

Duke University School of Medicine

2nd Year Elective Course Offerings



Summer 2009
5th Edition

web: registrar.mc.duke.edu
email: medreg@mc.duke.edu

Duke University School of Medicine

Courses of Instruction

Anesthesiology

Clinical Science Electives

ANESTH-250C. CLINICAL ANESTHESIOLOGY. The student will participate in the pre-, intra-, and post-operative anesthetic management of patients while assigned to an individual resident or attending anesthesiologist. Usually, (s)he will spend two weeks in the general Operating Rooms; one in the cardiothoracic Operating Rooms; and a fourth week in subspecialty areas including the Hyperbaric facility, the Pain Management Service, and others. Learning opportunities will include pre-operative patient evaluation, anesthetic technique selection, airway management, pharmacology, physiology, and anatomy; and procedures such as vascular access, including central venous and arterial line placement, and patient monitoring. These areas will be reinforced by a lecture series, Grand Rounds, and other conferences. In the fall priority in registration is given to students considering careers in Anesthesiology. Students are expected to attend the first day and are strongly advised not to miss any of the first week. More than 5 absences are not permitted. Permission of the instructor is required. Please contact Joyce Graves at 681-6754 or via email at jgraves@duke.edu for more information. Enrollment max. 4. Credit: 4.
Dwane and Staff

Community and Family Medicine

Clinical Science Electives

COMMFAM-253C. OCCUPATIONAL AND ENVIRONMENTAL MEDICINE. This elective is designed to enhance the student's skills in several important areas related to occupational medicine: occupational injury and illness prevention, epidemiology, health management for employee populations, industrial toxicology, worksite wellness, and prevention programs. During this four week rotation, students will complete readings related to these areas, observe surveillance exams and prospective health planning visits, participate in lectures and seminars, learn to conduct computerized database searches concerning industrial toxicology, and (as available) visit industrial sites. Students will also complete at least one project involving one of the topics above. Upon completion of the rotation, students can expect to have practical and useful skills applicable to occupational medicine and worksite health programs. Credit: 4. Two months advance notice and permission from instructor is required. Enrollment: max 1 per month. All interested students should contact the Coordinator of Medical Student Programs at 681-3066.
Epling, Darcey and Moon

COMMFAM-263C. COMMUNITY HEALTH. This elective introduces students to the concepts and practice of community and population-based health care. Population-based care is becoming increasingly important in addressing the health needs of this nation. This elective helps students understand how Duke serves communities through collaborative, innovative, interdisciplinary clinical services, educational programs, and applied research. By allowing students to participate in actual programs, role modeling and experiential learning are used to supplement and apply what is learned in the required text-based materials of the course. Because the specific course activities depend upon the student's particular interests and the community health activities ongoing at the time of the elective, each student's experience will be individually designed. To participate in this course, students must contact

Ms. Tia Simmons, Medical Instructor in the Division of Community Health at least six weeks prior to the start of the course. She can be reached by phone at 919-668-3787. At that time, Ms. Simmons and the student, along with appropriate community programming faculty and staff, will plan the specific activities that will be undertaken by that student, and the requirements for the student's successful completion of the course. Students may contact the Coordinator of Medical Student programs at 681-3066 for more information. Details on initial class meeting location and time will be sent prior to first day. Credit: 4; Enrollment max: 2. *Simmons*

COMMFAM-269C. COMMUNITY AND FAMILY MEDICINE PRECEPTORSHIP. An individually tailored preceptorship which allows students to observe and participate in aspects of the broad scope of Community and Family Medicine, including delivery of care to individuals, families, and populations within the context of the community in which they live. The rotation supplements and complements the second-year core clerkship, and allows the student further exploration of specific areas of interest. A wide variety of practice types and geographic locations are available; students may choose from an extensive list or nominate a new site. Opportunities are also available within the Duke system, including: Lifestyle Management, Howard Eisenon, M.D. All interested students should contact the Coordinator of Medical Student Programs at 681-3066 to arrange a rotation in their area of interest. Because of the necessity for site approval and prior arrangements with preceptors, it is essential that this contact be made as soon as possible, and at least six months prior to the desired rotation. Drops are not accepted. Prerequisites: permission of instructor. Enrollment max. 1. Credit: 4. *Copeland and staff*

COMMFAM-270C. PRIMARY CARE SPORTS MEDICINE. This elective is designed to introduce students to the concepts and practice of primary care sports medicine. Over recent years there has been increased focus on physical fitness. More people are engaging in regular physical activity and the average life expectancy has increased. This increase in activity has also resulted in an increased number of musculoskeletal injuries. In order to provide good care to these patients' physicians need to be well versed in treatment of musculoskeletal problems as well as the common medical problems that physically active people face. During this month-long elective, students will become familiar with the diagnosis, treatment, and prevention of musculoskeletal injuries as well as treatment of primary care issues such as HTN, hypertrophic cardiomyopathy, asthma, and mononucleosis. During this rotation students see patients in the Sports Medicine and Family Medicine clinics. Students also participate in the care of college and high school athletes. To participate in this rotation students must contact the Medical Student Program Coordinator, 681-3066, at least 6 weeks prior to the course. Credit: 4. Enrollment Max: 1 per month. *Bytomski and Boggess*

Medicine

Clinical Science Electives

MEDICINE-252C. CLINICAL DERMATOLOGY. The elective in clinical dermatology is designed to prepare students to perform an accurate skin examination, formulate appropriate differential diagnoses, and choose relevant diagnostic or therapeutic interventions. This course is valuable to any student interested in improving their ability and confidence in the cutaneous exam. Students in the rotation spend two weeks working in the outpatient dermatology clinics, one week on the inpatient consult service at Duke, and one week at the Durham VA Medical Center. The outpatient clinical experience includes general dermatology clinics as well as a variety of specialty clinics such as pediatric dermatology, HIV dermatology, cutaneous oncology; clinic attendance can be tailored to the student's future career goals. Patient care is supplemented with lectures designed to provide the student with a foundation in dermatologic principles, and students are encouraged to attend weekly departmental teaching conferences. Student evaluations are based on the development of clinical skills as assessed by faculty and residents, and by a brief clinically oriented examination. Students are to report to the Dermatology Clinic, Duke south, Purple Zone, Clinic 3K, Room 3337 at 8:30 a.m. on the first day of the rotation for orientation. Dr. Prose is the course director and may be reached at 684-5146. Secondary Contact: Dr. Rambhi Cardones, 970-7719. Credit: 4. Enrollment: max. 4. *Prose, Hall, Myers, Malik, Olsan, Murray and other staff*

MEDICINE-253C. TUTORIAL IN MEDICAL PDC (Subspecialty Clinics). (1) Course Goals: Primary-To broaden student exposure to ambulatory care in internal medicine and allow students to work intensively with a single, seasoned medical practitioner. Students learn the informational content relevant to the discipline, but also have the opportunity to observe how one doctor goes about daily practice. (2) How Goals Are Achieved: Students work in a one-to-one relationship with a faculty member in the Department of Medicine who sees patients regularly in the Private Diagnostic Clinic. Students evaluate patients and develop plans for treatment and follow-up under the guidance of the preceptor. Students may follow patients admitted to the hospital. Students may select preceptors from any of the medical subspecialties. (3) Methods of Evaluation: On a regular basis, the preceptor will observe student interactions with patients noting the quality of that interaction as well as the resulting evaluation, including the assessment/differential diagnosis as well as plans for further evaluation, treatment, and follow-up. A copy of the evaluation form will be provided to students at the beginning of their tutorial. Prerequisites: Students must prearrange their elective with an individual preceptor and communicate the preceptor's approval to Dr. Jane Gagliardi (via email: Gagli001@mc.duke.edu) at least two weeks prior to the start date of the planned tutorial. At the end of the experience, the preceptor will then complete a standard evaluation form. Credits: 1 (complete a total of 40 hours; e.g., 10 hours/week for 4 weeks). 2 (complete a total of 80 hours; e.g., 20 hours/week for 4 weeks). 3 (complete a total of 120 hours; e.g., 30 hours/week for 4 weeks). 4 (complete a total of 160 hours, e.g., 40 hours/week for 4 weeks). You may recruit one to four physicians to come up with sufficient clinic time to meet credit requirements. Time missed for purposes of residency interviews beyond two full days of clinic will require make-up sessions or will result in assignment of fewer credits. Prerequisite: Permission of Instructor is required. Enrollment: max 4. For more information, please contact Dr. Gagliardi via email at gagli001@mc.duke.edu or Sheila Gainey at sheila.gainey@duke.edu. *Gagliardi and Medical PDC staff.* **NOTE: Medical students seeking experiences in the PDC with preceptors MUST be explicit in making the preceptors aware that they are second year medical students, especially if they have not yet taken the clerkship in Internal Medicine.**

MEDICINE-254C. CARDIAC CARE UNIT. 1) Course Goals: Primary - To provide an in-depth experience in the evaluation and care of inpatients with various cardiovascular problems. Secondary -To refine student understanding of the cardiovascular history, physical examination and non-invasive and invasive laboratory testing in evaluating and managing patients with known or suspected cardiovascular disease. (2) How Goals Are Achieved: Students are assigned to the Duke CCU, the VA CCU, or to a

cardiology inpatient service at Duke, and, in concert with the house staff, cardiology fellows, and senior staff attendings, work up and manage patients admitted to these various services. They also participate in a core curriculum experience, including individually assigned times to work with HARVEY, the cardiology patient simulator, and various computer assisted instruction programs. (3) Methods of Evaluation: Students are evaluated by all resident, fellow, and senior staff with whom they work. The evaluation form is available at the beginning of the elective. Depending on circumstances, students may also be evaluated by written and practical examinations at the beginning and/or end of the elective. Prerequisite: Must have successfully completed Medicine 205C prior to enrollment. For more information please contact Dr. Waugh via email at waugh002@mc.duke.edu or Dawne Smith at smith695@mc.duke.edu. Students are to meet at 8:00 a.m. in Room 4058 Purple Zone at Duke South on the first day of classes for orientation. The room is the Human Simulation and Patient Safety Center. Credit: 4. Enrollment: max 2. *Waugh and cardiology staff*

MEDICINE-257C. NEUROLOGY CLERKSHIP. This course provides the student with a firm understanding of the neurological examination, formulation of clinical neurological problems, and practice with written and oral communications in a hospital setting. The student has the opportunity to apply the neuroanatomy, neurophysiology, neurochemistry, and neuropathology learned in the first year to the evaluation and care of his or her patients. The patients are drawn from the neurology services at Duke Hospital or the Durham VA Medical Center. The students elicit a history and perform a physical examination. The student records the findings in the hospital charts and presents the findings at regular staff rounds. The student then participates with a clinical team of faculty and house officers in the hospital evaluation of the patients. The student is encouraged to participate in all diagnostic procedures such as lumbar puncture. The student has the opportunity to follow patients through neuro-radiological and neuro-surgical procedures forming part of evaluation and treatment. The specific expectations for the student are: (a) to perform and record a competent neurological and history examination on each admitted patient; (b) to be competent in the hospital management of neurological patients including diagnostic evaluations such as hematological and urine evaluations, lumbar puncture and appropriate electrical studies; (c) to assume responsibility as the primary care person for his or her patients; (d) to participate in daily work rounds with an assigned team of house officers and faculty; (e) to be sufficiently knowledgeable to participate in patient care decisions; (f) to attend faculty attending rounds and to present patients to faculty within 24 hours after admission; and (g) to participate in neurology service rounds and conferences during the course. The course includes faculty lectures. A written evaluation is provided to the students by faculty and house staff. There is an examination. For more information, please contact Dr. Chilukuri at chilu001@mc.duke.edu. Students should report promptly to Duke North 4300 at 8am the first day, unless otherwise indicated. Credit: 4. Enrollment: max 10. *Chilukuri and neurology staff*

MEDICINE-258C. CONSULTATIVE CARDIOLOGY. (1) Course Goals: Primary - To refine and further develop the skills necessary for eliciting an accurate, complete CV history and for performing an accurate, complete CV physical examination: To refine student understanding of normal and pathologic cardiovascular physiology while functioning in the role of a consultant for inpatients and outpatients with various cardiovascular problems; Secondary - to develop the skills necessary to quickly and accurately interpret ECGs (both 12-lead ECGs and rhythm strips). (2) How Goals Are Achieved: Students are assigned to the consult service at either the VA Hospital or Duke, where, in concert with the resident, fellow and senior staff attending, they evaluate the operative risk for cardiac and non-cardiac surgery as well as make decisions concerning the evaluation and treatment of patients with a wide variety of heart diseases. Students participate in reading ECGs and a core curriculum experience including individually assigned times to work with HARVEY, the cardiology patient simulator, and various computer assisted instruction programs. (3) Methods of Evaluation: Students are evaluated by the resident, fellow, and senior staff with whom they work. The evaluation form is made available at the beginning of the elective. Depending on circumstances, students may also be evaluated by written and practical examinations at the beginning and/or end of the elective. Prerequisite: Must have successfully completed Medicine 205C prior to enrollment. For more information please contact Dawne Smith at 681-6745 or via email at

smith695@mc.duke.edu. Students should meet promptly at 8:00 a.m. in Room 4058, Duke Clinics, Purple zone for orientation. The room is the Human Simulation and Patient Safety Center. Credit: 4. Enrollment: max 2. *Waugh, Wang and cardiology staff*

MEDICINE-259C. GERIATRIC MEDICINE. Course Goals: Primary - To enable the student to become familiar with the principles of caring for the geriatric patient. Secondary - To familiarize the student with the physiology and diseases of aging. (2) How Goals Are Achieved: This elective is offered by the interdepartmental faculty of the Division of Geriatric Medicine. The student works with faculty, fellows, and housestaff in a number of settings involved in the care of the geriatric patient. These include the Geriatric Evaluation and Treatment Clinic (Duke), Geriatric Evaluation Unit Clinic (Durham VA), The Forest at Duke Clinic, Extended Care and Rehabilitation Center (Durham VA) and other subspecialty clinics. Principles to be stressed are biology and pathophysiology of aging, multiple clinical problems in the elderly, interdisciplinary team approach to evaluation, planning and treatment, goals of maximal functional achievement and independence for the elderly. Specific clinical problems that students encounter include cognitive disorders, gait instability and falls, urinary incontinence, pressure sores, and chronic pain. Students also learn about the management of common chronic diseases in the elderly, including diabetes mellitus, heart disease, and osteoarthritis. The student participates actively in the work-up and management of patients work-up in inpatient extended care and outpatient settings to become more familiar with the problems of the elderly in the community. Familiarity with the growing literature in geriatric medicine is encouraged. The student participates in seminars, lectures and team meetings at the appropriate sites. (3) Methods of Evaluation: Evaluation is by consensus of instructors and fellows at the various training sites. It is based on discussions and presentations throughout the course period. If students are registering for the course within 15 days of starting the rotation, they will need to call the program coordinator at 660-7577 to notify her of their late registration and request permission to enroll. Permission will be based upon availability of clinical experiences for the team identified. No students will be accepted for registration after 4PM on the Wednesday before a Monday rotation start. As noted above, students registering within 15 days of the rotation start are expected to call the program coordinator immediately to notify her and request permission. Credit: 4. Enrollment: max 1. *Twersky and staff*

MEDICINE-261C. INTRODUCTION TO ADVANCED GENERAL MEDICINE (DUKE, VA , DRH). (1) Course Goals: To gain additional knowledge regarding inpatient internal medicine. Primary - To provide additional experience in the management of hospitalized patients with a wide variety of general internal medical problems. Secondary - To develop a comprehensive understanding of the pathophysiology of the common problems encountered on an internal medicine inpatient service. (2) How Goals Are Achieved: Students are assigned to one of the general medical wards at Duke Hospital, Durham Regional Hospital or the Durham VA Medical Center. They are assigned patients on the service and are expected to perform and complete an initial evaluation, develop a care plan, formulate and write admission orders (to be countersigned by the intern), present the patient at teaching rounds, and follow the patient throughout the hospital course. Students are assigned two patients per call night and will follow up to six patients at a time. Students who have not yet rotated on General Medicine will start out admitting one patient per call night and will advance as the elective progresses. Outside reading on each patient is expected. Credit: 4 Enrollment: Max 16. For more information, please contact Dr. Gagliardi at gagli001@mc.duke.edu or Sheila Gainey at sheila.gainey@duke.edu. *Gagliardi and Staff*

MEDICINE-262C. CLINICAL ARRHYTHMIA SERVICE. (1) Course Goals: Primary - To provide students with an in-depth exposure to the diagnosis and management of cardiac arrhythmias, electrophysiologic studies, ablation of arrhythmias, cardiac pacemakers, and implantable defibrillators; to help students to understand the electrophysiologic events that result in arrhythmias and ECG changes. This course is not designed to be a substitute for the general cardiology elective (MEDICINE 404C and 445C). Secondary - To familiarize the student with certain basic techniques of arrhythmia diagnosis such as esophageal recording and pacing. (2) How Goals Are Achieved: The student spends four weeks working on the Clinical Arrhythmia Service. The student makes rounds with the Clinical Electrophysiology Service on inpatients with arrhythmia problems. The student is encouraged to attend electrophysiologic studies and assist in the analysis of data from these studies. Attendance of electrophysiologic surgical procedures is also encouraged. The student is responsible for the work-up of patients admitted to the

Arrhythmia Service as well as inpatient consults and plays an important role in the follow-up of these patients while they are in the hospital. The student sees outpatients during Arrhythmia Clinics that meet on Monday, Tuesday, Wednesday, and Thursday in the PDC. The student assists in the evaluation of patients for permanent pacemaker implantations. Students are responsible for reviewing the literature on subjects related to the patients that they have seen on the clinical service. (3) Methods of Evaluation: Students are evaluated on their clinical skills in taking histories, performing physical examinations as well as in their presentation and assessment of the patient's problem. They are also assessed on their ability to read and understand the relevant literature and their ability to assume a responsible role in the care of patients on the Clinical Arrhythmia Service. For more information please contact Dr. Grant at grant007@mc.duke.edu. Credit: 4. Enrollment: max 1. *Grant, Sorrentino, Greenfield, Bahnson, Al-Khatib, and Ashar.*

MEDICINE-265C. CLINICAL INFECTIOUS DISEASES. Students are expected to work up assigned patients by interview, physical examination, and collation of laboratory results, leading to a summary and synthesis of the problem. Emphasis is placed on follow-up of inpatients, including attendance at procedures or operations whenever possible. Students should know their own patients well enough to be able to give presentations on rounds or at conferences. Students are expected to read texts and relevant primary references to learn about their patients' problems. Students are expected to attend conferences listed on the weekly schedule of division activities, including Microbiology Plate Rounds, Journal Club, and tutorials. For more information, please call Cheryl Jacobs at 684-6854 or email cheryl.jacobs@duke.edu. Credit: 4. Enrollment max. 7. *Perfect*

Obstetrics and Gynecology

Clinical Science Electives

OBGYN-260C. GYNECOLOGIC CANCER. This course presents a clinical experience in the management of patients with a gynecologic malignancy. This will include operating room, inpatient unit and clinic experiences. The student assumes the role of a sub-intern. Outpatient, inpatient, and operative exposure to these patients is extensive. For more information, please call 684-3765. Students should report at 6:30 a.m. to 7700 Duke North on the first day of classes. Credit: 4. Enrollment: max 1. *Berchuck, Valea, Secord, Havrilesky, Lee, and gynecologic oncology fellows*

OBGYN-261C. CLINICAL REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY. Course for students who desire additional basic and clinical experience in examination, diagnosis, and treatment of obstetric and gynecologic patients with endocrinopathy and infertility. Course consists of clinical core of reproductive endocrine problems correlated with examination and treatment of patients in the Endocrinology Outpatient Clinic, in surgery, and in the hospital. Exposure to assisted reproductive technologies is also available depending on the current clinical load. Credit: 4. Enrollment: max 1. For more information, please contact Dr. Behera at 919-572-4673 or via email at millie.behera@duke.edu. *Behera, Walmer, Price, Copeland, and Reproductive Endocrinology fellows*

OBGYN-263C. PERINATAL MEDICINE. A study of the relationship of clinical factors during pregnancy as well as during labor and delivery. Emphasis is placed on abnormal conditions of pregnancy as related to the infant, prenatal pathological conditions adversely affecting the fetus and the newborn, and maternal management of the mother during the antepartum period as well as during labor. Current problems in the maternal-fetal relationships are outlined. The clinical rotation consists of exposure to the high risk in-patient obstetric service as well as the out-patient clinical service and fetal diagnostic center. Prerequisites: must contact Dr. Livingston prior to registration. She can be reached at 681-5220. Credit: 4. Enrollment: max 2. *Livingston, Ellestad, Heine, Murtha, and maternal-fetal medicine fellows*

Ophthalmology

Clinical Science Electives

OPHTHAL-252C. GENERAL OPHTHALMOLOGY. A clinical preceptorship in which the student participates and observes the regular house staff activities including night call, conferences, lectures, patient care, and treatment including surgery. The use of specialized ophthalmic apparatus is emphasized. Students should report to the lobby of the AERI building (adjacent to and within the Eye Center) @ 8:30 am to see Ieshia Almestica, 681-0341. Prerequisites: OPHTHAL 420C recommended, but not required. Credit: 4 or 8. Enrollment: max 4. *Fekrat*

OPHTHAL-255C. PEDIATRIC OPHTHALMOLOGY. A clinical preceptorship in which the student participates in the outpatient pediatric ophthalmology clinic. The student will encounter the more common ocular disorders of childhood including ocular motility disturbances, congenital cataracts and glaucoma, and congenital genetic and metabolic disorders. In addition adult motility disorders and neuro-ophthalmic disease such as thyroid eye disease, cranial nerve palsies, and optic nerve abnormalities will be encountered. The diagnosis and treatment aspects are emphasized heavily and opportunities to observe surgery are provided. The course meets by arrangement and requires a minimum of 5 days per credit. For more information, please call 684-3957. Credit: 1 or 2. Enrollment: max 3. *Buckley, Enyedi, Freedman, Wallace, Yanovitch, and Young*

Pathology

Clinical Science Electives

PATHOL-248C. PRACTICAL SURGICAL PATHOLOGY. This course is intended as an introduction to the practice of diagnostic surgical pathology. Clinical and morphologic aspects of disease are emphasized in rotations through the different specialty services (GI, Gyn path Hemepath, Neuropath, etc.) Students will participate (with residents and staff) in the evaluation of gross specimens, interpretations of glass slides (with ancillary studies), and the preparation of the final report. The course can be tailored to individuals planning a career in pathology or those pursuing other specialties. Rotations through the Fine Needle Aspiration and Exfoliative Cytology services can be scheduled depending on the student's interest. Please contact Dr. Bentley prior to starting rotation (684-6423) or Rex.Bentley@duke.edu. Secondary contact: Bonnie Lynch, 684-2533. Students meet on the first day at Dr. Bentley's office, M216A, Duke South, Green Zone, 2nd floor at 8:45 a.m. Credits: 4. Enrollment: max 2. *Bentley and staff*

PATHOL-253C. AUTOPSY PATHOLOGY. The course is intended to introduce students to the autopsy as an investigative tool. Anatomic-clinical correlation is emphasized. Students work directly with one or more members of the pathology department. They first assist at autopsies and then perform autopsies under supervision. They work up these cases with particular attention to correlations with clinical and experimental medicine, prepare the final autopsy reports, and work essentially at the level of a house officer. Students are expected to present their findings at staff conferences. For more information, please call 684-2482. Credit: 4 or 8. Enrollment: max 2. *Proia, DiBernardo and Hulette*

Pediatrics

Clinical Science Electives

PEDS-251C. PEDIATRIC INFECTIOUS DISEASES. This course provides experience in the clinical and laboratory diagnosis of infectious diseases and in their therapy. The student works closely with the infectious disease fellow and attending, participating actively in evaluation of patients in both the inpatient and outpatient setting. Daily rounds in microbiology laboratory. For more information, please call Dr. Jhaveri at 684-6335. Secondary contact: Dr. Cunningham, 684-6335. Administrative contact is Terry Hales, 681-4658. Students should meet on the first day at the Children's Health Center, Peds ID office, room T915. Peds ID fellow page: 970-7420. Credit: 4. Enrollment: max 2. *Jhaveri, St. Geme, Katz, Drucker, McKinney, Steinbach, Moody, McGann, Cunningham, Seed and Benjamin*

PEDS-253C. ALLERGY AND CLINICAL IMMUNOLOGY. Clinical appraisal and practice in use of methods of diagnosis and treatment of allergic and immunologic disorders including the atopic diseases, immunologic deficiency states, and bone marrow transplantation. Scope: in-depth seminars, history, physical examination, skin testing, a variety of clinical immunologic tests, and Clinical Research Unit experience. For more information please call Dr. Burks at 684-9914. Alternate contact: Beverly Ross, email beverly.ross@duke.edu; phone: 681-2949. Students meet on the first day at 8:30 a.m. on the 4th floor, CHC - Allergy and Immunology Clinic. Credit: 4. Enrollment: max 2. *Burks, Markert, Williams, Roberts, Frank, Buckley, Chinn, Land and Vickery*

PEDS-254C. CLINICAL GENETICS AND METABOLISM. The student becomes familiar with evaluation and management of various genetic disorders including malformation syndromes and biochemical disorders. History-taking, pedigree construction and analysis, specialized aspects of the dysmorphological physical examination, diagnostic techniques, routine and specialized laboratory methods (cytogenetic, biochemical, molecular), and reference materials (texts and computer programs) are covered. Students participate in weekly teaching and clinical conferences. For more information please call 684-2036. First Day of Classes: Students should meet at the Genetics Clinic at 8:00 a.m., CHC level 2, Room 2924A. Credit: 4. Enrollment: max 2. *McDonald*

PEDS-257C. PEDIATRIC HEMATOLOGY AND ONCOLOGY. This course includes all aspects of clinical and laboratory hematology (with a focus on sickle cell disorders) as well as the diagnostic evaluation, care, and treatment of patients with malignant diseases (childhood leukemia, lymphoma, osteosarcoma, neuroblastoma, Wilm's tumor). Emphasis is placed on fundamental concepts of pediatric hematology/oncology. Students will accompany the inpatient team on the ward rounds for 2 weeks of the rotation with the remaining time spent in the clinic evaluating new patients and seeing established patients. Students also are expected to attend divisional teaching conferences. Students will be asked to research a specific topic and deliver a short presentation at the end of their rotation. For more information please call Deb Lasater at 684-3829 or Dr. Kreissman via email at kreis001@mc.duke.edu. Prerequisite: contact instructor. Credit: 4. Enrollment: max 1. *Kreissman, Armstrong, Barfield, Hwang, Lindaric, Moran Rosoff, Thornburg, Wechsler*

PEDS-259C. PEDIATRIC STEM CELL TRANSPLANT UNIT. This four week elective is designed to give medical students experience in all aspects of clinical hematopoietic stem cell transplantation including the diagnostic evaluation, care, and treatment of transplant patients. Emphasis is placed on fundamental concepts of hematopoietic stem cell transplantation. Students will accompany the inpatient team on the ward rounds for 3 weeks of the rotation with the remaining time spent in the clinic evaluating new patients and seeing established patients. Students also are expected to attend divisional teaching conferences and give informal presentations on topics in hematopoietic stem cell transplantation. Students should join the Division meeting on Monday at 8:00 a.m. in the Division offices on the first floor of the Old Duke Credit Union (1400 Morreene Rd) on the first day of classes. For more information, please contact Dr. Martin at paul.martin@duke.edu, or pager, 970-3758. Secondary contact:

Tim Driscoll, 668-1120. Credit: 4. Enrollment: max 2. *Martin, Kurtzberg, Driscoll, Szabolcs, Parikh, Prasad and Page*

PEDS-261C. CLINICAL PEDIATRIC CARDIOLOGY. This Medical Student rotation provides an learning experience in the clinical diagnosis and management of childhood heart disease. The student will have the opportunity to see and participate in the management of children referred for cardiology evaluation or follow-up via clinic or consultation. There are also experiences observing cardiovascular procedures in the Pediatric Cardiac Catheterization Laboratory, the Pediatric Echocardiography Laboratory and the operating room. The emphasis is placed upon outpatient management, but there is the option of attending inpatient rounds in the cardiac intensive care unit if desired. Scope: history, physical examination, and special diagnostic techniques (echocardiography, electrocardiography, cardiac catheterization and cineangiography). Students participate in outpatient clinics five days per week as well as weekly cardiology/cardiovascular surgery conference. Prerequisite: PEDS 205C. Credit: 4. For more information please call 684-3574. Please contact Dr. Wechsler by phone or by email (stephanie.wechsler@duke.edu) prior to the first day of the rotation to schedule an orientation meeting. Secondary contact: Gisela Pedraza at 684-3574. Enrollment: max 1. *Wechsler, S; Other faculty: Armstrong, Barker, Camitta, Campbell, Carboni, Fudge, Idriss, Kanter, Li, Pasquali, Rhodes.*

PEDS-265C. ENDOCRINE DISORDERS IN CHILDREN. Students attend in the Pediatric Endocrine, Diabetes, and Insulin Resistance/Obesity Clinics and assume active roles in the evaluation and management of in-patients admitted to the Endocrine Service. Emphasis is placed upon the evaluation of growth and sexual development as indices of endocrine status during childhood. Students also participate in a monthly endocrine journal club and in weekly intra- and interdepartmental endocrine clinical and research conferences. Students will make a presentation to the endocrine group at the end of the rotation. For more information, please e-mail Dr. Robert Benjamin at benja013@mc.duke.edu. Secondary contact: Dr. Deanna Adkins, email at deanna.adkins@duke.edu. Prerequisite: contact instructors. First day of class - report to Registrar for paperwork completion and then to Lenox Baker Children's Hospital, 3000 Erwin Road, Suite 200. Credit: 1 to 8. Enrollment: max 2. *Benjamin, Freemark, Adkins, Friedman and Haqq*

PEDS-266C. PEDIATRIC NEUROLOGY. Students will partake in the evaluation and management of both hospitalized and ambulatory pediatric patients with neurological disorders. Emphasis is placed on the neurodevelopmental history, neurological examination, the use of laboratory tests and radiological tools and pharmacotherapy in the diagnosis and management of childhood neurological disorders. Administrative contact: Terry Hales at 681-4658. Students should report to the PEDS Neuro office in the CHC room T0913. Please meet promptly at 8:00 a.m. Prerequisite: contact Dr. Gallentine at 668-0477. Credit: 1 to 8. Enrollment: max 2. *Gallentine*

PEDS-270C. INTRODUCTION TO THE PEDIATRIC INTENSIVE CARE UNIT. This course is designed for second year medical students to allow students a four-week experience in the Pediatric Intensive Care Unit. Under supervision of faculty attendings, fellows, and residents, students participate in the care of critically ill children admitted to the Pediatric Intensive Care Unit. Emphasis is placed on the development of the pathophysiologic approach to the diagnosis and therapy of a broad spectrum of pediatric illnesses as they present in acute care settings. Advanced concepts in pediatric critical care are emphasized. Students are not expected to take night call with pediatric house staff. Prerequisite: PEDS 205C. For more information please contact Dr. Hartman, 681-6403 or via email at mary.hartman@duke.edu. Credit: 4. Enrollment: max 2. *Hartman, Kern, Meliones, Schulman, Turi, and Weldon*

PEDS-271C. PEDIATRIC NEPHROLOGY. Students actively participate in assigned patient care, and prepare didactic presentations as a part of instruction. Clinical work provides the students with exposure to clinical nephrology and basic renal physiology. The course will provide experience in diagnosis, interpretations of laboratory tests, natural history, and treatment of acute and chronic disorders of the kidney in children. The student will participate in the management of fluid and electrolyte disorders

in infants and children. Consultative services are provided for inpatients and outpatients from general and subspecialty disciplines in pediatrics, intensive care units, and the transplant services. For more information, please contact Dr. Wigfall at 684-4688 or via email at wigfa001@mc.duke.edu or Dr. Foreman at forem001@mc.duke.edu. Credit: 4. Enrollment: max 1. *Wigfall, Gbadegesin, and Foreman*

PEDS-290C. ADVANCED PEDIATRICS. This course permits the student to elect an in-depth experience within pediatrics. Each student has a specific faculty preceptor who develops and implements the curriculum tailored to the individual's needs. Listed below are the faculty representatives to contact. Arrangements for the elective must be made with these individuals prior to enrolling in the course. The name of the preceptor with whom a student is working must be designated during web registration. Drucker and selected departmental representatives. Division Faculty Telephone: Emergency Department Linton Yee, M.D. 684-5537* Gastroenterology Martin Ulshen, M.D. 681-4841 Pulmonary Richard Kravitz, M.D. 684-2289 Rheumatology Eglia Rabinovich, M.D. 684-6575 – (contact Judy Messinger at 684-6627; Sports Medicine Deborah Squire, M.D. 477-4297 *In the Emergency Department, the student participates in the initial evaluation, stabilization and management of pediatric medical patients. Weekly didactic lectures and case review conferences are offered. The student is expected to research a relevant topic of his/her interest and lead a brief discussion with faculty and house staff during the elective. The student is evaluated by the ED Attending staff and receives ongoing feedback throughout the rotation as well as a formal exit interview. Enrollment: max 1; Credits: 4 Prerequisite: PEDS 205C. *Contact Dr. Drucker at Robert.drucker@duke.edu with any questions.*

Psychiatry

Clinical Science Electives

PSYCHTRY-253C. ADDICTION PSYCHIATRY. Students are exposed to a spectrum of settings for treatment of substance use disorders. Students are based at the Durham VAMC Substance Abuse Outpatient Program, with additional experience at other Duke-affiliated inpatient and outpatient facilities. Emphasis is placed on understanding the relationships between addictive disorders and other psychiatric and medical conditions. Experiences include diagnostic evaluation, pharmacological management, and individual, group, and family psychotherapy. Students function as members of the multidisciplinary treatment team at the VA program. For more information and for approval, please contact Dr. Roy Stein at 286-0411 or via email at stein001@mc.duke.edu. Credit: 4. Enrollment max 1. Prerequisites: instructor approval at least 4 weeks in advance and satisfactory completion of PSYCHTRY 205C. *Stein, Anderson-Brown, Book, Bradford, and Loro*

PSYCHTRY-265C. CONSULTATION-LIAISON PSYCHIATRY. The consultation-liaison services at Duke Medical Center offers a clinical clerkship in the evaluation and management of psychiatric disorders in the medical and surgical setting. The student performs psychiatric consultations for medical and surgical services under direct supervision of residents and senior staff. Emphasis is placed on assessment and treatment of psychiatric disorders in the inpatient medical/surgical setting. Topics in psychosomatic medicine, psychopharmacology and medico-legal issues are discussed. Students attend weekly MedPsych conference. Hours are 8am-6pm M-F, call the consult pager to arrange meeting place on first day (970-PSYC). Students need to check with Dr. Rivelli in advance via email at sarah.rivelli@duke.edu to confirm the availability of this rotation. Prerequisites: instructor approval and satisfactory completion of PSYCHTRY-205C. Credit: 4. Enrollment: max 1. *Rivelli*

Radiation Oncology

Clinical Science Electives

RADONC-255C. CLINICAL RADIATION ONCOLOGY. Radiation oncology plays a crucial role in the management of patients with cancer. The student begins this course with lectures, individual tutorials, and audio-visual education programs to review the crucial elements of radiation biology, medical radiation physics, and dosimetry. This is followed by clinical instruction based in the ambulatory clinics of the Radiation Oncology Department as well as participation in brachytherapy procedures, care of inpatients, and new patient consultations. This course provides an introduction to the role of radiation therapy in the treatment of malignant disease. For more information please contact Dr. Larrier at 668-7342 or via email at larri003@mc.duke.edu. Secondary contact: Bette W. Clack, email, walke098@mc.duke.edu or phone, 668-6693. Students should report to Room 005113 [Sub-basement, White Zone, Duke South] at 7:45am on the first day of the rotation. Credit: 4 or 8. Enrollment: max 2. *Larrier and staff*

Radiology

Clinical Science Electives

RADIOL-250C. THORACIC IMAGING. This course will provide the ability to interpret chest radiographs and increase the student's confidence in diagnosing cardiac and pulmonary diseases from chest films. Through formal teaching sessions and case presentations, as well as daily interactions with surgical and medical clinical teams, the student will be exposed to the broad range of modalities and interventional procedures conducted by the thoracic imaging division. Opportunities exist to become involved in research projects. During the course of one month, the student will have interpreted or observed the reading of more than 1,000 chest radiographs. For more information please contact Dr. Washington at 684-7512 or via email, lacey.washington@duke.edu. Credit: 4. Enrollment: max 3. *Washington and staff*

RADIOL-251C. CLERKSHIP IN NEURORADIOLOGY. A specialized program of detailed instruction in neuroradiology. The program includes participation in many interdepartmental conferences and the performance and interpretation of a variety of examinations including cerebral angiography, computerized axial tomography, magnetic resonance images, and myelography. For more information please contact Dr. James Eastwood at 684-7466 or via email at eastw004@mc.duke.edu. Administrative contact: Babbie Williams, 684-7406. Students should meet on the first day of class at room 1515 for Neuroradiology conference. Orientation to the class follows. Please report promptly at 8:30 a.m. Credit: 4 or 8. Enrollment: max 2. *J Eastwood and staff*

RADIOL-252C. PEDIATRIC RADIOLOGY. A specialized program of instruction and participation in the wide variety of radiologic examinations in the pediatric age group. Special correlation of these examinations to the problems of specific diagnosis and patient care is made. For more information, please contact Dr. Caroline Carrico at 684-7343 or via email at caroline.carrico@duke.edu. Credit: 4. Enrollment: max 2. *Carrico, Frush and staff*

RADIOL-257C. MUSCULOSKELETAL IMAGING. During this four week elective, the student will be exposed to conventional x-rays in bone radiology, emergency room bone films, bone tumor films and musculoskeletal MRI. At the conclusion, the student will be able to identify fractures and have a working knowledge of musculoskeletal radiology. A case presentation will be required. For more information please contact Dr. Nancy Major at 684-7469 or via email at major0004@mc.duke.edu. Secondary contact: Tina Brantley, email at brant003@mc.duke.edu or phone at 684-7652. Credit 4. Enrollment: max. 2. *Major (and staff), Helms, Spritzer, Cothran, and Vinson*

Study Away

Clinical Science Electives

STDYAWAY-250C. EXTRA-MURAL CLINICAL. Second year study away

Surgery

Clinical Science Electives

SURGERY-250C. GENERAL SURGICAL ONCOLOGY. The course is designed for the student interested in surgical oncology. The students are involved in patient care with a specific surgeon but, in addition, are expected to attend multidisciplinary conferences related to gastrointestinal and breast carcinoma. These multidisciplinary conferences involve medical and radiation oncology as well as surgical oncology. The student is also expected to evaluate surgical patients in an outpatient setting as well as participating in inpatient and operative patient care. This course is designed for students who have an interest in the basic sciences in relation to surgical oncology. Attendance at research conferences involved in the molecular and cellular biology of human cancers is also expected. For more information please contact Dr. Clary at 684-6553 or via email, clary001@mc.duke.edu. Permission of instructor is required. Credit: 4. Enrollment: min 1, max 2. *Tyler, Seigler, Clary, Lyerly, Pruitt and Olson*

SURGERY-252C. EMERGENCY MEDICINE. The American College of Emergency Physicians defines emergency medicine as "the medical specialty with the principal mission of evaluating, managing, treating and preventing unexpected illness and injury." Course Goals: 1) Students will see patients with the full range of chief complaints that present to the Duke University Emergency Department. 2) Students will gain experience in making initial evaluations as well as diagnostic and treatment plans with an emphasis on detecting and treating immediate life threatening conditions. 3) Students' ability to rapidly obtain critical facets of a history and physical examination will improve. 4) Students will mature as clinical problem-solvers by seeing several patients per day with undifferentiated chief complaints. How Goals Are Achieved: 1) Students will work with attendings and residents during approximately 13 eight-hour shifts per month. A mixture of day, evening, and overnight shifts will be assigned. 2) Medical student lectures will be held every Monday morning. 3) Students will attend resident conferences on Wednesday mornings. 4) Students will shadow a Durham EMS paramedic team for one day. Methods of Evaluation: Attendings and senior residents will give feedback to students. For more information please contact Dr. David Gordon at 919-684-5537 or by email, davidc.gordon@duke.edu. Prerequisites: none. First day meeting: 9:00 a.m. in the conference room located in the emergency services administrative suite above the emergency department. Administrative contact: David Massung, email at david.massung@duke.edu or phone at 681-4458. Credit: 4. Enrollment: max 8. *Gordon*

SURGERY-253C. TRAUMA SERVICE. This course is designed to provide students interested in trauma care with further experience both in the Emergency Department and on the Inpatient Trauma Service. The course emphasizes triage, resuscitation, complications and pitfalls, and style versus substance differences in management for major and minor emergency problems in the Emergency Department and also pre- and postoperative care on the Inpatient Trauma Service. The student has a full-time experience by assuming duties and responsibilities similar to a junior intern. Emphasis is placed on developing skills in the care of patients with multi-system injuries in the Emergency Department, Inpatient Service, and Operating Room. Students work in conjunction with the attending staff and the residents on the Trauma Service. For more information, please contact Dr. Shapiro at ml.shapiro@duke.edu. Credit: 4. Enrollment: max 2. *Shapiro, Vaslef*

SURGERY-254C. INTRODUCTION TO PLASTIC, RECONSTRUCTIVE AND MAXILLOFACIAL SURGERY. This course is designed for students who may have a future interest in plastic surgery. Duties include the preoperative evaluation of patients, assisting in the operating room, making daily ward rounds, and participation in conferences. For more information please contact Bridgit Burch at 681-6588 or via email at bridgit.burch@duke.edu. Credit: 4. Enrollment: max 1. *Levin, Zenn, Marcus and Erdmann*

SURGERY-256C. ADVANCED CLERKSHIP IN PEDIATRIC SURGERY. This course is designed to familiarize the student with the whole range of surgical problems in children, but with

emphasis on the pathophysiology of surgical and related problems in the newborn infant and the total care of the child with a malignancy. The student is encouraged to participate fully in the patient care aspects of the service and is considered an integral part of the patient care team. Prerequisite: successful completion of Surgery 205C and a brief pre-enrollment interview with Dr. Henry Rice. For more information please contact Kristin Dickerson via email at kristin.dickerson@duke.edu or by phone at 681-5077. Students may also contact Marisol Francisco via email at marisol.francisco@duke.edu. Students must contact one of the listed individuals prior to the first day of classes to obtain information regarding the meeting time and location for the first day of classes. Credit: 4. Enrollment: max 1. *Rice*

SURGERY-257C. ADVANCED UROLOGIC CLERKSHIP. The diagnosis, management, and surgical treatment of adult and pediatric patients with urologic disorders are covered comprehensively. Students are afforded intimate association with the entire staff in the clinics, wards, and operating rooms, and participate in surgery. Cystoscopic and urographic diagnostic methods along with other techniques are taught. Students are to meet on first day of clerkship on 6300DN at 7:00 am for Urology Morning Rounds with Residents. For more information, please contact Gladys Walker at 684-5693 or via email at gladys.walker@duke.edu or John Wiener at 684-6994 or via email at john.wiener@duke.edu. Credit: 4. Enrollment: max 3. *Wiener, Preminger, Albalá, Donatucci, Freedland, Inman, Moul, Maloney, Robertson, Walther, and Webster*

SURGERY-263C. ADVANCED SURGERY-EMPHASIS CARDIOVASCULAR/THORACIC. Advanced experience in cardiothoracic surgery is offered in this elective, with participation in preoperative evaluation, operations, and postoperative care. This experience is available in thoracic oncologic surgery, adult cardiac surgery, congenital cardiac surgery, or a combination. The elective also includes several weekly teaching conferences. For more information, please contact Annette Sullivan at 668-0440. Credit: 4. Enrollment max: 5. *D'Amico, Davis, Gaca, Harpole, Hughes, Lin, Lodge, Milano, Onaitis, Smith, Tong*

SURGERY-265C. CLINICAL NEUROSURGERY. The course is designed for those students with a career interest in one of the neurological sciences. Duties include the work-up and care of inpatients, work-up of clinic patients, assistance in the operating room, daily rounds, and night call. Weekly conferences are held in neurosurgery, neurology, neuropathology, and neuroradiology. There are also special lectures. Permission of instructor is required. For more information, please contact Karen Koenig at 684-3271 or via email at koeni002@mc.duke.edu. First Day of Classes: students are to meet promptly at 6:00 a.m., 4200 (Neuro ICU) at Duke Hospital. Credit: 4. Enrollment: max 2. *Friedman and Neurosurgery Staff*

SURGERY-269C. CLINICAL OTOLARYNGOLOGY. This course provides the second-year student with potential aspirations in otolaryngology with a comprehensive experience in clinical otolaryngology - from laryngology to otology to oncology to pediatrics. The exposure to faculty is equivalent to the fourth-year sub-internship and should provide an opportunity for guidance in the career path. The student's duties include participation in both outpatient clinic activities and inpatient care including ward rounds and operating room procedures, and also in various conferences held by the division. The student is expected to take overnight in-house call at least one night each week and to prepare and give a 15-minute lecture at the end of the course on a topic of his/her choosing related to a patient-care case in which he/she participated during the rotation. This course does not count toward the fourth year subinternship requirement. For more information please contact Dr. Puscas at 681-7367. Credit: 4. Enrollment Max: 2. *Puscas, Cohen, Esclamado, Fisher, Kaylie, Scher, Witsell and Tucci.*

SURGERY-270C. INTRODUCTION TO THE SURGICAL INTENSIVE CARE UNIT. This course is designed for second year medical students to allow students a four-week elective experience in the Surgical Intensive Care Unit (SICU). Under supervision of a multidisciplinary Faculty consisting of Attendings from the Department of Surgery, Medicine and Anesthesia, the student participates in the care of critically ill adult patients admitted to the SICU. Emphasis is placed on the development of the pathophysiologic approach to the diagnosis and therapy of a broad spectrum of patients admitted to the SICU for perioperative care, treatment of traumatic injury, resuscitation, and support of organ failure.

Advanced concepts in adult critical care are emphasized, including the supportive care of Multiple organ dysfunction syndrome, Septick shock, hemorrhagic shock, multiple organ transplantation, and bedside procedures. This course will count for fourth year critical care requirement. For more information please contact Dr. Shapiro via email at ml.shapiro@duke.edu. Prerequisite: SURG 205C. Credit: 4. Enrollment: max 2. *Shapiro, Vaslef, Knudsen, Moretti, Young*

SURGERY-279C. GENERAL PRINCIPLES OF ORTHOPAEDICS. A full experience on the Orthopaedic Service with duties and responsibilities similar to a first year resident. Inpatient care, outpatient examination, operating room experience, and emergency room call are included. Conference attendance is required. Individual or group discussions are conducted each day with attending staff/residents. The purpose of the course is to present broad concepts of orthopaedics to students planning general practice, pediatrics, allied surgical specialties, or orthopaedics. For more information, please contact Wendy Thompson at 684-3170 or via email at thomp205@mc.duke.edu. Credit: 4. Enrollment: max. 4. *Nunley, orthopaedic staff and house staff.*

(Subject to Change)