

# RUTGERS

New Jersey Medical School

## **ELECTIVES** for **Visiting Students** *2018-2019*

*Office of the Registrar  
Medical Sciences Building  
MSB B-640*

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## ELECTIVES SCHEDULE - Visiting Students

**THESE ARE THE ONLY DATES OFFERED TO VISITING STUDENTS. STUDENTS MUST ADHERE TO NJMS ROTATION DATES; THERE WILL BE NO EXCEPTIONS.**

### ACADEMIC YEAR 2018 - 2019

	CALENDAR DATES	BROCHURE DESIGNATION
2018	July 2 to July 27	July*
	<i>*July rotations are ONLY available for:</i> <i>- department of PM&amp;R (all students)</i> <i>- Neurosurgery and Otolaryngology for RUTGERS ROBERT WOOD JOHSON STUDENTS ONLY)</i>	
	July 30 to August 24	August
	August 27 to September 21	September
	September 24 to October 19	October
	October 22 to November 16	November*
	<i>*November rotations are ONLY available for the Department of PM&amp;R</i>	

The elective offerings listed in this brochure are the ONLY electives that are offered to non-NJMS students.

## DEPARTMENT OF EMERGENCY MEDICINE

### **EMED 9011 - INTRODUCTION TO EMERGENCY MEDICAL SERVICES (EMS)**

DIRECTOR: Martha Masters, MD, and William O'Brien

LOCATION: University Hospital EMS, University Hospital Emergency Department

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This rotation is based at The University Hospital Emergency Medical Services, in Newark, New Jersey. The elective will afford the medical student a general overview of the Emergency Medical Services, with a focus on busy urban systems. Primary areas of study are ground based Basic and Advanced Life Support and Emergency Medical Dispatch and communications, with secondary concentration on CQI, protocol development, medical direction and EMS research. In addition the student will understand the role of state government in EMS in New Jersey by attending state meetings when possible. Time will be provided to ride on the ambulances.

### **EMED 9151 - PEDIATRIC EMERGENCY MEDICINE**

DIRECTOR: Dr. Virteeka Sinha, MD (vs533@njms.rutgers.edu)

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This rotation is designed to familiarize the student with the evaluation and management of common pediatric emergencies that present to a tertiary children's Emergency Department. This will be done in a direct patient care environment, where the student will see patients on their own in a supervised setting as part of a team of residents and faculty, and present these cases to the supervising physicians. The focus will be on history-taking and examination of children of all ages, and witnessing or performance of common Emergency Department procedures such as phlebotomy, I.V. insertions, arterial blood gas sampling, bladder catheterization, lumbar puncture, suturing and wound management, and splinting of simple fractures. The student will also learn some basics of radiologic interpretation as it pertains to common pediatric emergencies (e.g., chest x-ray, orthopedic films).

While on this rotation, the student will work approximately 36 hours per week (includes some nights and weekends). The student schedule will be made available prior to the beginning of the rotation. S/he will participate in the management of pediatric trauma patients in conjunction with the Emergency Department residents and faculty, and possibly pediatric psychiatric emergencies. There will be an opportunity to discuss and learn about child abuse evaluation and referral and DYFS policies and procedures. Students will have the opportunity to attend emergency medicine departmental conferences, morning report and grand rounds. Students will be given an opportunity to write up and discuss an interesting case.

Evaluations will be based on fund of knowledge, patient workups, interest level, lecture presentation and procedural skills (faculty and residents will participate in the evaluation process).

## **EMED 9245 - EMERGENCY MEDICINE**

Elective Director: Shannon Moffett, MD  
MSB E 501  
[shannon.moffett@rutgers.edu](mailto:shannon.moffett@rutgers.edu)

Course Coordinator: Ms. Tiffany Thompson  
MSB E 609  
[tt388@njms.rutgers.edu](mailto:tt388@njms.rutgers.edu)  
973-972-5886

LOCATION: University Hospital, Department of Emergency Medicine

WHEN OFFERED: August, September, October

DESCRIPTION OF COURSE: This course is a four week clinical rotation in the Emergency Department (ED) at University Hospital. The course is offered only to fourth-year medical students, who will act as interns during their clinical shifts.

Requirements include:

- Fourteen 8-hour shifts per 4-week rotation.
- Many evenings, night, and weekend shifts in our busy ED
- Attendance at our Emergency Medicine conferences Wednesdays from 8am-1pm (MSB E609)
- Attendance at all didactics for our core clerkship students
- One morning spent in the New Jersey Poison Information and Education System Center
- Participation in our Social Determinants of Health Curriculum
- 5-minute power-point presentation at end of block

Students will see patients with a wide range of presenting signs and symptoms that include trauma, chest pain, acute gynecologic and abdominal complaints, respiratory failure and other acute and acute-on-chronic presentations.

Students are encouraged to perform any necessary diagnostic, resuscitative and/or therapeutic procedures under direct supervision of the ED attending physician.

- Students will be evaluated at the intern level. Specifically, we expect:
- Absolute professionalism, including dress and timeliness
- Efficient and timely interview/examination
- Efficient and timely presentation of a tailored, substantive HPI and plan to attending /senior resident
- Rigorous follow-up on any diagnostic studies for the patients under the student's care
- Appropriate actions to make patients more comfortable and move them efficiently through the ED

Students will be graded on their clinical performance via evaluations by the ED attending physicians and senior residents. Mid-rotation feedback regarding clinical performance is provided. This elective is graded on a fail/pass/high pass/honors scale. Attendance at all required shifts, lectures, didactics, and procedural workshops is required to pass this elective.

## DEPARTMENT OF FAMILY MEDICINE

### **FMED 9100 – STUDENT-RUN FREE CLINIC VISITING STUDENT ELECTIVE**

DIRECTOR: Drs. Chantal Brazeau and Steven Keller

LOCATION: Student Family Health Care Center Clinic and Department of Family Medicine

WHEN OFFERED: Only 3<sup>rd</sup> and 4<sup>th</sup> year visiting students from US, LCME-accredited medical schools may apply and enroll in this elective. All applications must be received at least 4 months in advance of the proposed elective start date in order to allow adequate time for processing, credentialing and mandatory training. The 3<sup>rd</sup>/4<sup>th</sup> year students must have participated in their home school's student-run free clinic.

DESCRIPTION OF ELECTIVE: This elective is designed to introduce visiting medical students from other US-LCME accredited schools to the innovative activities of our Student Family Health Care Center (SFHCC), the longest student-run free clinic in the country. Over the past 3 years, the SFHCC has incorporated innovative models of primary care including Patient Centered Medical Home (PCMH) concepts, Interprofessional Education, an outreach to a local homeless shelter and a robust quality assurance/quality improvement (QA/QI) program. Visiting students will attend all clinics including SFHCC and outreach sites, all SFHCC didactics and reflection sessions and will participate in a mentored Quality Assurance/Quality Improvement (QA/QI) project. Visiting students will learn about the incorporation of the PCMH (including patient education, care management and helping patients register for affordable health insurance via the Affordable Care Act) in our student-run free clinic and will be educated about the process of developing a quality assurance program for a student-run clinic so they can replicate this at their own sites. NJMS students are not eligible to enroll in this elective.



## DEPARTMENT OF MEDICINE

### **MED 9008 - LIVER DISEASE AND HEPATITIS C**

DIRECTOR: Dr. Nikolaos Pyrsopoulos

LOCATION: University Hospital and Liver Center

WHEN OFFERED: August, September, October

#### DESCRIPTION OF ELECTIVE:

a) Objectives: This elective exposes fourth year medical students to the Liver program at the New Jersey Medical School and Liver Center. It will focus on the current approach to viral hepatitis C and other liver diseases including its differential diagnosis and treatment. Hepatitis C is one of the most common causes of chronic liver disease world-wide with involvement of 2000 New Jerseyans. Academic perspective developed at the Liver Center indicates instruction focused on hepatitis C provides the insight needed to obtain basic views required for pursuit of all other diseases of the liver; accordingly the student obtains needed overviews of liver disease using the NJMS approach. The course is designed to give medical students hands-on experience in prevention, detection and treatment of this and other liver disorders and their complications including cirrhosis, cancer and fulminant liver failure. Attention will be focused on reversibility of clinical, laboratory, radiologic and morphologic features of hepatitis C and its differentiation from other hepatic disorders. Special attention will be given to the influence of available therapeutic measures in prognosis.

The exciting up-to-date course will prepare students interested in family medicine, internal medicine, pediatrics and other primary care specialties to properly care for these special patients. Attendees will be provided with newest information on clinical, laboratory, radiologic, morphologic and etiologic criteria, as well as available medical, surgical and radiologic therapeutic modalities for liver disease.

#### b) Format:

1. Ambulatory evaluation and treatment of selected referred patients with chronic hepatitis C and other unique hepatic disorders.
2. Inpatient rounds on patients with hepatitis C or other disorders of the liver admitted to the Medical Hepatology and Surgical Transplant Services.
3. Instruction and observation of scheduled special diagnostic and therapeutic measures including upper endoscopy for bleeding varices, TIPS for varices and ascites, ERCP for biliary obstruction, and needle biopsy of the liver.
4. Participation in ongoing studies on detection and management of viral hepatitis without complications or in the presence of bleeding esophageal varices, ascites, hepatic encephalopathy, and renal dysfunction.
5. Participation in work-up of patients with end-stage liver disease not responsive to medical measures who require transplantation; observation of donor organ retrieval; participation in transplant surgery and postoperative care.

## **MED 9092 – GERIATRICS**

DIRECTOR: Drs. Manisha Parulekar

LOCATION: Hackensack University Medical Center

WHEN OFFERED: September, October

DESCRIPTION OF ELECTIVE: With Medicare eligible persons now accounting for as many as 50% or more of all hospital beds, physicians will be required to have an appreciation of the needs of the older patient and how to target services and interventions, whether or not they originate in hospitals. . Physicians, in both primary care and many of the specialties, will be required to carry out a comprehensive assessment initially and learn to maximize both the older person's functional state and quality of life.

In this rotation, the student will work on the acute geriatric floor at Hackensack University Medical Center and participate in rounds and patient assessment. The inpatient service will include consultation for trauma, orthopedics, psychiatry and other subspecialties as well. Issues of great concern to all of us as we age, such as incontinence, dementia, polypharmacy and falls, will be discussed. In the outpatient experience he/she will attend a long term care facility, assisted living facility, geriatrics clinic working with an interdisciplinary team in the care of the older patient. A geriatrics syllabus and research opportunities will be provided.

The students will be expected to attend geriatric didactic sessions, Morning Report and Journal Club, and all bedside rounds. The student will be doing a pre and posttest in geriatrics.

### GOALS OF THE ELECTIVE:

1. Increase knowledge and develop skills in geriatric assessment.
2. Appreciate the heterogeneity of health and function in older adults and learn about physiology of aging.
3. Develop an understanding of health aging.
4. Change in attitude towards the aging population.

## **MED 9121 - GASTROENTEROLOGY**

DIRECTOR: Dr. Sushil Ahlawat

LOCATION: This elective is based at University Hospital and the Department of Veterans Affairs Medical Center in East Orange.

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The elective is directed towards students who are considering entering Internal Medicine, Family Practice, Pediatrics, Gastroenterology, or General Surgery. Emphasis is put on clinical diagnosis and treatment of digestive diseases and nutritional disorders. Assignments are made to either University Hospital or the Department of Veterans Affairs Medical Center in East Orange. The program is designed to provide instruction in gastroenterology, hepatology, and nutrition using newest approaches to common digestive disorders. There is a review of common techniques used in these areas and students participate in the weekly Digestive Disease Conferences, didactic lectures, journal club, pathology conference and radiology conference.

1. Objectives: Obtain further knowledge of pathophysiology and additional experience in proper diagnosis of common problems in gastroenterology: esophageal disease, upper G.I. bleeding, peptic ulcer, diseases of the intestine, diverticulitis, proctitis, pancreatitis, diagnosis and treatment of hepatitis, fatty liver, cirrhosis, biliary obstruction, gallstones, inborn errors of metabolism, and primary liver cancer.

The student learns the most up-to-date approach to management of acute G.I. bleeding, acute and chronic pancreatitis, ascites, hepatic encephalopathy, and jaundice. Special attention will be given to the evaluation of patients for liver transplantation and gastrointestinal involvement with AIDS.

2. Format: Utilizing newest video technology, students will participate in upper endoscopy, colonoscopy, treatment of bleeding ulcers, needle biopsy of the liver, esophageal, biliary and rectal manometry. Students work up patients in association with subspecialty residents and clinical faculty. They learn how to use clinical, laboratory, morphologic, radiologic and epidemiological studies for the diagnosis and evaluation of the effectiveness of treatment. They will assist in Endoscopic Ultrasound, liver biopsy, endoscopic retrograde cholangiography, interpretation of ultrasounds, CT scans, MRI's, hepatitis serology, and mucosal and liver biopsies.

## **MED 9150 - INFECTIOUS DISEASES**

DIRECTOR: Dr. Lisa Dever

DIVISION CHIEF: Dr. David Alland

PROGRAM MANAGER: Lisa Wade, wadeli@njms.rutgers.edu  
Phone: (973) 972-7837, Fax: (973) 972-2122

LOCATION: University Hospital, VA New Jersey Health Care System (East Orange), and Hackensack University Medical Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Assignments to University Hospital or affiliated hospitals will be made by the program director on the basis of the student's choice. The student will be supervised and educated by the Infectious Diseases Fellow as well as the Faculty Attending Physician. The following objectives should be fulfilled:

- a. Obtain further knowledge of pathophysiology, diagnosis and treatment of infectious diseases due to bacteria, mycobacteria, fungi, viruses, rickettsia and parasites. The student is required to comprehensively evaluate and follow a minimum of 5 patients per week and to keep an account of appropriate data and diagnosis for review at the end of the rotation. Patients will be seen by the student in the hospital, ambulatory setting, and emergency department.
- b. Acquire expertise in interpreting clinical microbiological data including smears, stains, cultures, and molecular and serologic studies. The student will also gain experience with the use and interpretation of a variety of imaging studies to diagnosis infectious diseases and increase their knowledge of the pharmacokinetics, toxicity, and spectrum of activity of antimicrobial agents used to treat infections.
- c. The student may elect to participate in ongoing basic or clinical research in infectious diseases.
- d. Attendance at all conferences sponsored by the Division is mandatory.

## **MED 9170 - NEPHROLOGY**

DIRECTOR: Dr. Alluru Reddi  
(973) 972-4100; reddias@njms.rutgers.edu

LOCATION: University Hospital and Department of Veterans Affairs Medical Center in East Orange.

WHEN OFFERED: August, September, October

**DESCRIPTION OF ELECTIVE:** Assignments to University Hospital or an affiliated hospital are made by the program director on the basis of the student's choice and his educational requirements. The following objectives should be fulfilled:

- a. Obtain further knowledge of pathophysiology and experience in proper diagnosis and treatment of acute and chronic renal failure, disorders of hydration, glomerulonephritis, renal calculi, electrolyte and acid-base disturbances, hypertensive emergencies, and urinary tract infections. A fourth year student must work up at least three patients with renal disease each week and keep an account of the diagnosis and other pertinent data for review at the end of the rotation.
- b. Acquire expertise in interpreting laboratory data including electrolyte and acid base parameters, urograms, renal scans, urine sediments, renal clearance tests, and kidney biopsies.
- c. The student may elect to participate in ongoing clinical or basic research in nephrology. He/she may participate in the activity of the peritoneal dialysis or hemodialysis units to become familiar with the clinical and mechanical problems occurring in this setting.
- d. The student will be encouraged to develop technical skills as an assistant in initiating acute hemodialysis and peritoneal dialysis. This will include femoral vein insertion.

### **MED 9180 - HEMATOLOGY/ ONCOLOGY**

**DIRECTORS:** Dr. Anupama Nehra

**LOCATION:** Rutgers CINJ at University Hospital

**WHEN OFFERED:** August, September, October

**DESCRIPTION OF ELECTIVE:** Assignments are made by the program director to University Hospital or an affiliated hospital, with input from the student. The following objectives should be fulfilled:

- Acquire detailed knowledge of the pathophysiology, clinical features, and basic principles of treatment of Hematologic Disorders in the following categories: hematologic malignancies, acute and chronic leukemia's, myeloproliferative disorders, myelodysplastic syndromes, bone marrow failure states, lymphoproliferative disorders, plasma cell dyscrasias, disorders of coagulation and thrombosis, including platelet disorders and von Willebrand disease, genetic and acquired disorders of coagulation, thrombophilic disorders, hemostatic issues in surgical and obstetric patients.
- Evaluation and management of anemia's, including hypoproliferative anemia's, hemolytic anemias.
- Acquire expertise in interpreting laboratory data relating to the hematologic system, including interpretation of peripheral blood smears, immunophenotyping, and acquire fundamental skills in performing and interpreting peripheral blood smears, and in performing and interpreting bone marrow biopsy and aspirations.
- The student may elect to participate in ongoing laboratory or clinical research.
- Obtain an overview of the clinical presentation, methods of diagnosis, staging and treatment of major neoplastic diseases including lymphomas and solid tumors.
- Understand basic principles of oncology, including radiation therapy, chemotherapy and surgery, as well as multimodality treatment.
- Acquire basic knowledge of tumor epidemiology, tumor biology, clinical pharmacology, clinical immunology, tumor markers and paraneoplastic syndromes.

- Be exposed to ongoing clinical research such as early clinical trials of new anti-cancer agents (Phase I, Phase II) and multicenter Oncology Group trials.

Students are encouraged to use Hoffman R, et al, editors **Hematology, Basic Principles and Practice** (Churchill, Livingston, New York, 3<sup>rd</sup> Edition) as a reference text. Students will attend weekly divisional and research conferences, tumor and hematopathology seminars, as well as participating in outpatient clinics and inpatient consultations and patient care. The student will be evaluated at the end of the rotation on the basis of their performance and participation in clinical activities, case presentations, and knowledge acquired. Emphasis will be placed on the comprehensive approach to the cancer patient, including: diagnosis, staging, surgical management, radiation, chemotherapy, psychosocial implication of cancer, death and dying, pain control and hospice. It is expected that this elective will demystify cancer and cancer patients and expose the student to an exciting, challenging and rewarding subspecialty.

The student will attend all (site specific) divisional conferences including the weekly Head and Neck Conference, every other week Lung and GI Oncology Conference, weekly Sarcoma Conference, and Breast Conference.

## **MED 9210 - PULMONARY DISEASES**

DIRECTOR: Dr. Andrew Berman (bermanar@njms.rutgers.edu)

LOCATION: University Hospital, Department of Veterans Affairs Medical Center in East Orange, and Hackensack University Medical Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Assignments are made by the program director to University Hospital or an affiliated hospital. The student will be expected to perform initial patient interviews, and follow up on patient interviews, physical examinations and review of pertinent ancillary studies daily. In addition, the student will be expected to perform literature searches on topics relevant to the patients they are following. The student is expected to present this information to the supervising faculty during rounds. The student's ability to collect, analyze, and summarize relevant medical information, as well as interpersonal skills and professionalism, will be the basis of the final evaluation. The following objectives should be fulfilled:

- Obtain further knowledge of pathophysiology and additional experience in proper diagnosis and treatment of:
  - Chronic obstructive lung disease such as chronic bronchitis and emphysema
  - Asthma
  - Pulmonary infections (pneumonia, lung abscess, TB)
  - Lung cancer
  - Pulmonary embolism
  - Pulmonary hypertension
  - Diffuse lung diseases, such as sarcoidosis and idiopathic pulmonary fibrosis
  - Respiratory failure
  - Selected ICU-related illnesses (while providing consultative services in non-medical ICU)
- Acquire expertise in interpreting laboratory data including pulmonary function tests, chest X-rays, chest CT scans, **thoracic ultrasound**, ventilation/perfusion scans, respiratory microbiology and lung histology.
- The student may elect to participate in ongoing clinical research in pulmonary diseases.

## **MED 9241 - GLOBAL TUBERCULOSIS INSTITUTE**

DIRECTOR: Dr. Alfred Lardizabal ([lardizaa@njms.rutgers.edu](mailto:lardizaa@njms.rutgers.edu), 973-972-8452)

ADMINISTRATIVE CONTACT: Amy Lewis ([lewisa1@rutgers.edu](mailto:lewisa1@rutgers.edu), 973-972-0978)

LOCATION: NJMS Global Tuberculosis Institute, Lattimore TB Clinic and University Hospital, and affiliated TB Clinics in Middlesex County and Hudson County

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The following objectives must be fulfilled:

- a. Acquire expertise in the clinical evaluation of a patient with potential pulmonary or extrapulmonary TB.
- b. Obtain further skills in the diagnostic methods for TB including testing procedures and radiographic examination.
- c. Obtain further knowledge of the method for screening patient contacts and in the treatment regimens for TB infection and disease.
- d. Obtain further knowledge of the disease control and public health issues relative to treating patients with TB.

The course will introduce students to the interdisciplinary approach necessary for TB control and encompass various educational activities in the areas of TB clinical management, research, patient education and disease control. Students accompany our attending physician for clinic rotation. Students attend our weekly TB Grand Rounds where difficult cases are discussed among our multidisciplinary clinic staff. If applicable, they may accompany an outreach worker to learn about the various methods of therapy administration (Directly Observed Therapy – DOT) and issues in patient care such as socioeconomic conditions, lifestyle factors, behavioral issues, or cultural barriers. Students may also have an opportunity to meet with research partners at the Public Health Research Institute to learn about basic science research in TB.

## DEPARTMENT OF NEUROLOGICAL SURGERY

### NSUR 9000 - ACTING INTERNSHIP IN NEUROLOGICAL SURGERY

DIRECTOR: Dr. Antonios Mammis  
[antonios.mammis@rutgers.edu](mailto:antonios.mammis@rutgers.edu), 973-972-4836

LOCATION: University Hospital

WHEN OFFERED: July (RUTGERS RWJMS STUDENTS ONLY), August, September, October

DESCRIPTION OF ELECTIVE: Students act as members of the neurosurgical team and are responsible for the work-up and care of neurosurgical patients; they are involved in operative procedures. Students will scrub on cases, take some night calls with the residents, and will be asked to prepare and present conferences. The elective is recommended for students interested in neurosurgery, neurology, trauma surgery or critical care.

### NSUR 9050 – RESEARCH IN NEUROLOGICAL SURGERY

DIRECTOR: Dr. Peter Carmel

LOCATION: NJMS

WHEN OFFERED: August, September, October

COURSE DESCRIPTION: This elective is designed to enhance the student's ability to conduct research and apply principles of statistical analyses to the field of Neurological Surgery. Under the supervision of a faculty mentor, the student will have the opportunity to identify a topic for experimental study, formulate a research proposal, perform a literature review, and then design and implement the proper study to further research his/her topic of interest. The elective will provide the student with an understanding of how clinical studies are designed and performed, and will further provide the student with valuable experience in experimental design, implementation, and trouble-shooting.

At the conclusion of this elective, the student will be able to:

1. Integrate pertinent scientific background to design experimental and observational studies in the field of Neurological surgery.
2. Use statistical methods to organize, analyze and report collected data.
3. Formulate a specific hypothesis and determine an appropriate study design and analysis method.
4. Design and implement data collection systems for Neurological surgery research.
5. Review and critique statistical methods and interpretations presented in published research in the Neurological surgery literature.
6. Communicate and present study findings through submission of original research for publication in a Neurological surgery journal or poster presentation.
7. Participate and assist in common neurological procedures, if applicable.

Learning outcomes & evaluation methods:

During this elective it is expected that a student will design and implement an original research project. The student is expected to review the relevant literature pertaining to an original project and gather data necessary for completion of the project. The student will communicate research ideas, design, and methodology throughout the elective and receive constructive feedback to enhance the research process. The student will submit a finalized project to an academic journal upon approval by the attending. The student will also have the opportunity to interact and observe Neurological surgery cases in the operating room at the discretion of the attending.

## DEPARTMENT OF NEUROSCIENCES

### NEUR 9010 - NEUROLOGY ACTING INTERNSHIP

DIRECTORS: Dr. Erin Feinstein

LOCATION: University Hospital and Department of Veterans Affairs Medical Center in East Orange

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Taken after the Neurology Clerkship, this elective gives the student who is interested in obtaining further neurological training the opportunity to function as a house officer in neurology with direct patient responsibility under close supervision.

REPORTING INSTRUCTIONS: The student should contact Dr. Feinstein ([feinster@njms.rutgers.edu](mailto:feinster@njms.rutgers.edu)) one week prior to the start of the course for reporting instructions.



## DEPARTMENT OF OBSTETRICS, GYNECOLOGY, AND WOMEN'S HEALTH

### **OBG 9020 - GYNECOLOGIC ONCOLOGY**

DIRECTOR: Dr. Bernadette Cracchiolo

LOCATION: University Hospital and Ambulatory Care Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Students will develop a deeper understanding of cancer care for gynecologic malignancies by participating in clinic, assisting in OR and performing supervised floor care. They will function as part of the gynecologic oncology team. Students will participate in twice weekly clinic sessions, daily rounds, surgical cases, work rounds, tumor board and pathology conference. They will be required to give a short oral presentation on a mutually agreed upon topic.

## DEPARTMENT OF OPHTHALMOLOGY

### OPH 9000 - OPHTHALMOLOGY

DIRECTOR: Dr. Suqin Guo

OTHER DIRECTORS: Drs. N. Bhagat, A. Cohen, D. Chu, L. Frohman, P. Hersh, A. Khouri,  
P. Langer, R. Rescigno, M. Roy, R. Turbin, M. Zarbin

CONTACT PERSON: Susan Niedzinski (sn445@njms.rutgers.edu) 973-972-2063

LOCATION: The Institute of Ophthalmology and Visual Science, Doctors Office Center, Suite 6100, Newark

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Students work along with residents in the General Eye Clinic and various sub-specialty clinics offered within the Institute of Ophthalmology and Visual Science. These include Pediatric ophthalmology, neuro-ophthalmology, Cornea and external diseases, Vitreoretinal, glaucoma, Oculoplastic and Uveitis. They learn how to use a direct-ophthalmoscope, slit lamp and other specialized instruments as well as how to perform general ophthalmology examinations. They are allowed to observe surgical procedures. Students attend the lectures on CD leveled to medical students and conferences for the eye residents.

#### Goals and Objectives

The Ophthalmology Clerkship seeks to provide the student with:

- a. An understanding of the visual apparatus, its functions, dysfunctions and diseases, especially as related to other systemic conditions
  - b. An opportunity for direct observation of the effects of aging and disease on the eye
  - c. The information necessary for the diagnosis of many significant ophthalmic diseases
  - d. The skills and disciplines required in the field of ophthalmology
- Specifically, students are expected to familiarize the information and techniques in the following areas as indicated:

#### Visual Acuity

Measurement and recording of visual acuity and color vision and the determination of whether reduced visual acuity is due to uncorrected refractive error or to a pathologic condition.

#### Ophthalmoscopy

Differentiating a normal from an abnormal fundus (optic nerve/retina), describing the appearance of an abnormality and the indication of its relationship to ocular, neurologic or systemic disease.

#### Slit Lamp Exam and Red eye

Familiarizing anterior segment ocular exam with slit lamp and determining whether a red-eye disorder requires the prompt attention of an ophthalmologist or whether a primary-care physician might appropriately treat the condition.

#### Injuries

Evaluating the problems of common ocular and orbital injuries and whether such injuries require the prompt attention of an ophthalmologist or whether a primary-care physician can treat the condition.

#### Ophthalmology-subspecialties

Students work along with residents in the General Eye Clinic and various sub-specialty clinics offered within the Institute of Ophthalmology and Visual Science. These include Pediatric ophthalmology, neuro-ophthalmology, Cornea and external diseases, Vitreoretinal, glaucoma, Oculoplastic and Uveitis.

**STUDENT EVALUATION:** Each student is evaluated on the basis of fund of information and comprehension, skills (history-taking and patient examination), problem-solving, industry and reliability, judgment, interpersonal

relations (with peers, staff, and patients), motivation, and house officer potential. A written test (multiple choice) will be given on the last Friday of the rotation. Evaluation will be sent to Registrar's Office at the completion of the rotation.

## **OPH 9002 – RESEARCH IN OPHTHALMOLOGY**

DIRECTOR: Dr. Marco Zarbin

LOCATION: NJMS

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This elective is designed to allow students the opportunity to perform clinical research in ophthalmology. Under the supervision of a faculty mentor, the student will have the opportunity to identify a topic for experimental study, formulate a research proposal, perform a literature review, and then design and implement the proper study to further research his/her topic of interest. The elective will provide the student with an understanding of how clinical studies are designed and performed, and will further provide the student with valuable experience in experimental design, implementation, and trouble-shooting.

During this elective, the student will be expected to:

1. Identify a topic or clinical case of interest for further study and write a research proposal.
2. Independently conduct a primary literature review and write a research proposal for submission to a faculty mentor.
3. Meet with his/her faculty mentor regularly to present and summarize relevant literature and inform the faculty member of his/her progress. The student's faculty mentor will provide mid-elective feedback and provide the student with suggestions for improvement.
4. Gather clinical data over the remainder of the elective and meet with his/her faculty mentor in order to produce a relevant clinical hypothesis.
5. Time permitting, synthesize the gathered information into an original and coherent research paper by the end of the elective for possible submission for peer reviewed publication.
6. Submit a one-page essay detailing how this research experience accomplished the objectives for this elective.

## DEPARTMENT OF ORTHOPAEDICS

### ORPS 9005 - PEDIATRIC ORTHOPAEDICS

DIRECTOR: Dr. Sanjeev Sabharwal

ADMINISTRATIVE CONTACT: Ms. Lori Clark (973) 972-3860

LOCATION: University Hospital and Affiliated Institutions

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The objective of this rotation is to expose the medical student to the art of history taking, physical examination and decision making in a child with musculoskeletal problems. The student will attend pediatric orthopaedic clinics, private office, participate in in-patient care and assist in the operating room. Typical orthopaedic problems such as pediatric fractures, congenital and developmental musculoskeletal problems, neuromuscular diseases as well as spinal deformities will be encountered. The student will be required to attend daily orthopaedic teaching rounds (morning report and CORE presentations) and a weekly didactic session on a common pediatric orthopaedic problem. Night call is optional. Based on the students' interests and availability, the elective can be modified with regards to focus on an outpatient versus surgical experience. The student is required to give a short (10-15 minute) presentation on a Pediatric Orthopaedic topic towards the end of the rotation.

A reference book on Pediatric Orthopaedics can be picked up from Ms. Lori Clark or Mr. Paul Savage in ACC 7300 at the beginning of the rotation. This book should be returned to them at the completion of the rotation. A handout containing pertinent reading materials and clinical schedule will also be provided. The student is required to fill out a feedback form regarding their experience and any suggestions to improve the rotation.

This elective is not open to international medical students.

### ORPS 9116 - ACTING INTERNSHIP IN ORTHOPAEDICS

DIRECTOR: Dr. Fran Patterson

ADMINISTRATIVE CONTACT: Ms. Lori Clark (973) 972-3860

LOCATION: University Hospital and Doctors Office Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This elective is designed for the medical student contemplating a career in Orthopaedic Surgery. The elective is designed to give the best exposure possible with various members of the Orthopaedic Department and provide a broad overview of orthopaedic surgery at New Jersey Medical School and its affiliates.

Exposure includes, but is not limited to, orthopaedic trauma, reconstructive surgery, pediatrics, hand, foot, ankle, oncology, spine, arthroscopy, shoulder surgery, and sports medicine. The interaction with faculty and residents is designed to be clinically oriented. This means that a large portion of the students' orthopaedic education will arise from facing orthopaedic problems with the residents and faculty in the emergency room, orthopaedic clinics, private physicians' offices, and operating room. During the rotation, all students will have the opportunity to have interchanges with all full-time members of the faculty and will have extensive opportunities to demonstrate their baseline knowledge of anatomy and developing skills in orthopaedic

examination in daily presentations of patient conditions and monthly formal diagnostic reviews. Overnight orthopaedic call is strongly encouraged in this rotation in order to allow the medical students to have a closer working interaction with the orthopaedic resident and provide better opportunities for the student to learn and demonstrate orthopaedic and manual dexterity skills.

## DEPARTMENT OF OTOLARYNGOLOGY

### **OTOL 9140 - OTOLARYNGOLOGY-HEAD AND NECK SURGERY, ACTING INTERNSHIP**

DIRECTOR: **Dr. Chan (Richard) Park** and Dr. Evelyne Kalyoussef

ADMINISTRATIVE CONTACT: Faye Wiggins

LOCATION: University Hospital

WHEN OFFERED: July (RUTGERS RWJMS STUDENTS ONLY), August, September, October

DESCRIPTION OF ELECTIVE: The student becomes part of the team managing the patients on the outpatient and inpatient Otolaryngology services. Acquisition of basic otolaryngologic history taking and physical examination skills will be emphasized. The student will also have the opportunity to observe and assist in the operating room. He/she will be exposed to the various subspecialty areas in otolaryngology, including otology-neurotology, head and neck surgery, facial plastic and reconstructive surgery, rhinology and pediatric otolaryngology. Students will also attend and participate in rounds and departmental conferences. The elective can be modified to accommodate the student's interest in a given aspect of otolaryngology.

### **OTOL 9151 - OTOLARYNGOLOGY RESEARCH**

DIRECTORS: Dr. Jean Anderson Eloy

ADMINISTRATIVE CONTACT: Faye Wiggins

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: A research elective month in the Department of Otolaryngology-Head and Neck Surgery at University Hospital. Students will participate in ongoing research with members of the Department. This is primarily for students interested in entering the field of Otolaryngology-Head and Neck Surgery; however, other students will be considered on an individual basis.

## DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE

### **PATH 9001 - SURGICAL AND AUTOPSY PATHOLOGY**

DIRECTORS: Dr. Stephen Peters

LOCATION: Pathology Department, University Hospital (E-140)

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This elective is designed to introduce students to a hospital-based anatomic pathology department through experience in the sub-disciplines of surgical and autopsy pathology. Students will have an opportunity to review and learn new basic pathological concepts as they relate to the management of patients as well as observe how pathologists function as members of the health care team.

During the elective, it is expected that the student will become familiar with recognizing the pathological manifestations of a variety of diseases and be able to apply this information to the management of the patient. The clinical faculty will provide appropriate feedback. The student will prepare a short powerpoint presentation for the faculty and residents summarizing the clinical features and pathological manifestations of one disease observed during the rotation.

Key responsibilities of the student while on elective:

1. Students will be expected to sit in on the daily surgical pathology signout sessions held both in the morning and afternoon. The student will take notes on the cases reviewed and be expected to answer questions or do literature searches about the diseases being discussed.
2. Students will be expected to shadow the pathology residents and observe the gross examinations of specimens in the Surgical Pathology Laboratory (E-level) as well as any autopsies performed in the Autopsy suite (C-level).
3. Students may be asked to review patient's records on selected cases.
4. Students will be expected to attend all intradepartmental and selected interdepartmental conferences.
5. There is no required night or weekend call although students may elect to be called on weekend days (8-5) to observe any autopsies that are performed by the residents.
6. Students will be expected to prepare a 10-15 minute PowerPoint clinical and pathological presentation on a case of their choosing observed during the elective on the next to last day(Thursday) of the elective.

Evaluation: The student's PowerPoint presentation will be graded H/HP/P/F as will their performance in asking questions during the sign-out sessions. A student cannot pass this elective without submitting a copy of their PowerPoint presentation. This elective is graded H/HP/P/F as per NJMS policy.

### **PATH 9005 - CELLULAR AND SUBCELLULAR STUDIES OF CANCER**

DIRECTOR: Dr. George Studzinski

LOCATION: Pathology Department, Medical Sciences Building, Room C-543 and C-545, [studzins@njms.rutgers.edu](mailto:studzins@njms.rutgers.edu)

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: A short course designed as an introduction to research in experimental pathology with special emphasis on preparation of a research project in any branch of the medical sciences. Attention is directed to selection of a project, its planning and preparation, as well as experimental approach and methodology. Practical experience in tissue culture, differentiation of leukemic cells and an introduction

to the use of DNA recombinant technology to study disease are included. Grades are awarded on the basis of performance in assigned tasks and a presentation at the end of the course.

### **PATH 9014 - FORENSIC PATHOLOGY**

**DIRECTORS:** Dr. Andrew L. Falzon, State Medical Examiner

**LOCATION:** Regional Medical Examiner Office  
325 Norfolk Street, Newark

**WHEN OFFERED:** August, September, October

**DESCRIPTION OF ELECTIVE:** This elective in forensic pathology offers the opportunity to witness and participate in medicolegal autopsies. Cases are routinely reviewed at 8:00 each morning, and autopsies commence shortly afterward. The office performs an average of six autopsies per day, and they reveal a wide range of natural disease, trauma, and chemical injury. The student will also have the opportunity to report to death scenes with a forensic investigator or with an on call physician. In addition, the student can observe pre-trial preparations between medical examiners and attorneys on various civil and criminal cases as well as attend a few trials where the medical examiners testify as expert witnesses. There are lectures by staff Forensic Pathologists in which a particular topic is discussed in detail. An interesting and complex case, where the cause or manner of death is a problem, is often discussed informally after the autopsy. Opportunities exist to learn from our very modern toxicology laboratory. The staff, including the doctors, are more than willing to teach and explain, and the students' experience here should be very rewarding. This elective is educational for students of varying subspecialty interests for future residency, both clinical and non-clinical.



## DEPARTMENT OF PEDIATRICS

### **PEDS 9009 - PEDIATRIC GASTROENTEROLOGY**

DIRECTOR: Dr. Iona Monteiro

LOCATION: University Hospital/DOC 5100

WHEN OFFERED: August, September

DESCRIPTION OF ELECTIVE: This is a four week preceptorship in clinical pediatric gastroenterology spent with the Pediatric Gastroenterologist, Dr. Monteiro. The interested student will be afforded the opportunity to participate in consultative services and management of common GI disorders in the ambulatory and in-patient setting and observe GI procedures. Basic reading material will be provided with time allotted for discussion.

### **PEDS 9015 – MEDICINE AND PEDIATRICS**

DIRECTORS: Dr. Kristin Wong

LOCATION: ACC, F-Level

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: In this elective, medical students will be exposed to the combined field of Internal Medicine and Pediatrics by working with the Med-Peds faculty. Discussions will be based on patient encounters and include the most common conditions presenting in adults and children. The students will spend most of their time in the ambulatory practice but will have the chance to round inpatient with the Med-Peds attending.

At the conclusion of this elective the student will be able to

1. Obtain further knowledge of pathophysiology and experience in the proper diagnosis and treatment of disease in patients of all ages.
2. Identify, summarize and develop a differential diagnosis of illnesses in both pediatric and adult patients: fever, vomiting, headache, chest pain, abdominal pain, wheezing, joint pain, backache.
3. Obtain communication skills in counseling patients and families: anticipatory guidance, nutrition, school issues, smoking cessation, diabetes, depression, asthma, COPD and hypertension.
4. Describe indications for consultation and referral for the most common diseases affecting adult and pediatric patients.
5. Describe indications/criteria for admissions to the inpatient setting for adults and pediatric patients.
6. Evaluate the business management of an urban ambulatory practice such as healthcare coverage, managed care, proper billing/coding, and reimbursements.

### **PEDS 9020 - PEDIATRIC INFECTIOUS DISEASES**

DIRECTOR: Arry Dieudonne, MD

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This elective offers an experience in evaluating and managing pediatric and adolescent patients seeking consultation at the Pediatric Infectious Diseases Clinic or who are hospitalized at

University Hospital on either the Pediatric Infectious Diseases (ID) Inpatient Service or on the General Pediatrics or pediatric subspecialty services. Students will work as part of a team routinely comprised of a Pediatric ID Attending Physician, (variably) an ID Fellow, and Residents in Pediatrics and/or Medicine-Pediatrics. Pediatric ID faculty members include Drs. David Cennimo, Barry Dashefsky, Arry Dieudonne and James Oleske. Students will attend, participate in, and contribute to the regular weekly and ad hoc didactic sessions conducted by the Division. More prolonged clinical and/or research electives in Pediatric ID can be accommodated selectively by individual arrangement. Please note that this elective does not include systematic exposure to Pediatric Immunology.

## **PEDS 9022 - PEDIATRIC INFECTIOUS DISEASES**

DIRECTOR: Dr. Julia Piwoz

LOCATION: The Joseph M. Sanzari Children's Hospital at Hackensack University Medical Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This elective offers the student hands-on experience in the evaluation and management of both common and uncommon pediatric infectious diseases. The student will generally have initial contact with the patients on the patient consultative service and will be actively involved in the care of patients admitted to the Infectious Diseases service. In addition, the student will have an opportunity to take part in the office setting and observe office based infectious diseases practice as well as the pediatric travel medicine program.

At the end of the elective, the student will be able to:

1. Understand the epidemiology and pathogenesis of common pediatric infectious disease processes, including meningitis, pneumonia, skeletal infections, foreign body infections, Kawasaki Disease and infections in immunocompromised hosts.
2. Recognize a wide variety of common and complex pediatric infections, and come up with an appropriate evaluation and management plan.

REPORTING INSTRUCTIONS: Students are expected to report to the Office of Academic Affairs, Hackensack University Medical Center, Alfred N. Sanzari Building, 360 Essex Street, 4<sup>th</sup> Floor, Suite 402, Hackensack, NJ 07601 at 8:00 a.m. on the first day of the rotation. Contact number: (551) 996-2016. Students should contact Dr. Piwoz prior to the start of the elective at 551-996-5308 or by email at [Julia.Piwoz@hackensackmeridian.org](mailto:Julia.Piwoz@hackensackmeridian.org).

## **PEDS 9030 - AMBULATORY PEDIATRICS**

DIRECTOR: Dr. Chitra Reddy

LOCATION: Doctors Office Center, Suites 4100 and 4300, (973) 972-2100

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This third or fourth year ambulatory pediatric elective seeks to enhance skills acquired in the third year pediatric clerkship and provides opportunity for the student to work in an office setting at the level of a first year resident. Under the supervision of attending physicians, the student will a) provide primary care for infants, children and adolescents, b) become proficient in eliciting a comprehensive history and conducting a thorough, age-appropriate physical exam including a developmental assessment, c) formulate a clinical impression with consideration of differential diagnosis, d) devise and implement an appropriate diagnostic and therapeutic plan, e) present and write his/her findings clearly and concisely, f) acquire a level of proficiency in performing common office procedures, g) develop and refine his/her

knowledge of pediatrics, focusing especially on primary care aspects: preventive health services, growth, nutrition, behavior and development, anticipatory guidance, and school issues, j) become proficient in management of common acute and chronic pediatric diseases, k) develop skills in communicating with and counseling patients and families, and l) gain confidence in his/her ability to function competently as a first-year resident.

Students are oriented on the first day and assigned to an office practice comprised of third year medical students, residents, and faculty attendings. The duties and responsibilities of the students are identical to those of the PGY-1 residents.

Students are expected to attend weekly Grand Rounds and daily noon conferences. Students will maintain a log of assigned patients for weekly review.

Students are evaluated by the attending physicians. Evaluation is based on subjective assessment of knowledge, problem-solving, proficiency in history-taking and physical examination, clinical judgment, presentations, record-keeping and interpersonal skills. As students are integral members of the patient care team, regular attendance and participation are essential. Unexcused absences are not allowed; anticipated absences for interviews should be cleared with the course director in advance.

### **PEDS 9060 - DEVELOPMENTAL PEDIATRICS**

**DIRECTORS:** Drs. Randye Huron and Punam Kashyap

**LOCATION:** Institute for Child Development, Hackensack University Medical Center

**WHEN OFFERED:** August, September, October

**DESCRIPTION OF ELECTIVE:** The objectives of this rotation include an introduction to the spectrum of developmental and behavioral disorders, including etiology, diagnosis and management. During the one month block rotation, the student will have an opportunity to observe diagnostic evaluations by developmental pediatricians, speech/language pathologists, and physical and occupational therapists. The students will have opportunities to participate in evaluations for Autistic Spectrum Disorders, neuro-behavioral disorders, genetic disorders associated with developmental delays, learning disorders and motor disorders such as cerebral palsy. In addition, they will participate in follow-up programs such as the medication clinics, High-Risk Infant Follow-Up program for babies born premature or with other high risk birth factors. This instructive and clinical program is complemented by student- centered learning such as active and inquiry based learning and case-based learning and teaching. The students will also have an opportunity to attend daily noon conferences run by Pediatric and Med-Peds residents, in collaboration with Attending's at Hackensack UMC in various specialties.

### **PEDS 9061 - PEDIATRIC HEMATOLOGY AND ONCOLOGY**

**DIRECTOR:** Dr. Frances Flug

**LOCATION:** Children's Cancer Institute, Hackensack University Medical Center

**WHEN OFFERED:** August, September, October

**DESCRIPTION OF ELECTIVE:** Students will spend the majority of their time in the outpatient Hematology/Oncology clinic, learning about the evaluation and treatment of blood disorders and cancer. Opportunities will be available to attend inpatient rounds on the Hematology/Oncology and Bone Marrow Transplant services. Students will attend weekly Tumor Board meetings and review blood smear and bone marrow pathology.

## **PEDS 9066 - PEDIATRIC CRITICAL CARE MEDICINE**

DIRECTOR: Dr. Mark E Siegel

LOCATION: Hackensack University Medical Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The HUMC PICU is a 15 bed unit that takes care of medical and surgical critically ill children. This elective will acquaint the student with the basic approach to care of the critically ill child, the importance of a team approach as well as family centered care. The PICU is a great place to apply that physiology you learned in medical school to actual patients!

The student will be a member of the critical care team involved in patient management and critical care rounds. The schedule is 8am – 6p daily. Interpretation of clinical data, laboratory data and improvement of technical skills will be encouraged.

## **PEDS 9110 - NEONATOLOGY**

DIRECTOR: Dr. Onajovwe Fofah

LOCATION: University Hospital, FICN (F-128)

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This is an introduction into Neonatal-Perinatal Medicine. This will make the student aware of the impact of perinatal and neonatal care on mortality and morbidity. The student will participate in attendance at high-risk deliveries, transport of high risk infants, morning report, teaching rounds, endorsement rounds, lectures, and night duties (optional). The student will learn to diagnose and manage common newborn diseases and the sequelae. A research project will be offered to interested students. Attending neonatologists and Pediatric Residents will participate in evaluating the student's performance.

## **PEDS 9142 - PEDIATRIC PULMONARY MEDICINE**

DIRECTOR: Dr. Evelyn Montalvo Stanton

LOCATION: St. Barnabas Medical Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This elective will provide the student an opportunity to:

- Review the structure and function of the normal and diseased lung in children
- Gain experience in the clinical evaluation of infants/children with pulmonary disease,
- Learn how to interpret pulmonary function tests in children and chest radiographs,
- Learn about different diagnostic procedures such as Flexible Fiberoptic bronchoscopy,
- Learn about children dependent on Respiratory Technology, and
- Drug administration by inhalation in infants/children and home treatment plans.

REPORTING INSTRUCTIONS: Student should report to the Department of Medical Education, 4<sup>th</sup> floor, Main Bldg, Room 4154 (inside 4100 unit) at 10:30 a.m. on Monday for registration and facility orientation with Debra Likon, Medical Student Coordinator. Student Parking: Lot 7 - Enter the Medical Center at the light at the Emergency Room Entrance. Go to the stop sign and make a right. You will past Lot #4, Lot#5 and the entrance to Radiation Oncology. Make a right into Upper Lot 7. Students are expected to report with white coat and stethoscope.

## **DEPARTMENT OF PHYSICAL MEDICINE AND REHABILITATION**

### **REHB 9000 - ACTING INTERNSHIP IN PHYSICAL MEDICINE AND REHABILITATION**

DIRECTOR: Dr. Steve Kirshblum

LOCATIONS: University Hospital and/or Doctors Office Center (Newark campus); Kessler Institute for Rehabilitation - (West Orange, Saddlebrook and Chester); Department of VA New Jersey Healthcare System - (East Orange and Lyon's); private physicians' offices

WHEN OFFERED: July, August, September, October, and November

DESCRIPTION OF ELECTIVE: Exposure to the field of physical medicine and rehabilitation (PM&R) is offered at any of the above-stated locations. The student becomes part of the team, taking histories and performing physical examinations of patients with neurological and orthopaedic problems. The individual patients are then followed by the student through the different treatment areas, and the student is involved actively in the diagnosis and treatment planning of his/her patients, as well as the comprehensive social and psychological evaluation and treatment and discharge planning. This includes the care and treatment of patients with spinal cord injury, traumatic brain injury, amputation, stroke, orthopedic, trauma, or general rehabilitation admitted for comprehensive care.

Depending on the student's interest and the facility, he/she will have the opportunity to be exposed to the wide array of therapeutic armamentarium used by the physiatrist, including pharmacologic management, injection treatments (motor point blocks, nerve blocks, trigger point injection, bursal/intraarticular injection), physical agents, including electrotherapy, therapeutic exercise, ADL training, orthotics/prosthetics, speech therapy and disability counseling.

This elective presents the student with problems in internal medicine, including rheumatology and neurology, as well as in neurosurgery and orthopaedics. Unusual diagnostic problems are seen more frequently in the rehabilitation center; either inpatient or outpatient services are included depending on the placement.

Students are evaluated on the basis of their overall involvement in the program, attendance at conferences and clinics, and the ability to carry out patient-care programs.

### **REHB 9001 - PEDIATRIC PHYSICAL MEDICINE AND REHABILITATION**

DIRECTOR: Dr. Michael Armento

LOCATION: Children's Specialized Hospital (Mountainside, NJ)

WHEN OFFERED: July, August, September, October, and November

DESCRIPTION OF ELECTIVE: Two-to-four weeks will be spent at Children's Specialized Hospital, a pediatric rehabilitation facility in Mountainside, N.J. Time will be spent in outpatient services, giving the student the opportunity to evaluate and follow the management of children with neuromuscular, musculoskeletal and developmental disorders including cerebral palsy, hypotonia, spina bifida, and muscular dystrophy. The student will have the opportunity to attend specialty clinics in orthopaedics and neurology, as well as observe the performance of diagnostic and management techniques unique to the field of rehabilitation medicine, including electrodiagnosis and peripheral nerve blocks. Students may also have the opportunity to attend clinics at special needs schools. This elective would be of particular interest to students thinking of careers in either Physical Medicine and Rehabilitation or Pediatrics. Evaluation will be based on overall interest, enthusiasm and clinical performance.

There are limited 2 week blocks offered at the Children's Specialized Hospital Inpatient site in New Brunswick, New Jersey. There students can shadow attendings in our 60 bed acute rehabilitation facility to observe both the medical and therapy management of children age one month to 21 years with a multitude of diagnosis. These include mutli-trauma, post-op orthopedic care, traumatic brain injury, spinal cord injury, infants with congenital anomalies and neuromuscular disorders.

### **REHB 9003 - RESEARCH IN PHYSICAL MEDICINE AND REHABILITATION**

**DIRECTORS:** Dr. John Bach

**LOCATIONS:** University Hospital; Kessler Institute - West, Saddlebrook, and Kessler Foundation Research Center; Department of VA New Jersey Healthcare System - East Orange

**WHEN OFFERED:** July, August, September, October, and November

**DESCRIPTION OF ELECTIVE:** There is an active research program in the physiological, psychological, behavioral and engineering aspects of rehabilitation in the Department of Physical Medicine and Rehabilitation, as well as a number of collaborative projects with other departments at Rutgers New Jersey Medical School. Research programs are currently underway to improve the functional abilities of persons with disabilities resulting from spinal cord injury, head injury, stroke, neuromuscular disease, pulmonary disease, and amputations. Projects cover such areas as functional electrical stimulation, advanced electromyography, prosthetic design, sympathetic nervous system function in spinal cord injured patients, geriatrics, fatigue, treatment of depression, sexuality, family training, and others.

### **REHB 9004 - MUSCULOSKELETAL/PAIN CLINICAL ROTATION**

**DIRECTORS:** **Drs. Patrick Foye** and Todd Stitik

**LOCATION:** Doctor's Office Center, Newark. Please contact Dr. Foye for other locations.

**WHEN OFFERED:** July, August, September, October, and November

**DESCRIPTION OF ELECTIVE:** To learn how to diagnose and non-surgically treat a variety of sports-related and other musculoskeletal conditions and injuries. Emphasis will be on developing a differential diagnosis, learning and practicing musculoskeletal physical exam skills, assessing biomechanics and mechanisms of injury, and initiating appropriate rehabilitation treatment programs. Students will also be encouraged to observe and participate in a variety of joint and soft tissue injection procedures. Students are expected to have a basic understanding of musculoskeletal anatomy and peripheral neuro-anatomy. Students will attend educational programs and may have the option of attending medically-covered athletic events during the time of their rotation. This is predominantly a clinical (patient care) rotation, but, additionally, clinical research exposure/participation may be available.

### **REHB 9005 MUSCULOSKELETAL/PAIN RESEARCH**

**DIRECTORS:** **Drs. Patrick Foye** and Todd Stitik

**LOCATION:** Doctor's Office Center, Newark. Please contact Dr. Foye for other locations.

**WHEN OFFERED:** July, August, September, October, and November

**DESCRIPTION OF ELECTIVE:** Students within this elective will actively participate in research projects related to topics in non-surgical musculoskeletal medicine. The outpatient division of the PM&R department is actively involved in a variety of research projects, including non-surgical treatment of coccydynia, osteoarthritis, back

pain, and a variety of other musculoskeletal conditions. Also, depending on the timing of the elective there are often additional academic projects for medical publication (review articles, online medical materials, etc.) which the students may actively participate in. Students should contact the course director in advance of the start date to make arrangements for which projects the students will be involved in. There is no clinical component to this rotation.

## **REHB 9006 - PAIN MANAGEMENT: INTERVENTIONAL PROCEDURES CLINICAL ROTATION**

DIRECTOR: Dr. Patrick Foye/Dr. Todd Stitik

LOCATIONS: Doctors Office Center (Newark campus), Department of VA New Jersey Healthcare System (East Orange and Lyon's); occasionally, some students may be assigned to rotate at affiliate sites in the northern NJ area

WHEN OFFERED: July, August, September, October, and November

DESCRIPTION OF ELECTIVE: Students will directly participate in pre-procedural evaluation visits, interventional procedures, and post-procedural evaluation visits of patients with various musculoskeletal and neurological conditions who are in need of interventional pain management procedures. Students will be encouraged to directly participate in the procedures to the degree that they are interested and capable of doing so. These procedures include but are not limited to the following: fluoroscopic-guided spinal injection procedures (e.g. epidurals), fluoroscopic-guided joint injection procedures, ultrasound-guided tendon sheath/bursa/joint injection procedures, office-based joint/soft tissue/bursa injection procedures, trigger point injections, EMG guided nerve block and intramuscular injection procedures, etc. Basic principles of fluoroscopy, musculoskeletal ultrasound, and EMG will also be taught. This course should be particularly helpful for students interested in pursuing a career in Physical Medicine and Rehabilitation, Pain Management, Anesthesia, Orthopedics, Neurology, Radiology, Rheumatology, and Primary Care.

During this elective it is expected that a student will assist with evaluations (patient interviews and physical exams) on patients with various pain-related conditions and present these findings to clinical faculty. Also, the student will actively participate in observing and performing various pain management procedures, including fluoroscopy-guided injections. Clinical faculty will provide feedback to the student. The student will also be required to write medical notes on patients that the student interacts with during the rotation.

## **REHB 9100 - GERIATRIC REHABILITATION**

DIRECTOR: Dr. Bruce Pomeranz

LOCATION: Kessler Institute for Rehabilitation (Saddlebrook)

WHEN OFFERED: July, August, September, October, and November

DESCRIPTION OF ELECTIVE: Objectives: The medical student participating in this elective will acquire the following skills: geriatric assessment and functional evaluation for the rehabilitation of patients with CVA; joint replacements; fractures; neurological disorders (Parkinson's, GBS, encephalopathies, dementia, peripheral neuropathies); arthritis and connective tissue disorders; musculoskeletal spasms and injuries; and coronary artery disease. He/she will have a knowledge of the complications with each of the above, the role of rehabilitation and potential for functional recovery, and an understanding of an interdisciplinary team approach in the management of the geriatric patient.

Format: The medical student will be assigned to an attending physiatrist. A resident may also be involved in mentoring the student. Specific duties will be assigned by the attending. Students will be required to follow the syllabus and guidelines, with physicians' responsibilities as defined.

Evaluation: Evaluation will consist of a written exam based on the syllabus at the end of the rotation and ongoing evaluation during the rotation.

### **REHB 9200 - SPINAL CORD INJURY**

DIRECTORS: Dr. Jeremiah Nieves and Dr. Carol Gill

LOCATIONS: Kessler Institute for Rehabilitation (West Orange) and/or VA NJ Healthcare System (East Orange)

WHEN OFFERED: July, August, September, October, and November

DESCRIPTION OF ELECTIVE: Objectives: (1) Learn how to evaluate and classify spinal cord injury patients according to international standards criteria. (2) Learn to determine functional potential of spinal cord injury patients. (3) Learn appropriate acute medical management and rehabilitation of spinal cord injury patients (4) Will also see patients with spasticity and be involved in management of spasticity, including injections.

Format: Students will rotate on an inpatient spinal cord injury service, following admitted patients. Students will also see chronic spinal cord injury patients during their outpatient appointments.

Evaluation: Oral exam to be given at the end of four-week rotation, based on the listed objectives.

### **REHB 9300 - NEUROMUSCULAR AND PULMONARY REHABILITATION**

DIRECTOR: Dr. John Bach

LOCATION: Doctors Office Center and University Hospital (Newark campus)

WHEN OFFERED: July, August, September, October, and November

DESCRIPTION OF ELECTIVE: This elective is designed to introduce students to the practice of neuromuscular, musculoskeletal, and rehabilitation medicine. Under the supervision of clinical faculty, students will learn differential diagnosis of neuromuscular disease and musculoskeletal disorders and both the medical and physical medicine treatment options. They will learn cardiopulmonary, orthopaedic, nutrition and other therapeutic interventions and equipment that affect survival and quality of life as well as manage common musculoskeletal syndromes. Students will round with the preceptors in University Hospital to observe the use of noninvasive physical medicine aids in extubation and decannulation of patients with ventilator failure due to musculoskeletal conditions and perform inpatient rehabilitation consultations with the PM&R residents.

Objectives: At the conclusion of this rotation the student will:

1. Describe the differential diagnosis of the floppy newborn.
2. Describe the differential diagnosis of children and adults presenting with generalized muscle weakness.
3. Understand the pathokinesiology of limb contracture development
4. List the therapeutic options in preventing limb contractures and scoliosis.
5. Analyze strategies for prolonging ambulation despite neuromuscular weakness.
6. Describe the noninvasive physical medicine aids.
7. Explain strategies for preventing respiratory failure and invasive ventilation for patients with the following conditions: post-polio, muscular dystrophy, spinal muscular atrophy, amyotrophic lateral sclerosis.
8. Define paradigm paralysis and how this hinders medical advances.
9. Describe the important elements of rehabilitation consultation for inpatient medical/pediatric services.



Format: The student will attend and play an active role in the Jerry Lewis Muscular Dystrophy Association clinic which is held weekly in the DOC.

### **REHB 9400 - BRAIN INJURY REHABILITATION**

DIRECTOR: Dr. Peter Yonclas and Dr Neil Jasey

LOCATION: University Hospital (Newark campus) and Kessler Institute for Rehabilitation (West Orange)

WHEN OFFERED: July, August, September, October, and November

DESCRIPTION OF ELECTIVE: Objectives: Upon completion of the rotation, the student should be able to: 1) understand the rehabilitation process following brain injury; 2) demonstrate proficiency in history-taking and performing a complete physical and neurologic examination of individuals with brain injury; 3) formulate differential diagnoses and rehabilitation problem list; 4) describe diagnostic and therapeutic options for the medical, neurological, musculoskeletal, and neurobehavioral complications of brain injury; and 5) discuss the impact of brain injury on the patient, his/her family and the community.

Format/Activities: daily patient rounds; rehabilitation meetings; behavioral management rounds; outpatient clinic; lectures and other educational programs.

Evaluation: Attendance and participation in activities; clinical histories; evaluation of bedside clinical skills.

### **REHB 9401 - REHABILITATION IN PRIVATE PRACTICE**

DIRECTORS: Drs. Thomas Agesen, Jay Bowen, Thomas Cava, Brett Gerstman, Gerard Malanga, and Robert Vrablik

LOCATIONS: Physicians' offices in the northern NJ area

WHEN OFFERED: July, August, September, October, and November

DESCRIPTION OF ELECTIVE: Objectives: Upon completion of the rotation, the student should demonstrate an ability to perform the following in caring for patients with a wide variety of rehabilitation diagnoses: 1) Perform a history and physical exam appropriate for the patient presentation, including neurological, musculoskeletal and functional assessments; 2) formulate differential diagnoses and a rehabilitation problem list; 3) discuss diagnostic and treatment options; 4) develop realistic functional goals, individualized for each patient; and 5) understand when to consult PM&R and which clinical problems benefit from a PM&R consultation.

Format/activities: Daily patient care involvement in an outpatient private practice setting, with potential for involvement with the practice's inpatient care as well. Students are encouraged to attend lectures with the PM&R residents for a half-day each week.

Evaluation: Students are evaluated on attendance, participation, enthusiasm, and clinical performance.

## DEPARTMENT OF PSYCHIATRY

### **PSYC 9000 - SUBINTERNSHIP IN PSYCHIATRY (INPATIENT UNIT)**

DIRECTOR: Dr. Najeeb Hussain, Behavioral Health Sciences Building, Room E-1447

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The elective student will be involved as a team member on the University Hospital inpatient psychiatric unit. Students are expected to perform as an intern, therefore taking responsibility for patient care. Each student will be assigned to a team with an attending for guidance and supervision. There may also be a resident on the team.

### **PSYC 9008 - SUBINTERNSHIP IN V.A. PSYCHIATRY**

DIRECTOR: Dr. Manjula Chilakapati

LOCATION: Department of Veterans Affairs Medical Center in East Orange (Inpatient Teaching Service)

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The student will function as a Treatment Team member in an active inpatient teaching unit which treats a variety of psychiatric patients including a unique experience with Post-Traumatic Stress Disorder (PTSD) veterans. The student will assume some house staff responsibilities under supervision. The student will be evaluated by the Course Director and other attending staff at the end of the four weeks using criteria similar to junior house staff evaluation, as appropriate.

### **PSYC 9010 – PSYCHIATRIC EMERGENCY SERVICES**

DIRECTOR: Dr. Cheryl Ann Kennedy

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This elective is designed to introduce 4th year students to the practice of medicine in a tertiary care academic medical center urban Psychiatric Emergency Department and appreciate the continuum of care of Psychiatric patients. Under the supervision of clinical faculty and Resident Psychiatrists, students will function as a sub-intern and perform all non-essential parts of the evaluation, treatment and disposition. Students will work closely with and observe other team members in their interdisciplinary role. Students will assist in coordinating all aspects of care. This elective will expand student understanding of the most vulnerable patients on the health care spectrum and what legal, Medical, psychiatric, biological social, economic, political forces impact the course of a case and its outcome.

During this elective, it is expected that a student will conduct patient interviews and physical exams and present findings to clinical faculty on a daily basis. Clinical faculty will provide mid-elective feedback to the student. The student will be required to submit one case report and a one-page essay summarizing his/her experience on the elective. The essay must reference elective objectives and one other professional source.

OBJECTIVES: At the conclusion of the elective, students will be able to 1) compare and contrast the health

needs and problems encountered by psychiatric patients, learn how the state system of mental health care works and understand the physician's role in the legal aspects of commitment to those patients; 2) explain cross-cultural issues in emergency psychiatric cases; 3) describe indications for consultation and referral of the most common psychiatric emergencies and the opportunities available within the community and the hospital system by understanding the continuum care from family care, to community-based outpatient care and outreach through partial and day hospital, to the inpatient continuum.

## **PSYC 9015 – INTEGRITY HOUSE**

DIRECTOR: Dr. Cheryl Kennedy

LOCATION: Integrity House

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Integrity House is a comprehensive residential and outpatient drug treatment center in Newark, New Jersey, for patients who suffer from substance use disorders and co-occurring mental illness. Under direct supervision of senior New Jersey Medical School psychiatry residents and clinical faculty, students will be introduced to the Therapeutic Community model in addiction medicine and have the opportunity to observe and participate in the treatment of individuals from diverse backgrounds in various stages of recovery. Students will work with an interdisciplinary and inter-professional health care team and develop skills in clinical assessment and diagnosis, motivational interviewing, individual and group psychotherapy, family counseling, pharmacotherapy, patient education, and transitional support.

### **OBJECTIVES:**

- To familiarize students with integrated care for individuals with co-occurring substance use and mental health disorders.
- To develop skills in evaluating and treating individuals with dual diagnoses.
- To develop skills in motivational interviewing, psychotherapy, family counseling, patient education, and recovery support.

## **PSYC 9020 - CHILD AND ADOLESCENT PSYCHIATRY**

DIRECTOR: TBD

LOCATION: Behavioral Health Sciences Building, University Hospital

WHEN OFFERED: September, October

DESCRIPTION OF ELECTIVE: This elective is designed for medical students with a particular interest in child psychiatry and psychosocial aspects of comprehensive health care. This rotation provides a broad exposure to child psychiatric settings, including emergency and crisis evaluation and treatment, consultation to medically ill youth, and clinical experience in child psychiatry specialty clinics. The clinical consultation is augmented by inclusion of the medical student in scheduled teaching activities for the child psychiatry residents as well as clinical supervision of the medical student by the child psychiatry residents and child psychiatry faculty. In addition, residents and faculty will support the education of the student through recommendation of specific readings and videotapes, as indicated. Special interests will be discussed and accommodated, if possible and feasible. This should be discussed with the training director prior to beginning the rotation. At the completion of the elective the student is expected to write either a brief essay on a topic of interest or a comprehensive evaluation of a child or adolescent.

GOALS: The goal of the medical student elective in child psychiatry is to 1) familiarize the student with what a child and adolescent psychiatrist does, 2) to teach the student about the psychosocial aspects of health care, 3) to acquaint the student with diagnosis and treatment of the emotionally and behaviorally disturbed

child/adolescent, and, 4) to improve understanding of the underlying problems via the biopsychosocial model.

**OBJECTIVES:** Students will develop their skills in evaluating children/adolescents, become proficient in child psychiatric assessment and have a beginning knowledge of differential diagnosis, treatment formulation, familiarity with commonly utilized treatment modalities, and appropriate medication choice.

### **PSYC 9030 - CONSULTATION-LIAISON**

**DIRECTOR:** Dr. Rashi Aggarwal, BHSB F-level

**LOCATION:** University Hospital

**WHEN OFFERED:** August, September, October

**DESCRIPTION OF ELECTIVE:** Students will perform psychiatric evaluations of medical/surgical patients as part of the Consultation/Liaison Service. Students will also make daily rounds with the resident and attending physician. There will be exposure to the legal process of competency determinations, training in evaluation of dementia, training in the impact of illness on the psyche and on coping with illness.

### **PSYC 9070 - AMBULATORY PSYCHIATRY**

**DIRECTOR:** Dr. Diego Coira

**LOCATION:** Hackensack University Medical Center

**WHEN OFFERED:** August, September, October

**DESCRIPTION OF ELECTIVE:** There are multiple options in this elective which the student can discuss with the course director:

- **Outpatient:** (1) To gain experience in evaluating patients in the Outpatient Department at the Debra Simon Center of Integrative Behavioral Health and Wellness. (2) To learn how to formulate cases using the bio psycho social model in an outpatient setting.
- **Inpatient:** (1) To gain experience in evaluating patients on the psychiatry inpatient unit. (2) To learn how to formulate cases using the bio psycho social model in a psychiatric inpatient setting.
- **Consultation-Liaison Service:** (1) To gain experience in evaluating patients with the Consultation Liaison Service on the medical units. (2) To learn how to formulate cases using the bio psycho social model in a medical/surgical inpatient setting.
- **Emergency Psychiatry:** (1) To gain experience in evaluating patients in the Emergency Trauma Center. (2) To learn how to formulate cases using the bio psycho social model in an emergency room setting.

### **PSYC 9091 - SUBSTANCE ABUSE**

**DIRECTORS:** **Drs. Manjula Chilakapati** and Sam Spinelli

**LOCATION:** VA - NJ Healthcare System, East Orange (and other sites pending availability)

**WHEN OFFERED:** August, September, October

**DESCRIPTION OF ELECTIVE:** This elective will emphasize clinical diagnosis and detection. Student will follow substance abusers in different clinical settings so that they can evaluate the different treatment approaches that are available. Students will be exposed to the problem of substance abuse in a number of special populations: chronic pain patients, the medically ill, at-risk minorities, physicians and adolescents. This

elective presents a good time to tie together basic science and clinical concepts and apply them to substance abuse. Students will have an opportunity to revisit preclinical subjects (such as pharmacology and genetics), to review their clinical skills (from psychiatry, medicine or surgery), then to apply their knowledge to drug and alcohol patients at all stages of illness.

## DEPARTMENT OF RADIATION ONCOLOGY

### RADO 9030 - RADIATION ONCOLOGY

DIRECTOR: Dr. Omar Mahmoud  
[omm21@cinj.rutgers.edu](mailto:omm21@cinj.rutgers.edu)

LOCATION: University Hospital

WHEN OFFERED: August, September, October

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce fourth year medical students to the field of Radiation Oncology. Under the supervision of attending physicians in an inner-city radiation oncology department, students will have the opportunity to see all aspects of pertinent patient care. Students will be able to see initial consultations of cancer patients, followed by simulation and treatment planning. The students will also participate in the routine activities surrounding daily treatments with radiotherapy. Students will attend all departmental patient care meetings, reviewing charts and radiographs. This elective will provide students with a better understanding of cancer care in general and radiation therapy specifically.

In the second week of this elective, it is expected that the student will do a 20 minute power point presentation on a specific cancer topic decided upon by the student and the faculty at the end of the first week. Participation in all aspects of patient care will be expected. Speak to the chief therapist to set up the time for this presentation.

**Evaluation:** The case presentations will be graded honors-fail and make up 40% of the grade. Participation will be graded honors-fail and make up 60% of the grade. The student's final grade will be computed using the NJMS Student Evaluation form. The elective is graded honors-fail per NJMS grading policy.

**Didactic lectures:** The radiation oncology department at NJMS and RWJMS is a joint department, under the leadership of Dr Bruce Haffty, and the residents rotate at both centers. On Fridays, all residents have an academic day, where they learn about physics, radiobiology, and clinical radiation oncology. NJMS students are more than welcome to participate in the lectures held at RWJMS. The day starts at 8 am Friday in the G2 conference room at RWJUH.

**Key Responsibilities of the student while on elective:**

- The student will be expected to see all in-patient consultations and present the findings to faculty.
- The student is expected to attend all departmental meetings and tumor boards.
- The student is expected to observe patient treatments.
- The student is expected to observe the construction of an immobilization device.
- The student is expected to witness computer treatment planning.
- The student is expected to observe patient simulation.

## DEPARTMENT OF RADIOLOGY

### **RAD 9010 - DIAGNOSTIC RADIOLOGY**

DIRECTORS: Dr. Pierre Maldjian

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Students rotate through general radiology, neuroradiology, mammography, diagnostic ultrasound, nuclear medicine, musculoskeletal radiology, thoracic radiology, and interventional radiology. Mornings are spent in the clinical areas. There are daily teaching sessions for the medical students with the residents and faculty. Teaching sessions where the medical students present interesting cases are also incorporated. The students are expected to attend departmental conferences. The objective of the program is to provide the student with the skills necessary to analyze common radiographic studies. Emphasis is on chest, abdomen, bone and gastrointestinal studies as well as emergency radiological evaluation. For exposure to ER radiology students are encouraged to observe in the ER reading area with the assigned physician. Computed tomography, nuclear medicine, magnetic resonance and ultrasound evaluations are essential elements in the program. A better understanding of the imaging modalities, their limitations, advantages and costs will also emerge from the experience. Student evaluation is based upon participation in the conferences, attendance, presentation of cases, and a written and practical examination. Students may also write an optional case report or review a paper on a contemporary radiology issue for extra credit.

### **RAD 9020 - INTERVENTIONAL AND VASCULAR RADIOLOGY**

DIRECTOR: Dr. Sohail Contractor

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: An elective in interventional and vascular radiology involves the participation in pre-treatment evaluation, treatment planning and post-treatment follow-up of patients that need an interventional or vascular procedure. The student is present during film reading sessions, and observes the various special procedures that are done every day.

The student will become aware of the role of interventional radiology in clinical practice. The various types of procedures along with their indications and the advantages and disadvantages of each procedure and examination will be discussed. At the conclusion of the elective, the student will be expected to give a 15-minute presentation to the interventional radiology faculty on a topic to be determined at the start of the rotation and prepare an approximately 250 word write-up on a case that was particularly interesting to the student during that rotation.

## DEPARTMENT OF SURGERY

### **SURG 9012 – SURGICAL ETHICS**

DIRECTOR: Dr. Michael Shapiro

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF COURSE: This elective is designed to build upon prior knowledge of Bioethics gained in the first three years with particular emphasis on ethical questions related to the surgical care of the patient. Students will participate in surgical rounds and the operating room on General Surgery/Surgical Oncology, and using those patient experiences, examine ethical questions such as informed consent, shared decision-making, intrinsic bias, futility, organ donation and allocation of scarce resources, management of complications and disclosure of error, the role played by biopsychosocial factors in treatment decisions, etc. Students will round with the resident team as well as the course instructor, and in the Surgical ICU as appropriate. Students will meet with the instructor to discuss ethical issues arising in the care of the patients, and prepare at least two presentations of topics of mutual interest. Students will also attend the monthly UH Bioethics Committee meeting.

Key responsibilities of the student while on elective:

1. The student will be expected to round with the resident team, attend cases in the OR, and present to clinical faculty on a daily basis.
2. The student is expected to read the pertinent surgical and ethics literature concerning the cases they see.
3. At least two written presentations discussing an ethical issue presented by a patient is required.
4. An ethics discussion, suitable for submission for an abstract or publication, will be considered if appropriate based on the case presentations.

### **SURG 9020 - ADULT CARDIOTHORACIC SURGERY**

DIRECTOR: Dr. Justin Sambol (sambol@njms.rutgers.edu)

ATTENDINGS: Drs. Paul Bolanowski, Douglas Jackson, and Constantinos Lovoulos

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The Adult Cardiothoracic Program includes cardiac, thoracic and esophageal surgery and will include working with the cardiac and thoracic attendings. The student will participate in Cardiothoracic conferences in which cardiac catheterization data, X-rays, angiography and other pertinent clinical data are discussed. He/she will participate in decision-making in regard to the necessity for, and types of, surgery done. Pre-operatively, the patient will be evaluated and both during the time of surgery and in the postoperative course, the student may become an essential member of the team. The goals and objectives are for the medical student to become familiar with both cardiac and thoracic diseases and types of surgical therapy offered. At times during the rotation, there will also be opportunities for research work in this field.

### **SURG 9050 - ACTING INTERNSHIP / UNIVERSITY HOSPITAL**

DIRECTORS: Dr. Michael Shapiro

LOCATION: University Hospital



WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The student is an active member of one of the general surgical teams. This elective is designed to teach each student the principles of clinical surgery, focused on pre-operative evaluation, selection of operations, and post-operative care. Graded responsibility in the care of surgical patients is encouraged.

### **SURG 9053 - ACTING INTERNSHIP / HACKENSACK**

COURSE DIRECTORS: Dr. Douglas Benson and Dr. Burton Surick

LOCATION: Hackensack University Medical Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Objective of the program is to provide internship experience on a general surgical service with a wide variety of clinical material. Activities include formal rounds with residents and the director, formal rounds with an Intensivist in the Critical Care Unit, as well as a series of conferences which the student may attend. Special reading assignments will be required. The student will participate in all aspects of surgical care at PGY-1 level under supervision. Evaluation will be made by the chief resident and director based on the background fund of information, clinical judgment, progress during the rotation, and clinical responsibilities.

### **SURG 9056 - ACTING INTERNSHIP/V.A.**

DIRECTOR: Dr. Charles Tischler

LOCATION: Department of Veterans Affairs Medical Center in East Orange (SICU)

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: One student is assigned to the surgical team. Students are expected to participate actively in the workup and care of surgical patients under close supervision. Duties essentially resemble those of an acting intern.

### **SURG 9061 - TRANSPLANTATION SURGERY**

DIRECTOR: Dr. Dorian Wilson

LOCATIONS: University Hospital and Doctors Office Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: During their rotation on the Transplant Surgery Service, students will be able to participate in all the surgical procedures performed in the section. These include multiple organ procurement, liver transplants, and various hepatobiliary procedures. In addition to the operative experience, students will be exposed to pre- and post-operative management of patients with various liver disorders. There is also a strong emphasis on bedside and operating room teaching regarding the various aspects of transplantation science. The student will participate actively in didactic sessions and conferences that are a regular part of the daily routine. They may be given the opportunity to present a topic that is of interest or one may be assigned to them during the rotation. Students participating in the 2 week elective will not be responsible for making a presentation. On the other hand, if the student is highly motivated to make a

presentation during the shorter elective, the desire to do so will be granted based upon scheduling restrictions and the flow of service demands.

On the rotation, if students are interested in directly participating in transplant surgeries, they are encouraged to be available 24 hours a day (with compensatory time off). This is due to the fact that most of the donor procurements and transplant procedures are unpredictable and often occur during off-hours. For similar reasons, weekend participation in transplant procedures (not rounding) is highly encouraged. Compensatory time off will be allotted/assigned as indicated.

### **SURG 9181 - PLASTIC SURGERY**

DIRECTOR: Dr. Edward Lee

ADMINISTRATOR: Amy Stolar

LOCATION: Ambulatory Care Center, E-1620

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The elective is designed to introduce students to the field of plastic surgery. Its emphasis is directed towards the understanding of wound healing, skin physiology, grafts and flaps, reconstructive surgery of the head and neck, extremities and chest, treatment of both acute and reconstructive hand injuries and cosmetic surgery. In addition, there will be an emphasis on microvascular surgery and its application in plastic surgery. The student will attend all plastic surgery academic conferences and will participate in ward rounds, clinic and surgery. The student will be expected to present a clinical case with discussion at plastic surgery grand rounds at the end of the rotation.

This elective is recommended for students interested in general or plastic surgery. This course is required for all applicants to a plastic surgery residency.

RECOMMENDED TEXT: Grabb and Smith, *"Plastic Surgery"* Lippincott Raven. Required reading: Chapters 1 and 2 of Grabb and Smith.

### **SURG 9184 - PLASTIC SURGERY**

DIRECTOR: Dr. Stephen Colen

LOCATION: Hackensack University Medical Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This is a comprehensive course covering all aspects of plastic surgery. Students will be required to attend conferences at University Hospital and at Hackensack University Medical Center. They will also obtain clinical exposure at Hackensack University Medical Center. No vacations are permitted during this four week elective.

REPORTING INSTRUCTIONS: Students are expected to report to the Office of Academic Affairs, Hackensack University Medical Center, Alfred N. Sanzari Building, 360 Essex Street, 4<sup>th</sup> Floor, Suite 402, Hackensack, NJ 07601 at 8:00 a.m. on the first day of the rotation. Contact number: (551) 996-2016.

### **SURG 9232 - TRAUMA TEAM ACTING INTERNSHIP**

DIRECTOR: Dr. David H. Livingston

LOCATION: New Jersey Trauma Center at University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: In this elective, students will serve as members of the Trauma Team at the New Jersey State Trauma Center. The schedule, including days off, is in compliance with the 80 hour work week. They will participate in the initial assessment of trauma victims in the Emergency Room and in the subsequent pre-operative, operative and post-operative management. In addition, there are conferences, didactic lectures and daily rounds which allow for expansion of the interests of the student. There is opportunity for participation in research protocols and pursuit of research interests as well. Students will also gain exposure to EMS pre-hospital patient care activities with ground and aeromedical transports.

Evaluations will be made by Dr. Livingston and the Trauma Faculty, the Trauma Fellows, and the Chief Resident, based upon presentations, observed skills, judgment and clinical performance.

### **SURG 9233 - SURGICAL INTENSIVE CARE UNIT**

DIRECTOR: Dr. Leslie Tyrie

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: The student will become an integral part of the team managing critically ill patients. Rounds will be made daily with the attending staff. Each student will function as a subintern and be responsible for presentation of one patient each day. On rounds, discussion will focus on the pathophysiology of each of the problems presented. Students will be given selected readings in critical care medicine. Students will also participate in insertion of central lines and arterial lines for monitoring, ventilator management, and resuscitation.

### **SURG 9235 - CRITICAL CARE PROBLEMS IN SURGERY**

DIRECTORS: Dr. J. Martin Perez

LOCATION: Hackensack University Medical Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: In conjunction with a full time intensivist and I.C.U. resident, the student functions as a member of the team in the Surgical Intensive Care Unit caring for the critically ill patients. The student will build on his or her knowledge of basic science and apply this to patient problems. S/he will learn to perform common I.C.U. procedures such as placement of arterial lines, central lines and pulmonary artery catheters. The curriculum will include such diverse subjects as shock and resuscitation, fluids and electrolytes, surgical nutrition, ventilator management and controversies in critical care. Students will learn from formal didactic sessions as well as from bedside discussions in which they will be expected to be active participants. They will take call at night on the trauma service and learn the basics of assessment and management of their patients.

## **SURG 9237 – SURGICAL INTENSIVE CARE/ST. BARNABAS MEDICAL CENTER**

DIRECTOR: Dr. Fariborz Rezai

LOCATION: Saint Barnabas Medical Center, Livingston, NJ

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: On this elective rotation, the student is assigned to the Surgical Intensive Care. He/she works under the close supervision of teaching residents and attending staff. As part of a multidisciplinary team, the student's responsibilities include taking call and admitting patients. Students are expected to present a complete history on rounds, perform physical examinations in the attending's presence, participate in bedside rounds as an integral part of the ICU team and attend all scheduled lectures. During this elective, it is expected that the student will be able to 1) present a complete history on rounds, 2) perform a physical exam, and 3) apply appropriate information obtained in reading to individual cases.

The student will actively participate in formal clinical teaching rounds, which include surgical residents and attending staff. Additionally, he/she will attend regular scheduled resident conferences of the Department of Surgery. The student is to be prepared for operative cases by way of appropriate reading.

Evaluation of the student by the surgical residents and attending physicians is based on multiple factors including fund of knowledge, level of participation in patient care, and ability to assume progressive responsibility.

## **SURG 9253 - UROLOGY - ACTING INTERNSHIP**

DIRECTOR: Dr. Nitin Patel  
[pateln11@njms.rutgers.edu](mailto:pateln11@njms.rutgers.edu)

ADMINISTRATOR: Shaniqua Mitchell, [mitches1@njms.rutgers.edu](mailto:mitches1@njms.rutgers.edu)

LOCATION: University Hospital and Department of Veterans Affairs Medical Center

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Students participating in this elective officiate as acting interns under the supervision of the chief of urology. They work closely with the urology residents and eight to ten urology attendings. Students are exposed clinically to all patients on the urology service.

This elective is not open to international visiting medical students.

## **SURG 9266 – ACTING INTERNSHIP IN VASCULAR AND ENDOVASCULAR SURGERY**

DIRECTOR: Michael Curi, MD, MPA  
[curi@njms.rutgers.edu](mailto:curi@njms.rutgers.edu)

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: Students with an interest in Vascular Surgery can experience working on the service functioning as an intern, alongside a team of vascular surgery fellows and general surgery residents. Rounds are conducted daily prior to going to the operating room or clinic. Sub-interns will be responsible for following pre- and post- op patients, evaluating consults, and seeing patients in the office. In the operating

room, the student will assist with open and endovascular procedures. They will assist in the post-operative care by writing brief operative notes and participate in all peri-operative care of the patient. ~~In the office/clinic, students will see patients, take H & P's, and present the patient to the attending who then sees the patient with the student.~~ Students will be taught how to write orders by faculty and residents. They will be expected to attend weekly pre-operative conferences, monthly journal clubs, and monthly morbidity and mortality conferences.

## **SURG 9300 - ORAL AND MAXILLOFACIAL SURGERY**

DIRECTOR: Dr. Vincent Ziccardi

LOCATION: University Hospital

WHEN OFFERED: August, September, October

DESCRIPTION OF ELECTIVE: This elective will introduce the student to the field of oral and maxillofacial surgery. University Hospital is a Level I Trauma Center with the oral and maxillofacial surgery division managing hundreds of patients who have sustained injuries to the maxillofacial region. In addition to trauma, the oral and maxillofacial surgery service treats patients with cysts, benign and malignant tumors of the jaws, performs reconstruction of jaws, manages patients with severe odontogenic infections, performs orthognathic and cosmetic procedures, and many other procedures of the oral and maxillofacial region. The student will have the opportunity to observe and assist in the operating room. He/she will also be exposed to postoperative management of surgical patients in the ambulatory clinic, as well as to numerous dentoalveolar procedures carried out using local anesthesia, ambulatory intravenous sedation, or general anesthesia.

This elective is recommended for students interested in oral and maxillofacial surgery, otolaryngology, plastic surgery and general surgery.