonary/Renal</td>
<td>9.5 cr.</td>
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<td>Co-Course Directors, Bruce Wallace, Ph.D. 303-315-8386 and John Weil, M.D. 303-315-4471. Course is an interdisciplinary approach to the cardiovascular, pulmonary, and renal systems, including anatomy, histology, physiology, pathophysiology, pathology, pharmacology, and development. Emphasis is on how the major organs work together to regulate blood pressure and fluid, electrolyte, and acid-base balance.</td>
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<tr>
<td>PRMD 5000</td>
<td>Ethics in the Health Professions I</td>
<td>0.7 cr.</td>
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<td></td>
<td>Course Director, Jackie Glover, Ph.D., 303-315-6093. Required two-part course in ethics taught with dental, medical, nursing, pharmacy, physical therapy and physician assistant students. This course includes basic knowledge and skills in ethical theory and reasoning, professional ethics, and inter-professional approaches to health care decision making.</td>
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### PHASE II – REQUIRED CURRICULUM FALL SEMESTER 2006

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<tr>
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<tr>
<td>IDPT 6000</td>
<td>Foundations of Doctoring II</td>
<td>1.6 cr./sem.</td>
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<td>Course Director, Brian G. Dwinnell, M.D., 303-315-1532. Asst. Course Director, Tina Roquemore, 303-315-1546. This course is the second year of the longitudinal Foundations curriculum. Students spend one afternoon each week off campus with a generalist physician or on campus learning communications or physical exam skills. Course limited to second year medical students.</td>
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</tbody>
</table>
IDPT 6001  Nervous System  7.5 cr.
Co-Course Directors, Tom French, Ph.D., 303-315-8089 and Steven Ojemann, M.D., 303-315-1764.
Course covers the gross and microscopic anatomy of the nervous system, basic neurobiology and neuropathology, pharmacology, neuropathology, and basic neurologic and psychiatric examination skills. Emphasis is on the relationship between basic processes and functional systems to clinical phenomena and behavior.

IDPT 6002  Digestive, Endocrine and Metabolic Systems  9.5 cr.
Co-Course Directors, Robin Michaels, Ph.D., 303-724-3402, Virginia Sarapura, M.D., 303-724-3931 and Daniel Bessesen, M.D., 303-315-9005.
This interdisciplinary course integrates clinical and basic science topics related to the normal function and diseases of the gastrointestinal and endocrine systems. The biochemistry and physiology of nutrient metabolism in health and disease will also be covered.

PRMD 6000  Ethics in the Health Professions II  0.7 cr.
Course Director, Jackie Glover, Ph.D., 303-315-6093.
Required two-part course in ethics taught with dental, medical, nursing, pharmacy, physical therapy and physician assistant students. This course includes basic knowledge and skills in ethical theory and reasoning, professional ethics, and inter-professional approaches to health care decision making.

IDPT 6000  Foundations of Doctoring II  1.6 cr./sem.
Course Director, Brian G. Dwinnell, M.D., 303-315-1532. Asst. Course Director, Tina Roquemore, 303-315-1546.
This course is the second year of the longitudinal Foundations curriculum. Students spend one afternoon each week off campus with a generalist physician or on campus learning communications or physical exam skills. Course limited to second year medical students.

IDPT 6003  Life Cycle  5.0 cr.
Co-Course Directors, Robert Shikes, M.D., 303-315-5410 and Sonya Erickson, M.D., 303-315-1487.
Course provides an interdisciplinary approach to the normal biology and pathobiology of the male and female reproductive systems, reproduction and pregnancy, the fetus, newborn and child, aging, and end of life. Clinical cases and physical examination will be integrated throughout.

IDPT 6004  Infectious Disease  4.5 cr.
Co-Course Directors, David Barton, Ph.D., 303-724-4215 and Nancy Madinger, M.D., 303-315-7233.
This course integrates microbiology, infectious diseases, and antimicrobial pharmacology. Content covers pathogenic microorganisms (bacteria, viruses, fungi, and parasites), host-pathogen interactions, microbial virulence determinants, host immune responses, signs and symptoms of disease presentation, epidemiology, laboratory diagnosis, prevention (vaccines) and therapy (antimicrobials).

IDPT 6015  Basic Cardiac Life Support Update  0.3 cr.
Course Director, Todd Larabee, M.D., 303-372-5500. Course Coordinator, Cathy Maciel, 303-372-5500.
A re-certification. principles of BCLS will be taught, utilizing lecture, demonstrations on mannequins, practice session. Course conducted on a Saturday in mid-Spring. Students read required text prior to course, pass written examination, demonstrate near perfect performance skills essential to BCLS.

FMMD 6622  Introduction to Family Medicine Research Methods  Summer sem.  Var. cr.  Max: 12
Course Director, David Gaspar, M.D., 303-315-5684. Course Coordinator, Cynthia Villanueva, 303-315-5684.
Provides students the skills in designing a primary care research project. Covers constructing research question, measurement of variables, reviewing literature, research design, reporting results and medical writing. This will serve as a foundation for the 4th year required scholarly project.

FMMD 6624  Healthcare for the Poor and Homeless  Fall and Spring sem.  1.0 cr.  Max: 4
Course Director, Wendy Madigosky, M.D. Course Coordinator, Cynthia Villanueva, 303-315-5684.
This course introduces students to healthcare of Denver’s poor and homeless. Students will participate in patient care at the Stout Street Clinic on six Saturday mornings throughout the school year. Participation in two additional volunteer outreach activities is also required.

FMMD 6410  Immersion Spanish Elective  Summer sem.  4.0 cr.
Course Director, David Gaspar, M.D., Course Coordinator, Cynthia Villanueva, 303-315-5684.
Students will attend an accredited Spanish language school in a Spanish speaking country. Participation is 60 hours of Spanish instruction: 15 hours of language class per week for 4 weeks or 20 hours/wk for 3 weeks.

**INTERDEPARTMENTAL ELECTIVES**

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<tr>
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<th>Max/Min</th>
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<tbody>
<tr>
<td>IDPT 6627</td>
<td>Directed Studies in Basic Science</td>
<td>All sems.</td>
<td>Var. cr.</td>
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<td>Course Directors: Maureen Garrity, Ph.D., Jesse Fortney; Course Coordinator, Becky Gossert, 303-315-7678.</td>
<td>This course provides an opportunity for medical students to further develop and refine their knowledge of the basic sciences. Course director approval required.</td>
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<tr>
<td>IDPT 6628</td>
<td>Nutrition and Cancer</td>
<td>Spring sem.</td>
<td>1.0 cr.</td>
<td>Max: 30/Min: 8</td>
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<td>Course Director, Richard F. Bakemeier, M.D., 303-724-3158; Course Coordinator, Connie Bair, 303-724-3158.</td>
<td>Human nutrition as it relates to clinical/biological aspects of cancer. Introduction to modern concepts of cancer development and treatment through seminars, patient presentations, lectures, discussion groups. Analyze your diet and what modifications seem likely to reduce the risks of cancer.</td>
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<tr>
<td>IDPT 6633</td>
<td>Issues in Reproductive Health</td>
<td>Spring sem.</td>
<td>1.0 cr.</td>
<td>Max: 20/Min: 6</td>
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<td>Co-Course Directors, Kristen Rundell and Sonya Erickson, M.D. Course Coordinator, Cynthia Villanueva, 303-315-5684.</td>
<td>The objective of this elective is to provide information about various issues related to reproductive health. This includes a clinical practicum with a reproduction health care provider and a seminar series on reproductive health.</td>
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<tr>
<td>IDPT 6634</td>
<td>Maternity Matching</td>
<td>Fall and Spring sem.</td>
<td>0.1 cr. per term</td>
<td>Max: 15</td>
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<td>Course Director, Loraine Dugoff, M.D. 303-372-6695. Course Coordinator, Mike Baca, 303-315-4540.</td>
<td>A two-semester course. Students observe the continuity of care for a pregnant woman and get exposure to those issues surrounding pregnancy. Goal is to improve the knowledge about the stages of pregnancy and patient education.</td>
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<tr>
<td>IDPT 6635</td>
<td>Medical Specialties</td>
<td>Spring sem.</td>
<td>1.0 cr.</td>
<td>Max: 30/ Min: 5</td>
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<td>Course Director, Jesse Fortney Course Coordinator, Becky Gossert, 303-315-8157</td>
<td>This course is designed to assist Phase I and II students in understanding options in choosing a specialty that will meet personal and professional career objectives through self-directed study, lectures, and educational experiences. Attendance, participation, and course work is expected.</td>
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<td>IDPT 6636</td>
<td>Elective Summer Preceptor Experience</td>
<td>Fall and Spring sem.</td>
<td>1.3 cr.</td>
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<td>Course Director, Brian Dwinnell, M.D. Course Coordinator, Tina Roquemore, 303-315-1546</td>
<td>Elective Summer Preceptorship is a clinical elective designed for students between their first and second year of medical school. It may take place in the hospital or in a clinic one afternoon or morning a week during the summer semester.</td>
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<td>IDPT 6637</td>
<td>Leadership Education and Advocacy Development Scholarship</td>
<td>Spring sem.</td>
<td>1.5 cr.</td>
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<td>Course Director, Shale Wong, M.D., 303-826-4436 Course Coordinator, Vicki Melton, 303-315-6758</td>
<td>The course will include monthly seminars and be divided into four thematic sections. Seminar speakers are primarily engaged in leadership/advocacy work in health care. The themes will be further explored by case-based, small group sessions. Elective required for LEADS scholars.</td>
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<tr>
<td>IDPT 6639</td>
<td>Health Care and Public Policy Advocacy</td>
<td>Fall and Spr sem.</td>
<td>0.9 cr.</td>
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<td>Course Director, Gary VanderArk, M.D. 303-315-2320 Course Coordinator, Cindy Bowles, 303-315-2320</td>
<td>Health care in public policy, work with course director and Colorado Medical Society to collaboratively research current issues in health policy. Students gain an expanded awareness of current issues in healthcare policy and an appreciation for relationship between medicine/politics.</td>
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<td>IDPT 6641</td>
<td>Summer Career Exploration</td>
<td>Summer sem.</td>
<td>Var. cr.</td>
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<td>Course Director, Jesse Fortney; Course Coordinator, Becky Gossert, 303-315-8157</td>
<td>Requirement: preceptor must be in the State of Colorado. Students enrolled are required to spend a minimum of 40 hours per week with the preceptor. Students can choose anywhere from 1 to 8 weeks. Course is designed to assist students in understanding options in choosing a specialty. Students will be given exposure to the opportunities which will build on basic skills learned in Foundations of Doctoring Curriculum while learning more about the clinical setting.</td>
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**MEDICINE ELECTIVES**

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<tr>
<td>MED 6620</td>
<td>Intro to Clinical Cardiology</td>
<td>Fall and Spring sem.</td>
<td>2.0 cr.</td>
<td>Max: 45/Min: 8</td>
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</tbody>
</table>
Course Director, Lane Craddock, M.D.

Course consists of lectures, graphics, demonstrating heart sounds and routine discussion. Hemodynamics, origin or heart sounds, meaning of abnormal sounds as reflecting abnormal hemodynamics are basis of course. Electrocardiography included both in formal presentations and in conjunction with disease entities.

**MED 6621 Geriatric Medicine**  
Fall and Spring sem.  
1.0 cr.  
Max: 1

Course Director, Laurence Robbins, M.D. 303-393-2822. Course Coordinator, Lynn Blair, 303-393-2822.

Aging in America, exposure to geriatric health care ranging from prevention among healthy community dwelling elderly to hospice care for terminally ill in nursing homes. Students contact the Course Coordinator, Lynn Blair two weeks prior to starting the elective.

**MED 6623 Introduction to Biomedical Research**  
Fall and Spring sems.  
Var. cr.

Course Director, John Repine, M.D., 303-315-8262. 

Independent study with a mentor of your choice. A short paper on a subject chosen by the student is usually required. Dr. Repine will meet with students interested in a career in academic medicine and/or research.

**MED 6626 Molecular Biology of Cancer**  
Fall sem.  
1.0 cr.  
Max: 15/Min: 4

Course Director, Christopher Hogan, 303-724-3113. Director, Bob Gemmill, 303-724-3582. Course Coordinator, Evelyn Sandoval, 303-724-3872.

Provides an overview of molecular events that occur in the cell that relate to the origins of neoplasia. Provides students the ability to understand/interpret literature and an appreciation of how biology impinges on the practical treatment of cancer.

**MED 6627 Art in Medicine, Medicine in Art**  
Spring sem.  
1.0 cr.  
Max: 12/Min: 4

Course Director, Henry Claman, MD, 303-315-6978; Associate Course Director, Lorraine Adams, MSW, 303-315-6758. Course Coordinator, Sara Higgins, 303-315-6969.

The course includes Arts in Medicine lectures, critical readings in the anthology, on Doctoring, and art-related field trips, including one at the Denver Art Museum. There will also be a required piece of reflective writing, poetry or prose.

**MED 6628 CAM-Complementary and Alternative Medicine-Theories and Practices**  
Spring sem.  
1.0 cr.

Course Director, Lisa Corbin, M.D., 720-848-1225 Course Coordinator, Vicki Melton, 303-315-6758.

With 50% of the US population using CAM, physicians need education about its rational use. Through discussions and experiential sessions; therapies such as acupuncture, chiropractic, and herbs are presented. Students may spend a half-day at the Center for Integrative Medicine.

**ORTH 6620 An Introduction to Orthopedics**  
Spring sem.  
1.0 cr.  
Max: 30/Min: 10


Course covers basic clinical problems of the musculoskeletal system. Topics include musculoskeletal physiology, reconstructive surgery, trauma, sports medicine, rheumatoid disease, and primary care orthopaedics. An opportunity is available for experience in the operating room and outpatient clinic.

**PATH 6601 Summer Preceptorship in Pathology**  
Summer sem.  
Var. cr.

Course Director, Jeffrey Holt, M.D. Course Coordinator, Susan Peth, 303-315-5326.

An introduction to various pathology practices. Course builds on previous basic knowledge and further develops understanding of the professional and general competencies required to practice pathology and to increase the skill level of students in the application of these competencies.

**PED 6622 Diabetes Mellitus: Diabetes Youth Camp**  
Summer sem.  
3.0 cr.  
Max: 3

Course Director, Peter Chase, M.D., 303-724-6711.

The student will spend 1 week at diabetes camp. One will learn about diabetes as well as children. Before and after camp, time will be spent at the Barbara Davis Center clinic. Clinical research projects can be developed if interested.
An opportunity for Phase I and II students to participate in a pediatric clinic. Students will provide well-care and minor acute illness care for children. Students are required to attend an orientation and three to four Wednesday evening clinics.

**PSYCHIATRY ELECTIVES**

**PSCH 6620  Psychiatry in Great Literature**  
Course Director, Robert Davies, M.D., 303-315-0452. Course Coordinator, Carole Evans, 303-315-8411.  
Writers, the first thinkers to understand the "whole man," took into account his unconscious. We'll illustrate this as reflected in normal development and personality formation, symbolization, fantasy and psychopathology using the characters and texts from Great Literature. Tuesday evenings.

**PSCH 6626  Introduction to Emergency Psychiatry**  
Course Director, Michael Weissberg, M.D. Course Coordinator, Carole Evans, 303-315-8411.  
Students will learn basics of emergency evaluation with particular focus on suicide, homicide, child abuse, spouse abuse, and incest.

**PSCH 6629  Medical Hypnosis For Primary Care**  
Course Director, Steve Allen, M.D., 303-741-0239. Course Coordinator, Carole Evans, 303-315-8411.  
Medical hypnosis has a wide application in primary care settings, but most primary care practitioners are unfamiliar with its use. Therefore, this course will teach students the basics of trance induction and its application for pain control, insomnia and relaxation.

**SURGERY ELECTIVES**

**Surg 6620  Introduction to Emergency Medicine**  
Course Director, Ravi Morchi, M.D., 303-372-5252. Course Coordinator, Cathy Maciel, 303-372-5500.  
Course will educate students about the practice of Emergency Medicine. Course consists of lectures and an ED observation shift. Course provides direct contact with practicing Emergency Physicians and opportunities to observe skills used in the practice of Emergency Medicine.

**Surg 6624  Introduction to Wilderness Medicine**  
Course Director, Andrew Kestler, 303-372-5244. Course Coordinator, Cathy Maciel, 303-372-5500.  
The course consists of a lecture series and one four hour weekend outdoor exercise. An emphasis on basic science topics with pathophysiology of wilderness medicine problems. Students participate in skill stations and perform various field medicine and evacuation procedures.

**Surg 6625  Global Health: Issues and Opportunities**  
Course Director, Ravi Morchi, M.D., 303-372-5252. Course Coordinator, Cathy Maciel, 303-372-5500.  
To educate students about health issues on a global scale. Material presented in this elective will review and elucidate topics covered in Phase I and II of the medical curriculum, and new material specific to medicine in the developing world.

**Surg 6626  Pre-hospital Medicine**  
Course Director, Christopher B. Colwell, M.D.; Course Coordinator, Laura Rendon, 303-436-7129.  
Enrollment restricted to EMIG (Emergency Medicine Interest Group) only. Students required to participate in 1 ten hour ride along shift with Denver Paramedic Division 911 ambulances, attend required Introductory Lecture on pre-hospital medicine and submit 1 evaluation from ambulance ride.

**Surg 6627  Intro to Trauma and Emergency Medicine**  
Course Coordinator, Laura Rendon, 303-436-7129.  
Enrollment restricted to EMIG (Emergency Medicine Interest Group) only. Students required to participate in 1 ten hour ride along shift with Denver Paramedic Division 911 ambulances, attend required Introductory Lecture on pre-hospital medicine and submit 1 evaluation from ambulance ride.
Course Directors Ravi Morchi, M.D., 303-372-5252 and Stephen Wolfe, M.D.  Course Coordinators, Marybeth Hutchins, 303-372-5503 and Laura Rendon, DHMC, 303-436-7129.  
Introduction to life-threatening conditions fundamental to emergency medicine. Focuses on the essentials of stabilization, rapid diagnosis, and acute management.  Weekly lectures given by faculty from UCHSC and Denver Health.  Pass-fail based on attendance with an optional write-up for honors.

**REQUIRED CLINICAL CLERKSHIPS**

Required clinical clerkships are open only to University of Colorado Medical Students.

- **IDPT 7000  Foundations of Doctoring III**  
  Course Director, Brian Dwinnell, M.D.  Course Coordinator, Tina Roquemore, 303-315-1546. 
  Students spend one afternoon, 2-3 times a month in the office of a generalist or specialist physician. Students will spend one afternoon every 5 weeks in small groups discussing the third year and professionalism issues. 

- **IDPT 7001  Transition to the 3rd Year**  
  Course Director, Brian Dwinnell, M.D.  Course Coordinator, Tina Roquemore, 303-315-1546. 
  Students will be introduced to basic skills essential for succeeding in the 3rd year, legal/ethical/professionalism issues, and be introduced to subspecialty knowledge and skills that are used in all clerkships.

- **FMMD 7000  Family Medicine Clerkship**  
  Course Director, David Gaspar, M.D.  Course Coordinator, Cynthia Villanueva, 303-315-5684  
  A rural clinical experience, introducing students to patients/problems seen by family physicians in community settings. Highlights assessment and management of ambulatory patients, but also includes exposure to patients located in community hospitals, nursing homes, emergency departments, or patient's home.

- **NEUR 7000  Clinical Clerkship in Neurology**  
  Course Director, Christopher Filley, M.D. 303-315-6461.  Course Coordinator, Marcia Sabo, 303-315-7214. 
  On hospital services and in outpatient clinics, students conduct history-taking and physical examinations to develop skills in neurologic diagnosis and treatment. Students work with housestaff, present patients to attending physicians and attend conferences and seminars on neurologic topics.

- **MED 7000  Clinical Clerkship in Medicine**  
  Course Director, Paul Seligman, M.D., 303-315-8474.  Associate Course Director, Kelly White, M.D., 720-848-2363; 
  Course Coordinator, Vicki Melton, 303-315-6758. 
  Clerkship consists of two five-week blocks, one in a Denver core teaching hospital; the other at another core hospital, an affiliated hospital, or a combined ambulatory/inpatient AHEC site. Optional two-week ambulatory experience available at the end of either block.

- **OBGY 7000  Clinical Clerkship in Obstetrics and Gynecology**  
  Course Director, Lorraine Dugoff, M.D., 303-315-7268.  Course Coordinator, Michael Baca, 303-315-4540. 
  Students work in general and subspecialty OBGYN clinics, labor and delivery, OB and GYN wards, and in O.R.  Offered at University Hospital, Denver Health Medical Center or an AHEC site (as available). Students are contacted by student coordinator via e-mail.

- **PED 7000  Clinical Clerkships in Pediatrics**  
  Course Director, Shale Wong, M.D.  Course Coordinator, Brenda Lovato, 303-861-6867. 
  This required clerkship develops the skills and knowledge to care for pediatrics patients of all ages in hospital or ambulatory settings.  
  Student study the impact of growth, development and family on a child’s physical and mental well-being and illness.

- **PSCH 7000  Clinical Clerkship in Psychiatry**  
  Course Director: Michael Weissberg, M.D.; Associate Director: Robert Davies, M.D., Coordinator: Carole Evans, 303-315-8411. 
  Work with psychiatric adult/child inpatients, outpatients at 12 sites including AHEC's, providing exciting, unique clinical settings. Students cover 10 clinical experiences outlined in Medical Student Log.

- **SURG 7000  Junior Surgery**  
  Course Director, Thomas A. Whitehill, M.D. 303-315-6486  Course Coordinator, Janice Frary, 303-315-4601. 
  Students study surgical disease processes and therapeutic procedures in clinical settings, while gaining operative experience in general surgery.  Focuses on the assessment and management of common inpatient episodes of care and ambulatory surgical problems.

**SURGICAL SUBSPECIALTIES FOR FOURTH YEAR STUDENTS**

- **ANES 7000  Clinical Clerkship in Anesthesiology**  
  Course Director, Joy Hawkins, M.D., 303-372-6321  Course Coordinator, Octavia Powell, 303-372-6319.
An introduction into clinical anesthesiology. Students will work one-on-one with faculty and residents to gain as much practical experience in all aspects of peri-operative care as possible. Didactic encounters allow a more thorough understanding of modern anesthetic theory.

**DERM 7000  Clinical Clerkship in Dermatology  2 wks**

Course Director, Cory A. Dunnick, M.D., 720-848-0589  Course Coordinator, Kemp Weston, 720-848-0510.

This two-week dermatology selective is designed to provide a basic introduction to medical and surgical dermatology including Moh's surgery. Students will perform skin biopsies, cryosurgery, and become familiar with the differential diagnosis and treatment of common skin disease.

**NSUR 7000  Clinical Clerkship in Neurosurgery  1 or 2 wks**

Course Director, Michael Handler, M.D., 303-861-6100  Course Coordinator, Diana Doyle, 303-315-0303.

One or two week clerkship designed to introduce students to Neurosurgery; emphasizing neurologic exam, neuroanatomy and recognition of common neurosurgical diseases. Participate in rounds, clinics, conferences and observe surgery. Choose on location, UCHSC/VA combined service, TCH or Denver Health.

**OPHT 7000  Clinical Clerkship in Ophthalmology  1 or 2 wks**

Course Director, Richard Davidson, M.D.  Course Coordinator, Gaylian Howard, 720-848-5029.

Student actively participates in patient care with an emphasis on diagnostic and therapeutic techniques available to non-opthalmologists. Various medical and surgical modalities available in the treatment of ocular disorders are provided through exposure to each ophthalmic subspecialty area.

**ORTH 7000  Clinical Clerkship in Orthopedics  2 wks**

Course Director, Richard Fisher, M.D.  Course Coordinator, Mary Samson, 303-315-1976.

Clinical rotation in orthopedics is given by the orthopedic staff at University of Colorado Hospital, Sports Medicine, DHMC, VA, and Children’s Hospital. Students will be involved with In-patient and outpatient and Emergency Room patient care.

**OTOL 7000  Clinical Clerkship in Otolaryngology  1 or 2 wks**

Course Director, Peggy Kelly, M.D., 303-764-8520.

A clinical and surgical introduction to the diverse field of Otolaryngology, including common diseases applicable to many medical fields, as well as the specialty care of head/neck cancer, ear/skull base surgery, plastic/reconstructive surgery, and airway/voice management.

**SURG 7001  Clinical Clerkship in Urology  1 or 2 wks**

Course Director, Robert E. Donohue, M.D.  Course Coordinator, Jennifer Allen, 303-315-8972.

This is a one or two week clerkship. Students will round daily and be assigned Urology Articles on Fridays. Students are to participate in clinics and surgeries. Clerkship is offered at UH, VAMC, DHMC and TCH.

### SCHOOL OF MEDICINE FOURTH YEAR ELECTIVES 2006-07

**ANESTHESIOLOGY ELECTIVES**

Prerequisites: Anes 7000, Med 7000 and Surg 7000

**ANES 8000  Clinical Anesthesiology  2 - 4 wks  Max: 4**

Course Director, Joy Hawkins, M.D., 303-372-6321. Course Coordinator, Octavia Powell, 303-372-6319.

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 Unit  4 wks  Max: 2**

Course Director, Joy Hawkins, M.D., 303-372-6321. Course Coordinator, Octavia Powell, 303-372-6319.

This fourth-year course introduces the challenges facing the critically ill. Students present “their” patients succinctly during rounds. Opportunities exist for procedures; arterial and central lines, intubations. Didactics and bedside teaching complement the learning experience. Honors grade is available.

**ANES 8002  Anesthesiology Subspecialties  2 - 4 wks  Max: 4**

Course Director, Joy Hawkins, M.D., 303-372-6321. Course Coordinator, Octavia Powell, 303-372-6319.

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.

**ANES 8100  Course Work Away in Denver  2 - 16 wks**
Course Director, Joy Hawkins, M.D., 303-372-6321.
Prerequisite: Departmental approval must be obtained and all arrangements made one semester in advance.
Students should discuss their course evaluation with their instructor and ensure that the written evaluation is mailed to Octavia Powell.

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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
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<tbody>
<tr>
<td>ANES 8200</td>
<td>Course Work Away In Colorado</td>
<td>2 - 16 wks</td>
</tr>
<tr>
<td>ANES 8300</td>
<td>Course Work Away Outside Colorado</td>
<td>4 - 16 wks</td>
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<tr>
<td>ANES 8400</td>
<td>Course Work Away Outside U.S.</td>
<td>4 - 16 wks</td>
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<tr>
<td>ANES 8600</td>
<td>Research in Anesthesiology</td>
<td>2 - 12 wks</td>
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<tr>
<td>ANES 8630</td>
<td>Research in Anesthesiology Outside Colorado</td>
<td>4 - 12 wks</td>
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<tr>
<td>ANES 8640</td>
<td>Research in Anesthesiology Outside U.S.</td>
<td>4 - 12 wks</td>
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</tbody>
</table>

**DERMATOLOGY ELECTIVES**

Prerequisites: Med 7000 and Ped 7000

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
<th>Max: 4</th>
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<tbody>
<tr>
<td>DERM 8000</td>
<td>Clinical Dermatology</td>
<td>4 wks</td>
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<tr>
<td>DERM 8300</td>
<td>Course Work Away Outside Colorado</td>
<td>4 wks</td>
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<tr>
<td>DERM 8400</td>
<td>Course Work Away Outside United States</td>
<td>4 wks</td>
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<tr>
<td>DERM 8600</td>
<td>Research in Dermatology</td>
<td>16 wks</td>
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<tr>
<td>DERM 8630</td>
<td>Research in Dermatology Outside Colorado</td>
<td>12 wks</td>
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<tr>
<td>DERM 8640</td>
<td>Research in Dermatology Outside U.S.</td>
<td>12 wks</td>
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Restrictions: This course may only be added during a drop/add period.
Prerequisite: Course Director approval required to add this course. Course description same as DERM 8600.

**FAMILY MEDICINE ELECTIVES**
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<tr>
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<th>Course Title</th>
<th>Duration</th>
<th>Max:</th>
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<tbody>
<tr>
<td>FMMD 8001</td>
<td>Healthcare for the Poor and Homeless</td>
<td>12 wks</td>
<td>8</td>
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<td></td>
<td>Fall/Spring Semesters only</td>
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<td></td>
<td>Course Director, Wendy Madigosky, M.D.</td>
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<td></td>
<td>Course Coordinator, Cynthia Villanueva</td>
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<td>303-315-5684.</td>
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<td></td>
<td>Assist the FMMD 6624 Healthcare for the Poor and</td>
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<td>Homeless course by participating in Saturday</td>
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<td>morning clinics at Stout Street Homeless Clinic</td>
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<td>and teaching first and second year medical</td>
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<td>students. Credit received for this course does</td>
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<td>NOT apply towards graduation.</td>
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<tr>
<td>FMMD 8002</td>
<td>Family Medicine Sub-Internship</td>
<td>4 wks</td>
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<td>Course Director, Steve Stahl, M.D.</td>
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<td>Course Coordinator, Alice Skram, 303-372-9764.</td>
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<td>Prerequisite: FMMD 7000.</td>
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<td></td>
<td>Experience CU Family Medicine! Students will</td>
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<td></td>
<td>be members of the inpatient service team at the</td>
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<td>Anschutz Inpatient Pavilion, take call, and</td>
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<td>will spend 2 half days per week at the A.F.</td>
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<td>Williams Family Medicine Center (outpatient</td>
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<td></td>
<td>clinic).</td>
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<tr>
<td>FMMD 8005</td>
<td>Care for Underserved Populations</td>
<td>2 wks</td>
<td>1</td>
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<td></td>
<td>Course Director, Richard Kornfeld, M.D.</td>
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<td>720-955-2039.</td>
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<td>Course Coordinator, Alice Skram, 303-372-9764.</td>
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<td>Restrictions: Not available sections 1-10 and</td>
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<td>Prerequisite: Course Director approval required</td>
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<td>to register.</td>
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<td>Offered at Lowry. Interact with culturally</td>
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<td>varied refugee and underserved populations,</td>
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<td>gain insight into the challenges faced by these</td>
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<td>underserved populations and assess if your</td>
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<td>future practice goals include serving these</td>
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<td>groups.</td>
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<tr>
<td>FMMD 8007</td>
<td>Outpatient Family Medicine</td>
<td>4 wks</td>
<td>2</td>
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<td>Course Director, Wendy Madigosky, M.D.</td>
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<td>303-372-9759.</td>
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<td>Course Coordinator, Alice Skram, 303-372-9764.</td>
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<td>Course is an outpatient family medicine at the</td>
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<td>A.F. Williams Family Medicine Center and Denver</td>
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<td>Health’s Lowry Family Medicine Clinic.</td>
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<td>Multidisciplinary faculty including</td>
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<td>pharmacologists, behavioral scientist, and</td>
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<td>experienced family physicians and residents</td>
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<td>caring for a diverse group of patients.</td>
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<td>FMMD 8008</td>
<td>Occupational and Environmental Medicine in</td>
<td>2 - 4 wks</td>
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<td>Family Practice</td>
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<td>Course Director, David Gaspar, M.D.</td>
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<td>Prerequisite: Course director approval required</td>
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<td>to add elective.</td>
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<td></td>
<td>Opportunities for the student to learn a variety</td>
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<td>of physical examinations ranging from sport</td>
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<td>physicals and commercial/FAA exams to complex</td>
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<td>disability evaluations. Elective taught by Dr.</td>
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<td></td>
<td>Stephen Gray.</td>
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<td>FMMD 8009</td>
<td>Directed Study in Family Medicine</td>
<td>2 - 8 wks</td>
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<td>Course Director, David Gaspar, M.D.</td>
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<td>Course Coordinator, Cynthia Villanueva</td>
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<td>Prerequisite: Course director approval required</td>
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<td>to add elective.</td>
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<td>Students may participate in directed scholarly</td>
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<td>work with specific faculty members including</td>
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<td>curriculum development projects, and other</td>
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<td>scholarly activities.</td>
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<td>FMMD 8100</td>
<td>Preventive Health Elective</td>
<td>2 wks</td>
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<td>Course Director, David Gaspar, M.D.;</td>
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<td>Course Coordinator, Bonnie Jortberg, MS, RD,</td>
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<td>CDE, 303-315-8078.</td>
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<td>Educate yourself in nutrition and preventive</td>
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<td>health, including physical activity and</td>
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<td>behavior change. A practical and</td>
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<td>interesting introduction to useful concepts</td>
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<td>will occur through interactive and varied</td>
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<td>didactics and clinical experience split over</td>
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<td>two weeks.</td>
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<td>FMMD 8100</td>
<td>Course Work Away In Denver</td>
<td>2 - 16 wks</td>
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<td>Course Director, David Gaspar, M.D.</td>
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<td>Course Coordinator, Cynthia Villanueva</td>
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<td>Prerequisite: FMMD 7000.</td>
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<td>Management of problems common to Family Medicine</td>
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<td>Both inpatient/outpatient experiences.</td>
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<td>Saint Joseph’s, St. Anthony’s, Rose and</td>
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<td>Swedish Family Medicine Residency programs also</td>
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<td>available. Sub-I application must be</td>
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<td>through the individual residency program.</td>
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<td>FMMD 8200</td>
<td>Course Work Away In Colorado</td>
<td>2 - 16 wks</td>
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<td>Course Director, David Gaspar, M.D.</td>
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<td>Course Coordinator, Cynthia Villanueva</td>
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<td></td>
<td>Restrictions: Not Available sections 41-44.</td>
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<td></td>
<td>Same as FMMD 8100, except students work</td>
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<td>outside the Denver area.</td>
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<td>Residency sites: Ft. Collins, North Colorado</td>
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<td>(Greeley), Saint Mary’s (Grand Junction),</td>
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<td>Southern Colorado (Pueblo). Sub-I application</td>
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<td>must be through the individual residency</td>
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<td>program.</td>
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<td>FMMD 8300</td>
<td>Course Work Away Outside Colorado</td>
<td>2 - 16 wks</td>
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<td>Course Director, David Gaspar, M.D.</td>
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<td>Course Coordinator, Cynthia Villanueva</td>
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<td></td>
<td>Restrictions: Not available to 4th year</td>
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<td>students sections 41-44.</td>
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<td></td>
<td>Course Description same as FMMD 8100, except</td>
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<td></td>
<td>that course occurs in Family Medicine practices</td>
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<td></td>
<td>or Residency Programs outside of Colorado.</td>
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<tr>
<td>FMMD 8400</td>
<td>Course Work Away Outside U.S.</td>
<td>4 - 16 wks</td>
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</tbody>
</table>
Course Director, David Gaspar, M.D.  Course Coordinator, Cynthia Villanueva, 303-315-5684.
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.
Prerequisite: Approval from the Associate Dean for Student Affairs required to register.
  Course description same as FMMD 8100, but occurring in another country.

**FMMD 8410 Immersion Spanish Elective**  4 wks
Course Director, David Gaspar, M.D.  Course Coordinator, Cynthia Villanueva, 303-315-5684.
Restrictions: Not available 41-44.
  Participation is 20 hours of language class per week for 4 wks and either a medical Spanish course for 20
  hours for 4 wks or volunteer in a local medical clinic 2 half days/week.

**FMMD 8600 Research in Family Medicine**  2 - 12 wks
Course Director, David Gaspar, M.D.  Course Coordinator, Cynthia Villanueva, 303-315-5684.
Prerequisite: The student must receive prior approval from the Associate Dean for Student Affairs and the department to register.
  Primary Care research opportunities are available in practice-based and epidemiologic research.

**FMMD 8630 Research in Family Medicine Outside Colorado**  4 - 12 wks
Course Director, David Gaspar, M.D.  Course Coordinator, Cynthia Villanueva, 303-315-5684.
Restrictions: Not available sections 41-44 to students graduating in May.
Prerequisite: Departmental approval must be obtained and all arrangements made at least one semester in advance.
  Approval of the Associate Dean for Student Affairs required.
  Course description same as FMMD 8600, except occurs outside of Colorado.

**FMMD 8640 Research in Family Medicine Outside U.S.**  4 - 12 wks
Course Director, David Gaspar, M.D.  Course Coordinator, Cynthia Villanueva, 303-315-5684.
Restrictions: Not available sections 41-44 to students graduating in May.
Prerequisites: Departmental approval must be obtained and all arrangements made at least one semester in advance.
  Approval of the Associate Dean for Student Affairs required.
  Course description same as FMMD 8600, except occurs outside of U.S.

**INTERDEPARTMENTAL ELECTIVES**

**IDPT 8000 Foundations of Doctoring IV**  0.2 cr. Summer & Fall / 0.4 cr. Spring
Course Director, Brian Dwinnell, M.D., 303-315-1532. Course Coordinator, Tina Roquemore, 303-315-1546.
  This course continues the established student-preceptor relationship from the FDC course.  Students attend
  their preceptor office one afternoon a week.  Students will work with a panel of patients or families serving as their
  physician under the supervision of their preceptor.

**IDPT 8001 Tutoring in Foundations of Doctoring**  1 cr. Fall / 0.2 cr. Spring
Course Director, Brian Dwinnell, M.D., 303-315-1532. Course Coordinator, Tina Roquemore, 303-315-1546.
Fourth year students are trained how to be tutors and then use their skills with first and second year students
learning physical exam and communication skills.  Learn how to coach small groups of students, give feedback and
evaluate student performance.

**IDPT 8002 Advanced Cardiac Life Support**  0.5 cr.  Max: 42
Course Director, Todd Larabee, M.D., 303-372-5500. Course Coordinator, Cathy Maciel, 303-372-5503.
Prerequisite: Current BLS Certification.
  Two day AHA course offered twice in the senior year spring semester with certification in management of
  cardiac and respiratory arrest.  Students should contact their residency to see if ACLS is required before beginning
  internship.

**IDPT 8003 Geriatric**  4 wks  Max: 2
Course Directors, Laurence J. Robbins, M.D. Course Coordinator, Lynn Blair, 303-393-2822.
  Student receives core didactic and reading material to enhance their knowledge of common geriatric medical
  and psychosocial issues.  Exposed to patient care in numerous out-patient, inpatient, hospice, long term care and home
  care settings on and off of University campus.

**IDPT 8007 Medicine /Pediatrics**  2, 3 or 4 wks  Max: 1
Course Directors: Lorraine Adams, M.S.W., 303-315-6758 and Robin Deterding, M.D., 303-764-8449.  Course
  Coordinator, Vicki Melton, 303-315-6758.
Prerequisites: Med 7000.
  Provide ambulatory and hospital care for pediatric and adult patients with a physician board-certified in both
  medicine and pediatrics.  The focus is primary care.  This elective is of interest to students interested in
  medicine/pediatrics residencies and careers.

**IDPT 8008 Preparing for Residency**  2 wks  Max: 40/Min. 20
Course Director, Paul Selgiman, M.D. Course Coordinator, Theresa Martinez, 303-315-8474.
Restriction: Offered session 37 only.

Course prepares graduating students for their internship and the transition to physician. Mornings are case- and-problem based situations likely to be encountered during their internship. Afternoons focus on medical legal, ethical issues, relations to attendings, patients, and families.

**IDPT 8009**  Head and Neck Tumor Oncology  4 wks  Max: 1
Course Director, John Song, M.D. Course Coordinator, Elizabeth Hardy, 303-315-7988.
Restrictions: Course not offered sections 9, 13, 29.

Exposure to patients with H&N malignancies and time spent in primary treatment disciplines. Goals, students should assess patient complaints, formulate treatment plan and participate in interdisciplinary approach to management of H&N cancer patients.

**MED 8001**  Sub-internship in In-Patient Internal Medicine  4 wks  Max: 18
Course Director, William Kaehny, M.D., 303-315-7768. Course Coordinator, Vicki Melton, 303-315-6758.

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 8003**  Transfusion Medicine  4 wks  Max: 1
Course Director, Daniel R. Ambruso, M.D., 303-363-2241. Course Coordinator, Flo Usechek, 303-363-2241.

This course is a comprehensive study of transfusion medicine, pre-transfusion testing, component preparation and storage, donor selection and testing, inventory control and blood administration. Independent study and research encouraged.

**MED 8004**  Cardiology  4 - 6 wks  Max: 6
Course Director, Eugene E. Wolfel, M.D., 303-315-4398. Course Coordinator, Karen Mileham, 303-315-4398.

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 8005**  Cardiac Diagnostic Skills  2 wks  Max: 6
Course Director, William Nelson, MD. 303-837-6820. Course Coordinator, Vicki Melton, 303-315-6758.
Restrictions: Course may only be added during a drop/add time.

Course is at Exempla St. Joseph Hospital. Goals are to improve cardiac physical diagnosis skills, interpret EKG findings, recognize abnormal heart sounds and murmurs; and analyze cardiac chest x-ray findings. Includes didactic sessions and home study.
### MED 8006  Allergy and Clinical Immunology  4 wks  Max: 1
Course Director, Stephen Dreskin, M.D., 303-315-7601. Course Coordinator, Jeanne Kittle, 303-315-7601.
Prerequisite: Course Director approval required to add course.
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 and Electrolyte Disorders  4 wks  Max: 4
Course Director, Tomas Berl, M.D., 303-315-6734. Course Coordinator, Carissa Gould, 303-315-6734.
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  4 wks  Max: 6
Course Director, Nancy Madinger, M.D. Course Coordinator, Yvonne Fitzpatrick, 303-315-7233.
UCH, DHMC and DVAMC. 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 8010  Clinical Gastroenterology  4 to 12 wks  Max: 3
Course Director, Joel Levine, M.D. Course Coordinator, Amanda Bauer, 303-315-2537.
Students will participate in work up of both hospitalized and ambulatory patients with gastrointestinal (GI) illnesses. GI pathophysiology will be emphasized. Students attend weekly conferences in clinical gastroenterology, radiology and pathology. They are invited to observe procedures. Hospital is assigned.

### MED 8011  Pulmonary Medicine  4 wks  Max: 4
Course Coordinator, Marvin Schwarz, M.D. Course Coordinator, Sara Potter, 303-315-4211.
Pre-requisite: Med 7000.
UCH, DHMC, and DVAMC. This elective offers broad experience in pulmonary and critical care medicine.
Students participate in consultations, attend conferences and clinics. A wide variety of pulmonary and critical care cases are seen.

### MED 8012  Clinical Rheumatology  4 wks  Max: 1
Course Director, Robert W. Janson, M.D. Course Coordinator, Wanda Simpson, 303-315-7592.
Prerequisite: Completion of all third year clerkships.
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  4 or 6 wks  Max: 2
Course Director, E. Chester Ridgway, M.D. Course Coordinator, Jackie Martine, 303-724-3922.
Introduction to clinical handling of endocrine/diabetes disorders through outpatient clinics and inpatients consults at VAMC, DHMC, UCH. Complete problem oriented approach to patient care. Multiple weekly/monthly conference attendance with fellows.

### MED 8014  Hematology/Oncology  3 - 6 wks  Max: 1
Course Director, Paul Seligman, M.D. Course Coordinator, Theresa Martinez, 303-315-8474.
Prerequisite: Med, Obgy, Ped, Psch 7000.
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/Oncology  2, 3 or 4 wks  Max: 1
Course Director, Paul Seligman, M.D. Course Coordinator, Theresa Martinez, 303-315-8474.
Prerequisites: Med, Obgy, Ped, Psch 7000. (Requirement - contact Dr. Seligman one week before beginning.)
Students learn the physician’s role in caring for dying patients. Students encounter home care and residential hospice patients and learn compassionate pain and symptom control.

### MED 8025  Medical Oncology  4 - 6 wks  Max: 2
Course Director, Rene Gonzalez, M.D., 720-848-0564.
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 8026  Sub-internship in Medical Oncology  4 wks  Max: 1
Course Director, Rene Gonzalez, M.D., 720-848-0564.
This elective is a sub-internship on the oncology unit of University Hospital. The student will function as an intern, admitting and evaluating patients. Teaching rounds will be on a daily basis with residents, oncology fellows and an attending physician.

**MED 8028 Primary Care Elective**
- **Duration:** 2, 3 or 4 wks
- **Max:** 2
  
Course Director, Lorraine Adams, M.S.W. 303-315-6758. Course Coordinator, Vicki Melton, 303-315-6758.
  
Working with a primary care internist, students improve skills in the focused history and physical to address the chief complaint; assessment and plan; preventive medicine; psychosocial problems; and appropriate referral to specialists. Denver and AHEC sites available.

**MED 8029 Applied Clinical Pharmacology**
- **Duration:** 4 wks
- **Max:** 105/Min: 20

Course Director, Mike Zawada, Ph.D. Course Coordinator, Brandi Dolan, 303-315-8455.
  
Restriction: Course offered section 33 only.
  
Course provides fourth year medical students with a practical approach to the pharmacologic treatment of common clinical conditions and is a part of preparation for internship. Course's structure: three 1-hr lectures daily and a final examination.

**MED 8030 Advanced Cardiac Assessment**
- **Duration:** 2 wks
- **Max:** 8

Course Director, Lane Craddock, M.D.
  
Restriction: Course offered session 41 only.
  
To upgrade skills in physical examination and interpretation of Electrocardiograms in cardiovascular disease; detect gaps in the teaching of these skills in order to provide appropriately timed instruction.

**MED 8032 Corrections Health Care**
- **Duration:** 2 wks
- **Max:** 1

Course Director, Lorraine Adams, M.S.W., 303-315-6758. Course Coordinator, Vicki Melton, 303-315-6758.
  
Prerequisite: One month notice needed to schedule this elective.
  
Provide primary care to inmates in corrections facilities. Experiences include manipulative or drug-seeking patients, the interface between health care and the legal system, and issues in correctional health care (i.e., HIV, TB).

**MED 8033 Sub internship in In-patient Medicine at Exempla Saint Joseph Hospital**
- **Duration:** 4 wks
- **Max:** 2

Course Directors, Robert Gibbons, M.D. and Debra Parsons, M.D. Course Coordinator, Deb TenBrink, 303-837-7837.
  
Student functions as an inter-equivalent and admits patients under supervision of a resident and attending. Student will enhance skills in report, interpreting clinical information, and in-patient management. Students will present EBM-research clinical question.

**MED 8034 Sub-internship in Critical Care at Exempla Saint Joseph Hospital**
- **Duration:** 4 wks
- **Max:** 2

Course Directors, Robert Gibbons, M.D. and Debra Parsons, M.D. Course Coordinator, Deb TenBrink, 303-837-7837.
  
Student functions as an inter-equivalent and admits patients during overnight call every third day. Student will enhance skills in reporting, interpreting clinical information, in patient management and in daily ICU interdisciplinary rounds. Student will present an EMB-research clinical question.

**MED 8036 Sub internships in Medical Critical Care at Denver Health Medical Center**
- **Duration:** 4 wks
- **Max:** 2

Course Director, James H. Fisher, M.D., Course Coordinator, Doris Quintana, 303-436-5905.
  
Prerequisites: Sub-I in medicine or surgery. Course Director approval required to add this course.
  
The sub-internship 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 Sub-Internship in Medical Critical Care at University of Colorado Hospital**
- **Duration:** 4 wks
- **Max:** 1

Course Director, Todd Bull, M.D. Course Coordinator, Marc Wesley, 303-315-7047.
  
Prerequisites: Sub I in Med or Surg.
  
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 8100 Course Work Away in Denver**
- **Duration:** 2 - 16 wks

Course Director, Paul Seligman, M.D., Course Coordinator, Vicki Melton, 303-315-6758.
  
Restrictions: Course not offered sections 41-44 to students graduating in May.
  
Prerequisite: Course director approved required to add course.
  
Students discuss your course evaluation with individual instructor and ensure written evaluation is mailed to Dr. Paul Seligman, 4200 E. 9th Ave., Box B-166, Denver, CO. 80262. Dr. Seligman assigns final grade.
MED 8200  Course Work Away in Colorado  2 - 16 wks
Restrictions: Sections 41-44 are not available to students graduating in May.
Course description is the same as MED 8100.

MED 8300  Course Work Away Outside Colorado  2 - 16 wks
Restrictions: Sections 41-44 are not available to graduating students.
Course description is the same as MED 8100.

MED 8400  Course Work Away Outside U.S.  4 - 16 wks
Restrictions: Sections 41-44 are not available to graduating students.
Course description is the same as MED 8100. The student must receive approval from the Associate Dean for Student Affairs. Planning consultation is available through the Medical Student International Program.

MED 8600  Research in Medicine  2 - 12 wks
Course Director, Kathryn Horwitz, Ph.D., 303-724-3936. Course Coordinator, Vicki Melton, 303-315-6758.
Restrictions: Sections 41-44 are not available to graduating students.
Course provides an opportunity for seniors to participate in research at the clinical or basic science level. The student must consult with Dr. Horwitz about the varieties of options available.

MED 8601  Introduction to Biomedical Research  2 - 4 wks
The goal of this course is to familiarize medical students with Biomedical Research and literature searches. Students will select and prepare a short paper on a specific approved topic and then review the work with a mentor and/or Course Director. Course Director, John Repine, M.D.

MED 8630  Research in Medicine Outside Colorado  4 - 12 wks
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.
Prerequisites: Departmental approval must be obtained and all arrangements made at least one semester in advance. The student must receive prior approval from the Associate Dean for Student Affairs.

MED 8640  Research in Medicine Outside U.S.  4 - 12 wks
Course Director, Kathryn Horwitz, Ph.D., 303-315-8433. Course Coordinator, Vicki Melton, 303-315-6758.
Restrictions: Sections 41-44 are not available to graduating students.
Seniors do clinical, basic science or health services research under the supervision of a Medicine faculty. Project is defined with individual mentor and approved by course director. Research mentor assigns final grade.
Prerequisite: NEUR 7000

NEUR 8000  Neurology  4 wks  Max: 3
Course Director, Christopher M. Filley, M.D., 303-315-6461. Course Coordinator, Marcia Sabo, 303-315-7214.
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.

NEUR 8100  Course Work Away In Denver  2 - 16 wks
Course Director, Christopher M. Filley, M.D., 303-315-6461. Course Coordinator, Marcia Sabo, 303-315-7214.
Prerequisite: Neur 7000. Arrangements must be made one month in advance.
A written evaluation must be sent from the outside department to Dr. Filley (4200 E. 9th Ave., B-183, Denver, CO. 80262). Dr. Filley assigns final grade.

NEUR 8300  Course Work Away Outside Colorado  4 - 16 wks
Prerequisite: Neur 7000.
Course description is the same as Neur 8100.

NEUR 8400  Course Work Away Outside U.S.  4 - 16 wks
Prerequisite: The student must receive approval from the Associate Dean for Student Affairs and course director.
Course description same as NEUR 8300. Planning consultation is available through the Medical Student International Program. Course work must be discussed with and approved by Dr. Filley.

NEUR 8600  Research in Neurology  2 - 12 wks
Prerequisite: Offered with Chairman’s approval only. The student must receive approval from the Associate Dean for Student Affairs.
For further course information, contact the Chairman, Donald Gilden, M.D., 303-315-8281.
Course Coordinator, Cathy Allen, 303-315-8281.

NEUR 8630  Research in Neurology Outside Colorado  2 - 12 wks
Prerequisite: Departmental approval must be obtained and all arrangements made at least one semester in advance. The student must receive prior approval from the Associate Dean for Student Affairs and from the Chairman of Neurology, Donald Gilden, M.D., 303-315-8281.

**NEUR 8640   Research in Neurology Outside U.S.**  
Course description same as NEUR 8630.

**NEUROSURGERY ELECTIVES**

Prerequisite: Nsur 7000

**NSUR 8014   Neurosurgery Sub internship**  
Course Director, Michael Handler, M.D., 303-386-6100. Course Coordinator, Diana Doyle, 303-315-0303.  
Intensive rotation emphasizing care and management of neurosurgical patients, with close patient responsibility. Weekly conferences and lectures required and students must present a case with topic discussion. Recommended for students with interests in neurosurgery, neurology, emergency medicine and trauma surgery.

**NSUR 8100   Course Work Away In Denver**  
Course Director, Michael Handler, M.D. Course Coordinator, Diana Doyle, 303-315-0303.  
Prerequisites: Departmental approval must be obtained and arrangements made one month in advance. Students are required to discuss their course evaluation with their individual instructor and ensure a written evaluation is mailed to Dr. Michael Handler. Dr. Handler assigns final grade.

**NSUR 8200   Course Work Away In Colorado**  
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.  
Course description is the same as NSUR 8100.

**NSUR 8300   Course Work Away Outside Colorado**  
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.  
Course description is the same as NSUR 8100.

**NSUR 8400   Course Work Away Outside U.S.**  
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.  
Course description is the same as NSUR 8100.

**NSUR 8600   Research in Neurosurgery**  
Course Director, Michael Handler, M.D. Course Coordinator, Diana Doyle, 303-315-0303  
Prerequisites: Departmental approval must be obtained and all arrangements made at least one month in advance.  
A written evaluation must be sent to Dr. Michael Handler & Diana Doyle, 4200 E. 9th Ave., Box C-307, Denver, CO 80262.

**NSUR 8630   Research in Neurosurgery Outside Colorado**  
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.  
Course description is the same as NSUR 8600.

**NSUR 8640   Research in Neurosurgery Outside U.S.**  
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.  
Course description is the same as NSUR 8600.

**OBSTETRICS AND GYNECOLOGY ELECTIVES**

Prerequisite: OBGY 7000

**OBGY 8000   General Obstetrics Sub-internship**  
Course Director, Lorraine Dugoff, M.D. 303-315-7267, Course Coordinator, Michael Baca, 303-315-4540.  
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 Sub-internship**  
4 wks  Max: 1
Course Director, Lorraine Dugoff, M.D. 303-315-7267, Course Coordinator, Michael Baca, 303-315-4540. 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 8002 Directed Study in Obstetrics and Gynecology** 4 or 8 wks
Course Director, Lorraine Dugoff, M.D., 303-315-7267. Course Coordinator, Michael Baca, 303-315-4540. Prerequisites: Must have approval from specific faculty involved and from Course Director to register. Students may obtain detailed and intensive directed study with specific faculty members. Opportunities such as clinical research projects, laboratory projects, directed literature reviews, and special clinical rotations are available.

**OBGY 8004 High Risk Maternal and Fetal Medicine** 4 wks Max: 1
Course Director, Lorraine Dugoff, M.D., 303-315-7267. Course Coordinator, Michael Baca, 303-315-4540. Intensive exposure to problems of high-risk obstetrics. Student will work under supervision of the Maternal-Fetal Medicine Staff. Student will attend high-risk clinics, have primary responsibility for patient care in antepartum unit under supervision of chief resident.

**OBGY 8005 Gynecologic Oncology** 4 or 6 wks Max: 1
Course Director, Lorraine Dugoff, M.D., 303-315-7267. Course Coordinator, Michael Baca, 303-315-4540. 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 Gynecologic Subspecialties and Procedures** 4 or 6 wks Max: 1
Course Director, Lorraine Dugoff, M.D., 303-315-7267. Course Coordinator, Michael Baca, 303-315-4540. 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 8100 Course Work Away in Denver** 2 - 16 wks
Course Director, Lorraine Dugoff, M.D., 303-315-7267. Course Coordinator, Michael Baca, 303-315-4540. Prerequisites: Departmental approval must be obtained and all arrangements must be made one semester in advance. Students required to discuss course evaluation with individual instructor and ensure a written evaluation is mailed to Dr. Lorraine Dugoff. Dr. Dugoff assigns final grade.

**OBGY 8200 Course Work Away in Colorado** 2 - 16 wks
Course description same as OBGY 8100.

**OBGY 8300 Course Work Away Outside Colorado** 2 - 16 wks
Course description same as OBGY 8100.

**OBGY 8400 Course Work Away Outside U.S.** 4 - 16 wks
Prerequisites: The student must receive prior approval from the Associate Dean for Student Affairs. Course description same as OBGY 8100. Planning consultation is available through the Medical Student International Program.

**OBGY 8600 Research in Obstetrics and Gynecology** 2 - 12 wks
Prerequisites: Departmental approval must be obtained and all arrangements must be made one semester in advance. The student must receive prior approval from the Associate Dean for Student Affairs.

**OBGY 8630 Research in Obstetrics and Gynecology Outside Colorado** 4 - 12 wks
Course description same as OBGY 8600.

**OBGY 8640 Research in Obstetrics and Gynecology Outside U.S.** 4 - 12 wks
Course description same as OBGY 8600.

### OPHTHALMOLOGY ELECTIVES

Prerequisite: OPHT 7000

**OPHT 8000 Ophthalmology** 4 wks Max: 1
Course Director, Richard Davidson, M.D. Course Coordinator, Gaylian Howard, 720-848-5029. 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 outpatient care, call activities, teaching rounds, conferences.

**OPHT 8100 Course Work Away In Denver** 2 - 16 wks
Course Director, Richard Davidson, M.D. Course Coordinator, Gaylian Howard, 720-848-5029.
Prerequisites: Arrangements must be made one month in advance. Departmental approval required to register. A final written evaluation must be mailed to Course Director who will assign the final grade.

OPHT 8200  Course Work Away In Colorado  2 - 16 wks
Course description same as OPHT 8100.

OPHT 8300  Course Work Away Outside Colorado  4 - 16 wks
Course description same as OPHT 8100.

OPHT 8400  Course Work Away Outside U.S.  4 - 16 wks
Prerequisites: The student must receive prior approval from the Associate Dean for Student Affairs. Course description same as OPHT 8100. Planning consultation is available through the Medical Student International Program.

OPHT 8600  Research in Ophthalmology  2 - 12 wks
Course Director, Richard Davidson, M.D.  Course Coordinator, Gaylian Howard, 720-848-5029.
Prerequisites: Arrangements must be made one month in advance. Departmental approval required to register. A final written evaluation must be mailed to Course Director who will assign the final grade.

OPHT 8630  Research in Ophthalmology Outside Colorado  4 - 16 wks
Course description is the same as OPHT 8100.

OPHT 8640  Research in Ophthalmology Outside U.S.  4 - 16 wks
Prerequisites: Approval from the Associate Dean of Student Affairs and course director required to register. Course description is the same as OPHT 8100. Planning consultation is available through the Medical Student International Program.

ORTH 8000  Senior Orthopaedic Surgery  4 or 6 wks  Max: 6
Course Director, Richard Fisher, M.D.  Course Coordinator, Mary Samson, 303-315-1976.
Restrictions: Offered summer and fall semesters.
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 8001  Senior Orthopaedic Elective - Primary Care  2 - 4 wks  Max: 4
Course Director, Richard Fisher, M.D., Course Coordinator, Mary Samson, 303-315-1976.
Restriction: Offered spring semester.
This course is designed as an elective in musculoskeletal medicine in route to a career in primary care or other overlapping field. The focus is on outpatient musculoskeletal medicine.

ORTH 8005  Sports Medicine  4 wks  Max: 1
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.

ORTH 8100  Course Work Away In Denver  2 - 16 wks
Course Director, Richard Fisher, M.D., Course Coordinator, Mary Samson, 303-315-1976.
Prerequisites: Arrangements must be made one month in advance. Departmental approval required to register.

ORTH 8200  Course Work Away In Colorado  2 - 16 wks
Course description same as ORTH 8100.

ORTH 8300  Course Work Away Outside Colorado  2 - 16 wks
Course description same as ORTH 8100.

ORTH 8400  Course Work Away Outside U.S.  2 - 16 wks
Prerequisites: The student must receive prior approval from the Associate Dean for Student Affairs and course director to register. Course description same as ORTH 8100. Planning consultation is available through the Medical Student International Program.

ORTH 8600  Research in Orthopedics  4 - 12 wks
Course Director, Richard Fisher, M.D., Course Coordinator, Mary Samson, 303-315-1976.
Prerequisites: Approval from Course Director and Associate Dean for Student Affairs required to register.
Provides an opportunity to participate in research at the clinical or basic science level. The student should contact the Departmental Office 3-4 months in advance to arrange a meeting with a member of the Orthopaedics faculty to define a project.

**ORTH 8630  Research in Orthopedics Outside Colorado  4 - 12 wks**
Prerequisites: Departmental approval must be obtained and all arrangements made at least one month in advance.

**ORTH 8640  Research in Orthopedics Outside U.S.  4 - 12 wks**
Prerequisites: The student must receive prior approval from the Associate Dean for Student Affairs and course director to register.
Course description same as ORTH 8630.

### OTOLARYNGOLOGY ELECTIVES

Prerequisite: OTOL 7000

**OTOL 8000  Clinical Otolaryngology  2, 4, or 6 wks  Max: 3**
Course Director, Peggy Kelley, M.D. 303-764-8520. Course Coordinator, Elizabeth Hardy, 303-315-7988.
Recommended for students considering a career in Otolaryngology. Offering a more in-depth exposure than in OTOL 7000. Also useful for those pursing a primary medical care to further hone head and neck examination skills and treatment of ENT pathology.

**OTOL 8100  Course Work Away In Denver  2 - 16 wks**
Course Director, Peggy Kelley, M.D. Course Coordinator, Elizabeth Hardy, 303-315-7988.
Prerequisites: Required departmental approval and all arrangements made one quarter in advance.
Students required to discuss their course evaluations with individual instructor and ensure the written evaluation is faxed to course coordinator at 303-315-8787. Dr. Kelley assigns final grade.

**OTOL 8200  Course Work Away In Colorado  2 - 16 wks**
Course description same as OTOL 8100.

**OTOL 8300  Course Work Away Outside Colorado  4 - 16 wks**
Course description same as OTOL 8100.

**OTOL 8400  Course Work Away Outside U.S.  4 - 16 wks**
Prerequisites: Student must receive prior approval from Associate Dean for Student Affairs and course director to register.
Course description same as OTOL 8100. Planning consultation is available through the Medical Student International program.

**OTOL 8600  Research in Otolaryngology  4 - 12 wks**
Course Director, Katie Rennie, Ph.D., 303-315-2923.
Prerequisites: Prior approval from Associate Dean and course director required to register.
Objectives: 1) work in supervised environment to gain appreciation for research design, criticism, statistical analyze; 2) complete research project with potential to publish in peer-reviewed journal. For further info contact Dr. Rennie.

**OTOL 8630  Research in Otolaryngology Outside Colorado  4 - 12 wks**
Prerequisites: Departmental approval must be obtained and all arrangements made one semester in advance. Approval from the Associate Dean for Student Affairs also required.

**OTOL 8640  Research in Otolaryngology Outside U.S.  4 - 12 wks**
Course description same as OTOL 8630.

### PATHOLOGY ELECTIVES

**PATH 8000  Pathology  4, 6 or 12 wks  Max: 6**
Course Director, Jeffrey T. Holt, M.D., 303-315-5408, or Course Coordinator, Susan Peth, 303-315-5326.
The Department assigns hospital by interests of the student. Anatomic pathology includes autopsy, surgical pathology, hematopathology and cytology. Clinical pathology includes clinical chemistry, microbiology, coagulation/blood banking and molecular diagnosis. Intended for those interested in clinical medicine, especially a pathology career.
PATH 8001  Interpretive Clinical Pathology  4 wks  Max: 30
Course Director, Hannis Thompson, M.D., 303-372-0346. Course Coordinator, Susan Peth, 303-315-5326.
Restrictions: Course offered section 29 only.
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 8002  Experimental Pathology  6 - 12 wks  Max: 12
Course Director, Jeffrey T. Holt, M.D., or Course Coordinator, Susan Peth, 303-315-5326.
Students are exposed to research relevant to human disease and development of a critical approach to the practice of medicine. Participation in multidisciplinary research done in our Department by tutorials, seminars, rotations through laboratories and hands-on practice in cutting-edge research.

PATH 8100  Course Work Away In Denver  2 - 16 wks
Course Director, Jeffrey T. Holt, M.D., 303-315-5326, or Course Coordinator, Susan Peth, 303-315-5326.
Prerequisites: Departmental approval required and arrangements made one month in advance. Required, a full written course description from the course director at outside institution.
Students ensure a written evaluation is mailed to Course Director who will assign the final grade.

PATH 8200  Course Work Away In Colorado  2 - 16 wks
Course description same as PATH 8100.

Path 8300  Course Work Away Outside Colorado  4 - 16 wks
Course description same as PATH 8100.

PATH 8400  Course Work Away Outside U.S.  4 - 16 wks
Course Director, Jeffrey T. Holt, M.D Course Coordinator, Susan Peth, 303-315-5326.
Prerequisites: Approval from the Associate Dean for Student Affairs and course director required to register.
Course description same as PATH 8100. Planning consultation is available through the Medical Student International Program.

PATH 8600  Research in Pathology  2 - 12 wks
Prerequisites: Department approval must be obtained and all arrangements made at least one month in advance. The student must also receive approval from the Associate Dean for Student Affairs.

Path 8630  Research in Pathology Outside Colorado  4 - 12 wks
Course Description same as Path 8600.

Path 8640  Research in Pathology Outside of U.S.  4 - 12 wks
Course Description same as Path 8600.

PED 8000  Pediatric Sub-internship  4 wks  Max: 3
Co-Course Directors, Adam, Rosenberg, M.D., Adriana Padgett, M.D. and Robin Deterding, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.
Restrictions: A 2-month advance notice is required to drop this course.
Prerequisites: Med and Ped 7000.
Designed for those students who are interested in further training in pediatrics. Students will be integrated as a functional member of a pediatric ward team.

PED 8004  Pediatric Cardiology  4 wks  Max: 1
Co-Course Directors, Michael Schaffer, M.D. and Robin Deterding, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.
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 8006  Immunology and Allergy  4 wks  Max: 2
Co-Course Directors, Donald Leung, M.D. and Robin Deterding, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.
The student is assigned to a pediatric allergy attending; share in the care of NJC outpatients, attend lectures, rounds, conferences. Patient responsibility delegated by attending commensurate with the student's interest/ability. Opportunities provided to observe laboratory procedures in immunology/pulmonary physiology laboratories.

PED 8007  Child Abuse and Neglect  4 wks  Max: 1

PEDIATRIC ELECTIVES
Co-Course Directors, Andrew Sirotnak, M.D. and Robin Deterting, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.

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 4, 6, 8, or 12 wks Max: 1
Co-Course Directors, Anne Tsai, M.D. and Robin Deterting, M.D., Course Coordinator, Brenda Lovato, 303-861-6867.

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 4 wks Max: 1
Co-Course Directors, Mary Glode, M.D. and Robin Deterting, M.D., 303-861-6982. Course Coordinator, Brenda Lovato, 303-861-6867.

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 4 or 6 wks Max: 1
Course Directors, Robin Deterting, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.

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 4, 6, or 12 wks Max: 1
Co-Course Directors, Kevin Staley, M.D. and Robin Deterting, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.
Prerequisite: Ped and Neur 7000.

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, Diabetes 4 wks Max: 2
Co-Course Directors, Michael Kappy, M.D. and Robin Deterting, M.D., Course Coordinator, Brenda Lovato, 303-861-6867.

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 Sub internship 4 wks Max: 3
Co-Course Directors, Elizabeth Thilo, M.D. and Robin Deterting, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.
Prerequisites: Med and Ped 7000.

Student assigned to UCH, DHMC, or TCH and 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 8017 Pediatric Sub internship in General Ambulatory Pediatrics at Denver Health Medical Center 4 wks Max: 1
Co-Course Directors, Simon Hambidge, M.D. and Robin Deterting. Course Coordinator, Brenda Lovato, 303-861-6867.
Prerequisites: Med and Ped 7000.

Clinical experience in an urban pediatric urgent care clinic will be provided. Spanish language skills are a plus. Some evening and weekend shifts are required.

PED 8018 General Academic Pediatrics 4 wks Max: 1
Co-Course Directors, Candice Johnson, M.D. and Robin Deterting, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.
Prerequisites: Med and Ped 7000.

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 at Children’s Hospital 4 wks Max: 1
Co-Course Directors, Eric Sigel, M.D. and Robin Deterting, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.

Clinical skills in diagnosis and management of medical problems common during adolescence, including reproductive health problems. Development of skills in interviewing and counseling adolescents and families.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Duration</th>
<th>Max:</th>
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</thead>
<tbody>
<tr>
<td>PED 8022</td>
<td>Pediatric Gastroenterology at The Children's Hospital</td>
<td>4 wks</td>
<td>1</td>
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<td>Co-Course Directors, Edward Hoffenberg, M.D. and Robin Deterding, M.D.</td>
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<td>Course Coordinator, Brenda Lovato, 303-861-6867.</td>
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<td></td>
<td>Restrictions: Course not available section 1.</td>
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<td></td>
<td>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.</td>
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<tr>
<td>PED 8024</td>
<td>Child Development and Behavior</td>
<td>2 or 4 wks</td>
<td>1</td>
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<td>Co-Course Directors, Ann Reynolds, M.D. and Robin Deterding, M.D.</td>
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<td>Course Coordinator, Brenda Lovato, 303-861-6867.</td>
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<td></td>
<td>Medical students will participate in the medical assessment and treatment of children with developmental and behavioral problems. They will attend lectures, participate in the seminars, and observe multidisciplinary assessments of children with developmental disorders.</td>
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<tr>
<td>PED 8025</td>
<td>Pediatric Emergency Medicine</td>
<td>4 wks</td>
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<td>Co-Course Directors, Glenn Faries, M.D. and Robin Deterding, M.D.</td>
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<td>Course Coordinator, Brenda Lovato, 303-861-6867.</td>
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<td>Prerequisites: Ped, Med, and Surg 7000.</td>
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<td>Students gain experience in assessment/management of common conditions in a pediatric emergency department including minor emergencies, acutely ill children, traumatic diagnoses. Procedural experience at student's level, and at attending's discretion, will also be gained.</td>
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<tr>
<td>PED 8026</td>
<td>Pediatric Nephrology</td>
<td>4 wks</td>
<td>1</td>
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<td>Co-Course Directors, Gary Lum, M.D. and Robin Deterding, M.D.</td>
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<td>Course Coordinator, Brenda Lovato, 303-861-6867.</td>
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<td></td>
<td>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.</td>
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<tr>
<td>PED 8028</td>
<td>Primary Care Elective</td>
<td>2 or 4 wks</td>
<td>2</td>
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<td></td>
<td>Course Director, Robin Deterding, M.D., 303-861-6867.</td>
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<td>Course Coordinator, Brenda Lovato, 303-861-6867.</td>
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<td>The Pediatric Primary Care will provide a complete experience that encompasses community based pediatric care in the clinics. Only those students who are interested in Pediatrics are encouraged to apply.</td>
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<tr>
<td>PED 8029</td>
<td>Introduction to Breastfeeding Management</td>
<td>2 wks</td>
<td>2</td>
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<td>Course Directors, Nancy Krebs, M.D. and Roxana Witter, M.D., 303-333-7059.</td>
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<td>Elective provides an introduction to breastfeeding as a medical topic, with precepting by lactation specialists at clinical sites and self-directed learning through complementary activities. Assessment of mother/infant breastfeeding dyad and management of breastfeeding problems is emphasized. Students contact Dr. Witter.</td>
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<tr>
<td>PED 8100</td>
<td>Course Work Away in Denver</td>
<td>2 - 16 wks</td>
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<td></td>
<td>Course Director, Robin Deterding, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.</td>
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<td></td>
<td>Restrictions: Sections 41-44 not available to 4th year students graduating in May.</td>
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<td></td>
<td>Prerequisites: Departmental approval required and arrangements made one month in advance. Students obtain course evaluations from on-site instructor and must have evaluation mailed to the student coordinator.</td>
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<tr>
<td>PED 8200</td>
<td>Course Work Away in Colorado</td>
<td>2 - 16 wks</td>
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<td></td>
<td>Restrictions: Sections 41-44 are not available to 4th year students graduating in May.</td>
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<td></td>
<td>Course description same as PED 8100.</td>
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<tr>
<td>PED 8300</td>
<td>Course Work Away Outside Colorado</td>
<td>2 - 16 wks</td>
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<td>Restrictions: Sections 41-44 are not available to 4th year students graduating in May.</td>
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<td></td>
<td>Course description same as PED 8100.</td>
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<tr>
<td>PED 8400</td>
<td>Course Work Away Outside U.S.</td>
<td>4 - 16 wks</td>
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<td>Restrictions: Sections 41-44 are not available to graduating students.</td>
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<td></td>
<td>Prerequisites: Program must be discussed with Dr. Robin Deterding (303-861-6918) before registration. Department approval must be made one semester in advance of rotation. Approval from the Associate Dean for Student Affairs also required.</td>
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<tr>
<td>PED 8600</td>
<td>Research in Pediatrics</td>
<td>2 - 12 wks</td>
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<td></td>
<td>Course Director, Robin Deterding, M.D. Course Coordinator, Brenda Lovato, 303-861-6867.</td>
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<td></td>
<td>Restrictions: Sections 41-44 are not available to 4th year students graduating in May.</td>
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<td>Prerequisites: Student must receive Departmental approval one semester in advance of rotation. Approval from the Associate Dean for Student Affairs also required.</td>
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<tr>
<td>PED 8630</td>
<td>Research in Pediatrics Outside Colorado</td>
<td>4 - 12 wks</td>
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</tr>
</tbody>
</table>
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.
Course description same as PED 8600.

PED 8640  Research in Pediatrics Outside U.S.  4 - 12 wks
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.
Course description same as PED 8600.

### PHYSICAL MEDICINE AND REHABILITATION ELECTIVES

Prerequisites: all 7000 level courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
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<tbody>
<tr>
<td>PHMD 8000</td>
<td>Physical Medicine and Rehabilitation</td>
<td>4 wks</td>
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<td></td>
<td>Course Director, William Sullivan, M.D.</td>
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<td></td>
<td>Course Coordinator, Vy Malcik, 303-724-1263.</td>
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</table>

This elective provides experience in the diagnosis and treatment of patients with pathologies 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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
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</thead>
<tbody>
<tr>
<td>PHMD 8100</td>
<td>Course Work Away In Denver</td>
<td>2 - 8 wks</td>
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<tr>
<td></td>
<td>Course Director, William Sullivan, M.D.</td>
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<td></td>
<td>Course Coordinator, Vy Malcik, 303-724-1263.</td>
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</table>

Prerequisite: PHMD 8000. Department approval must be obtained at least one month in advance.
Clinical experience in Physical Medicine and Rehabilitation, inpatient and/or outpatient. Written evaluation must be sent by individual instructor, with course Director responsible for final grade.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
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<tbody>
<tr>
<td>PHMD 8200</td>
<td>Course Work Away In Colorado</td>
<td>2 - 8 wks</td>
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<td>Course description and requirements same as PHMD 8100.</td>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
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<tbody>
<tr>
<td>PHMD 8300</td>
<td>Course Work Away Outside Colorado</td>
<td>4 - 8 wks</td>
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<td></td>
<td>Same as PHMD 8100 with prior approval but no prerequisite PHMD 8000 (although recommended) if visiting an ACGME accredited residency program.</td>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
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<tbody>
<tr>
<td>PHMD 8600</td>
<td>Research in Physical Medicine and Rehabilitation</td>
<td>2 - 12 wks</td>
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<td></td>
<td>Course Director, William Sullivan, M.D.</td>
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<tr>
<td></td>
<td>Course Coordinator, Vy Malcik, 303-724-1263.</td>
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</table>

Prerequisite: PHMD 8000. Obtain departmental approval and all arrangements made at least one month in advance and prior approval from Associate Dean for Student Affairs.
Written evaluation must be sent by individual instructor, with course director responsible for final grade.

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
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<tbody>
<tr>
<td>PHMD 8630</td>
<td>Research in Physical Medicine and Rehabilitation</td>
<td>4 - 12 wks</td>
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<td>Outside Colorado</td>
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<td></td>
<td>Same as PHMD 8600 with prerequisite PHMD 8000 or 8300.</td>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
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<tbody>
<tr>
<td>PHMD 8640</td>
<td>Research in Physical Medicine and Rehabilitation</td>
<td>4 - 12 wks</td>
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<td>Outside U.S.</td>
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Course description and requirements same as PHMD 8630

### PREVENTIVE MEDICINE ELECTIVES

Prerequisites: see specific elective

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
<th>Max:</th>
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<tbody>
<tr>
<td>PRMD 8003</td>
<td>Specialty of Preventive Medicine</td>
<td>4 - 8 wks</td>
<td>4</td>
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<tr>
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<td>Course Director, Tim Byers, M.D., M.P.H., 303-315-5169.</td>
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<td>Prerequisite: Course Director approval required to add course.</td>
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Designed for students interested in exploring the field of preventive medicine. Tailored educational experiences in the Denver area in a variety of settings. Speak with the course director to design this elective.

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Duration</th>
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<tbody>
<tr>
<td>PRMD 8006</td>
<td>Directed Study in Bioethics and Medical Humanities</td>
<td>2 - 8 wks</td>
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<td>Course Director, Jacqueline Glover, Ph.D., 303-315-6093.</td>
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<td>Prerequisite: Course Director Approval Required to add course.</td>
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</table>

Selected students may participate in directed scholarly work in Bioethics and Medical Humanities with specific faculty members. Opportunities such as directed literature reviews, clinical research projects, curriculum development projects, and other scholarly activities are available.

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<tr>
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<th>Duration</th>
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<tbody>
<tr>
<td>PRMD 8100</td>
<td>Course Work Away In Denver</td>
<td>2 - 12 wks</td>
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<td>Course Director, Tim Byers, M.D., M.P.H., 303-315-5169.</td>
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<td></td>
<td>Restrictions: Sections 41-44 not available to students graduating in May.</td>
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<tr>
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<td>Prerequisites: Course Director Approval required one month in advance. Students required to discuss course evaluations with instructor and ensure written evaluation is mailed to Dr. Byers who assigns final grade.</td>
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</tr>
</tbody>
</table>
PRMD 8200  Course Work Away In Colorado  2 - 16 wks
Prerequisite: Med and Ped 7000. Course description is the same as PRMD 8100.

PRMD 8300  Course Work Away Outside Colorado  4 - 16 wks
Course description is the same as PRMD 8200.

PRMD 8400  Course Work Away Outside U.S.  4 - 16 wks
Course Director, Tim Byers, M.D., M.P.H., 303-315-5169.
Prerequisites: Course Director and Associate Dean of Student Affairs approval required to add course.
Designed for students interested in international preventive medicine. Tailored educational experiences in a variety of settings can be designed with assistance from the Medical Student International Program and the course director.

PRMD 8600  Research in Preventive Medicine  4 - 12 wks
Course Director, Tim Byers, M.D., M.P.H., 303-315-5169.
Prerequisites: Course Director and Associate Dean of Student Affairs approval required to add course.
Designed for students interested in preventive medicine research. Tailored research experiences in the Denver area can be established in a variety of settings. Speak with the course director to design this elective.

PRMD 8630  Research in Preventive Medicine Outside Colorado  4 - 12 wks
Course description and requirements same as PRMD 8600.

PRMD 8640  Research in Preventive Medicine Outside U.S.  4 - 12 wks
Course description and requirements same as PRMD 8600.

PSCH 8000  Sub-internship in Psychiatry  4 - 6 wks  Max: 3
Course Director, Michael Weissberg, M.D.; Associate Course Director, Robert Davies, M.D. Course Coordinator, Carole Evans, 303-315-8411.
Direct patient care responsibility. Student selects primary focus in clinical work, such as adult inpatient, child outpatient, emergency room, inpatient consultations, V.A., community psychiatry. Student receives supervision, attends rounds, teaching conferences. Three weeks before beginning, contact Carole Evans, at 303-315-8411.

PSCH 8001  The “Big Six” Substance Dependence Problems  2 - 4 wks  Max: 2
Course Director, Thomas J. Crowley, M.D. Course Coordinator, Elisa Upwood, ext. 303-315-0162.
Prerequisites: Course Director approval required to add course.
In treatment programs, experts’ tutorials, and readings, students learn approaches to 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 6 clinical problems.

PSCH 8100  Course Work Away In Denver  2 - 8 wks
Course Director, Michael Weissberg, M.D.; Associate Course Director, Robert Davies, M.D. Course Coordinator, Carole Evans, 303-315-8411.
Prerequisites: Department approval required. Arrangements must be made one semester in advance.
Students are required to discuss course evaluations with instructor and ensure written evaluation is mailed to Dr. Weissberg, c/o Carole Evans, Mail Stop C-254-61. Dr. Weissberg assigns final grade.

PSCH 8200  Course Work Away In Colorado  2 - 8 wks
Course description and requirements same as PSCH 8100.

PSCH 8300  Course Work Away Outside Colorado  4 - 8 wks
Course description same as PSCH 8100.

PSCH 8400  Course Work Away Outside U.S.  4 - 8 wks
Course description same as PSCH 8100. Planning consultation is available through the Medical Student International Program.
Prerequisites: The student must receive prior approval from the Associate Dean for Student Affairs and course director to add course.

PSCH 8600  Research in Psychiatry  2 - 12 wks  Max: 3
Course Director, Michael Weissberg, M.D.; Associate Course Director, Robert Davies, M.D. Course Coordinator, Carole Evans, 303-315-8411.
Prerequisites: The student must receive prior approval from the Associate Dean for Student Affairs and the course director to add course.
Research electives in various areas of Psychiatry including child and infant.
PSCH 8610  Research in Drug and Alcohol Abuse  2 - 12 wks  Max: 2
Course Director, Thomas J. Crowley, M.D. Course Coordinator, Elisa Upwood, 303-315-0162.
Prerequisite: Course Director approval required to add course.
Regarding substance dependence our faculty study: phenotypic descriptions, adolescent-onset genetics, comorbid conduct disorder and ADHD, brain imaging, stopping HIV spread, and clinical trails. Literature reviews, data collection, analysis, and writing of scientific papers are emphasized.

PSCH 8630  Research in Psychiatry Outside Colorado  4 - 12 wks
Course Director, Michael Weissberg, M.D.; Associate Course Director, Robert Davies, M.D. Course Coordinator, Carole Evans, 303-315-8411.
Prerequisites: Departmental approval must be obtained and all arrangements made one semester in advance. The student must also receive approval from the Associate Dean for Student Affairs.

PSCH 8640  Research in Psychiatry Outside U.S.  4 - 12 wks
Course description and requirements same as PSCH 8630.

RADIOLOGY ELECTIVES

Clinical Prerequisite: Fourth year status or permission of the Course Director

RAD 8000  Diagnostic Radiology at University of Colorado Hospital  4 wks  Max: 5
Course Director, Carol M. Rumack, M.D. Course Coordinator, Tina Kutsuma, 303-372-6136.
Restrictions: Course not available sections 25 and 45.
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 at University of Colorado Hospital  4 wks  Max: 2
Course Director, Adrienne Sage-El, M.D. Course Coordinator, Tina Kutsuma, 303-372-6136.
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  2 - 4 wks  Max: 1
Course Director, Stephen Johnson, M.D. Course Coordinator, Joanne Conklin, 303-372-6141.
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 8100  Course Work Away In Denver  2 - 16 wks
Course Director, Carol Rumack, M.D. Course Coordinator, Tina Kutsuma, 303-372-6136.
Restrictions: Sections 41-44 not available to students graduating in May.
Prerequisites: For rotation approval, students must first provide name, address, and phone number of preceptor to the course director. Students maintain sole responsibility for obtaining written evaluation. 2 week rotation not Honors eligible.

RAD 8300  Course Work Away Outside Colorado  2 - 16 wks
Course description and requirements are the same as RAD 8100.

RAD 8600  Research in Radiology  2 - 12 wks
Course Director, Carol Rumack, M.D. Course Coordinator, Tina Kutsuma, 303-372-6136.
Prerequisites: Approval from the Associate Dean of Student Affairs required. The name, address, and phone number of the preceptor must be given to the course director for final approval. Students responsible for obtaining written evaluation. 2 week rotation not Honors eligible.

RAD 8630  Research in Radiology Outside Colorado  4 - 12 wks
Course description and requirements are the same as RAD 8600.

RADIATION ONCOLOGY ELECTIVES

RAO 8005  Radiation Oncology  4 - 8 wks  Max: 2
Course Director, Changhu Chen, M.D., M.S., 720-848-0116. Course Coordinator, Collette Cielens, 720-848-0156.
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 8100  Course Work Away In Denver  4 - 8 wks
Course Director, Changhu Chen, M.D., M.S. Course Coordinator, Collette Cielens, 720-848-0154.
Prerequisite: RAO 8005. Departmental approval must be obtained one month in advance.

Students are required to discuss their course evaluation with their individual instructor and ensure that the written evaluation is mailed to Dr. Changhu Chen.

**RAO 8200  Course Work Away In Colorado**  
Course description same as for RAO 8100.  
4 - 8 wks

**RAO 8300  Course Work Away Outside Colorado**  
Course description same as for RAO 8100.  
4 - 8 wks

**RAO 8400  Course Work Away Outside U.S.**  
Course description same as for RAO 8100. The student must receive prior approval from the Associate Dean for Student Affairs.  
4 - 8 wks

**RAO 8600  Research in Radiation Oncology**  
Course Director, Changhu Chen, M.D., M.S. Course Coordinator, Collette Cielens, 720-848-0154.  
Prerequisite: RAO 8005. Departmental and Associate Dean of Student Affairs approval must be obtained and all arrangements made one semester in advance.  
This elective is designed to acquaint the student with current research developments, knowledge and techniques in radiation oncology.  
4 - 12 wks

**RAO 8630  Research in Radiation Oncology Outside Colorado**  
Course description same as RAO 8600.  
4 - 12 wks

**RAO 8640  Research in Radiation Oncology Outside Research U.S.**  
Course description same as RAO 8600.  
4 - 12 wks

**SURGERY ELECTIVES**

Prerequisites: SURG 7000

**SURG 8000  General Surgery Sub-internship at University of Colorado Hospital**  
Course Director, Thomas A. Whitehill, M.D., 303-315-6486. Course Coordinator, Janice Frary, 303-315-4601.  
Prerequisites: Med, OBGYN, FMMD and Surg 7000.  
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.  
4 - 12 wks Max: 4

**SURG 8001  General Surgery Sub-internship at Denver Health Medical Center**  
Course Director, Jeff Johnson, M.D. 303-436-6559. Course Coordinator, Batyah Weiler, 303-436-6559.  
Prerequisites: Anes, Ped and Surg 7000.  
Join an Acute Care Surgery Team at a Level I Trauma Center. Course emphasizes pre-operative evaluation, operating room decisions and postoperative care outside the ICU. Student will attend clinics, rounds, conferences and surgical procedures.  
4 or 6 wks Max: 3

**SURG 8002  General Surgery Sub-internship at St. Joseph Hospital**  
Course Director, Jeffrey Clark, M.D. Course Coordinator, Rebecca Schoby, 303-837-7295.  
Restrictions: Not available sections 1 and 5.  
4 wks Max: 2

**SURG 8004  Emergency Medicine at University of Colorado Hospital**  
Course Director, Ravi Morchi, M.D., 303-372-5252. Course Coordinator, Cathy Maciel, 303-372-5503.  
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.  
4 wks Max: 4

**SURG 8005  Emergency Medicine at Denver Health Medical Center**  
Course Director, Vince Markovchick, M.D. Course Coordinator, Laura Rendon, 303-436-7129.  
Prerequisite: Med, OBGYN, Surg 7000.  
Student is primary caregiver for acutely ill/injured patients at DMC Emergency Department, supervised by Emergency Medicine Staff. Daily lectures in traumatic/medical emergencies, conferences, "board rounds". Orientation, first day, 7:15 am., Admin Conf. room.  
4 wks Max: 1
**SURG 8006  Emergency Medicine Career Elective**  
4 wks  
Max: 3
Course Director, Vince Markovich, M.D.  
Course Coordinator, Laura Rendon, 303-436-7129.
Prerequisites: Med, OB/GYN, Surg 7000.
Same as Surg 8005 and directed for students applying to EM Residencies. Mentors assigned/work 4-5 shifts directly with student, discuss EM as a career, CV, personal statement, counsel regarding application/match process for residency, Ambulance ride-along.

**SURG 8008  Cardiotoracic Surgery Sub-internship**  
4 wks  
Max: 2
Course Director, David Fullerton, M.D.  
Course Coordinator, Kami Fugate, 303-315-4797.
Prerequisite: Surg 7000.
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 and Surgery**  
4 or 6 wks  
Max: 1
Course Director, Gordon K. Lindberg, M.D., Ph.D., 303-315-7062.  
Course Coordinator, Randall Streiffert, 303-315-7062.
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**  
4 wks  
Max: 1
Course Director, Michael J. V. Gordon, M.D.  
Course Coordinator, Lori Morell, 720-848-2721.
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 8012  Urology Sub-internship**  
4 or 6 wks  
Max: 4
Course Director, Robert Donohue, M.D., 303-315-5942.  
Course Coordinator, Jennifer Allen, 303-315-8972.
Prerequisites: Surg 7000 and Surg 7001.
All students are required to rotate at hospitals, participate and perform physical exams, follow-up, clinic and surgeries. All Urology Conferences are mandatory. The Chief Resident, under supervision of the Attending, guides educational experiences.

**SURG 8015  Pediatric Surgery**  
2, 4, or 6 wks  
Max: 1
Course Director, Frederick Karrer, M.D., 303-315-861-6530 at TCH.
Student will assume major clinical responsibility for pediatric surgical patients, will work with housestaff, 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.

**SURG 8020  Vascular Surgical Research**  
4 - 12 wks
Course Director, Mark Nehler, M.D., 303-315-8552. Course Coordinator, Janice Frary, 303-315-4601.
Prerequisites: Med, Surg 7000.
Students work in Vascular Diagnostic Laboratory to learn problems of vascular surgical research, tests used, and test interpretations. Responsible for at least one research project, either an original investigation or as part of an ongoing investigation.

**SURG 8021  Surgical Critical Care**  
4, 6 or 8 wks  
Max: 2
Course Director, Jeff Johnson, M.D., 303-436-6559. Course Coordinator, Batyah Weiler, 303-436-6559.
Prerequisites: Anes, Med, Surg 7000.
Assigned to surgical ICU, work with critical care residents, fellow and staff. Students gain experience in resuscitation, hemodynamic monitoring, mechanical ventilation, nutritional support, bedside ultrasound and all aspects in care of critically ill surgical patients.

**SURG 8024  Clinical Toxicology**  
4 wks  
Max: 2
Course Director, Kennon Heard, M.D., 303-739-1264. Course Coordinator, Becky Holmes, 303-739-1240.
Introduction to medical toxicology at Rocky Mountain Poison and Drug Center. Participation in clinical service, inpatient consultative care at DHMC/UH. Conferences and didactic instruction provided weekly. Short presentations required. Exposed to fundamentals of environmental toxicology, public health concerns and occupational toxicology.

**SURG 8030  Clinical Transplantation - Liver, Kidney, Pancreas**  
2 - 4 wks  
Max: 3
Course Director, Michael Wachs, M.D., 303-372-8750. Course Coordinator, Jody Mandic, 303-372-8731.
Medical student will round with transplant team, which includes: Surgeons, Nephrologists, and Hepatologists. They will be exposed to all aspects of transplant care including preoperative work up, donor surgery, transplant surgery, post-operative care.
SURG 8100  Course Work Away In Denver  2 - 16 wks
Course Director, Thomas A. Whitehill, M.D., 303-315-6486. Course Coordinator, Janice Frary, 303-315-4601.
Prerequisites: Departmental approval must be obtained and all arrangements made one month in advance.
Students are required to discuss their course evaluations with their preceptor(s) and ensure that the written
evaluation is mailed to Dr. Whitehill, who assigns the final grade.

SURG 8200  Course Work Away In Colorado  2 - 16 wks
Restrictions: Sections 4148 are not available to 4th year students graduating in May.
Course description and requirements same as SURG 8100.

SURG 8300  Course Work Away Outside Colorado  4 - 16 wks
Restrictions: Sections 41-48 are not available to 4th year students graduating in May.
Course description and requirements same as SURG 8100.

SURG 8400  Course Work Away Outside U.S.  4 - 16 wks
Course Director, Thomas A. Whitehill, M.D., 303-315-6486. Course Coordinator, Janice Frary, 303-315-4601.
Restrictions: Not available sections 41-44 for students graduating in May.
Prerequisites: Students must receive prior approval from the Associate Dean for Student Affairs and course director to
add course.
Course description same as Surg 8100. Planning consultation is available through the Medical Student
International Program.

SURG 8600  Research in Surgery  2 - 12 wks
Course Director, Thomas A. Whitehill, M.D., 303-315-6486. Course Coordinator, Janice Frary, 303-315-4601.
Prerequisites: The student must receive prior approval from the Associate Dean for Student Affairs and course director to
add course.
Contact department for further course information.

SURG 8630  Research in Surgery Outside Colorado  4 - 12 wks
Course Director, Thomas A. Whitehill, M.D., 303-315-6486. Course Coordinator, Janice Frary, 303-315-4601.
Restrictions: Sections 41-44 are not available to 4th year students graduating in May.
Prerequisites: Departmental approval must be obtained and all arrangements made one semester in advance.
Student must receive approval from the Associate Dean for Student Affairs.