



New Jersey Medical School

**ELECTIVES**  
for  
**Fourth Year Students**  
*2024-2025*

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

## FOREWORD

This brochure describes the electives offered to fourth year students at New Jersey Medical School. The elective program augments the required clerkships and is designed to assist students in career planning and complement future training. An extensive selection of courses is offered in both the basic sciences and clinical disciplines and in settings that include acute care hospitals, ambulatory clinics, private offices, and research laboratories.

Students are encouraged to consult their Advisors, Department Chairs, Clerkship Coordinators, and Student Affairs Dean for assistance in planning their elective programs. Please see the section on Program Guidelines and Registration Procedures for further information.

Best wishes for a rewarding and enjoyable year.

Heidi Schwalb  
Registrar  
B-640 Medical Sciences Building

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This brochure represents programs of the current curricula, educational plans, offerings and requirements of the New Jersey Medical School. The School reserves the right to change any provisions, offerings, tuition, fees, or requirements at any time within the student's period of study at NJMS. In addition, NJMS may at any time eliminate, modify or change the location of any School, Institute, Center, Program, Department, course or academic activity.

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## PROGRAM GUIDELINES AND REGISTRATION PROCEDURES

### **Academic Offerings/Programs of Study**

Each academic department of New Jersey Medical School is responsible for certifying the educational merit of the electives relating to its discipline. All electives submitted to the Office of Education for inclusion in the Electives Brochure must be approved by the appropriate academic department prior to publication.

All electives offered at NJMS or its affiliates are listed in this brochure. Under exceptional circumstances, a special elective may be developed by arrangement between a student and a faculty member. A written description of the course, with the approval of the department chair, must be submitted to the Registrar's Office before the student will be permitted to register.

***Elective choices for the year will be limited to sixteen (16) weeks in any one academic department.*** Exceptions may be granted on an individual basis; however, they must be approved by the Associate Dean for Student Affairs.

A maximum of eight (8) weeks of elective credit in departmental research can be applied toward the degree requirements.

Applications for an elective with a sponsor who is a relative must be approved by the Associate Dean for Student Affairs. Approval must be requested at least 30 days in advance of the elective.

### **Registration Procedures For NJMS Students**

#### **NJMS Electives**

NJMS electives and outside elective courses (externships) can be scheduled in the fall (May through October) and spring (November through April). NJMS electives are those offered at NJMS and its affiliates. Externships are those offered at other medical schools.

**Fall Electives** are NJMS electives taken in May - October. Registration for these electives is conducted by the Registrar's Office. Students are asked to pick selections for each month in which they would like to take an NJMS elective and write these choices on an Elective Selection Form. Completed forms are processed by the Registrar's Office according to the student's lottery number. Instructions and Elective Selection Forms are distributed to students in February. Upon completion of the fall elective registration for NJMS students, visiting student course requests are processed on a space available basis.

**Spring Electives** are NJMS electives taken in November - April. Instructions and forms are e-mailed to fourth year students in September.

### **Expectation to Travel to Affiliate Sites Policy**

During the course of their education, students enrolled in the doctor of medicine degree program at Rutgers New Jersey Medical School will receive their training at various clinical training sites. New Jersey Medical School has affiliations with a number of private practitioners, facilities and hospitals. The breadth of clinical training sites enriches the student's learning experience, as the student is exposed to diverse patient populations and health care environments.

Students are expected to make their own travel arrangements when assigned to an affiliate site. If a student does not own an automobile, it is expected that the student will carpool, make full use of public transit systems, or secure another method of transportation that will insure their prompt arrival at the site. If a student cannot fulfill the NJMS essential functions for admission, matriculation and program completion or travel to affiliate sites, the student should request accommodations through the NJMS Access to Accommodations policy. In the absence of approved accommodations, failure to secure adequate transportation to an affiliate site cannot be used as an excuse for tardiness or absenteeism.



To view the entire policy, please visit:

[http://njms.rutgers.edu/education/student\\_affairs/documents/StudentHandbook.pdf](http://njms.rutgers.edu/education/student_affairs/documents/StudentHandbook.pdf) (Page 105)

### **Adding/Dropping An Elective**

NJMS students may process NJMS elective course changes no less than **four weeks** prior to the date the course is scheduled to begin. NJMS students may process externship course changes no less than four weeks prior to the date the course is scheduled to begin.

Students may add a course within four weeks of the course start date only with Registrar Office approval and permission of the department. Students requesting to drop a course subsequent to the four-week deadline and prior to the first day of class will have a grade of withdrawal (WD) recorded on his/her transcript.

A student who may need to take a leave on or after the first scheduled day of an elective, with concurrence of the faculty sponsor, will have a grade of withdrawal (WD) recorded on his/her transcript. Otherwise, a final grade of Fail (F) will be recorded.

Add/drop activity is not official until processed in the Registrar's Office. Notification to academic departments is not considered official.

### **Evaluation Forms**

On the first day of the rotation, students are requested to take an evaluation form ("Summary Evaluation of Student Performance in Clinical Courses") to the elective sponsor and ask that the responsible faculty member complete the evaluation and return it to the Registrar's office **within two weeks** following completion of the elective.

At the conclusion of the elective, students are expected to complete all course evaluations.

## PROFESSIONAL LIABILITY COVERAGE

Students of New Jersey Medical School are covered for professional liability claims arising out of their treatment of patients only as part of a course authorized by the School. This coverage extends to include elective programs at other institutions as long as the elective has been approved by the appropriate department of the school and the Registrar's Office. The following conditions must be satisfied for this coverage to be in effect:

1. Entries on a patient's medical record must be signed legibly by the student and countersigned by a graduate physician and/or licensed physician in accordance with state law.
2. Procedures other than venepuncture, arterial puncture, insertion of peripheral venous lines, and insertion of urethral catheters must be directed and supervised by a graduate physician and/or licensed physician, and documentation of supervision noted on the chart.

## STUDENT EVALUATION

Students are evaluated according to the criteria set by the individual elective sponsors. Students should discuss mutual expectations and evaluation methods with sponsors at the beginning of the elective. An informal assessment of progress halfway through the elective is strongly encouraged.

Grades are reported to the Registrar using the *Summary Evaluation of Student Performance in Clinical Courses Form*, available in the Office of the Registrar.

## ATTENDANCE POLICY

Participation in learning experiences is essential for the development of competent physicians. Attendance is expected at all scheduled activities, including lectures, conference, rounds, clinical assignments, on-call, and preceptorships. A clerkship or elective director may grant a student an excused absence from a mandatory clerkship or elective session for the following reasons:

- personal illness;
- birth of a child;
- an appointment with a healthcare provider or to receive healthcare services;
- mandatory jury duty;
- serious illness or death of an immediate family member<sup>1</sup>;
- serious illness or death of a non-family member by the approval of the Associate Dean for Student Affairs;
- residency interviewing;
- or by approval of the Associate Dean for Student Affairs.

Students must notify the respective clerkship/elective director or her/his designee of his/her expected absence on or before the scheduled start time of the clerkship/elective. The student may not leave a message or write an email; they must speak to the clerkship/elective or designee and be granted the excused absence. The clerkship/elective director may require appropriate documentation. In the event that the clerkship/elective director or his/her designee is not available, the student must contact the Associate Dean for Student Affairs.

Unexcused absences are not permitted and will result in failure and repetition of the clerkship/elective. All excused absences must be made-up; any time not made-up will result in a grade of "I/R - Incomplete/Requirements."

Students who are absent for more than five consecutive or cumulative days within a clerkship or elective will be required to take a leave of absence from the School. When a student is placed on a leave of absence, the clerkship/elective director will determine how remaining clerkship/elective requirements must be fulfilled, which may include, but is not limited to, repetition of the entire clerkship/elective.

In response to events or notifications of escalating, and/or severe weather and/or other disasters and catastrophic emergencies, the RBHS may decide to implement curtailment of operations procedures described in the "Inclement Weather and Emergency Curtailment of Operations" policy. Hazardous weather, disasters, catastrophes, and other emergencies do not automatically cause curtailment procedures to be placed into effect; a decision to implement curtailment procedures must be made and communicated by the appropriately designated University or RBHS officials.

For the purpose of inclement weather or other disasters and catastrophic emergencies, students shall not be deemed or characterized as "essential or emergency" personnel as these designations are defined by law. Pursuant to Rutgers and RBHS policies, students shall not be compelled or required to report to their duties nor should they be adversely affected by their absence (ie. evaluations and/or grading), as the absence shall be deemed an excused absence. Please note that all excused absences due to such emergencies will be addressed at the clerkship level.

Clerkship and elective directors are obligated to enforce this policy.

<sup>1</sup>Members of the immediate family are defined as spouse, domestic partner, children, parents, brother or sister, parents-in-law, grandparent, brother-in-law or sister-in-law, aunt or uncle, niece or nephew or other relatives living in the student's household unit.

## VISITING STUDENTS

### Visiting students enrolled in LCME accredited medical schools:

Students from institutions accredited by the Liaison Committee on Medical Education (LCME) interested in applying for elective rotations at New Jersey Medical School or an affiliate hospital must supply their visiting student application materials through VSLO, the Visiting Student Learning Opportunities program.

Applications may be submitted through VSLO starting on a date to be determined each Spring; they will be reviewed starting in May. To apply to our institution, visiting students must complete and submit a VSLO application for your preferred electives and dates. For more information on our visiting student electives, please contact Ms. Gina Ardito at [arditoga@njms.rutgers.edu](mailto:arditoga@njms.rutgers.edu).

For more information on VSLO, please visit [www.aamc.org/students/medstudents/vsas](http://www.aamc.org/students/medstudents/vsas) or contact VSLO at [vsas@aamc.org](mailto:vsas@aamc.org) or (202) 478-9878. VSLO is currently only available for medical and osteopathic students from U.S. LCME accredited schools to use.

Visiting students enrolled in Saint George's University School of Medicine and Ross University School of Medicine may submit their applications in paper copy. Please see our website for further information at <http://njms.rutgers.edu/education/registrar/visitingstds.cfm>:

### All visiting students:

Given that students from Saint George's University School of Medicine and Ross University are approved by the New Jersey State Board of Medical Examiners to participate in clinical training in the state, these students may apply for electives at NJMS. Students from all other non-LCME accredited international medical schools are not accepted. Visiting students must be US citizens and satisfy the application requirements identified above.

All application information must be received **at least eight weeks prior** to the start of the elective rotation. NJMS reserves the right to deny an application(s) for an elective rotation if application materials are received within eight weeks of the elective(s) start date(s). If you wish to apply for more than one elective and you are applying on paper, please use one form per elective. Visiting students may complete up to 8 weeks of electives. Please be advised that you must follow NJMS rotation dates and use NJMS course numbers to identify the electives in which you seek to enroll. Do not directly submit application materials to academic departments.

We begin processing applications for the fall term in May. Acceptance into an elective is based upon a complete application, including immunization compliance, and elective availability. If you are accepted into the rotation you will be automatically registered. Should you wish to drop the course or change your elective dates, you must notify this office in writing no later than four weeks prior to the start date.

## **POLICY ON THE TEACHER-LEARNER RELATIONSHIP AND THE LEARNING ENVIRONMENT IN MEDICAL EDUCATION**

Rutgers New Jersey Medical School has a responsibility to foster the development of professional and collegial attitudes needed to provide caring and compassionate health care by all members of the New Jersey Medical School community, including medical students, graduate students, resident physicians, faculty, volunteers and other staff who participate in the educational process. We believe that teaching and learning should take place in a climate of mutual respect where students are evaluated based upon accomplishment, professionalism and academic performance. We are committed to maintaining a positive learning environment and the highest standards of behavior in the teacher-student relationship. The diversity of members of the academic community, combined with the intensity of interactions that occur in the health care setting, may lead to incidents perceived as or actually of mistreatment or unprofessional behavior. New Jersey Medical School maintains its commitment to preventing student abuse and the highest standards of professionalism through education, by providing support for those who are subjected to mistreatment, and by responding with corrective action to incidences of abuse and unprofessionalism. This policy addresses the behaviors required from all those who are in training sites, including faculty members, residents, nurses, staff, or students in a teaching role. It is intended to ensure an educational environment in which students, staff, volunteers, and faculty may raise and resolve issues without fear of intimidation or retaliation. The Dean of New Jersey Medical School oversees the implementation of this policy.

This policy on mistreatment prevention and response and the learning environment has four main components:

- A statement of New Jersey Medical School's standards of behavior with regard to mistreatment, including: a definition of mistreatment; examples of types of mistreatment; persons who may be the object or perpetrator of mistreatment; and the purpose of the policy on mistreatment.
- A plan for the ongoing education of the New Jersey Medical School community concerning these standards of behavior and professionalism and the process by which they are upheld.
- A description of the New Jersey Medical School process for responding to allegations of mistreatment.
- A description of options that are available to all members of the New Jersey Medical School for reporting incidences of unprofessional behavior exhibited by anyone in the learning environment.

Learners will be "protected" when making truthful reports of abuse or unprofessional behavior on the part of others, even when their identity must be disclosed. Such reporting is a professional obligation on the students' part as members of our educational community. Members of our educational community including faculty and staff who witness others being abusive to learners or exhibiting unprofessional behavior are also expected to report these incidents. This will help to create a better learning environment for all.

A complaint should be reported as soon as possible but not more than 90 (ninety) days after the alleged incident. Several avenues of reporting are available to a student who experiences an incident of inappropriate behavior and mistreatment or is the witness to unprofessional behavior. The same pathways may be used by faculty and staff who witness abusive and/or unprofessional behavior.

For a copy of the full policy, which includes a detailed description of various reporting mechanisms, please visit online at: [http://njms.rutgers.edu/education/student\\_affairs/documents/StudentHandbook.pdf](http://njms.rutgers.edu/education/student_affairs/documents/StudentHandbook.pdf) (page 45)

## **THE NEW JERSEY MEDICAL SCHOOL**

### **CODE OF PROFESSIONAL CONDUCT**

The Rutgers New Jersey Medical School Code of Professional Conduct (hereinafter referred to as "the Code") sets forth general principles of integrity as well as expectations for behavior consistent with the ethical study and practice of medicine as described in the American Medical Association (AMA) code of ethics and the American Board of Internal Medicine's Project Professionalism.

Acknowledging the high professional and ethical standards that physicians are expected to exhibit, the students of the New Jersey Medical School (NJMS) have adopted the following as guidelines for professional conduct. Students are expected to exercise good judgment when questions of a professional or ethical nature arise.

NJMS student responsibilities include, but are not limited to, the following:

1. to be aware of and to abide by all applicable federal, state and local civil and criminal laws and regulations;
2. to be aware of and to abide by all applicable University and School policies, rules, procedures and standards, both general and academic; to be responsible for personal and professional integrity and honesty in all academic activities; to treat all members of the community (faculty, staff, students, patients) with respect and understanding and to resolve conflicts with other members of the NJMS community in a respectful and constructive manner.
3. to hold themselves to high standards of academic integrity. This includes the accurate and honest reporting of clinical and research data, as well as ensuring that the rules regarding all examinations and coursework are adhered to.
4. to do their utmost to ensure a safe and friendly environment for patients. This includes maintaining accurate notes, following up promptly on results of diagnostic studies and serving as a patient advocate. Additionally, students will maintain strict confidentiality regarding patient information.
5. to adhere to all generally recognized standards of professional and ethical conduct and to help ensure that high standards of professional and ethical conduct are upheld by fellow students, colleagues and peers by reporting incidents of academic and professional dishonesty observed in others.

To view the entire policy, please visit:

[http://njms.rutgers.edu/education/student\\_affairs/documents/StudentHandbook.pdf](http://njms.rutgers.edu/education/student_affairs/documents/StudentHandbook.pdf) (page 26)

## NJMS Standards of Professionalism

Appropriate professional behavior is a fundamental component of preclerkship and clinical competency. In addition to clinical performance and medical knowledge, interpersonal skills need to meet New Jersey Medical School standards. Interpersonal skills are described here as including (1) professional attributes and responsibilities; (2) self-improvement and adaptability; (3) effective relationships with patients; and (4) effective relationships with other members of the faculty, student body and members of the health care team. Each student should be familiar with the NJMS Guide to Professional Conduct and the NJMS Code of Conduct, the companion documents to this policy.

We must set a standard for the attainment of professionalism that is as high as those for the attainment of the cognitive skills. While cognitive competencies are judged in blocks of time (courses and clerkships), professionalism must be assessed and tracked over the continuum of the student's medical education and career. Accountability for the professional development of students and the evaluation of their professionalism is the responsibility of all preclinical and clinical evaluators, despite the relatively short course/clerkships, changing sites and the perception that this is a subjective area.

To address lapses in professionalism, New Jersey Medical School employs a multi-tiered, developmental approach. A student whose behavior does not meet a standard, as defined above, is reported on either the Pre-Clerkship and Clerkship Years or Institutional Professionalism Form. Subsequent action is taken in a manner appropriate to both the severity of the infraction and the student's position along the continuum of the curriculum. The language on the forms was chosen to define the minimum standard of behavior the student has not met. The intent of each form is to identify a student with behavior(s) that does not meet a standard so that a plan of professional development may be instituted promptly.

**If you have an experience with a student that does not meet the standards stated above, the following steps must be taken:**

1. The Course Director/Clerkship Director/Faculty/Administrator must discuss the situation with the student and inform them that they are going to present the incident(s) to the PreClerkship or Clerkship Professionalism Subcommittee.
2. The incident should be presented to a subcommittee of the Pre-Clerkship Curriculum Committee or Clerkship Curriculum Committee depending on the student's phase in the curriculum. The subcommittee will be made up of all faculty members of these committees.
  - a. The student will meet with the Chair of the relevant subcommittee to be informed of the subcommittee process and their rights.
  - b. The subcommittee will meet within 10 days of the experience that led to the concern.
    - i. The Course Director/Clerkship Director/Faculty/Administrator bringing the incident(s) to the relevant committee will describe the situation.
    - ii. The student will be asked to address the committee to explain their perspective on what happened and any factors that the committee needs to consider.
  - c. The relevant committee will decide if it is appropriate to complete a Professionalism Form. If appropriate, the form is completed by the Course Director/Clerkship Director/Faculty/Administrator fifteen (15) business days from the clerkship or course end date or the date of incident, whichever is later.
3. The student must sign to acknowledge receipt and review of the form.
4. The form is submitted to the Office of Student Affairs and is placed in the student's file

**For students in the pre-clerkship years:**

- a. If one or two professional forms are submitted for a student in the first two curricular years, the student is required to be counseled by the ADSA, who will arrange a plan for professional development. The form and the plan for professional development will not be referenced in the MSPE (Medical Student Performance Evaluation). The ADSA will report on these students to the CSA (Committee on Student Affairs) on a bi-monthly basis.

- b. If a student receives more than two forms in the first two curricular years then the student will be required to appear before the CSA. After meeting with the student, the CSA will decide whether or not the content of the forms, the professional development plan(s), and the meeting with the CSA will be referenced in the MSPE under the adverse action question in the academic history section.
- c. If a student receives more than two forms in the first two years and a subsequent form in the third or fourth year then the student is required to appear before the CSA and the forms, the professional improvement plan(s), and the meeting with the CSA shall be mentioned in the MSPE under the adverse action question in the academic history section.

**For students in the clerkship years:**

- a. If student receives one form in the third or fourth year and has had no prior forms submitted on their behalf, the student is required to be counseled by the ADSA, who will arrange a plan for professional development. The form and the plan for professional development will not be referenced in the MSPE (Medical Student Performance Evaluation).
- b. If the student receives two or more forms in the third/fourth years then the student is required to appear before the CSA and the forms, the professional development plan(s), and the meeting with the CSA will be mentioned in the MSPE under the adverse action question in the academic history section.

**For students who will have professionalism forms mentioned in the MSPE:**

The student may appeal having the professionalism forms in their MSPE by writing the Dean within 10 business days of the CSA meeting. The Dean will review the professionalism forms, the committee's decision, the student's written appeal, and will decide whether the CSA action will stand and the forms will be mentioned in the MSPE.

**For students not receiving a form:**

If the Pre-Clerkship or Clerkship Professionalism Subcommittee decides not to complete a form, but believes the student would benefit from counseling by the ADSA, they will refer the student without this being a part of the student's record.



## **HIV (HUMAN IMMUNODEFICIENCY VIRUS) HBV (HEPATITIS B VIRUS) AND HCV (HEPATITIS C VIRUS) POLICY**

The university policy 00-01-45-52:00 titled “HIV, HBV and HCV” references University requirements for Human Immunodeficiency Virus, Hepatitis B Virus and Hepatitis C Virus (HIV, HBV and HCV) testing, evaluation, immunization, and impact on the allowed clinical activities of employees, faculty, housestaff and students who have or will have patient contact, contact with research subjects, or contact with potentially infectious materials during their employment or studies. The full copy of the policy is available online at:

<http://policies.rutgers.edu/4035-currentpdf>

## **MANAGEMENT OF POTENTIAL OCCUPATIONAL/ EDUCATIONAL EXPOSURES TO HIV, HBV, AND HCV**

The purpose of this policy is to outline the procedure under which postexposure prophylaxis will be made available to the University's personnel, including students, housestaff, faculty, staff and postdoctoral appointees, who in the course of their studies and/or occupational activities, are exposed to blood, tissue or other body or laboratory fluids that may contain human immunodeficiency virus (HIV), hepatitis B virus (HBV) and/or hepatitis C virus (HCV). This policy is based upon the available scientific data and Public Health Service recommendations for postexposure management of health-care personnel who have occupational exposure that may place them at risk of acquiring HIV, HBV and/or HCV.

The full copy of the policy is available online at:

<http://policies.rutgers.edu/4038-currentpdf>

## DIRECTORY OF CLINICAL TRAINING SITES

Behavioral Health Science Building  
183 South Orange Avenue  
Newark, NJ 07103  
Telephone: (973) 972-5479

Children's Specialized Hospital  
150 New Providence Road  
Mountainside, NJ 07092  
Telephone: (908) 233-3720

University Reproductive Associates  
214 Terrace Avenue  
Hasbrouck Heights, NJ 07604  
Telephone: (201) 288-6330

Department of Veterans Affairs  
New Jersey Health Care System  
385 Tremont Avenue  
East Orange, NJ 07019  
Telephone: (973) 676-1000

Doctors Office Center  
90 Bergen Street  
Newark, NJ 07103  
Telephone: (973) 972-2000

Eye Institute of New Jersey  
Doctors Office Center  
90 Bergen Street  
Newark, NJ 07103  
Telephone: (973) 872-2000

FOCUS Community Health Center  
449 Broad Street  
Newark, NJ 07102  
Telephone: (973) 972-0980

Jersey City Medical Center  
50 Baldwin Avenue  
Jersey City, NJ 07304  
Telephone: (201) 915-2000

Kessler Institute for Rehabilitation  
1199 Pleasant Valley Way  
West Orange, NJ 07052  
Telephone: (973) 731-3600

Kessler Institute for Rehabilitation  
240 Central Avenue  
East Orange, NJ 07018  
Telephone: (973) 414-4700

Kessler Institute for Rehabilitation  
300 Market Street  
Saddle Brook, NJ 07663  
Telephone: (201) 587-8500

Morristown Memorial Hospital  
100 Madison Avenue  
Morristown, NJ 07962  
Telephone: (973) 971-5000

Mountainside Family Practice  
799 Bloomfield Avenue  
Verona, NJ 07044  
Telephone: (973) 746-7050

Newark Beth Israel Medical Center  
201 Lyons Avenue at Osborne Terrace  
Newark, NJ 07112  
(973) 926-7000

Regional Medical Examiner's Office  
325 Norfolk Street  
Newark, NJ 07103  
Telephone: (973) 648-2548

Cooperman Barnabas Medical Center  
94 Old Short Hills Road  
Livingston, NJ 07039  
Telephone: (973) 322-5777

St. Elizabeth/Trinitas Hospital  
225 Williamson Street  
Elizabeth, NJ 07207  
Telephone: (908) 994-5000

St. Joseph's Regional Medical Center  
703 Main Street  
Paterson, NJ 07503  
Telephone: (973) 754-2000

St. Michael's Medical Center  
111 Central Avenue  
Newark, NJ 07102  
Telephone: (973) 877-5000

University Hospital  
150 Bergen Street  
Newark, NJ 07103  
Telephone: (973) 972-4300

## ELECTIVES SCHEDULE - Fourth Year Students

### ACADEMIC YEAR 2024 - 2025

	CALENDAR DATES			BROCHURE DESIGNATION
2024	May 6	to	May 31	May
	June 3	to	June 28	June
	July 1	to	July 26	July
	July 29	to	August 23	August
	August 26	to	September 20	September
	September 23	to	October 18	October
	October 21	to	November 15	November
	November 18	to	December 20*	December

\*Thanksgiving recess begins 5:00 p.m. on 11/22/24. Electives will resume on 12/2/24.

\*Winter recess is scheduled from 12/21/24 - 1/1/25. Clerkships will resume on 1/2/25.

2025	January 2	to	January 24	January
	January 27	to	February 21	February
	February 24	to	March 21	March
	March 24	to	April 18	April

## DEPARTMENT OF ANESTHESIOLOGY

### **ANES 9000 - GENERAL ANESTHESIA**

DIRECTOR: Dr. Olga Martins

LOCATION: University Hospital

DURATION: 2 - 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 5

PREREQUISITE: General Surgery

DESCRIPTION OF ELECTIVE: Students will have an opportunity to review the fundamentals of basic and clinical sciences in pharmacology and physiology as they relate to anesthesia. They will be involved in preoperative preparation, administration of anesthesia and postoperative follow-up of the patient. Application of cardiac, respiratory, metabolic, renal and fluid/electrolyte physiology to clinical conditions is emphasized. The basic skills of tracheal intubation and airway maintenance are learned in the operating room. The student will also be exposed to the fundamentals of regional and conduction anesthesia. All anesthetic procedures are done under the supervision of faculty anesthesiologists. Opportunities for anesthetics for such specialties as cardiothoracic surgery, neurosurgery, and obstetrics exist for the well-motivated student. Fourth year students completing a 4-week rotation also have the option to select one week in the CTICU/SICU West.

All students will receive a list of topics to be covered during their rotation. For each day in the OR, the student should initiate the discussion of those topics with his/her resident or attending. The anesthesia provider will initial the form, which the student should submit to the course director at the end of the rotation. All students participate in a formal examination process, depending on the length of elective and medical student year. The 2-week elective examination is a 15-25 question multiple choice exam. Students scheduled for the 4-week elective will be given a 60 question exam on the last day of the rotation.

Evaluation: The student's grade is based upon clinical performance (majority) and examination results (minority).

REPORTING INSTRUCTIONS: Student should report to Dr. MSB E-545 at 7:10 a.m. on the first day of the elective. All materials will be emailed by Steve Demas in advance of the rotation.

### **ANES 9001 - OBSTETRICAL ANESTHESIA**

DIRECTOR: Dr. Dongchen Li

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: June, August - April

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Medicine, General Surgery, Obstetrics and Gynecology, General Anesthesia elective or permission of Dr. Li.

**DESCRIPTION OF ELECTIVE:** The full spectrum of anesthetic management of parturients is available, including general and regional analgesia/anesthesia. This elective provides the student with insight into the psychologic, physiologic and metabolic alterations in pregnancy, labor and delivery, and how they affect the conduct of anesthesia. Other topics include neonatal resuscitation, management of airways, and care of patients with high-risk pregnancies. Students are given reading assignments and are expected to participate in discussion and prepare a short paper on a topic of interest.

**REPORTING INSTRUCTIONS:** Students should contact Dr. Li at lido@njms.rutgers.edu.

### **ANES 9002 - MANAGEMENT OF CHRONIC PAIN SYNDROMES**

**DIRECTOR:** Dr. Andrew Kaufman

**EDUCATION COORDINATOR:** Ms. Lisa White

**LOCATION:** Pain Center, DOC Suite 3400

**DURATION:** 4 weeks from June through January, then 2-4 weeks from February to May

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 3

**PREREQUISITE:** None

**DESCRIPTION OF ELECTIVE:** During this rotation, students will be exposed to a wide variety of chronic pain conditions including central and peripheral neuropathies, cancer related pain, and chronic spinal conditions. Students will review all relevant tests, i.e. MRI, CT, EMG/Nerve Conduction, Plain films and help to formulate treatment plans. Treatments include pharmacologic interventions as well as nerve blocks, epidural injections, facet joint injections, radiofrequency ablative techniques and trials of spinal cord stimulator.

In addition, the student will be involved with the University Hospital consultative service. Rounds are made every morning beginning at 7:15 a.m. with the team of the pain attending, second year anesthesiology resident, and nurse practitioner.

There will be daily didactic sessions and case presentations.

Patients are seen in both our Newark office (DOC Suite 3400) as well as our Summit Office (Medical Arts Center on the campus of Overlook Medical Center)

**REPORTING INSTRUCTIONS:** Ms. White will email the student(s) one week prior to the start of the rotation. If you do not receive an email, please contact Ms. White at 972-2085 on the day prior to the start of the rotation.

### **ANES 9004 - RESEARCH IN ANESTHESIOLOGY**

**DIRECTORS:** Dr. Alex Bekker (or current Chair)

**LOCATION:** University Hospital

**DURATION:** 4 - 8 weeks

**WHEN OFFERED:** By arrangement with Tamara Berezina, MSB E-562A

NUMBER OF STUDENTS PER ROTATION: 2 (no students in June)

PREREQUISITE: Permission of the Program Director, CITI training (for clinical research projects)

DESCRIPTION OF ELECTIVE: Projects in clinical research are available for the motivated student interested in a career in Anesthesiology. Areas of interest include pain management, pediatric anesthesia, and perioperative management. Research projects in basic science are available for the student who has demonstrated previous basic science laboratory experience. Interested students must arrange a meeting with the department's Research Coordinator, Tamara Berezina.

REPORTING INSTRUCTIONS: Please contact Ms. Berezina 3 business days prior to the start of the rotation to confirm start date and meeting time with faculty mentor.

## DEPARTMENT OF EMERGENCY MEDICINE

### EMED 9010 – COMMUNITY MEDICINE

DIRECTOR: Hosseinali Shahidi, MD

LOCATION: Jordan and Harris Community Health Center, 11 Hawkins Court, Newark

DURATION: 4 - 8 weeks

WHEN OFFERED: **NOT CURRENTLY OFFERED – DO NOT REGISTER**

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

**COURSE DESCRIPTION:** The elective will introduce students to the community healthcare model. Students will be involved in the evaluation of health care needs of the community through active participation as a member of an interdisciplinary team. The team will include nursing students, students from the School of Health-Related Professions, public health students, nurses, nurse practitioners, and community health workers. The students will learn principles of teamwork through these interactions and engage in activities that concentrate in preventing illness and maintaining health rather than treating disease. Students will be introduced to the complex problems of health care delivery to marginalized and underserved populations. The elective offers students the opportunity to improve their skills in cultural competency and interdisciplinary communication. Since this is a community empowerment project, the students will learn the essentials of community participatory techniques that will strengthen the student's interpersonal skills through interaction with empowered communities and their members. Students will be expected to participate in any ongoing community participatory research activities.

Training will occur at the Jordan and Harris Community Health Center that serves an underserved community of Newark. The program serves three housing developments: Terrell, Hawkins and Riverview. Combined, the total resident population is approximately 3000 people. The Jordan and Harris Community Health Center functions as the monitoring station for their health care. Primary care is provided by nurse practitioners who visit these communities in a mobile medical van. The health center is connected to the communities it serves through the CHWs (community health workers) who were selected by the community and trained in the community.

**REPORTING INSTRUCTIONS:** Students should report to Dr. Shahidi's office in MSB E-645 on the first day of the rotation at 9:00 a.m. At that time students will be provided with an orientation, reading materials and a schedule.

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

DIRECTOR: Timothy Satty, MD ([sattytm@njms.rutgers.edu](mailto:sattytm@njms.rutgers.edu)) and Tung-lin Jesse Yuan, DO ([tung-lin.yuan@rutgers.edu](mailto:tung-lin.yuan@rutgers.edu))

LOCATION: University Hospital EMS, University Hospital Emergency Department

DURATION: 2 weeks ONLY

WHEN OFFERED: Throughout the academic year (August-Nov by permission only)

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: This rotation is based at University Hospital Emergency Medical Services, in Newark, New Jersey. The elective will afford the medical student a general overview of 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. Students will complete 3 EMS shifts per week in addition to meetings and one day of didactics.

REPORTING INSTRUCTIONS: Students must contact EMS Supervisor Nicole Ferrarella ([ackermnm@uhnj.org](mailto:ackermnm@uhnj.org)) at least two weeks prior to the start of the rotation to receive rotation expectations, and to discuss meeting time and location. Further reporting information will be provided by email.

### **EMED 9015 – EMERGENCY MEDICAL SERVICES/NEWARK BETH ISRAEL**

DIRECTOR: Dr. Dr. Gluksman

LOCATION: Newark Beth Israel Medical Center / RWJBarnabas Mobile Health

DURATION: 2-4 weeks

WHEN OFFERED: Throughout the academic year by permission

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Preapproval from Cassandra Struck, [rotators@rwjbh.org](mailto:rotators@rwjbh.org)

DESCRIPTION OF COURSE: The purpose of this course is to expose the medical student to a unique facet of Emergency Medicine--the role of the EMS Medical Director and the EMS Physician. Students will have the opportunity to participate in fieldwork with EMS fellows and EMS attending physicians. They will respond to 911 calls as part of the EMS system, observing emergency pathology and its initial management at the point of first medical contact. The student will be exposed to the complex cultural and social challenges of the prehospital environment. They will accompany the fellows during emergency activations, including interfacility transfers of the most critically-ill patients. They will attend the weekly EMS fellowship conference, where they will discuss cases, review protocols and their development, and gain a deeper understanding of EMS systems. They will review prehospital care literature for the monthly EMS journal club. The student will leave the elective with a clearer understanding of the care of patients outside hospital walls and the roles available in EMS for physicians.

Key responsibilities of the student while on elective:

- Students will complete 4 EMS shifts per week/12 hours per shift to include nights and/or weekends.
- Respond with EMS physician to prehospital emergencies while on shift.
- Participate in monthly journal club, actively discuss EMS literature and impacts on protocols.

<https://www.rwjbh.org/for-health-care-professionals/medical-education/newark-beth-israel-medical-center/ems-disaster-medicine-fellowship/>

REPORTING INSTRUCTIONS: On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.



## **EMED 9020 – EMERGENCY POINT-OF-CARE ULTRASOUND**

DIRECTOR: Dr. Linda Qiu ([lyq2@njms.rutgers.edu](mailto:lyq2@njms.rutgers.edu))

LOCATION: University Hospital - Emergency Department

DURATION: 2 weeks ONLY

WHEN OFFERED: August - December

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** This rotation is designed to teach medical students core clinical applications of point-of-care ultrasound (POCUS) for patients in the emergency department (ED). Students will develop fundamental knowledge and skills in clinical ultrasound through a combination of virtual didactic sessions, hands-on scanning in the ED, self-directed study, and quality assurance of departmental scans. This experience is well suited for students matching into fields in which POCUS can be used for clinical decision-making and procedural guidance. Students matching into Emergency Medicine are especially encouraged to enroll in this elective as an extended boot camp prior to residency.

**Monday - Friday:**

- 1) Students will meet with Emergency Ultrasound Division faculty for approximately 3 hours and perform clinically indicated POCUS scans in the ED. Students are welcome to arrange for additional practice with ED residents or faculty as well.
- 2) Students will review online videos/lectures on their own time and with residents throughout the rotation to supplement clinical learning.
- 3) Students will attend quality assurance Zoom sessions with faculty and residents to review departmental scans.

### **LEARNING OBJECTIVES**

By the end of this rotation, students will be able to:

- 1) Independently acquire ultrasound images of various organ systems in patients in the ED.
- 2) Interpret ultrasound images for clinical decision-making.
- 3) Develop an understanding of how POCUS will be beneficial towards their respective clinical specialty.

### **EVALUATION METHODS AND GRADING BREAKDOWN**

- 1) Learning/development of POCUS technical skills and interpretation (30%)
- 2) Attendance/professionalism (30%)
- 3) POCUS Pearl (20%)
  - a) By the end of the elective, students will create a brief, 1-3 sentence pearl on an ultrasound topic of their choice that will be sent out to the ED listserv (examples will be provided). Over the calendar year, these pearls are sent by residents and faculty every Wednesday morning.
- 4) Quiz (10%)
  - a) Towards the end of the second week, students will take a brief, multiple-choice quiz reviewing material from the elective.
- 5) Survey completion (10%)
  - a) Students will fill out a brief, anonymous feedback form at the end of the rotation for faculty to use towards improvements.

**REPORTING INSTRUCTIONS:** Please contact the Rotation Director ([lyq2@njms.rutgers.edu](mailto:lyq2@njms.rutgers.edu)) 1 week prior to the start of elective to receive the schedule and instructions for reporting on the first day.

## **EMED 9022 – EM ULTRASOUND (NBIMC)**

DIRECTOR: Dr. Adam Sivitz

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** This rotation is designed to teach medical students the core clinical applications of bedside ultrasound for patients in the emergency department. Through a series of didactic sessions, hands on practice and bedside patient engagement, the student will develop fundamental knowledge and skills that will assist them with the use of bedside ultrasound, giving them a comprehensive understanding of basic bedside ultrasonography. This course will comprise a combination of self-directed study sessions, lectures and practicums where the student will have the opportunity to demonstrate their understanding of the core ultrasound applications, their clinical indications and interpretation, as well as the ability to use ultrasound guidance to facilitate procedures such as intravenous line placement.

**Learning outcomes & evaluation methods:**

Through simulation, didactics, group learning and patient interactions, the student will obtain a solid foundation of the core competencies for ultrasound examination in the Emergency Department.

Evaluation is based on assessment of knowledge, clinical judgment, presentations, professionalism, and interpersonal skills. This elective is graded Honors/High Pass/Pass per NJMS grading policy.

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

1. Students will watch a selection of short instructional videos prior to the elective.
2. Students will attend scanning sessions supervised by Emergency Medicine faculty and/or senior residents.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

## **EMED 9025 – HEALTHCARE LEADERSHIP AND OPERATIONS IN EMERGENCY MEDICINE**

DIRECTOR: Brian Kenny, DO and Erin Muckey, MD, MBA

LOCATION: University Hospital and New Jersey Medical School

DURATION: 2 weeks only

WHEN OFFERED: Second half of each elective block only

NUMBER OF STUDENTS PER ROTATION: 4

**DESCRIPTION OF ELECTIVE:** The delivery of healthcare has become increasingly complex, and future physician leaders should be equipped with leadership and administrative skills to ensure that they can provide care efficiently with the highest quality. The goal of this elective is to provide an opportunity for medical students to experience various aspects of healthcare administration, including clinical quality, patient safety, leadership, communication, and clinical operations management. Additionally, medical students will

learn and apply frameworks for dealing with systems issues in the hospital. These issues will be of critical significance to a growing proportion of physician practice, and therefore, are an important part of the medical education experience.

Topics covered may include but are not limited to lean/six sigma, change management, systems thinking, negotiation, emotional intelligence, and presentation skills. The course will include daily didactics, small group learning, participation in relevant departmental and hospital committee meetings, and presentation development.

Key responsibilities of the student while on elective:

- 1) The student will participate in daily conferences presented by course directors and experts from different sectors of ED leadership. Students may also be assigned online modules intended to augment the conferences.
- 2) The student will be prepared to engage in the discussion during didactic sessions.
- 3) Along with the preceptor, student will choose a selection of hospital or departmental committees to attend, at least 3 departmental and 2 hospital committee meetings per week. These may include, but are not limited to: Peer Review, Hospital Informatics, Patient Safety, Throughput/Flow.
- 4) The student will formally prepare for and lead daily discussions on assigned topics in healthcare leadership and/or operations
- 5) The student will give final presentation on last day on QA topic

Evaluation will be based on the ability of the student to satisfactorily meet all requirements and assignments of the elective and assimilate and apply information learned to actual systems issues. Students will be expected to develop short presentations for discussion and respond to feedback.

REPORTING INSTRUCTIONS: Students will report to UH Emergency Department Mezzanine offices.

## **EMED 9030 – MEDICAL TOXICOLOGY**

DIRECTOR: Diane Calello, MD

LOCATION: ACC G-1600

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year EXCEPT 8/12-8/23 and 8/26-9/6, 9/9-9/20, 9/23-10/4

NUMBER OF STUDENTS PER ROTATION: 2

DESCRIPTION OF COURSE: The individual will function as both student and participant in the daily operations of the New Jersey Poison Information and Education System, the regional poison center and AIDS/STD/Hepatitis Hotline for the state of New Jersey. The individual will learn the history of poison centers and how they currently operate and their place in public health and disaster preparedness. The student will participate in daily rounds and is expected to be prepared to discuss cases every morning and afternoon at sign out rounds. Medical toxicologists will accompany the student to evaluate poisoned patients at the bedside. Students will read and discuss interesting toxicology articles during journal club and will learn research study design and toxicology investigation principles. The student will have the opportunity to complete a scholarly project at the completion of the experience.

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

1. Describe the role of poison centers in prevention, primary through tertiary, of poisonings.
2. Evaluate a poisoned patient, recognize toxidromes, develop a differential diagnosis, and an appropriate care plan for a variety of overdose situations.
3. Demonstrate a working knowledge of antidotes used for poisoned patients and when they are indicated.
4. Interpret toxicological laboratory studies, understand pharmaceutical principles, and research study

designs in toxicology.

6. Complete an end-of-the-rotation presentation on a toxicology topic of their choosing.

REPORTING INSTRUCTIONS: Please contact Dr. Bruce Ruck ([ruckbe@njms.rutgers.edu](mailto:ruckbe@njms.rutgers.edu)) prior to the start date to confirm the schedule for the first day of the elective. Students who are unable to enroll in the course because the course is full are encouraged to reapply for another block and contact Bruce Ruck and Cynthia Santos to determine if a slot can be made available or other arrangements can be made.

## **EMED 9035 – INTRODUCTION TO TERROR MEDICINE**

DIRECTORS: Dr. Novneet Sahu, Dr. Timothy Satty

LOCATION: New Jersey Medical School

DURATION: 2 weeks

WHEN OFFERED: 3/24/25 – 4/4/25 **ONLY**

NUMBER OF STUDENTS PER ROTATION: minimum 3 – maximum 9

DESCRIPTION OF ELECTIVE: This elective introduces students to the new field of Terror Medicine and its relationship to emergency and disaster medicine. Under the oversight of the Department of Emergency Medicine students will have the opportunity to study the distinguishing elements of a terror event, e.g. establishment of incident command, altered standards of care/triage, bystander control, psychological effects, and contribution of non-traditional health-care providers. Covered topics will include chemical, biological, radiological, nuclear, and explosive events. Students will also participate in tabletop and hands-on terror response exercises. This elective will provide students with a better understanding of terror medicine, its overlap with emergency and disaster medicine, and the challenge of responding to mass-casualty terror events.

Satisfactory completion of the course includes submission of a 1-2 page paper about terror medicine that summarizes key lessons learned from the course and proposes ideas for advancing the field;

REPORTING INSTRUCTIONS: On the first day of the elective the student should report to a room that will be designated in advance to enrollees. The student must bring his/her ID.

## **EMED 9040 – POLICY AND ECONOMICS IN EMERGENCY MEDICINE**

DIRECTOR: Brian Kenny, DO ([bk547@njms.rutgers.edu](mailto:bk547@njms.rutgers.edu)), Anthony Rosania, MD ([rosanian@njms.rutgers.edu](mailto:rosanian@njms.rutgers.edu)), Akiva Dym, MD ([akiva.dym@rutgers.edu](mailto:akiva.dym@rutgers.edu))

LOCATION: University Hospital

DURATION: 2 weeks only

WHEN OFFERED: First two weeks of each elective block

NUMBER OF STUDENTS PER ROTATION: 4

DESCRIPTION OF ELECTIVE: This elective is aimed at providing medical students with an exposure to health policy and economics in the clinical setting of an urban emergency department. Students will be

provided with first hand experience in assessing and understanding the impact of health policy and economics on the care of patients. Topics to be studied and discussed include, but are not limited to: Medicare, Medicaid & The Affordable Care Act; EMTALA; value-based medicine; population health initiatives; bundled payments and re-admission reduction; balance billing; high reliability in healthcare; and the impact of healthcare consolidation. The elective will approach this by way of case studies, allowing the students to identify patients in the UH Emergency Department who are impacted or affected by issues related to health policy and economics. This will be supplemented by a handful of didactic experiences aimed at teaching the student about key issues in policy and economics including those described above.

Objectives:

- 1) Understand the history of healthcare reimbursement in the United States.
- 2) Explain the nature of healthcare billing, the impact of contracted rates, balance billing and the implications for the uninsured patient.
- 3) Describe EMTALA and its key provisions.
- 4) Explain the key elements of the Affordable Care Act and the impact of recent executive and legislative changes.
- 5) Understand key Medicare value-based and cost-cutting initiatives such as re-admission reduction, bundled payments, and MACRA.
- 6) Describe the characteristics of high reliability organizations & explain obstacles to obtaining high reliability.
- 7) Identify the impact of policy & economics on individual patients.

REPORTING INSTRUCTIONS: Students should report to the UH Emergency Medicine Mezzanine Office.

## **EMED 9060 – EMERGENCY MEDICINE RESEARCH**

DIRECTOR: Lewis Nelson, MD  
[Lewis.nelson@rutgers.edu](mailto:Lewis.nelson@rutgers.edu)

Managing Director: Christine Ramdin, PhD  
[cramdin@njms.rutgers.edu](mailto:cramdin@njms.rutgers.edu)

LOCATION: University Hospital ED and Medical Science Building

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year by arrangement only

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Permission from a course director

DESCRIPTION OF ELECTIVE: This elective is designed for 4th year medical students to learn about the practical aspects of performing research, with a focus on topics relevant to emergency medicine and its subspecialties (e.g., medical toxicology, addiction medicine, emergency ultrasound, pediatric emergency medicine, prehospital care). The elective involves collaboratively developing a research question, creating a methodology to address the question, and planning and performing the research or quality project. Depending on the topic and methodology, many projects will not complete during a 4 week rotation, but completion following the elective is a realistic goal. This elective will provide students with a strong foundation to embark on their own research project as residents and faculty.

OBJECTIVES:

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

- 1) Demonstrate understanding of basic methodological and statistical concepts.
- 2) Conduct a comprehensive literature review on a topic and understand the gaps of knowledge regarding this topic.
- 3) Outline a research question and plan.
- 4) Successfully complete an IRB protocol.
- 5) Write an abstract or manuscript following completion of the project

**KEY RESPONSIBILITIES OF THE STUDENT WHILE ON ELECTIVE:**

- 1) Complete the assigned workbook
- 2) Take ACE/Fresno test, complete the CITI Program: Research, Ethics, and Compliance Training
- 3) Attendance-student must be present at the weekly progress meeting with supervising faculty or staff
- 4) Participate in ongoing department of emergency medicine projects including literature review, data collection, data analysis, and/or data cleaning.

**REPORTING INSTRUCTIONS:** All students must report to the designated meet-up place on the first Monday of the elective.

**EMED 9070 – ARTIFICIAL INTELLIGENCE (AI) IN EMERGENCY MEDICINE**

**DIRECTOR:** Anthony Rosania, MD ([rosanian@njms.rutgers.edu](mailto:rosanian@njms.rutgers.edu)) and Brian Kenny, DO ([bk547@njms.rutgers.edu](mailto:bk547@njms.rutgers.edu))

**LOCATION:** University Hospital

**DURATION:** 2 weeks only

**WHEN OFFERED:** First two weeks of each elective block

**NUMBER OF STUDENTS PER ROTATION:** 4

**COURSE DESCRIPTION:**

Provide medical students with a deeper understanding of technology and artificial intelligence (AI) applications in the healthcare setting. Introduce AI and its potential applications within the healthcare setting, such as augmenting direct patient care and improving hospital throughput. The course will focus on the role of machine learning and the implementation of data analytics in medical research, diagnostics, and treatment planning. The student will begin to understand the development of AI-derived tools that aid healthcare professionals in decision-making, clinical diagnostics, and treatment plans. The course will utilize case studies to unravel the ethical, legal, and privacy components that arise when using AI in healthcare.

After this elective, the student will be able to:

1. Gain a fundamental understanding of the basic principles of artificial intelligence (AI) and how it can be integrated into healthcare
2. Explore the various applications of AI in healthcare, including diagnostics, treatment planning, pharmaceutical innovation, and personalized medicine
3. Learn the importance of how AI applications are managed, including the challenges and ethical considerations that are needed when using AI in healthcare
4. Investigate the use of AI in clinical decision-making algorithms and how AI can assist healthcare professionals with patient care
5. Obtain insight into the regulations that surround the use of AI in the healthcare setting and understand the importance of rigorous validations and testing of AI models for clinical use
6. Understand the role that AI has in improving efficiency in the healthcare setting
7. Discuss the potential harmful and ethical implications of using AI in healthcare, including bias and

accountability

Key Responsibilities of the student while on elective

1. The student will participate in daily conferences presented by course directors and experts focusing on artificial intelligence in healthcare
2. The student will prepare one slide presentation per day presenting a current usage of AI in healthcare
3. The student will give a final presentation on the last day on an AI-driven solution to a current healthcare challenge

REPORTING INSTRUCTIONS: The student will report to the UH Emergency Department Mezzanine offices. The student is expected to wear business casual attire.

## **EMED 9075 – MEDICAL SIMULATION AND TEAMWORK STRATEGIES IN EMERGENCY MEDICINE**

DIRECTOR: Michael Anana, M.D.

LOCATION: University Hospital

DURATION: 2 weeks only

WHEN OFFERED: 3/24/25-4/4/25 ONLY

NUMBER OF STUDENTS PER ROTATION: 4 (2 student minimum)

COURSE DESCRIPTION: This elective is designed to provide 4th-year medical students with introductory training in medical simulation and teamwork strategies.

Simulation serves as a key resource between theory and clinical practice. The application of simulation enables students to apply their knowledge to practice and gain the critical skills necessary to succeed as future physicians. This rotation provides a broad overview of medical simulation, including an introduction to debriefing, simulation scenario designs, and its implementation in clinical and educational settings. Furthermore, the faculty will support the student's education by introducing relevant literature, videos and providing opportunities for hands-on practical experience. With the help of simulation training, students can develop key clinical skills in a safe environment early in their medical education. Simulation scenarios with facilitated debriefing provide training for teamwork, interpersonal skills, effective communication, and improved patient care.

The first week will focus on simulation in emergency medicine, and the second week will concentrate on TeamSTEPPS (Team Strategies and Tools to Enhance Performance and Patient Safety).

Week 1: Simulation in Emergency Medicine Topics will include:

- Introduction to medical simulation and its benefits
- Hands-on practice with various medical simulation scenarios
- Introduction to Debriefing
- Simulation Scenario Design and Implementation

Week 2: Teamwork Strategies in Emergency Medicine/ Introduction to TEAMSteps Topics will include:

- Introduction to TeamSTEPPS and its components: Leadership, Situation Monitoring, Mutual Support, and Communication
- Interactive workshops and role-playing exercises
- Team-based scenarios to practice effective communication and teamwork
- Reflection and feedback sessions



Key Responsibilities of the student while on elective:

Attendance at didactic & experiential learning sessions in clinical skills center as per schedule

Completion of asynchronous learning assignments

Review of selected current literature as set by elective syllabus and participation in group discussions

Participation and skills assessment in procedure workshops and simulations.

REPORTING INSTRUCTIONS: The student will report to the Emergency Medicine Residency Main Conference Room MSB E 609. The student is expected to wear business casual attire.

## **EMED 9080 – PATIENT SAFETY IN EMERGENCY MEDICINE**

DIRECTOR: Anthony Rosania, MD ([rosanian@njms.rutgers.edu](mailto:rosanian@njms.rutgers.edu)), Mina Attaalla ([mattaall@njms.rutgers.edu](mailto:mattaall@njms.rutgers.edu)) and Brian Kenny, DO ([bk547@njms.rutgers.edu](mailto:bk547@njms.rutgers.edu))

LOCATION: University Hospital

DURATION: 2 weeks only

WHEN OFFERED: Second two weeks of each elective block

NUMBER OF STUDENTS PER ROTATION: 4

### **COURSE DESCRIPTION:**

This elective aims to help introduce and provide knowledge for medical students to obtain the fundamental skills to participate in patient safety initiatives. Students will be exposed to concepts in best practices, risk reduction strategies, conflict mitigation, and effective communication to enhance overall patient well-being and experience. Students will be introduced to principal patient safety concepts and delve into the historical development of patient safety in healthcare. Root cause analysis methodologies and the importance of robust incident reporting will be explored with an emphasis on how human factors (e.g., communication and teamwork), and systems limitations impact the success of patient safety initiatives. There will be an introduction to quality improvement and frameworks designed to enhance patient operations and prevent adverse events. A focus on seminal journal articles and case studies exemplifying the importance of medication safety.

After this elective, the student will be able to:

1. Define and explain the fundamental concepts related to patient safety, including adverse events, near misses, and medical errors with a focus on the significance these play in the healthcare setting
2. Discuss methods for identifying and analyzing the root causes of patient safety incidents
3. Recognize the role of patients and their families in promoting safety and learn strategies that focus on engaging patients in their care and encourage participation in safety measures
4. Understand the principles of continuous quality improvement and learn how to use these methodologies to enhance patient safety
5. Outline strategies to minimize healthcare-associated infections and ensure a safe environment for patients
6. Explore the impact of human factors such as fatigue and stress on patient safety
7. Gain knowledge of regulatory standards and guidelines related to patient safety
8. Learn the importance of reporting systems for adverse events and near misses

Key Responsibilities of the student while on elective

1. The student will participate in daily conferences presented by course directors and experts focusing on patient safety and quality improvement
2. The student will be prepared to engage in discussion during all didactic sessions
3. The student will present daily on a prior healthcare conflict solved with patient safety initiatives
4. The student will give a final presentation on the last day on a quality improvement application for a



current patient safety conflict in healthcare

REPORTING INSTRUCTIONS: The student will report to the UH Emergency Department Mezzanine offices. The student is expected to wear business casual attire.

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

DIRECTOR: Kei Wong, MD ([kw410@njms.rutgers.edu](mailto:kw410@njms.rutgers.edu))

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4 (students will not overlap shifts)

DESCRIPTION OF ELECTIVE: This rotation is designed to familiarize the student with the evaluation and management of common pediatric emergencies that present to a 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, 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).

#### **LEARNING OUTCOMES & EVALUATION METHODS:**

While on this rotation, the student will work a mix of days, nights and weekends. The student schedule will be made available prior to the beginning of the rotation. Students will participate in the management of pediatric trauma patients in conjunction with the Emergency Department residents and faculty. Students will have the opportunity to attend emergency medicine departmental conferences, morning reports and grand rounds. There will be an opportunity to discuss and learn about child abuse evaluation and DCPD policies or referrals.

Evaluation is based on assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, professionalism, and interpersonal skills. This elective is graded Honors/High Pass/Pass per NJMS grading policy.

REPORTING INSTRUCTIONS: Students must contact Dr. Wong via e-mail two weeks prior to the start of the rotation ([kw410@njms.rutgers.edu](mailto:kw410@njms.rutgers.edu)).

### **EMED 9152 – PEDIATRIC EMERGENCY MEDICINE (NBIMC)**

DIRECTOR: Dr. Choksi

LOCATION: Newark Beth Israel Medical Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**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).

**Learning outcomes & evaluation methods:**

While on this rotation, the student will work a mix of days, nights and weekends. The student schedule will be made available prior to the beginning of the rotation. Students will have the opportunity to attend emergency medicine departmental conferences, morning report and grand rounds.

Evaluation is based on assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, professionalism, and interpersonal skills. This elective is graded Honors/High Pass/Pass per NJMS grading policy.

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

1. The student will be expected to see patients in the pediatric ED and present to the faculty, fellows, and residents. The student will write notes on the patients they see.
2. The student is expected to report all activities on time.
3. The student is expected to review current literature in pediatric emergency medicine.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

## **EMED 9160 - FUNDAMENTAL PROCEDURES IN CLINICAL MEDICINE**

**DIRECTORS:** Drs. Jill Ripper and Harsh Sule

**LOCATION:** University Hospital

**DURATION:** 2 weeks only

**WHEN OFFERED:** Throughout the academic year EXCEPT December and January

**NUMBER OF STUDENTS PER ROTATION:** 2

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** This 2-week elective will allow fourth year medical students to practice key basic procedures in clinical medicine. Some students have had experience during the clerkships, but still feel uncomfortable doing basic procedures. These fundamental skills are best developed through repeated exposure and practice. This elective, housed in the Emergency Medicine department, provides a structured experience for students who wish to have additional opportunities to learn and practice common bedside procedures under the supervision of experienced faculty and residents both in the emergency setting as well as in a simulated setting. Prior to beginning practice sessions and throughout the elective, students will be expected to review appropriate technique for each procedure using recommended website videos.

The student will be expected to see patients in the emergency room as well as in the simulation lab, and perform phlebotomy, arterial blood gases, and insert intravenous catheters when appropriate. If available, students will also perform PPD placement, paracentesis, arthrocentesis, lumbar puncture, incision and drainage of abscesses and suturing of lacerations.

REPORTING INSTRUCTIONS: Student should email Dr. Ripper ([ripperji@njms.rutgers.edu](mailto:ripperji@njms.rutgers.edu)) for reporting instructions 2 weeks before the start of the elective.

### **EMED 9245 - EMERGENCY MEDICINE (Visiting students)**

Elective Director: Dr. Samantha Lleras  
[lleras@njms.rutgers.edu](mailto:lleras@njms.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

DURATION: 4 weeks

WHEN OFFERED: July-October

NUMBER OF STUDENTS PER ROTATION: 2-5

PREREQUISITES: Completion of all third year required clerkships, VSAS application.

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:

- 1) Fourteen 8-hour shifts per 4-week rotation.
- 2) Many evenings, night, and weekend shifts in our busy ED
- 3) Attendance at Wednesday resident conferences
- 4) 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 also assigned a resident/faculty mentor based on their interests and are expected to meet with them throughout the clerkship.

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

1. Students will be evaluated at the intern level. Specifically, we expect:
2. Absolute professionalism, including dress and timeliness
3. Efficient and timely interview/examination
4. Efficient and timely presentation of a tailored, substantive HPI and plan to attending /senior resident
5. Rigorous follow-up on any diagnostic studies for the patients under the student's care
6. 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.

REPORTING INSTRUCTIONS: Generally, we meet at 8AM on first day remotely through Zoom/Webex. Please email Ms. Tiffany Thompson [tt388@njms.rutgers.edu](mailto:tt388@njms.rutgers.edu) for further instructions. Any changes/updates will be emailed on acceptance to the rotation via VSLO

### **Additional Electives**

**EMERGENCY MEDICINE BOOT CAMP** (under Office of Education)

## DEPARTMENT OF FAMILY MEDICINE

### FMED 9010 - AMBULATORY FAMILY PRACTICE

DIRECTORS: Name: Dr. Rachel Rosenberg  
Email: [rr1254@njms.rutgers.edu](mailto:rr1254@njms.rutgers.edu)

LOCATION: New Jersey Family Practice Center (90 Bergen St, LL 0300)

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year with approval of director

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** The clerkship is designed to acquaint the student with the work of a family physician in a setting which allows the student responsibility appropriate to his or her level of knowledge and skills. The goals of this rotation are to: (a) familiarize the student with that portion (about 90%) of medical problems which never reach the hospital, with an emphasis on their diagnosis and management by the family physician; (b) provide the student with an opportunity to see medical problems in an undifferentiated form and to develop an understanding as to management by the primary physician; (c) provide the student with an appreciation of Family Medicine and, in particular, the ramifications of interpersonal relationships in health and disease; (d) demonstrate the integration of the psychiatric and medical models; (e) allow the student to appreciate the use of community resources by the family physician and the management of problem patients and families; (f) demonstrate to the student the effective and appropriate utilization of the community hospital by the family physician; and (g) introduce the concepts of office management, record-keeping, finances, practice analysis, etc.

This elective is not open to international medical students.

**First Day Reporting Instructions:** The student will report to New Jersey Family Practice on the first day of the rotation. The time of arrival will depend on the location and preceptor since patient care schedules. The student must contact the preceptor the week prior to the beginning of the rotation to confirm time of arrival. The student must wear professional attire and their white coat, and bring their ID & stethoscope.

### Additional Electives

**IMPROVING PATIENT OUTCOMES THROUGH QA/QI STUDIES** - (under Office of Education)

## DEPARTMENT OF MEDICINE

### **MED 9004 – PALLIATIVE CARE**

DIRECTOR: Susanne Walther, APN  
Department of Medicine – [walthesr@uhnj.org](mailto:walthesr@uhnj.org)

LOCATION: University Hospital

DURATION: 2 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: A clinical experience, covering all inpatient units, ED, some outpatient, with the University Hospital Palliative Care/Family Support team. The overall aim is to develop competence in discussing and providing specialized medical care for people with serious illness focusing on relief of symptoms, pain and stress – whatever the diagnosis.

Objectives include:

1. Developing personal comfort and professional confidence in the presence of dying patients and acutely grieving family members.
2. Discussing the complementary contributions of various members of interdisciplinary palliative care team.
3. Identifying key principles and core literature of palliative medicine.
4. Assessing and devising treatment for a variety of pain syndromes and common non-pain symptoms, encompassing both pharmacological and complementary modalities.
5. Distinguishing pain from suffering and identifying appropriate interventions for each.
6. With supervision, providing first-level bereavement support to patients and their families.
7. Participating in discussions about withdrawing or withholding potentially life-sustaining treatment.
8. Demonstrating communication skills appropriate to the care of dying and grieving persons.
9. Observing family meetings.

REPORTING INSTRUCTIONS: Student should contact Susanne Walther, APN at (973) 972-0147 or email [walthesr@uhnj.org](mailto:walthesr@uhnj.org), pager 973-259-2187. Meet Monday morning at 9:30 a.m. in front of UH G-244.

### **MED 9006 – RHEUMATOLOGY**

DIRECTORS: Eugenio Capitle, M.D.

LOCATION: Doctors Office Center, Suite 4500

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: None

**DESCRIPTION OF ELECTIVE:** Undergraduate medical students working in Rheumatology & Immunology are exposed to the following areas in which observation or active participation is required to obtain clinical competence:

- a. Management of rheumatology, autoimmune, and immunologic diseases;
- b. Physiology of organ systems prone to develop rheumatologic and immunologic disease, e.g. respiratory tract, muscles and joints, skin, eyes, and gastrointestinal tract;
- c. The immunologic mechanisms operative in:
  - Autoimmune disorders, rheumatoid arthritis, systemic lupus erythematosus, vasculitides, myositis, scleroderma, Sjogren's Syndrome
  - Spondyloarthropathies including psoriatic arthritis, reactive arthritis, arthritis associated with inflammatory bowel disease, ankylosing spondylitis,
  - Adult onset Still's disease
  - Crystal induced arthropathies including gout and pseudo gout
  - Infectious arthritis
  - Soft tissue or Regional cause of joint pain such as tendinopathy or bursitis
  - Osteoarthritis
  - Metabolic bone disorders including osteoporosis, osteomalacia, renal osteodystrophy
  - Fibromyalgia
  - Dermatologic disorders associated with musculoskeletal and autoimmune disorders
- d. The performance and interpretation of laboratory immunologic procedures helpful to the clinician in diagnosis and management of rheumatologic, autoimmune and immunologic disease.
- e. The use of medical informatics (i.e. reference manager) in the evaluation of evidence based medicine related to the elective.

Students are expected to attend and participate in weekly clinics, conferences, Journal Club, and literature review. Students may also undertake a research project in conjunction with on-going research activities in the Division of Allergy & Immunology and Rheumatology. During this 2-4 week rotation students will be encouraged to complete a review paper dealing with a specific topic.

In the past completed review papers have been successfully submitted (nearly 100% acceptance) to national peer reviewed journals.

**REPORTING INSTRUCTIONS:** On the first day of the elective, students should report to the Doctors Office Center (DOC) Suite 4500 at 9:00 AM. The phone number for the office is (973) 972-0051.

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

**DIRECTOR:** Name: Paul J Gaglio, MD  
Title: Division Director: Hepatology and Transplant Hepatology  
Phone: 973-972-5252  
Email: [pjg47@njms.rutgers.edu](mailto:pjg47@njms.rutgers.edu)

**LOCATION:** University Hospital

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 2-4

**DURATION:** 2-4 weeks

**PREREQUISITES:** None

**DESCRIPTION OF ELECTIVE:** The course is designed to provide education to fourth year medical students related to the care of patients with all variety of Liver Disease. The focus will be education related to the spectrum of liver diseases seen in both a non-transplant and transplant setting. Students will gain knowledge in the clinical evaluation of patients with various liver diseases including physical assessment, identification of clinical problems, formulating a differential diagnosis, utilizing appropriate diagnostic tools and providing management decisions in these patients. In addition, students will learn best practices for managing patients both before and after liver transplantation.

**Format:**

1. Ambulatory evaluation and treatment of patients with all variety of liver diseases
2. Inpatient rounds (week 1-2) and outpatient clinic sessions (week 3-4)
3. Participation in pre and post Transplant outpatient clinic

**Key responsibilities of the student while on elective:** The student will be expected to see at least two patients in the clinical setting and present findings to clinical faculty on a daily basis during morning rounds. The student will write notes on the patients he/she sees. While on hospital rounds, the student will be expected to review patient's charts prior to rounds. The student is expected to review current literature on selected topics as directed by the Hepatology Faculty.

While in outpatient clinic, the student will see patients along with the Faculty, and will be expected to participate in decisions related to pre and post Liver Transplantation patient care

**First day reporting instructions:** Student should report to University Hospital D yellow at 8 AM on the first day of the elective while on inpatient, and to the ACC D level Transplant clinic at 8 AM while on outpatient rotation. **Questions: please call 973-972-5252 or contact Administrative Coordinator Julia Torres [jmt303@njms.rutgers.edu](mailto:jmt303@njms.rutgers.edu)**

## **MED 9010 – ASTHMA, ALLERGY & IMMUNOLOGY**

**DIRECTOR:** Eugenio Capitle, M.D.

**LOCATION:** Doctors Office Center, Suite 4500

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS:** 1

**PREREQUISITE:** None

**DESCRIPTION OF ELECTIVE:** Undergraduate medical students working in Asthma, Allergy & Immunology are exposed to the following areas in which observation or active participation is required to obtain clinical competence:

- a. Management of allergic, asthmatic, autoimmune, and immunologic diseases;
- b. Physiology of organ systems prone to develop allergic and immunologic disease, e.g. respiratory tract, muscles and joints, skin, eyes, and gastrointestinal tract;
- c. The immunologic mechanisms operative in: (1) asthma, (2) allergies, (3) immuno-ophthalmology, (4) autoimmune disorders, (5) eosinophilia, (6) vasculitis, (7) immunodeficiencies, (8) immunodermatology;
- d. The performance and interpretation of laboratory immunologic procedures helpful to the clinician in diagnosis and management of allergic, asthmatic, autoimmune and immunologic disease.



- e. The use of medical informatics (i.e. reference manager) in the evaluation of evidence based medicine related to the elective.

Students are expected to attend and participate in weekly clinics, conferences, Journal Club, and literature review. Students may also undertake a research project in conjunction with on-going research activities in the Division of Allergy & Immunology and Rheumatology. During this 2-4 week rotation students will be encouraged to complete a review paper dealing with a specific topic.

In the past completed review papers have been successfully submitted (nearly 100% acceptance) to national peer reviewed journals.

**REPORTING INSTRUCTIONS:** On the first day of the electives, students should report to the Doctors Office Center (DOC), Suite 4500, at 9:00 AM. The phone number for the office is (973) 972-0051.

### **MED 9025 – CRITICAL CARE MEDICINE/COOPERMAN BARNABAS MEDICAL CENTER**

**DIRECTOR:** Dr. Kristin Fless

**LOCATION:** Cooperman Barnabas Medical Center, Livingston, NJ

**DURATION:** 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** Once registered, the student must contact Dr. Fless and the Medical Student Coordinator at 973-322-5548 at least 2 weeks prior to the start of the elective.

**DESCRIPTION OF ELECTIVE:** The critical care medicine elective at Cooperman Barnabas Medical Center will introduce fourth year students to the practice of intensive care medicine and create an opportunity for students to strengthen their skills in focused history taking and acquiring new skills for evaluating and treating the critically ill population. Students will have the opportunity to care for medical, surgical and neurosurgical patients in the critical care environment. Students will have the opportunity to learn about and assist in invasive procedures such as central venous catheter and arterial catheter placement. They will have the opportunity to assist in evaluating and caring for patients as well as transitioning care to other providers when appropriate and participating in discussions with patients and family regarding goals of care.

During this elective the student will function as an integral member of the medical team and will be assigned to work with a team consisting of an intern and an R2 resident. The student will conduct patient interviews and physical exams, review medical records and radiologic exams and integrate physiologic data from the bedside to prepare and present daily oral presentations and written notes to the ICU attending and resident. The student will be expected to do two oral presentations to the ICU attending and team reflective of a current medical issue pertinent to their patient including a summary of current literature.

**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 the 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.

## **MED 9033 - MULTIDISCIPLINARY CLINICAL ONCOLOGY**

DIRECTOR: Dr. Joshua Kra and Dr. Malcolm Mattes

LOCATION: UH Cancer Center

DURATION: 4 weeks only

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Prior approval required

**COURSE DESCRIPTION:** This elective is designed to further explore fourth year students interest in the multidisciplinary care given in clinical oncology, specifically in our urban community. Students will have the opportunity to spend time rotating between medical oncology, surgical oncology, and radiation oncology, and may also spend time with pathology, radiology, or other subspecialties based on their interest. Interested students will also have the opportunity to focus on a specific disease group (e.g. breast cancer, GI cancer, lung cancer) to gain specific knowledge within the field.

During this 4 week elective, students will see various oncology related diseases in both inpatient and outpatient clinical settings and understand the approach to multidisciplinary cancer care. They will receive 1:1 preceptorship from attending physicians, attend MDC tumor boards, and spend about 1/3 of their time rotating on each of the 3 main specialties. Students will also present at a multi-disciplinary care tumor board at the end of the rotation on a topic of interest.

After this elective, the student will be able to:

1. Obtain histories and physicals on cancer patients and presenting during rounds/clinic
2. Recognize the different modalities of cancer treatment (surgery, radiation, systemic therapy) and how treatment decisions are made
3. Explain common side effects of each therapeutic modality
4. Identify the role of palliative care in supporting cancer patients and develop the skills for goals of care discussions

Key responsibilities of the student while on elective:

1. The student will be expected to see patients in the office/hospital and present findings to clinical faculty on a daily basis. The student will write notes on the patients he/she sees.
2. The student is expected to attend and participate in all activities listed in the course description
3. The student is expected to review current literature regarding oncology patients seen
4. One written case report and end-of-rotation oral presentation at the MDC tumor board

**REPORTING INSTRUCTIONS:** Students should reach out to Dr. Kra prior to the 1st day of the rotation for reporting instructions.

## **MED 9040 - CARDIOVASCULAR DISEASES**

DIRECTOR: Dr. Christine Gerula  
[gerula@njms.rutgers.edu](mailto:gerula@njms.rutgers.edu), 973-972-4731

ADMINISTRATIVE CONTACT: Jessica Gonzalez Romero, [jg1769@njms.rutgers.edu](mailto:jg1769@njms.rutgers.edu), 973-972-4731

LOCATION: The primary teaching location for this rotation is University Hospital; however, the students may

also rotate through the East Orange VA Hospital. Attempts will be made to accommodate individual preferences but final decisions will be made on the first day of the rotation. Presence at University Hospital on the first day is mandatory so that all students receive assignments.

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITE: Medicine

DESCRIPTION OF ELECTIVE: Cardiovascular disease remains the leading cause of morbidity and mortality in the United States. With the aging of our population, the number of patients with proven or suspected cardiovascular disease presenting to primary and specialty physicians is expected to rise significantly.

The program is designed to meet the needs not only of those students with a special interest in cardiology, but also those who have other career plans in medicine. The elective has 3 sets of educational sessions: clinical rotations, didactic sessions, and oral presentations.

Clinical Rotations: This elective rotation will provide students with an opportunity to learn and observe how the cardiovascular disease patients are interviewed, diagnosed and treated. During morning sessions, students will attend teaching rounds of clinical services; students will rotate on alternate weeks through the Coronary Care Unit and Telemetry Services.

Didactic Sessions: Afternoon sessions are devoted to cardiovascular diagnostics and therapeutics. Students will have at least two sessions on how to interpret electrocardiograms (EKG's). Separate afternoon sessions are designed to provide exposure to the latest in cardiovascular diagnostics: echocardiography, stress testing, cardiac catheterization, nuclear cardiology, cardiac CT and MRI. Students will also have opportunities to observe therapeutic interventions such as percutaneous coronary interventions and cardiac surgery.

Lectures and Talks: Students will have ample opportunity to attend medical and cardiology grand rounds, clinical case PowerPoint presentations by cardiology fellows, cardiac catheterization conferences, and cardiology fellowship lecture series.

This elective is not open to international medical students.

REPORTING INSTRUCTIONS: If the rotation begins on a Monday, students should report to the Conference room at UH I-102 at 9:00 a.m. If the rotation begins any other day of the week, students should report to Ms. Gonzalez Romero in MSB I-538 at 9:00 a.m. (973-972-4731). On the first day of the rotation, students will receive final assignments of their rotation (University Hospital vs. East Orange VA Hospital).

### **MED 9045 – CARDIOLOGY (NBIMC)**

DIRECTOR: Dr. Sergio Waxman

LOCATION: Newark Beth Israel Medical Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce students to the practice of Cardiology. Under the supervision of clinical faculty, students will participate fully in our out-patient and in-patient clinical services. This elective will provide students with an opportunity to learn about a wide spectrum of heart disease and develop clinical skills in managing simple and complex patients. Students will have the opportunity to learn and observe how the cardiovascular disease patients are interviewed, diagnosed and treated as well as integrate clinical medicine with molecular pathophysiology of disease.

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam.
2. Identify common cardiology diagnoses and propose appropriate management plans.
3. Demonstrate review of appropriate cardiology literature on rounds and in a formal presentation.
3. Present patient data thoroughly in both written and verbal formats.
4. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

**MED 9050 - CRITICAL CARE MEDICINE**

**DIRECTORS:** Anne Sutherland, M.D.

**LOCATION:** MICU at University Hospital

**DURATION:** 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 1 (up to 3 with approval from Dr. Sutherland – coordinate through registrar)

**PREREQUISITE:** Medicine

**Required reading:**

- NEJM 2000; Vol 342, no. 18, pp 1301-08
- NEJM 2001; Vol 345, No. 19, pp 1368-77
- Lancet 2008; Vol 371, pp 126-34
- NEJM 2009; Vol 360, No. 13, pp 1283-97
- JAMA 2012;308(19):doi:10.1001/jama.2012.13872
- JAMA 2012; Vol 308, No. 16, pp 1651-59.
- Critical Care Medicine 2013; Vol 41, no. 2, pp 580-637.

**Recommended texts:**

- **Manual of Critical Care**, edited by Suhail Raoof
- **Critical Care Medicine, 4<sup>th</sup> ed**, authored by John J. Marini and Arthur P. Wheeler

**DESCRIPTION OF ELECTIVE:** This is an intense immersion into critical care medicine with a focus on severe sepsis & septic shock, respiratory failure and the acute respiratory distress syndrome (ARDS). Other common conditions that might be encountered include: 1) venous thromboembolism, 2) metabolic disarray from uncontrolled diabetes, 3) gastrointestinal hemorrhage, 4) acute renal failure, 5) congestive heart failure, 6) hypertensive urgencies & emergencies, and 7) acute liver failure. The students are expected to round with the

MICU teams, to assist in the care of the patients, to present cases and to attend the teaching sessions.

Learning outcomes & evaluation methods: The student will be expected to perform initial, as well as daily patient interviews, physical examinations and review of pertinent ancillary studies. The student will then present this information to the supervising faculty during morning rounds. The student's ability to collect, analyze, summarize and succinctly present the relevant medical information, together with the demonstration of overall medical knowledge, interpersonal skills, professionalism, etc. will be the basis of the final examination/grade.

Key responsibilities of the student while on elective:

- The student will review the chart and examine the patient prior to the work rounds
- Student will collect, analyze, summarize and present medically relevant patient information
- Students are expected to perform literature searches on appropriate topics and apply the results to the patient care
- Overnight call is NOT expected, but students will take "long call" with the residents until 8 p.m. 1-2 nights/week

This elective is not open to international medical students.

REPORTING INSTRUCTIONS: Student should report to the MICU (phone: 973-972-6072) at 8:00 AM on the first day of rotation.

### **MED 9055 – CRITICAL CARE (NBIMC)**

DIRECTOR: Dr. Lina Miyakawa

LOCATION: Newark Beth Israel Medical Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: This is an intense immersion into critical care medicine with a focus on severe sepsis & septic shock, respiratory failure and the acute respiratory distress syndrome (ARDS). Other common conditions that might be encountered include: 1) venous thromboembolism, 2) metabolic disarray from uncontrolled diabetes, 3) gastrointestinal hemorrhage, 4) acute renal failure, 5) congestive heart failure, 6) hypertensive urgencies & emergencies, and 7) acute liver failure. The students are expected to round with the ICU teams, to assist in the care of the patients, to present cases and to attend the teaching sessions.

#### **OBJECTIVES:**

1. Perform initial as well as daily patient interviews, physical examinations and review of pertinent ancillary studies.
2. Identify common critical care diagnoses and propose appropriate management plans.
3. Demonstrate the ability to collect, analyze, summarize and succinctly present the relevant medical information.
4. Demonstrate review of appropriate literature on rounds and in a formal presentation.
5. Present patient data thoroughly in both written and verbal formats
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants

REPORTING INSTRUCTIONS: On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

### **MED 9065 – DERMATOLOGY (VA)**

DIRECTOR: Dr. Chinmoy Bhate & Dr. Philip J. Cohen  
Email: [chinmoy.bhate@va.gov](mailto:chinmoy.bhate@va.gov) & [Philip.cohen@va.gov](mailto:Philip.cohen@va.gov)

LOCATION: East Orange Veterans Affairs

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year *EXCEPT July*

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: In this program, the student is assigned to work with the faculty in dermatology. The program is arranged to provide experience in the recognition and treatment of common dermatologic disorders. Attention is focused on an understanding of cutaneous physiology, pathology and pharmacology as well as experience in clinical dermatology. This is obtained at inpatient and outpatient services at the East Orange Veterans Affairs. A rotating student should learn how to examine the skin, how to describe cutaneous findings, and how to recognize common skin disorders.

Learning outcomes & evaluation methods:

While on this rotation, the student will rotate within the outpatient clinics as well as participate in inpatient consultation.

Evaluation is based on assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, professionalism, and interpersonal skills. This elective is graded Honors/High Pass/Pass per NJMS grading policy.

Key responsibilities of the student while on elective:

1. The student will be expected to see patients within the dermatology clinic.
2. The student is expected to report to all activities on time.
3. The student is expected to review current literature in dermatology.

REPORTING INSTRUCTIONS: Prior to the first date, the student should coordinate on-boarding with the VA Education Affairs; E-mail: [VANJEDGroup@va.gov](mailto:VANJEDGroup@va.gov); Phone: 973-676-1000 X1305. On the first day of the elective, the student should report to the VA Dermatology clinic at 8:00 am. The Dermatology Clinic is located in the VA main building, A-level, Blue wing.

### **MED 9070 - ENDOCRINOLOGY**

DIRECTOR: David Bleich, M.D.  
[bleichda@njms.rutgers.edu](mailto:bleichda@njms.rutgers.edu)

LOCATION: University Hospital and MSB I-588, (973) 972-3479

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: Medicine Clerkship

DESCRIPTION OF ELECTIVE: The rotation is based at the University Hospital and East Orange VA Medical Center (EOVA) and supervised by full time faculty at University Hospital. Students will participate in outpatient clinics and inpatient consultations. Weekly case conferences, didactic sessions, and journal club are integral components of the educational program, which is designed to fulfill the following objectives:

- a. Obtain further knowledge of pathophysiology and additional experience in proper diagnosis and treatment of: diabetes mellitus, thyroid diseases, disorders of calcium metabolism (PTH, Vitamin D), neuroendocrine problems (pituitary tumors, hypopituitarism), disorders of steroid hormone production or metabolism (adrenal insufficiency, hypercortisolism, virilization and hirsutism), reproductive disturbances (hypogonadism, amenorrhea), hypolipoproteinemia's. Students will become members of the Endocrine consultative team including senior medical residents, fellows and attending endocrinologist and will spend time examining patients and consulting with faculty interpreting historical, physical, pathophysiological, analytical and therapeutic information.
- b. Acquire expertise in interpreting endocrine/metabolic laboratory data including hormone measurements (chemical and radioimmunoassay), radiotracer scans, radiologic studies, and stimulation/suppression tests used in the evaluation of endocrine disorders.
- c. Acquire technical skill in obtaining and interpreting signs of endocrine disease on history and physical examination.
- d. Promote an understanding of radioimmunoassay and other analytic techniques applicable to clinical and investigative problems in Endocrinology and Metabolism.

REPORTING INSTRUCTIONS: On the first day of the elective the student(s) should report to EOVA Medical Center (Tremont Avenue, East Orange, NJ) at 8:00 a.m. for the Endocrine Clinic under the supervision of Dr. John Shin (347) 351-6770. Following our Endocrine Clinic, the student(s) should then report back to the Endocrine Office. If there are problems, students can page our Senior Endocrine fellow at (973) 312-3923. The Weekly Endocrine Schedule will be emailed to students prior to the start of the rotation.

*Please note that students will be excused for one residency interview under certain circumstances during their Endocrine elective rotation, but only on Tuesday or Friday. Students who miss elective activities on Monday, Wednesday, or Thursday will not receive credit for the elective.*

## **MED 9075 – INTRODUCTION TO CORRECTIONAL MEDICINE AND HEALTH**

DIRECTOR: Pamela Valera, PhD, MSW

LOCATION: Essex County Correctional Facility

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: None

DESCRIPTION OF ELECTIVE: This elective is designed to introduce fourth year students to correctional health, located at the Essex County Correctional Facility in Newark, NJ. During the rotation, students will work in multi-disciplinary teams with direct supervision by experienced correctional physicians, advanced practice providers, and nursing staff. Medical students will engage with patients



in a variety of correctional health care settings, including the infirmary, substance use disorder clinics, chronic care clinics, and primary care clinics. Students will also participate in the initial new admission history and physical exams for new patients.

Key responsibilities of the student while on elective:

1. The student will be expected to see patients in the clinical setting and present findings to clinical faculty on a daily basis.
2. The student is expected to report to all activities on time.
3. The student is expected to review current literature relevant to their patient's care.

**REPORTING INSTRUCTIONS:** On the first day of the elective, the student should report to the Essex County Correctional Facility, 354 Doremus Avenue, Newark, NJ 07105. Email [lanicette@eccorrections.org](mailto:lanicette@eccorrections.org)

### **MED 9105 – GENERAL AMBULATORY MEDICINE (NBIMC)**

**DIRECTOR:** Jose Bustillo, DO

**LOCATION:** Newark Beth Israel Medical Center

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** None

**DESCRIPTION OF ELECTIVE:** Under the supervision of clinical faculty, students will have the opportunity to practice in a private practice model that delivers care to the underserved patients in Newark. This elective will provide students with a better understanding of the scope and practice of outpatient Internal Medicine, with a focus on preventive care and chronic disease management, while highlighting the health needs of Newark's underserved population. Discussions will be based on patient encounters and include the most common conditions presenting in adults.

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam
2. Describe indications for consultation and referral for common diseases encountered in ambulatory internal medicine.
3. Interpret common imaging studies in the outpatient setting.
4. Present patient data thoroughly in both written and verbal formats
5. Perform counseling for patients and families: nutrition, smoking cessation, diabetes, depression, asthma, COPD and hypertension.
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.



## **MED 9106 - ACTING INTERNSHIP IN INTERNAL MEDICINE**

DIRECTOR: Alla Fayngersh, M.D.

[fayngeal@njms.rutgers.edu](mailto:fayngeal@njms.rutgers.edu)

LOCATION: University Hospital, Department of Veterans Affairs New Jersey Health Care System in East Orange, and Hackensack University Medical Center. Students must e-mail Dr. Fayngersh two weeks prior to the first day to arrange the location of your assignment.

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Medicine

DESCRIPTION OF ELECTIVE: The Director of the Fourth Year program assigns students to University Hospital or an affiliated hospital. The program is identical to the mandatory acting internship required for fourth year students. The acting intern is assigned to a medical team consisting of a faculty attending, residents and junior medical students. He/she has responsibilities comparable to those of a PGY-1 resident. They include: (a) working up new hospital admissions using the problem-oriented record. This is done under the supervision of a PGY-2 or PGY-3 resident and an attending physician; (b) presenting patients worked up in the hospital to senior residents and faculty; (c) recording patient data for review by the team leader at the end of the rotation; (d) outlining diagnostic and therapeutic plans for patients worked up; and (e) working with the medical team in implementing the agreed to plan and monitoring the results of treatment. The acting intern presents patients at morning reports and conference rounds. He/she is expected to have a thorough understanding of the basic and clinical information pertinent to proper diagnosis and treatment, as well as concepts available in current literature. The acting intern is expected to achieve proficiency in the following areas:

- History taking.
- Complete physical examination.
- Mastery of the body of knowledge required for proper problem-solving in common medical disorders: cardiac, digestive, endocrinologic, genetic, hematologic, infectious, nutritional, oncologic, pulmonary, renal, and rheumatologic diseases.
- Expertise in interpreting laboratory values, including radiographs, pulmonary function tests, liver function tests, joint fluid analysis, electrocardiograms, spinal fluid analysis, endocrinologic studies, microbiologic studies, and toxicologic studies.

The acting intern interacts with specialty residents and faculty so that there is up-to-date information on both the state of the art and scientific knowledge of a wide variety of medical disorders.

Acting interns are required to attend the following teaching conferences when assigned to University Hospital:

- Morning report, where patients hospitalized during the previous twenty-four hours are reviewed.
- Noonday conferences which include a clinical case conference, bi-monthly literature reviews, scheduled special research conferences, scheduled primary care conferences, and scheduled basic-clinical science conferences at University Hospital.
- Departmental grand rounds in the Medical Sciences Building, Tuesdays, 8:00 A.M.- 9:00 A.M.

- Subspecialty conferences in which the patients they have worked up are presented and discussed.

**NB:** This elective is open on a space-available basis to students from other U.S. medical schools after all NJMS students have registered for the mandatory rotation.

## **MED 9121 - GASTROENTEROLOGY**

**DIRECTOR:** Dr. Ahmed Al-Khazraji, MD

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

**DURATION:** 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 2

**PREREQUISITE:** Medicine

**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.

**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 different GI pathology presentation including acute G.I. bleeding, acute and chronic pancreatitis, ascites, hepatic encephalopathy, and jaundice. Students will have opportunity to observe patient with end-stage liver disease, undergoing liver transplantation.

**Format:** Utilizing newest video technology, students will be exposed to multiple GI procedures including an upper endoscopy, colonoscopy, treatment of bleeding ulcers, banding esophageal varices, needle biopsy of the liver, other advanced procedures such as esophageal dilatation, biliary interventions endoscopic retrograde cholangiography and endobariatric cases. Motility interventions including Bravo capsule, endo-FLIP, esophageal and rectal manometry. Students work up patients in association with subspecialty residents, fellows 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.

**REPORTING INSTRUCTIONS:** On the first day of the rotation, students should report to University Hospital, E-178 at 8:00 a.m. The GI Office telephone number is (973) 972-5252. Students doing the rotation at the East Orange VA Medical Center will report to the Endoscopy Suite at 8 a.m. on the first day of rotation

## **MED 9125 – HOSPITALIST MEDICINE**

DIRECTOR: Dr. Daniel Matassa

LOCATION: University Hospital

DURATION: 2 weeks only

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

**DESCRIPTION OF ELECTIVE:** This elective will provide students an introduction to hospitalist medicine. Students will have the opportunity to acquire knowledge, skills and other attributes required for successful evaluation and management of hospitalized patients. Students will be assigned to the hospitalist service at University Hospital and will participate in all patient care activities assigned to his/her preceptor. In addition, the student will study required reading material and will discuss with preceptor.

### **OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness
2. Demonstrate a comprehensive initial physical exam of a hospitalized patient
3. Summarize patient data thoroughly in both written and verbal formats
4. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants.

**KEY RESPONSIBILITIES OF THE STUDENT WHILE ON ELECTIVE:** The student will be assigned patients to interview, examine, and follow from admission to discharge. The student will go on daily rounds with his/her attending, during which he/she will provide an update and assessment/plan for all assigned patients, both new and established. The student will document patient progress in the medical record on a daily basis. The student will carry a daily census of at least 3 patients, with an encouraged focus on the evaluation and management of new admissions. It is expected that the student will demonstrate self-directed learning by locating, assimilating, and presenting evidence from current literature, as it relates to the evaluation and management of his/her patients. Each student will present a 10-15 minute review of a hospital-medicine topic, which will be individually chosen in consultation with the attending.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to University Hospital, room I-121 at 7:00 a.m., unless given other specific instructions by the elective director.

## **MED 9150 - INFECTIOUS DISEASES**

DIRECTOR: Dr. Diana Finkel

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

LOCATION: University Hospital and VA New Jersey Health Care System (East Orange)

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 3

PREREQUISITE: None

**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.

**REPORTING INSTRUCTIONS:** Students will receive an email from the Infectious Diseases Division Office with reporting instructions for the first day of the elective. If this email is not received, they can contact Lisa Wade at [wadeli@njms.rutgers.edu](mailto:wadeli@njms.rutgers.edu) for information.

### **MED 9155 – INFECTIOUS DISEASES (NBIMC)**

**DIRECTOR:** Dr. Madhu Suryadevara

**LOCATION:** Newark Beth Israel Medical Center

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** None

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce students to the practice of infectious diseases. Students will 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. Students will also acquire expertise in interpreting clinical microbiological data including smears, stains, cultures, and molecular and serologic studies. The student will increase their knowledge of the pharmacokinetics, toxicity, and spectrum of activity of antimicrobial agents used to treat infections.

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam
2. Identify common infectious diseases and propose appropriate management plans.
3. Demonstrate review of appropriate infectious disease literature on rounds and in a formal presentation.
4. Interpret imaging studies to diagnose infectious diseases and clinical microbiological data.
5. Present patient data thoroughly in both written and verbal formats
6. Communicate effectively with other members of the healthcare team, including nurses, social workers,

attendings and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

## **MED 9159 – INFECTIOUS DISEASES (VA)**

**DIRECTOR:** Dr. David Cennimo

**LOCATION:** New Jersey VA Medical Center – East Orange

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 2

**PREREQUISITES:** None

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce students to the clinical practice of infectious diseases. Students will obtain further knowledge of pathophysiology, diagnosis and treatment of infectious diseases due to typical and atypical bacteria, mycobacteria, fungi, viruses, 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 clinics, and emergency department. Students will also acquire expertise in interpreting clinical microbiological data including smears, stains, cultures, and molecular and serologic studies. The student will increase their knowledge of the pharmacokinetics, toxicity, and spectrum of activity of antimicrobial agents used to treat infections.

### **OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial, and environmental aspect of illness, as well as a comprehensive physical exam.
2. Identify common infectious diseases and propose appropriate management plans.
3. Demonstrate review of appropriate infectious disease literature on rounds and in a formal presentation.
4. Interpret imaging studies to diagnose infectious diseases and clinical microbiological data.
5. Present patient data thoroughly in both written and verbal formats.
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings, and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Dr. David Cennimo, Building 1, 7<sup>th</sup> Floor ID practice. Please email [david.cennimo@va.gov](mailto:david.cennimo@va.gov) 1-2 days prior to the elective to determine meeting logistics.

## **MED 9170 - NEPHROLOGY**

**DIRECTOR:** Dr. Julius Gardin  
[jg1326@njms.rutgers.edu](mailto:jg1326@njms.rutgers.edu)

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

**DURATION:** 4 weeks

**WHEN OFFERED:** Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: None

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.

REPORTING INSTRUCTIONS: On the first day of the elective, students should report to MSB, I-524.

### **MED 9175 – NEPHROLOGY (NBIMC)**

DIRECTOR: Dr. Heather Lefkowitz

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 weeks only

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Preapproval from Cassandra Struck, [rotators@rwjbh.org](mailto:rotators@rwjbh.org)

DESCRIPTION OF ELECTIVE: This elective is designed to introduce students to the practice of nephrology. Students will 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. Students will also acquire expertise in interpreting laboratory data including electrolyte and acid base parameters, urograms, renal scans, urine sediments, renal clearance tests, and kidney biopsies.

#### **OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam
2. Identify common diagnoses in nephrology and propose appropriate management plans.
3. Demonstrate review of appropriate nephrology literature on rounds and in a formal presentation.
3. Present patient data thoroughly in both written and verbal formats

4. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants

REPORTING INSTRUCTIONS: On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

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

DIRECTOR: Dr. Anupama Nehra

LOCATION: Rutgers CINJ at University Hospital

DURATION: 2 or 4 weeks (4 weeks preferred)

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

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.
- a. Evaluation and management of anemia's, including hypoproliferative anemia's, hemolytic anemias.
- b. 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.
- c. The student may elect to participate in ongoing laboratory or clinical research.
- d. Obtain an overview of the clinical presentation, methods of diagnosis, staging and treatment of major neoplastic diseases including lymphomas and solid tumors.
- e. Understand basic principles of oncology, including radiation therapy, chemotherapy and surgery, as well as multimodality treatment.
- f. Acquire basic knowledge of tumor epidemiology, tumor biology, clinical pharmacology, clinical immunology, tumor markers and paraneoplastic syndromes.
- g. 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.

**REPORTING INSTRUCTIONS:** Call (973) 972-6257 prior to beginning of elective to ascertain location of where to report on the first day of the rotation.

### **MED 9185 – HEMATOLOGY/ONCOLOGY (NBIMC)**

**DIRECTOR:** Dr. Alice Cohen

**LOCATION:** Newark Beth Israel Medical Center

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** None

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce students to the practice of Hematology/oncology. 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. Students will also participate in hemophilia/thrombosis and sickle cell comprehensive clinics. They will work with a multidisciplinary teams to understand who to diagnosis and managed inherited blood disorders. 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.

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam
2. Identify common hematology/oncology diagnoses and propose appropriate management plans.
3. Demonstrate review of appropriate hematology/oncology literature on rounds and in a formal presentation.
3. Present patient data thoroughly in both written and verbal formats
4. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

### **MED 9210 – PULMONARY DISEASES**

**DIRECTOR:** Dr. Andrew Berman ([bermanar@njms.rutgers.edu](mailto:bermanar@njms.rutgers.edu))

**LOCATION:** University Hospital



CONTACT: Dr. Andrew Berman, phone (973) 972-6111

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 3

PREREQUISITE: Internal Medicine rotation

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:

- a. 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)
- b. 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.
- c. The student may elect to participate in ongoing clinical research in pulmonary diseases.

REPORTING INSTRUCTIONS: Report to University Hospital, I-354, at 9:00 AM on the first day of the rotation. Phone (973) 972-6111, fax (973) 972-6228. This elective is not open to international medical students.

### **MED 9215 – PULMONOLOGY (NBIMC)**

DIRECTOR: Dr. Pratik Patel

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: 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. Students will obtain 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

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam
2. Identify common pulmonary diagnoses and propose appropriate management plans.
3. Demonstrate review of appropriate pulmonary literature on rounds and in a formal presentation.
3. Present patient data thoroughly in both written and verbal formats
4. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

**MED 9220 - PLANT-BASED NUTRITION**

**DIRECTOR:** Dr. Ron Weiss - Founder and CEO, Ethos Health

**LOCATION:** Ethos Health, 177 W. Mill Road, Long Valley, NJ

**CONTACT:** Asha Gala, [agala@ethosprimarycare.com](mailto:agala@ethosprimarycare.com)

**DURATION:** 4 weeks (Note that this elective will require some Saturdays and evenings)

**WHEN OFFERED:** Throughout the academic year, with permission

**NUMBER OF STUDENTS PER ROTATION:** 2

**PREREQUISITE:** Prior approval required

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce students to lifestyle medicine with a focus on a whole food, plant-based (WFPB) to reverse and prevent disease. Ron Weiss, M.D. is board certified in internal medicine and lifestyle medicine, and is Assistant Professor of Clinical Medicine at NJMS. He runs a farm-based primary care practice, which offers a combination of doctor's visits, lifestyle wellness educational programs and certified organic produce. This elective offers a rich clinical experience; Students will learn skills needed to practice lifestyle primary care medicine and have the opportunity to counsel patients on lifestyle change, and participate in education classes. Students will also have the opportunity to assist the farmer, learn about organic mixed vegetable production, as well as the relationship of soil health to human health.

**Responsibilities of students will include:**

-Students will be expected to see patients in the clinical setting and present findings to clinical faculty on a daily basis.

- Students will counsel patients and learn the process of WFPB medicine.
- Students will learn about an organic farm and incorporating that into patient wellness.
- Student will make a scholarly project for evidence based WFPB counseling, which could include a recipe.
- Student is expected to participate in education workshops for patients.
- Students are expected to learn how to construct patient medical records on an EHR.

REPORTING INSTRUCTIONS: On the first day of the elective the student should report to Ethos Health clinical building at 9 a.m. Student should have their white coat and clinical tools.

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

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

ADMINISTRATIVE CONTACT: Anita Khilall ([anita.khilall@rutgers.edu](mailto:anita.khilall@rutgers.edu), 973-972-9102)

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

DURATION: 2 or 4 weeks (prior approval required for 4 week rotation)

WHEN OFFERED: Permission required - please contact Anita Khilall for available dates and approval

NUMBER OF STUDENTS PER ROTATION: 2

DESCRIPTION OF ELECTIVE: The following objectives must be fulfilled:

1. Acquire expertise in the clinical evaluation of a patient with potential pulmonary or extrapulmonary TB.
2. Obtain further skills in the diagnostic methods for TB including testing procedures and radiographic examination.
3. Obtain further knowledge of the method for screening patient contacts and in the treatment regimens for TB infection and disease.
4. Obtain further knowledge of the case management and public health issues relative to treating patients with TB.

Prior to this elective, students will complete the CDC's *Interactive Core Curriculum on Tuberculosis: What the Clinician Should Know* available at [https://www.cdc.gov/tb/education/corecurr/index.htm#/Anchor\\_Interactive](https://www.cdc.gov/tb/education/corecurr/index.htm#/Anchor_Interactive)

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 TB Grand Rounds where difficult cases are discussed among our multidisciplinary clinic staff. Students may also have an opportunity to accompany an outreach worker in the field or meet with research partners at the Public Health Research Institute to learn about basic science research in TB.

REPORTING INSTRUCTIONS: Medical students should plan to arrive at the Global Tuberculosis Institute at the agreed upon time on the first day of the rotation, and report to the Education & Training Office – 1<sup>st</sup> floor, West Wing of the ICPH building located at 225 Warren Street, Newark, NJ. Phone: 973-972-9102 or -0979. Students should contact the Education & Training Office in advance to obtain information and clarify instructions for parking near or around the ICPH building.

## DEPARTMENT OF NEUROLOGICAL SURGERY

### NSUR 9000 - ACTING INTERNSHIP IN NEUROLOGICAL SURGERY

DIRECTOR: Dr. P.K. Agarwalla, [pk.agarwalla@rutgers.edu](mailto:pk.agarwalla@rutgers.edu) (e-mail preferred)

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year, with permission from course director only

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: Medicine, General Surgery, Neurology, prior approval required. Neuro-radiology recommended but not required.

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 rigorous and demanding; it is designed to preview an intern-level rotation for those students actively considering and applying for a neurosurgical residency position. For those students who want only an introduction to neurosurgery, consider the Introduction to Neurological Surgery Elective (NSUR 9500).

#### COURSE OBJECTIVES:

1. By the completion of the elective, the medical student will have a basic understanding of the expectations and duties of a Neurosurgical Intern.
2. The Acting Intern (AI) should be able to interview and examine a neurosurgical patient independently.
3. The AI will participate in surgical procedures in the OR and at the bedside under the direct supervision of a Senior Resident or Attending Physician.
4. By the conclusion of the AI rotation, students should have in development at least one research project.
5. Students will be expected to give at least one presentation of their choosing during the rotation. This presentation may be a case presentation, research presentation, or grand rounds talk geared to a level commensurate with their education.
6. Most importantly, the goal of this rotation is to equip the student with the tools necessary to succeed in a neurosurgical residency.

EVALUATIONS: Your performance will be evaluated in a “360-degree” manner by all interactions while on service including with faculty, nursing, residents, and staff. Evaluation will be based on professionalism, fund of knowledge, attendance, and evidence of learning during the rotation. Faculty will evaluate you based on their interactions in teaching sessions and in the operating room.

REPORTING INSTRUCTIONS: Please contact the course director at least 2 weeks in advance of your first day to obtain instructions.

### NSUR 9010 – INTERVENTIONAL NEUROLOGY/ENDOVASCULAR NEUROSURGERY/ NEUROINTERVENTIONAL RADIOLOGY

DIRECTOR: Dr. Priyank Khandelwal, Assistant Professor and Director of the Endovascular Neurosurgery Fellowship. [Pk544@njms.rutgers.edu](mailto:Pk544@njms.rutgers.edu)

LOCATION: University Hospital

DURATION: 2 weeks only

WHEN OFFERED: Throughout the academic year, by arrangement with course director

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Medicine, General Surgery, Neurology, prior approval required. 4<sup>th</sup> year students only (NJMS and visiting students).

DESCRIPTION OF ELECTIVE: Interventional Neurology/Endovascular Neurosurgery/Neuro-interventional Radiology is a subspecialty that uses minimally invasive approaches through catheters and radiological imaging to treat a broad variety of cranial and spinal vascular pathologies including aneurysms, arteriovenous malformations, ischemic stroke and head/neck tumors. This 2-week elective is intended to expose the student to the diagnosis and treatment of patients with vascular pathologies of the brain and spinal cord. Students will be able to see patients at the time of admission, participate in the discussion of the pathology including interpretation of CT/MRI imaging, and be allowed to observe interventional procedures. Post-treatment, the student will continue to follow the clinical progress through the hospitalization. In addition, the students will be able to participate in weekly neuro-interventional teaching rounds and conferences and have exposure to both residents and fellows in the field. Students are required to give one brief presentation on the topic of interest.

MANDATORY Pre-reading:

1. Anatomy section from [neuroangio.org](http://neuroangio.org).
2. Diagnostic Cerebral Angiography by Anne G. Osborn Second Edition. ISBN-10: 0397584040

REPORTING INSTRUCTIONS: On the first day of the rotation, students should report to the DOC 8100 at 8:30 a.m. to meet the director.

## **NSUR 9050 – RESEARCH IN NEUROLOGICAL SURGERY**

DIRECTOR: Dr. PK Agarwalla, [pk.agarwalla@rutgers.edu](mailto:pk.agarwalla@rutgers.edu)

LOCATION: NJMS

DURATION: 4 weeks (consecutive only)

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: The student must contact the elective director at least 6 weeks prior to the elective start date to seek approval to enroll and to discuss the research topic. A research faculty mentor must be chosen and approved. If the course director is the research mentor, then additional approval must be obtained from the registrar's office. This course is for fourth year NJMS students only.

Formal biostatistics training and familiarity with a statistical language/software (e.g. R, SPSS, SAS, Stata) are strongly encouraged.

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 will further provide the student with valuable experience in experimental design, implementation, and troubleshooting.

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 or abstract format.

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. Evaluation will be based on the draft of research or preliminary data at the end of the rotation.

### **Additional Elective**

**ADVANCED SURGICAL ANATOMY OF NEUROSURGERY AND OTOLARYNGOLOGY** (under Office of Education)

## DEPARTMENT OF NEUROSCIENCES

All grades in Neurosciences electives are determined by evaluation of students based on the following: attendance, carrying out of assigned duties, fund of knowledge of subject material as determined by preceptor evaluation on a daily basis, judgment and attitude.

### NEUR 9000 - NEUROSCIENCES RESEARCH

DIRECTOR: Research Mentor

LOCATION: Medical Sciences Building and Dept of Veterans Affairs Medical Center in East Orange

DURATION: 4 -8 weeks

WHEN OFFERED: by permission only

NUMBER OF STUDENTS PER ROTATION: 6

PREREQUISITES: Permission from research mentor

DESCRIPTION OF ELECTIVE: Students work with a member of the Neurosciences faculty in an area of basic or applied research. The elective provides an opportunity to develop investigative skills in neurosciences.

### NEUR 9010 - NEUROLOGY ACTING INTERNSHIP

DIRECTORS: Dr. Erin Feinstein

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

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year (with permission from Dr. Feinstein)

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITE: Neurology

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.

### NEUR 9011 - NEUROLOGY CONSULTATION

DIRECTORS: Dr. Erin Feinstein

LOCATION: Doctors Office Center and Department of Veterans Affairs Medical Center in East Orange

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: Neurology

DESCRIPTION OF ELECTIVE: The consult rotation (CR) in neurology is an opportunity for students to improve their knowledge and experience gained during their third year of medical school and to have exposure to the outpatient practice of neurology. During the CR rotation, the time is divided between the Doctors Office Center (DOC) and the East Orange VA. The student will spend a total of 4 weeks on CR, 2 weeks at DOC and 2 weeks at the VA. While at the DOC, the student will spend time in neurology subspecialty clinics, such as neuromuscular headache, multiple sclerosis, movement disorders, and stroke. While at the VA the student will participate in general neurology clinic. At the end of the rotation, the student will have a depth of understanding of diagnosis and managing out-patient neurologic illnesses.

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.

### **NEUR 9012 - NEUROLOGY PRECEPTORSHIP**

DIRECTOR: Dr. Erin Feinstein

LOCATION: Private offices and hospitals of participating neurologists.

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year. Must be arranged at least 3 months in advance; no exceptions will be granted.

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Neurology Clerkship

DESCRIPTION OF ELECTIVE: Taken after the Neurology Clerkship, this elective gives the student interested in further neurological training the opportunity to participate in a closely supervised experience by the clinical faculty in the private practice of neurology.

REPORTING INSTRUCTIONS: The student should arrange directly with the participating neurologist the time and location of the first meeting after first discussing the rotation with Dr. Feinstein. Dr. Feinstein should be contacted at [feinster@njms.rutgers.edu](mailto:feinster@njms.rutgers.edu).

This elective is not open to students from other U.S. medical schools or to international medical students.

### **NEUR 9020 - PEDIATRIC NEUROLOGY**

DIRECTOR: Dr. Caroline Hayes-Rosen

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year (with permission by Dr. Hayes-Rosen)



NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Pediatrics and Neurology

DESCRIPTION OF ELECTIVE: Students participate on the clinical service which includes both inpatient and outpatient experiences. They are given supervised responsibility for patients. Students participate in consults, teaching rounds, lectures, and clinics. Students can expect to see a wide variety of patients including such disorders as autism, ADHD, learning disabilities, cerebral palsy, seizures, neuromuscular disorders, headaches and metabolic disorders. Neurodiagnostic techniques such as CT scan, EEG, and MRI will be taught. Customization of clinic schedule is available for students with specific interests.

REPORTING INSTRUCTIONS: Students should text the Pediatric Neurology fellow at 862-800-6737 by 8AM.

### **Additional Elective**

**ADVANCED SURGICAL ANATOMY OF NEUROSURGERY AND OTOLARYNGOLOGY** - under Office of Education

**PEDIATRIC NEUROLOGY (NBIMC)** - under Department of Pediatrics

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

### OBG 9003 - ACTING INTERNSHIP IN OBSTETRICS AND GYNECOLOGY

DIRECTOR: Dr. Joseph Apuzzio

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: June – November; February - April

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Prior departmental approval

**DESCRIPTION OF COURSE:** The Acting Internship in Obstetrics and Gynecology seeks to enhance the skills acquired during the third-year clerkship and provide the student the opportunity to function as a first-year OB/Gyn resident. The student will be responsible to junior and senior residents in the Labor and Delivery Suite and function as the subintern, alternating with the first year resident on labor patients. The student will be assigned pertinent topics such as hypertension, labor curve analysis, fetal heart rate monitoring, and obstetrical analgesia. The student will also follow all patients during a week and report analysis thereof on a weekly basis to the Attending physician. In addition, the student will be expected to present detailed summaries (from antenatal records, labor, deliveries, and neonatal status) of a few cases weekly to the Attending physician. Students will also attend high risk clinic, gaining the skill of accurate diagnosis and management of common high risk obstetrical complications. At the end of the rotation student will have in depth understanding of diagnosis and obstetrical and gynecological problems.

Key responsibilities of the student while on elective:

1. The student will be expected to participate in inpatient and outpatient assessments.
  - The student will be expected to participate in operative cases.
  - The student will be expected to round and document in the medical records daily progress notes for patients under the care of the Ob/Gyn service, including consultations from other services.
  - The student will be expected to participate in all rounds and conferences, including preparation of materials used during conference as assigned by the attending.

**Learning outcomes & evaluation methods:** The elective will be graded Honors/High Pass/Pass/Fail. Students are evaluated by the senior resident, chief resident and team attending. Evaluation is based on subjective assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, record-keeping and interpersonal skills, using an evaluation form designed by the medical school for elective evaluations.

As Acting Interns are integral members of the patient care team, regular attendance and participation are essential. Unexcused absences are not allowed.

**FIRST DAY REPORTING INSTRUCTIONS:** Students are oriented on the first day in Labor and Delivery by the Chief Resident on Obstetrics and the student will function on the obstetrics services team at University Hospital comprised of a chief resident, a senior resident, an intermediate level resident and 1 or 2 first year residents, third year medical students and a faculty attending. The duties and responsibilities of acting interns are identical to those of the PGY-1 residents.

## **OBG 9010 - WOMEN'S HEALTH AMBULATORY CARE**

DIRECTOR: Dr. Lauren Naliboff

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year with permission from Dr. Naliboff

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology 3<sup>rd</sup> year clerkship

DESCRIPTION OF ELECTIVE: This elective is designed to provide exposure to a range of ambulatory care activities and issues in obstetrics, gynecology and women's health and will emphasize direct patient care and contact. Students will participate in the Ob/Gyn outpatient clinics at University Hospital and the primary focus will be the provision of ambulatory care services to adult and adolescent women with particular emphasis on prenatal and postpartum care, routine gynecologic care, and primary and preventative care for women along the age continuum. Students will be assigned to specific clinics and will be expected to independently see patients under the supervision of faculty and residents. Students will directly participate in obtaining patient histories and performing physical exams and will be expected to outline the initial workup of patients and formulate appropriate assessment/plans for patient management.

REPORTING INSTRUCTIONS: On the first day of the elective the student should report to the ACC C-Level Pod 4, at 9:00am for colposcopy clinic. This will be covered by either Dr. DiNapoli or Dr. Fife. The student should wear his/her white coat and bring his/her ID. All other materials will be provided to student.

## **OBG 9020 - GYNECOLOGIC ONCOLOGY**

DIRECTOR: Dr. Nancy Zhou

LOCATION: University Hospital and Ambulatory Care Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology, Medicine, Surgery clerkships

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.

## **OBG 9030 - REPRODUCTIVE CHOICES**

DIRECTOR: Dr. Lauren Naliboff

LOCATION: University Hospital, F-245, (973) 972-5840 or (973) 972-5003

DURATION: 2 weeks

WHEN OFFERED: Throughout the academic year by arrangement

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology 3<sup>rd</sup> year clerkship, approval of Dr. Naliboff

DESCRIPTION OF ELECTIVE: This elective is designed to provide more in depth exposure to women's reproductive choices. The student will gain more detailed knowledge of the field of family planning, including contraception and pregnancy termination. Students will participate in patient care in ambulatory and inpatient settings. Teaching will take place in the operative room, clinic setting, ultrasound suite and inpatient hospital setting, genetics, pathology, and following patients through the system of care.

**First day reporting instructions:** On the first day of the elective the student should report to MSB E-level, room 503B at 9:00am. The student should wear his/her white coat and bring his/her ID. All other materials will be provided to student.

### **OBG 9051 - PRENATAL DIAGNOSIS**

DIRECTOR: **Dr. Joseph Apuzzio** and Dr. Shauna Williams and Dr. Lisa Gittens-Williams  
Department of Obstetrics, Gynecology & Women's Health  
Medical Science Building E-506  
973-972-5557 (Aquinetta)  
Email joseph.apuzzio@njms.rutgers.edu

LOCATION: University Hospital and Ambulatory Care Center,  
140 Bergen Street, C-Level  
Newark, New Jersey 07103  
Obstetrics and Gynecology Ultrasound Area

DURATION: 4 weeks

WHEN OFFERED: September – April by approval

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Permission from Dr. Apuzzio REQUIRED

DESCRIPTION OF ELECTIVE: The student will spend the first week with basic obstetric and gynecologic ultrasound examinations, starting at 9:00 a.m. in the Ambulatory Care Center, C-level Obstetrics and Gynecology Suite. The student should ask for the ultrasound technologist for the obstetric/gynecologic sonography unit. During the month, the student will observe and review ultrasound examinations of pregnant patients referred for dating of pregnancies, suspected genetic or structural problems and others. The student will be asked to research and present one or more topics to the Maternal Fetal Medicine group with a Powerpoint presentation on the last Monday of the rotation at 3 p.m. The presentation should be sent to Dr. Apuzzio by the Friday before the presentation. MFM Rounds take place on Mondays at 3PM .

### **OBG 9070 - HIGH-RISK OBSTETRICS**

DIRECTOR: Dr. Lisa Gittens-Williams

LOCATION: University Hospital

DURATION: 2 - 8 weeks

WHEN OFFERED: Throughout the academic year by arrangement, see Registrar's Office for information

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology

DESCRIPTION OF ELECTIVE: The student will follow the schedule of the senior resident assigned to the high risk obstetrical service will be involved in the care of complicated antenatal and postpartum patients and will gain the skill of accurate assessment, evaluation and management of high risk obstetrical inpatients. The student will prepare cases for presentation for daily Maternal Fetal Medicine Rounds. A topic based presentation will be prepared and presented to faculty and students at the weekly perinatal review. Students will attend Maternal Fetal Medicine clinic, gaining the skill of accurate diagnosis and management of common high risk obstetrical complications. At the end of the rotation, student will have in depth understanding of diagnosis and management of common obstetrical problems.

This elective is not open to international medical students.

REPORTING INSTRUCTIONS: On first day of elective, student should attend rounds on F green, UH conference room at 8 AM. Please contact Dr. Gittens Williams at [gittenn@njms.rutgers.edu](mailto:gittenn@njms.rutgers.edu) prior to the start date of the rotation.

### **OBG 9071 - OBSTETRICAL IN-PATIENT LABOR AND DELIVERY SERVICE**

DIRECTOR: Dr. Talicia Jackson

LOCATION: University Hospital

DURATION: 2 - 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology Core Clerkship

DESCRIPTION OF ELECTIVE: This elective is designed to provide exposure to the Labor and Delivery and Postpartum units. The student will be an integral part of the team, acting as subintern while working with junior and senior residents to provide direct patient care. Students will participate in the management of obstetrical patients from admission to post delivery. They will be expected to independently see patients under the supervision of the faculty and residents, directly participate in obtaining patient history and performing key portions of the physical exams and outline initial assessment and plans for patient management. Students will be involved in daily rounds and will be expected to present detailed summaries (i.e. antenatal records, delivery history, neonatal status and labor course) of the patients they are following. The student will also be involved in educational conferences and will be required to give a short presentation on a pertinent topic such as hypertension, labor curve analysis, fetal heart rate monitoring.

This elective is not open to international medical students.

REPORTING INSTRUCTIONS: Students should report to University Hospital, Labor and Delivery, F Level, University Hospital. Phone numbers: (973) 972-5838 or 5839.

### **OBG 9081 - REPRODUCTIVE ENDOCRINOLOGY/INFERTILITY**

DIRECTOR: Dr. Sara Morelli  
Ext. 2-5554

LOCATION: University Reproductive Associates  
214 Terrace Avenue, Hasbrouck Heights, NJ  
(201) 288-6330

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology

DESCRIPTION OF ELECTIVE: The student will follow, with the REI Attending physician, patients in the in vitro fertilization program, as well as in- and out-patients with gynecological endocrine or infertility problems. The student will be given topics and patient cases to review, analyze and present to the Attending physician. The student is required to prepare a presentation on an REI topic to REI Division Faculty and Fellows at the conclusion of their rotation.

REPORTING INSTRUCTIONS: Students should report to the address above at 8:00 a.m. on the first day of the rotation.

This elective is not open to international medical students.

### **OBG 9085 – INTRODUCTION TO WOMEN’S HEALTH RESEARCH**

DIRECTOR: Research Mentor

LOCATION: Medical Science Building

DURATION: 4 - 8 weeks

WHEN OFFERED: Throughout the academic year with permission from your PI

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: Obstetrics, Gynecology and Women’s Health Clerkship

DESCRIPTION OF ELECTIVE: This course is designed for students to learn the principles of hypothesis driven research in women’s health. The student will receive individual instruction in order to write a de novo protocol for a research study chosen by the student and course directors under the directors’ guidance. The study can be a basic science, clinical or epidemiological research project, according to the interests of the student. The written protocol must be submitted for review by the course directors. The goal is to enhance our students’ ability to read and critically assess the biomedical research literature which drives evidence-based medicine.

### **Additional Elective**

**OB/GYN RESIDENT READINESS TRAINING** (under Office of Education)

## OFFICE OF EDUCATION

### **EDUC 9001 – COMPREHESIVE REVIEW OF MEDICINE**

DIRECTOR: Dr. Christin Traba

LOCATION: Office of Education

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year, prior to Step 2 CK

NUMBER OF STUDENTS PER ROTATION: Unlimited

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: This course is designed as a preparation for the USMLE Step 2 Clinical Knowledge examination and, as such, will focus on essential topics from Internal Medicine as well as other specialties. One of the hallmarks of this course is the time allotted for independent study. In order to maximize this time, students are required to prepare an individualized learning plan for their studying and will be required to complete review questions daily (with submission of weekly progress reports).

Learning outcomes & evaluation methods:

This course is Pass/Fail; students must complete all required assignments to receive a Pass grade.

Key responsibilities of the student while on elective:

1. Complete self-assessment at start of elective, identifying areas of strength/weakness, and develop an individualized learning/study plan.
2. Daily practice questions with weekly submission of progress reports.

REPORTING INSTRUCTIONS: Students will receive correspondence via email prior to the start of the rotation.

### **EDUC 9005 – TEACHING AND MENTORING IN THE SUMMER PROGRAMS**

DIRECTOR: Dr. Maria Soto-Greene

[sotogrml@njms.rutgers.edu](mailto:sotogrml@njms.rutgers.edu)

ADMINISTRATIVE CONTACT: Omayra Mercado, [mercadom@njms.rutgers.edu](mailto:mercadom@njms.rutgers.edu)

LOCATION: NJMS

DURATION: 2 weeks only

WHEN OFFERED: 5/20-5/31, 6/3-6/14, 6/17-6/28 only, by arrangement

NUMBER OF STUDENTS PER ROTATION: 2-4 (depending on the program)

PREREQUISITES: Permission from Dr. Soto-Greene. Students with experience in the NJMS summer pipeline programs such as SMART or students with experience in the FIRST program or those with demonstrated commitment to mentoring and tutoring of learners who are underrepresented in medicine.

DESCRIPTION OF ELECTIVE: The goal of this elective is to introduce medical students to their role as teacher and mentor before they begin residency and better prepare them for this role. The student will be expected to

engage in all ongoing activities of the summer pipeline programs for underrepresented in medicine students for example, the FIRST (Freshman Introduction to Resources, Skills, and Training) program, a six-week summer program designed to acclimate students to NJMS by providing a rigorous, skills-oriented foundation for successful performance in the basic science curriculum of medical school. It is aimed at enhancing the intellectual and self-management skills of those students whose backgrounds may not have included the skills known to be effective in professional training or who have been out of the academic environment for some time. The summer programs use a range of instructional techniques vital to the education of professionals, including: lecture, laboratory, conferences, tutorials, problem-based learning seminars and guided independent study sessions. Students receive feedback on their performance from the faculty and peer upperclassmen via written and practical examinations and small group exercises. The programs are taught by basic science and clinical faculty and upperclassmen teaching assistants. Fourth year student teaching and mentoring assistants in this elective will support the Year 2 teaching assistants. The fourth year students will be expected to build their skills as a mentor through didactics before engaging with peers. The role of the 4th year students will focus more on building community through mentoring relationships and advising. It is expected that the relationships with the summer pipeline students will continue beyond the structured elective until the student graduates.

This elective will facilitate the development of the knowledge, skills, and attitudes necessary to help our students develop their experience and identity as teachers and mentors as they transition from medical school into residency. Students will not only learn more about the medical education process through this elective, but also take pride in the fact that they are helping to train future colleagues.

**OBJECTIVES:**

1. Develop specific skills that will allow students to teach more effectively in various clinical and classroom scenarios (didactics, physical diagnosis, anatomy lab, clinical skills workshops).
2. Describe the qualities necessary for being an effective mentor and mentee
3. Demonstrate the skills of a good mentor through role-modeling and mentoring for students in the summer programs to foster their personal and professional growth
4. Share and discuss medical school experiences on student panels for the summer programs
5. Explore building community with the incoming class of participants for peer to peer academic and career mentoring.

**KEY RESPONSIBILITIES OF THE STUDENT WHILE ON ELECTIVE:** Complete mentor training didactics, engage in teaching sessions Monday-Friday (this includes labs, small groups, clinical workshops etc.), design and lead student panels for advising, design quizzes and exams, provide 1:1 mentoring and study skills support for a cohort of summer pipeline program participants, complete self-assessment of teaching and mentoring before and after elective.

**REPORTING INSTRUCTIONS:** Office of Education, MSB C-642

**EDUC 9010 – INTRODUCTION TO HEALTH INSURANCE SYSTEMS AND MEDICAL POLICY**

**DIRECTOR:** Dr. Miriam Panganiban  
[Miriam\\_panganiban@horizonblue.com](mailto:Miriam_panganiban@horizonblue.com)

**LOCATION:** Horizon Blue Cross Blue Shield of New Jersey, Newark NJ

**DURATION:** 4 weeks only

**WHEN OFFERED:** **NOT CURRENTLY OFFERED – DO NOT REGISTER**

**NUMBER OF STUDENTS PER ROTATION:** 4

**PREREQUISITES:** Contact Dr. Panganiban 3 weeks prior to rotation to begin registration and arrange access. Horizon will require a background check and drug test for all candidates prior to the beginning of the rotation.



Details about these requirements will be provided by Horizon.

**DESCRIPTION OF COURSE:** This elective is designed to introduce 4th year medical students to health insurance, and the manner in which health insurance benefits are administered to health plan members. Under the supervision of the clinical faculty, students will participate in small group sessions to gain an understanding of topics relating to health plan operations, including 1) the different health insurance products and plan designs, 2) the meaning of medical policies and their impact on payment, and 3) the influence of federal and state mandates on individual physician and health care system reimbursement. The students will attend meetings relating to the development and maintenance of medical policies and clinical codes (e.g., ICD10, CPT), and may also participate in the evidence review of medical policies. This elective will provide students with a better understanding of health insurance companies and their services, and the role that they play in managing medical costs for their members.

Normal business hours are between 8am and 5pm Monday through Friday, and the elective would allow reasonable flexibility in scheduling to accommodate residency interviews and other important activities.

Key responsibilities of the student while on elective:

1. The student will be expected to attend scheduled teaching sessions and meetings as directed.
2. The student is expected to review any articles or other documents that are provided.
3. The student is expected to independently research medical topics relating to medical policies, using available online and physical published medical resources.
4. At least one medical policy evidence review and presentation is required during the elective.

**REPORTING INSTRUCTIONS:** On the first day of the elective, the student should report to Horizon Blue Cross Blue Shield of New Jersey, 3 Penn Plaza, 12<sup>th</sup> Floor (S), Newark, NJ. Please be sure to reach out 3 weeks prior to the start date to begin registration and arrange access.

## **EDUC 9025 – INTRODUCTION TO EDUCATIONAL INFORMATICS**

**DIRECTOR:** TBD

**LOCATION:** NJMS

**DURATION:** 4 weeks (extension to 8 weeks with permission only)

**WHEN OFFERED:** **NOT CURRENTLY OFFERED – DO NOT REGISTER**

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** The student must contact the elective director prior to registering for the elective to discuss possible projects so that there is a general plan of action before the elective starts. After the initial conversation, the student must submit a proposal for the elective director's approval at least eight (8) weeks prior to the proposed start date of the elective. The student must possess computer skills needed for the project they will be working on. Specific skills required will depend on project chosen. Projects will be chosen either based on the Educational Informatics projects already in progress, or could be a new project of the student's choosing that will be agreed upon with the elective director.

**DESCRIPTION OF COURSE:** The use of information technology in medical education is continually growing. New technologies, such as online modules, social media, audience response systems, etc., are being implemented to improve the education of medical students, residents, and patients. A need exists for people in both clinical and academic settings who are familiar with the use of these technologies for purposes of education and who can imagine and create new ways of using these technologies and systems for innovative purposes. By learning about the uses of existing technologies and the innovation process used to create new approaches to education, the students will be able to utilize these skills in residency and beyond, to engage and teach their future students, residents, and patients better. The goal of this 4-week elective is to provide

fourth year medical students an introduction to the various aspects of Educational Informatics in the medical field and to provide an opportunity to specifically focus on an Educational Informatics project of their choice. Students will be exposed to the various technologies and systems that NJMS uses for education and will work closely with the Educational Informatics director to develop and work on a focused project. If the project leads to a presentation, publication, or grant, the student will have the opportunity to be one of its authors.

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

1. Demonstrate an understanding of the role of Educational Informatics in the settings of Medical School Education, Residency Education, and Patient Education
2. Present and show progress on an Educational Informatics project that was worked on during the elective.
3. Submit a summary of the project that was worked on, for the purposes of possible poster presentation, publication, or grant application for further resources needed to advance the project.
4. Discuss and present one or more of the emerging concepts and ideas in the field of Medical Educational Informatics, and give his/her perspective on their potential uses for the future.

REPORTING INSTRUCTIONS: TBD

### **EDUC 9033 - INTERNATIONAL MEDICINE**

DIRECTOR: Dr. Ziad Sifri and Dr. Harsh Sule

LOCATION: Various international sites

DURATION: 4 - 8 weeks

WHEN OFFERED: Throughout the academic year by arrangement

NUMBER OF STUDENTS PER ROTATION: 10

PREREQUISITES: Approval from one of the course directors

DESCRIPTION OF ELECTIVE: This elective provides an opportunity for interested students to experience/study aspect(s) of healthcare outside of the U.S. Students are encouraged to identify a program that Rutgers faculty are involved with and/or previous NJMS students have participated in (can be obtained from the Rutgers NJMS Office of Global Health website or by contacting the elective directors). Novel qualified international health programs should be presented to the Elective Director for pre-approval prior to the student applying to the program and/or finalizing any other plans. To be considered qualified, at a minimum, a program must satisfy published NJMS curricular goals, objectives and educational policies, and afford participating students meaningful exposure to medical care systems and/or public health problems and programmatic interventions in the host country.

Upon identifying an appropriate program preliminary/tentative approval must be obtained from the Registrar. Following this the student must meet with the elective directors to discuss their international experience, receive advice specific to their proposed experience and receive final approval. Students must not make any financial commitments until this final approval is received.

Following completion of the international experience the student is expected to complete a scholarly work product that is pre-approved by the course directors. Options include a paper (minimum of 1500 words), poster presentation and/or a lecture that is reflective of the goals and objectives of the independent study project. The student will be required to complete and submit/present within four (4) weeks of completion of the international experience.

The course grade will be based on evaluations by the responsible on-site supervising physician preceptor and the Elective Directors, including an assessment of the student's scholarly work product.

Please note: Students must follow all Registrar's Office procedures concerning international travel, including the purchase of international health insurance, enrollment in the International SOS program, and registration for the Rutgers MyTrips program. Information regarding these requirements will be provided by the Registrar's Office prior to the student's trip. Furthermore, students should be advised that Rutgers University/Rutgers NJMS will not approve travel to any country listed on the U.S. Department of State's Travel Warnings or Travel Advisories. Students are expected to monitor this information through the website: <http://travel.state.gov/content/passports/english/alertswarnings.html>.

## **EDUC 9035 – INTRODUCTION TO CLINICAL INFORMATICS**

**DIRECTOR:** Dr. Iris Herrera and Dr. Anthony Rosania

**LOCATION:** NJMS

**DURATION:** 2-week didactic or 4-week didactic plus project experience

**WHEN OFFERED:** June, October, November, February and April (first half of block for 2-week option)

**NUMBER OF STUDENTS PER ROTATION:** 1-4

**PREREQUISITES:** Students interested in a four-week elective are encouraged to contact the course directors ahead of time to determine a choice of project. Projects will be chosen either based on the Clinical Informatics projects already in progress or could be a new project of the student's choosing that will be agreed upon with the elective director.

**DESCRIPTION OF COURSE:** The use of information technology in clinical medicine is continually growing. Electronic Health Records (EHRs) are now being adopted in hospitals and offices across the country and the field of Health/Clinical Informatics is gaining prominence, with certifications, Master & PhD tracks, and, most recently, a post-residency fellowship with a subspecialty board certification process being introduced. A need exists for people in clinical settings who are familiar with the use of informatics in clinical medicine and who can imagine and create new ways of using these technologies and systems for innovative purposes. By learning about the uses of existing technologies and the innovation process used to create new approaches to clinical informatics, the students will be able to utilize these skills in residency and beyond, to teach and improve the workflows of their colleagues and other health professionals, as well as improve patient access to their own health information. The goal of the 2-week elective is to provide fourth year medical students an introduction to the various aspects of Clinical Informatics in the inpatient and outpatient setting. Activities will include independent study and didactic sessions, and a final, brief, presentation on a current topic in Clinical Informatics. The 4-week elective follows the schedule of the two week but provides motivated students who are interested in pursuing a career in Clinical Informatics to provide an opportunity to focus on a Clinical Informatics project of their choice. Students will be exposed to the various technologies and systems currently in use and will work closely with the Chief Medical Information Officer (CMIO) of University Hospital, informatics leaders, and other IST professionals as they learn about the origins, growth and importance of health IT, as well as develop an understanding of some of the current issues in health IT and informatics. As mentioned, those choosing the 4-week option will develop and work on a focused project. If the project leads to a presentation, publication, or grant, the student will have the opportunity to be one of its authors. The elective will be four 40-hour weeks.

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

1. Demonstrate an understanding of the role of Clinical Informatics in the outpatient and inpatient settings
2. Assess the use of an EHR patient portal by the University Hospital's patient population

3. Appreciate the utility of health analytics in using EHR data for improving patient outcomes, increasing safety, and supporting public health efforts.

4. Discuss and present one or more of the emerging concepts and ideas in the field of Clinical Informatics, and give his/her perspective on their potential uses for the future.

In addition, students completing the four-week elective will:

1. Demonstrate progress and present a Clinical Informatics project.

2. Submit a summary of the project that was worked on, for the purposes of possible poster presentation, publication, or grant application for further resources needed to advance the project.

REPORTING INSTRUCTIONS: Student should contact Dr. Herrera at [herrerir@njms.rutgers.edu](mailto:herrerir@njms.rutgers.edu) to arrange a time and place to meet on the first day.

### **EDUC 9040 - OB/GYN RESIDENT READINESS TRAINING**

DIRECTOR: Dr. Nancy Zhou

LOCATION: University Hospital

DURATION: 2 weeks

WHEN OFFERED: 4/7/25 – 4/18/25 ONLY

NUMBER OF STUDENTS PER ROTATION: Minimum 4, maximum 13

DESCRIPTION OF ELECTIVE: This elective is designed for students entering the field of obstetrics, gynecology and women's health and is designed to provide participants with the skills and knowledge to successfully begin their PGY-1 year in Ob/Gyn training. Specifically, it will focus on teaching surgical skills and Ob/Gyn patient management issues commonly encountered as a PGY-1. It will also focus on the "nuts and bolts" of being a resident such as dictating operative notes and discharge summaries, preparing for journal club, resident statistics, M&M conferences and the CREOG in-service exam. In short, this course is designed to teach you everything you didn't realize you didn't know until you became a resident. This course will be taught through a number of methods including: faculty and resident facilitated didactic sessions, small group exercises, surgical skill simulated models, and mock pages and interviews.

### **EDUC 9050 – SURGICAL BOOT CAMP**

DIRECTOR: Dr. Melissa Alvarez-Downing

LOCATION: University Hospital

DURATION: 2 weeks

WHEN OFFERED: 4/7/25 – 4/18/25 ONLY

NUMBER OF STUDENTS PER ROTATION: Unlimited

PREREQUISITES: For students who plan to match into surgical or surgical subspecialty PGY-1 only

DESCRIPTION OF ELECTIVE: This is an intensive hands on course designed to review and practice essential

skill sets needed to be well prepared for a surgery internship. The course will cover essential elements of relevant anatomy (cadaver dissections), basic surgical procedures, intubation, chest tube thoracostomy, central venous line placement, strategies for paperwork, answering pages, emergency decision making, case presentation on rounds, dictation of operative reports, etc.

Students will be required to demonstrate a variety of surgical skills and presentation skills will be assessed by an oral presentation of surgical cases, accuracy of medical documentation will be assessed by reviewing an operative report. Students must satisfactorily complete all components of the elective to earn a passing grade:

1. Students must attend all sessions (skills practice, dissection, case presentations).
2. Students will be required to successfully perform a series of basic surgical skills.
3. Students will present oral cases simulating the patient presentations at bedside rounds, emphasizing succinct, accurate delivery of relevant data.

REPORTING INSTRUCTIONS: Students will be contacted by Dr. Melissa Alvarez-Downing ([meliss.alvarezdowning@rutgers.edu](mailto:meliss.alvarezdowning@rutgers.edu)) prior to the start of the course re: reporting instructions for the first day as well as a schedule for the course. Any questions or concerns should be directed directly to Dr. Alvarez-Downing.

## **EDUC 9060 – ADVANCED SURGICAL ANATOMY OF NEUROSURGERY AND OTOLARYNGOLOGY**

DIRECTOR: Dr. Chan Park and Dr. James Liu

LOCATION: University Hospital

DURATION: 2 weeks

WHEN OFFERED: Not currently offered

NUMBER OF STUDENTS PER ROTATION: 10

PREREQUISITES: Priority will be given to those who have matched or are applying into a residency involving Otolaryngology, Neurosurgery, Plastic Surgery and Ophthalmology. If space permits, second preference will be given to students seeking residency in Neurology or General Surgery.

DESCRIPTION OF ELECTIVE: This is an intensive hands-on elective designed to enhance the fundamental understanding of head and neck anatomy from a surgical perspective. The surgical anatomy of the head, neck and brain provide an extensively complex three-dimensional system, the understanding of which is critical in the practice of the fields of Otolaryngology, Neurosurgery, and Neurology. This course is thus designed to teach fourth year medical students advanced anatomy from a surgical perspective. Although it is tailored towards students who want to pursue a surgical career, the course is open to anyone interested in learning more about neuroanatomy and the anatomy of the head and neck. This course will consist of didactic lectures that will be integrated into subsequent cadaveric dissections and intraoperative video instruction, providing a focus on the surgical approaches to vital regions of the head and neck via naturally existing corridors.

Students will be required to demonstrate their knowledge of neurosurgical and otolaryngology procedures. They will also be assessed on their understanding of the anatomy as it relates to the practice of neurosurgery and otolaryngology. They will be assessed by an oral presentation of a surgical case and on their accuracy of medical documentation by reviewing an operative report.

Students will be required to:

4. Attend all sessions (skills practice, lectures, dissections, case presentations)
5. Attend at least three neurosurgical and three otolaryngology procedures in the operating room
6. Attend weekly neuroradiology grand rounds
7. Successfully describe the anatomy of a few basic neurosurgical and otolaryngology procedures

8. Present one surgical case going over the anatomy and its relevancy to the surgical procedure
9. Complete one hypothetical operative report simulating the dictations of operations that will be required for surgical residency.

REPORTING INSTRUCTIONS: Students should contact the ENT administrator for reporting instructions and orientation on the first day of the elective. 973-972-4588.

### **EDUC 9070 – EMERGENCY MEDICINE BOOT CAMP**

DIRECTORS: Dr. Sarah Dunn and Dr. Harsh Sule

LOCATION: NJMS and UH

DURATION: 2 weeks

WHEN OFFERED: 4/7/25 – 4/18/25 ONLY

NUMBER OF STUDENTS PER ROTATION: 15

PREREQUISITES: For students who plan to match into Emergency Medicine residency only

DESCRIPTION OF ELECTIVE: The EM boot camp elective will help teach and train students in EM specialty-specific competencies and provide an experiential learning opportunity to prepare them for entering residency. The goal is to offer a core standardized curriculum that addresses the essential and supplemental competencies/skills that an incoming EM resident should ideally possess, and therefore mitigate the gap in expected versus actual skill set(s). Students will be provided with instruction of high-yield topics related to EM to help students critically understand current status and best practices, such as acute coronary syndrome, stroke, sepsis, asthma, trauma, etc. Training in procedure skills such as airway management, pain management/procedural sedation, point-of-care ultrasound and ED patient observation, reassessment and disposition will be provided. Essential skills for residency preparation, such as patient-centered communication and professionalism, Advanced Cardiac Life Support (ACLS) skills, medico-legal principles of ED patient care, end-of-life care/palliative care, and orthopaedic splinting will be taught and practiced.

By the completion of the elective, the student will have acquired basic knowledge and skills specific to the field of EM by demonstrating:

1. A basic understanding of the role of an EM resident/physician
2. A focused evaluation and management of patients presenting with common ED complaints and guided performance of common ED procedures in a simulated environment
3. Appropriate assessment and evaluation of two ED patients/shift, oral presentation and EMR documentation for each

REPORTING INSTRUCTIONS: Students should email Dr. Dunn ([sarah.dunn@rutgers.edu](mailto:sarah.dunn@rutgers.edu)) for reporting instructions and course materials 2 weeks before the beginning of the elective.

### **EDUC 9075 – SEXUAL HEALTH**

DIRECTOR: Dr. Jeremy Grachan

LOCATION: Medical Science Building

DURATION: 2 weeks only

WHEN OFFERED: 3/10/25-3/21/25 **ONLY**

NUMBER OF STUDENTS PER ROTATION: 10

**COURSE DESCRIPTION:**

This elective will introduce students to various topics in sexual health, with a focus on the social and clinical contexts physicians may practice in when working with patients with diverse sexual expressions. Each morning, students will participate in expert-led didactic experiences that cover topics such as sexual wellness, identity formation, gender-affirming care, consensual sexual expression, paraphilic disorders, sex-associated trauma, and high-risk sexual practices. Each afternoon, students will participate in small-group and active learning activities (e.g., case discussions, journal clubs, etc.) that will continue to introduce them to advances in the field. This elective will provide students with the clinical and scholarly foundation to continue exploring sexual health, especially when working with diverse patient populations, throughout their career.

By the end of the elective course, students will be able to:

- Comprehensively assess a patient's sexual health, through encouraging a patient to openly discuss their relationships and sexual interests in an inclusive and nonjudgemental approach
- Explain current theoretical models explaining the psychology behind an individual's gender and sexual orientation, including in adolescents, and relate this to current topics in the media;
- Describe advancements in gender-affirming care, including medical, surgical, and mental health approaches;
- Review pelvic anatomy and relate it to gender-affirming surgery and sex-related injuries;
- Summarize common sexually transmitted diseases and advances in their management;
- Compare and contrast common sexual interests, kinks, and paraphilic disorders in the context of the individualized patient experience; and
- Apply the material covered in this elective to developing a research proposal, including a research question, literature review, and methodology.
- 

Key responsibilities of the student while on elective:

1. Given the topics discussed during this course, students will be first and foremost expected to be respectful toward each other and the course material.
2. Students will be expected to attend daily didactic sessions and daily small-group sessions.
3. Students will be expected to complete any assigned reading prior to each didactic experience or small group, when applicable.
4. Students will be expected to review current literature around sexual health, both as part of any assigned reading and on their own.
5. Students will be expected to attend one (1) off-site group therapy meeting focused on sex addiction (Sex Addicts Anonymous).
6. Students will be expected to produce and deliver a final presentation at the end of the elective. This presentation will be on a research question selected by the student. Students will be expected to review the study's background and propose a methodology for their study during the presentation.

**REPORTING INSTRUCTIONS:** Students will report to a conference room in the Medical Science Building on the first Monday of the elective at 9 AM. The course director will communicate the specific location to the students prior to their first day.

**EDUC 9080 – IMPROVING PATIENT OUTCOMES THROUGH QA/QI STUDIES**

**DIRECTOR:** Dr. Steven Keller

**LOCATION:** Virtual Zoom

**DURATION:** 4 weeks



WHEN OFFERED: Throughout the academic year, with approval from Dr. Keller

NUMBER OF STUDENTS PER ROTATION: 6

PREREQUISITES: Permission required

**DESCRIPTION OF ELECTIVE:** Following best evidence-based guidelines leads to improved medical outcomes and increased patient safety. Assessing guideline adherence (QA) is a basic clinical skill which every clinician carries out over the lifetime of their clinical practice to improve their performance (QI). The objective of this elective is to teach the skills needed to assess quality of screening, diagnosis and/or treatment of medical issues while improving patient outcomes and safety, a skill set residencies require. With mentoring from the course director, students will have a choice of clinical topics of interest to the student in any department within NJMS. Students are encouraged to select a topic of interest within their choice of residency. Once a specific topic is chosen, students are required to identify a clinical faculty to advise on the specific variables to be assessed. Students will be mentored as they conceptualize, design, and carry out their own project. Finally, students will be mentored on the basic analysis needed and finally write a report and present their findings to the clinician advisor.

Individual guidance and feedback will be provided by the course director through zoom. Students will learn the value of QA/QI studies while being mentored in: The development of the QA/QI question; data collection and evaluation, and finally the presentation of their results to their clinical faculty advisor. The product of this QA/QI chart review meets the requirements for a submission of the student's paper to the Rutgers Medical Journal of QA/QI for publication.

All students wishing to take this elective must zoom with the course director about a month before the elective begins to plan for this elective. There are no set hours, students can accomplish their study around their schedule which is particularly important during residency interviewing. Finally, all meetings will be virtual. Students with questions concerning this elective are encouraged to view my QA QI Resource folder on my google drive, start with the master PPT—see link below and/or arrange for a virtual meeting with the director ([skeller@rutgers.edu](mailto:skeller@rutgers.edu)) who will be happy to discuss this offering.

[Click for my Google Drive](#)



## 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

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

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 5

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.

**REPORTING INSTRUCTIONS:** The students are to report to the 6<sup>th</sup> floor, Suite 6100 in the Doctor's Office Center (DOC) Building at 8:30 a.m. on the first day of their elective. They are to bring their ophthalmoscopes with them. The students will receive email instructions prior to their ophthalmology rotation.

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

**DIRECTOR:** Dr. Marco Zarbin

**LOCATION:** NJMS

**DURATION:** 4 - 8 weeks

**WHEN OFFERED:** Throughout the academic year, by arrangement with research mentor

**NUMBER OF STUDENTS PER ROTATION:** 4

**PREREQUISITES:** Permission of the research mentor

**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.

**REPORTING INSTRUCTIONS:** Student should arrange reporting instructions with their research mentor.

### **Additional Elective**

#### **PEDIATRIC OPHTHALMOLOGY** (under Department of Pediatrics)

## DEPARTMENT OF ORTHOPAEDICS

### ORPS 9000 - CLINICAL ORTHOPAEDICS FOR THE NON-ORTHOPAEDIST

DIRECTOR: Dr. Neil Kaushal

ADMINISTRATIVE CONTACT: Ms. Monique Smith (973) 972-3860

LOCATION: University Hospital and Doctors Office Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: General Surgery and Family Medicine

**DESCRIPTION OF ELECTIVES:** This elective is specially designed for a medical student who desires to enter a field other than orthopaedic surgery but deeply desires to improve their knowledge base of clinical orthopaedics. The elective is focused on providing outpatient evaluation and examination and treatment techniques to the medical student. Consequently, the medical student will spend the majority of the time working with the residents and attendings in the orthopaedics clinics and private offices at the Doctors Office Center. Additional exposure is provided with patient consultation in the emergency room and on the orthopaedic floors as well as interactions with orthopaedic radiology. In general, these students are not required to go to the operating room unless they so desire. No overnight call is required. Extensive opportunity is provided for interchanges regarding the discussion of diagnosis and treatment of simple, common orthopaedic problems. This is particularly directed towards educating the medical student on proper techniques for diagnosis and initializing their treatment as well as providing the baseline information to help the future physicians understand when it is most beneficial to refer patients to orthopaedic surgeons as well as to know what type of diagnostic modalities to utilize in their evaluations and to gain an understanding of certain symptomatology and presentation necessitating further evaluation and treatment.

This elective is not open to international medical students.

**REPORTING INSTRUCTIONS:** On the first day of the rotation students should attend morning report at 6:45 a.m. at UH E-349 and identify themselves to the orthopaedic resident.

### ORPS 9010 - ORTHOPAEDIC SPINE SURGERY/ENDOSCOPIC & OPEN PROCEDURES

DIRECTOR: Dr. Praveen Kadimcherla

LOCATION: Advanced Spine Surgery Center - Union & Atlantic Spine Center - West Orange

DURATION: 2 weeks only

WHEN OFFERED: Throughout the academic year by permission

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Approval from site office manager, Alina Chin, [achin@atlanticspinecenter.com](mailto:achin@atlanticspinecenter.com) or 973-640-1920

**DESCRIPTION OF COURSE:** On this elective rotation, the student will participate in outpatient and hospital evaluations treating various spine pathologies. Students are expected to discuss the patient's history and physical, review MRI findings and images of the cervical and lumbar spine as well as observe surgical procedures. The student will prepare for office evaluations and surgical procedures by reading appropriate articles and reviewing relevant anatomy.

Key responsibilities of the student while on elective:

1. Students will perform history and physical exams on patients within the clinic
2. Students will be expected to complete relevant reading and present a 20 minute presentation on a spine related topic
3. Student will observe operative cases

**REPORTING INSTRUCTIONS:** Students should contact Alina Chin, Front Office Manager, 973-640-1920, or [achin@atlanticspinecenter.com](mailto:achin@atlanticspinecenter.com) at least 1 week prior to start date. Report to 475 Prospect Ave., Ste 110, West Orange, NJ 07052. Professional attire required.

### **ORPS 9020 – ORTHOPAEDICS (NBIMC)**

**DIRECTOR:** Dr. Neil Kaushal

**LOCATION:** Newark Beth Israel Medical Center

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year, students pursuing Orthopaedics ONLY

**NUMBER OF STUDENTS PER ROTATION:** 2

**PREREQUISITES:** Students must be pursuing Orthopaedics residency

**DESCRIPTION OF ELECTIVE:** This elective is designed to provide a broad overview of orthopaedic surgery. Exposure includes, but is not limited to, 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, 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.

Learning outcomes & evaluation methods:

The elective will be graded Honors/High Pass/Pass/Fail. Students are evaluated by the residents and attendings based on their overall progress in the OR, clinic, and emergency room. Evaluation is based on subjective assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, record-keeping and interpersonal skills.

Key responsibilities of the student while on elective:

1. The student will be expected to participate in patient assessments in the ER, inpatient unit and clinics.
2. The student will be expected to participate in operative cases, round and document in the medical records daily progress notes for patients under the care of the orthopaedic service, including consultations from other services.
3. The student will be expected to participate in weekly orthopaedic conference.

**REPORTING INSTRUCTIONS:** Students should reach out to Dr. Kaushal prior to the 1<sup>st</sup> day of the rotation for reporting instructions.

## **ORPS 9040 – ORTHOPEDIC DIVERSITY IN MEDICINE**

DIRECTOR: Dr. Flo Edobor-Osula

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year with permission

NUMBER OF STUDENTS PER ROTATION: 2

DESCRIPTION OF ELECTIVE: This elective is designed to provide the student with an opportunity to examine diversity in medicine from the perspective of one of the least diverse fields. During the rotation, all students will have the opportunity to have interchanges with all full-time members of the faculty and have the opportunity to take on a research project that explores an issue surrounding recruitment of both women and underrepresented minority candidates into Orthopaedic Surgery. The student may also conduct a research study on social determinants of health as it pertains to Orthopaedic Surgery in an inner city population such as Newark. The student will be expected to have an abstract or manuscript ready to submit at the completion of the rotation.

Key responsibilities of the student while on elective:

1. The student will be expected to complete an abstract or manuscript.
2. Work with our research coordinator to start data collection and analysis of data.
3. The student will be expected to participate in weekly orthopaedic conference.

REPORTING INSTRUCTIONS: Students should reach out to Dr. Edobor-Osula prior to the first day of the rotation for reporting instructions.

## **ORPS 9050 – ORTHOPAEDIC HAND AND UPPER EXTREMITY**

DIRECTOR: Dr. Michael Vosbikian

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year, students pursuing Orthopaedics ONLY

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Students must be pursuing Orthopaedics residency

DESCRIPTION OF ELECTIVE: This elective is designed to provide exposure to orthopaedic hand and upper extremity surgery. 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, 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.

Learning outcomes & evaluation methods:

The elective will be graded Honors/High Pass/Pass/Fail. Students are evaluated by the residents and attendings based on their overall progress in the OR, clinic, and emergency room. Evaluation is based on

subjective assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, record-keeping and interpersonal skills.

Key responsibilities of the student while on elective:

1. The student will be expected to participate in patient assessments in the ER, inpatient unit and clinics.
2. The student will be expected to participate in operative cases, round and document in the medical records daily progress notes for patients under the care of the orthopaedic service, including consultations from other services.
3. The student will be expected to participate in weekly orthopaedic conference.

REPORTING INSTRUCTIONS: Students should reach out to Dr. Vosbikian prior to the 1<sup>st</sup> day of the rotation for reporting instructions.

## **ORPS 9060 – ORTHOPAEDIC ONCOLOGY**

DIRECTOR: Dr. Kathleen Beebe

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year, students pursuing Orthopaedics ONLY, and having completed an Orthopedic Acting Internship

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Students must be pursuing Orthopaedics residency

DESCRIPTION OF ELECTIVE: This elective is designed to provide an overview of orthopaedic oncology. 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, 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.

Learning outcomes & evaluation methods:

The elective will be graded Honors/High Pass/Pass/Fail. Students are evaluated by the residents and attendings based on their overall progress in the OR, clinic, and emergency room. Evaluation is based on subjective assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, record-keeping and interpersonal skills.

Key responsibilities of the student while on elective:

1. The student will be expected to participate in patient assessments in the ER, inpatient unit and clinics.
2. The student will be expected to participate in operative cases, round and document in the medical records daily progress notes for patients under the care of the orthopaedic service, including consultations from other services.
3. The student will be expected to participate in weekly orthopaedic conference.

REPORTING INSTRUCTIONS: Students should reach out to Dr. Beebe prior to the 1<sup>st</sup> day of the rotation for reporting instructions.

## **ORPS 9070 – ORTHOPAEDIC SPORTS AND JOINTS**

DIRECTOR: Dr. Balazs Galdi

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year, students pursuing Orthopaedics ONLY

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Students must be pursuing Orthopaedics residency

**DESCRIPTION OF ELECTIVE:** This elective is designed to provide an overview of orthopaedic sports and joint injuries. 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, 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.

**Learning outcomes & evaluation methods:**

The elective will be graded Honors/High Pass/Pass/Fail. Students are evaluated by the residents and attendings based on their overall progress in the OR, clinic, and emergency room. Evaluation is based on subjective assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, record-keeping and interpersonal skills.

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

1. The student will be expected to participate in patient assessments in the ER, inpatient unit and clinics.
2. The student will be expected to participate in operative cases, round and document in the medical records daily progress notes for patients under the care of the orthopaedic service, including consultations from other services.
3. The student will be expected to participate in weekly orthopaedic conference.

**REPORTING INSTRUCTIONS:** Students should reach out to Dr. Galdi prior to the 1<sup>st</sup> day of the rotation for reporting instructions.

## **ORPS 9080 – ORTHOPAEDIC TRAUMA**

DIRECTOR: Dr. Mark Adams

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year, students pursuing Orthopaedics ONLY

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Students must be pursuing Orthopaedics residency

**DESCRIPTION OF ELECTIVE:** This elective is designed to provide an overview orthopaedic trauma. 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, 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.

Learning outcomes & evaluation methods:

The elective will be graded Honors/High Pass/Pass/Fail. Students are evaluated by the residents and attendings based on their overall progress in the OR, clinic, and emergency room. Evaluation is based on subjective assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, record-keeping and interpersonal skills.

Key responsibilities of the student while on elective:

1. The student will be expected to participate in patient assessments in the ER, inpatient unit and clinics.
2. The student will be expected to participate in operative cases, round and document in the medical records daily progress notes for patients under the care of the orthopaedic service, including consultations from other services.
3. The student will be expected to participate in weekly orthopaedic conference.

REPORTING INSTRUCTIONS: Students should reach out to Dr. Adams prior to the 1<sup>st</sup> day of the rotation for reporting instructions.

## **ORPS 9090 – ORTHOPAEDIC PEDIATRICS AND SPINE SURGERY**

DIRECTOR: Dr. Neil Kaushal

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year, students pursuing Orthopaedics ONLY

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Students must be pursuing Orthopaedics residency

DESCRIPTION OF ELECTIVE: This elective is designed to provide an overview of pediatric orthopedics and spine surgery. 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, 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.

Learning outcomes & evaluation methods:

The elective will be graded Honors/High Pass/Pass/Fail. Students are evaluated by the residents and attendings based on their overall progress in the OR, clinic, and emergency room. Evaluation is based on subjective assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, record-keeping and interpersonal skills.

Key responsibilities of the student while on elective:

1. The student will be expected to participate in patient assessments in the ER, inpatient unit and clinics.
2. The student will be expected to participate in operative cases, round and document in the medical records daily progress notes for patients under the care of the orthopaedic service, including consultations from other services.
3. The student will be expected to participate in weekly orthopaedic conference.

REPORTING INSTRUCTIONS: Students should reach out to Dr. Kaushal prior to the 1<sup>st</sup> day of the rotation for reporting instructions.



## **ORPS 9116 - ACTING INTERNSHIP IN ORTHOPAEDICS**

DIRECTOR: Drs. Neil Kaushal

ADMINISTRATIVE CONTACT: Ms. Monique Smith (973) 972-3860

LOCATION: University Hospital and Doctors Office Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITE: General Surgery

**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.

**REPORTING INSTRUCTIONS:** On the first day of the rotation students should attend morning report at 6:45 a.m. at UH E-349 and identify themselves to the orthopaedic resident. They should also contact Dr. Kaushal at [kaushank@njms.rutgers.edu](mailto:kaushank@njms.rutgers.edu) for their service assignments the week prior to starting the rotation.

## **ORPS 9192 - ORTHOPAEDIC RESEARCH**

DIRECTOR: Dr. David Paglia

LOCATION: Laboratories for Orthopaedic Research  
New Jersey Medical School, MSB G-Level and Cancer Center, G 4, 5, & 6

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year with permission from the course director

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Students must receive signed permission from Dr. Paglia prior to registration.

**DESCRIPTION OF ELECTIVE:** Students will be assigned to one of many ongoing research activities concerned with the development of advanced orthopaedic implants or materials, new orthopaedic therapeutic modalities or a variety of musculoskeletal basic science research projects. Students work closely with faculty

and staff with expertise in orthopaedic surgery, biomechanics, biomaterials, molecular biology, computer science, and the anatomy and physiology of the musculoskeletal system. Examples of some current projects are: molecular biology of osteoblast differentiation and fracture healing, spinal mechanics including the testing of hydrogel spine disc implants, synthetic bone graft substitutes, and bone micromechanics and remodeling. Students will be evaluated on the basis of their contribution to the project and a written report. Evaluation forms must be signed by Dr. Paglia.

**REPORTING INSTRUCTIONS:** Students should contact Dr. Paglia at least four weeks prior to expected start date to arrange a meeting time on the first day of the rotation.

## **DEPARTMENT OF OTOLARYNGOLOGY**

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

DIRECTOR: Dr. Evelyne Kalyoussef and Dr. Dylan Roden

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year with permission from course director only

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: Medicine or General Surgery

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 have the opportunity to observe and assist in the operating room as well as in the clinic. He/she will be exposed to the various subspecialty areas in otolaryngology, including otology-neurotology, head and neck surgery, laryngology, facial plastic and reconstructive surgery, rhinology and pediatric otolaryngology. Students will also attend and participate in rounds and departmental conferences. Students are expected to give a presentation at the Departmental Grand Rounds at the end of their rotation.

REPORTING INSTRUCTIONS: Students should contact the Otolaryngology–Head and Neck Surgery academic office at (973) 972-4588 prior to the first day of the elective for reporting instructions.

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

DIRECTORS: Dr. Jean Anderson Eloy

LOCATION: University Hospital

DURATION: 4 - 8 weeks

WHEN OFFERED: Throughout the academic year, by arrangement with the department

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: Permission of the Course Director, Completion of online CITI course on Human Subjects Protection (link available through IRB website)

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.

Approval for the elective must be obtained from the Course Director a minimum of one month prior to the start date of the research elective. Interested students should contact the ENT academic office at (973) 972-4588.

REPORTING INSTRUCTIONS: Students should arrange for an appointment with Dr. Eloy one month prior to beginning the elective. Call 973-972-4588 to arrange an appointment. Email: eloyj1@njms.rutgers.edu. Call the ENT department at 973-972-4588 for reporting instructions.

#### **Additional Elective**

**ADVANCED SURGICAL ANATOMY OF NEUROSURGERY AND OTOLARYNGOLOGY** (under Office of Education)

## DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE

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

DIRECTORS: Dr. David Suster

LOCATION: Pathology Department, University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: June - October, February - April

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: None

**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.

**REPORTING INSTRUCTIONS:** Students should report to room E-155, University Hospital at 10:00 AM on the first day of the rotation.

### **PATH 9003 - NEUROPATHOLOGY**

DIRECTORS: Dr. Ada Baisre (973) 972-7167; [baisread@njms.rutgers.edu](mailto:baisread@njms.rutgers.edu)

LOCATION: Neuropathology Division-Pathology Department, Medical Sciences Building

DURATION: 4 weeks

WHEN OFFERED: October (9/23-10/18) and March (2/24-3/21) ONLY

NUMBER OF STUDENTS PER ROTATION: 3

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:**

The neuropathology elective is dedicated to learning more advanced surgical and autopsy neuropathology, including skeletal muscle and peripheral nerve, in a highly interactive environment. Students will have the opportunity to interact with Pathology, Neurology and Pediatric Neurology residents during part of the rotation, which will allow for communication and interaction with these specialties. The rotation is structured to cover the following topics:

Introduction to Neuropathology  
Vascular Diseases  
Neoplasms  
Infections  
Myelin-related disorders  
Degenerative disorders  
Pediatric, Toxic, Metabolic and Nutritional Disorders  
Muscle and Nerve Disorders

There will be a didactic and interactive session for each of the topics, for which the students must prepare, followed by a microscopic session, which the students will preview on their own and make diagnoses, before discussing with the attending. Each student will present one Neuropathology Case and one Journal Club. Gross neuropathology sessions and brain cutting sessions will give students a more comprehensive understanding of the practice of neuropathology. Students are expected to integrate information from other ancillary studies, with the clinical information when available, to improve both diagnostic capability and patient care. Students will also complete a pretest and a posttest to assess improvement in the recognition of neuropathological lesions. Grades are determined by the extent of knowledge acquired during the elective, and by attendance.

**Recommended Reading and References:**

1. Escourolle and Poirier's Manual of Basic Neuropathology, 6th Edition, Gray F, Poirer J, and De Girolami, U., Oxford. (Provided at the beginning of the rotation in PDF and book form.)
2. Robbins and Cotran Pathologic Basis of Disease, Peripheral Nerves and Muscles & Central Nervous System Chapters. (Available at Rutgers University Library online)
3. Neuropathology: A Reference Text of CNS Pathology, 3rd Edition, by Ellison D et al
4. Surgical Pathology of the Nervous System and Its Coverings, 4th Edition, by Burger PC, Scheithauer BW, and Vogel FS. (Available in the Neuropath Lab in book form.)
5. Neuropathology, Series: Foundations in Diagnostic Pathology. 2nd Edition Richard A. Prayson. (Available in the Neuropath Lab in book form.)
6. WHO Classification of Tumours of the Central Nervous System, 2016. IARC (Available in the Neuropath Lab in book form.)

**REPORTING INSTRUCTIONS:** Students should report to the Neuropathology Laboratory, MSB Room C-525 (973-972-7167) at 9:00 a.m. on the first day of the rotation.

### **PATH 9016 - DERMATOPATHOLOGY**

**DIRECTORS:** Drs. W. Clark Lambert and Robert A. Schwartz

**LOCATION:** University Hospital and MSB

**DURATION:** 4 weeks

**WHEN OFFERED:** Throughout the academic year with permission from Dr. Lambert or Dr. Schwartz

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITE:** None

**DESCRIPTION OF ELECTIVE:** This course is designed to familiarize students with principles and techniques relevant to the study of skin diseases. Focus is placed on the pathogenesis and micro- and macroscopic presentation of cutaneous lesions. Students are evaluated on the basis of attendance and ability to acquire and apply information pertinent to the science of dermatopathology.

### **PATH 9025 - DERMATOPATHOLOGY RESEARCH**

**DIRECTORS:** Drs. W. Clark Lambert and Robert A. Schwartz

**LOCATION:** MSB H-576 and MSB C-520

**DURATION:** 4 - 8 weeks

**WHEN OFFERED:** Throughout the academic year with permission from Dr. Lambert or Dr. Schwartz

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** None

**DESCRIPTION OF ELECTIVE:** This clerkship covers all aspects of dermatopathology. The student will have the ability to delve into depth in areas of this discipline. The student will attend dermatopathology conferences and selected pathology and/or dermatology clinics and conferences. Student evaluation is done by the mentor. Evaluation is based upon interest, enthusiasm and performance.

This elective is not open to students from other U.S. medical schools or to international medical students.

## DEPARTMENT OF PEDIATRICS

### A. GENERAL

Students desiring pediatric electives are encouraged to discuss their plans with the Chairman of Pediatrics, NJMS, MSB, F-540, at (973) 972-5275, prior to decision.

### B. EVALUATION

In each of the pediatric electives, students will be assessed on the following items by the supervising faculty attending using the new student evaluation form:

1. History Taking and Interviewing Skills
2. Physical Examination & Assessment
3. Formulation of Diagnosis & Treatment Plan
4. Ability to Apply Knowledge to Patient Care
5. Reliability, Industry & Professional Attitude in Patient Care
6. Interpersonal Skills/Team Work
7. Specialty-Specific Technical Skills
8. Written & Verbal Communication
9. Self-Teaching Skills
10. Potential as a Resident

Grades are assigned as Honors, High Pass, Pass or Fail.

### C. LOCATION

Electives are taken at University Hospital, Newark Beth Israel, and Cooperman Barnabas Medical Center.

### D. TYPES OF ELECTIVES

The Department of Pediatrics offers two major types of electives:

1. Acting Internships in Pediatrics on the inpatient service. The student functions as a junior resident.
2. Subspecialty Rotation. The student is assigned to a subspecialty preceptor and participates in all clinical and academic activities of a subspecialty division.

### PEDS 9001 - ACTING INTERNSHIP IN PEDIATRICS

DIRECTOR: Dr. Christin Traba

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 3 total (including mandatory AI), more only with special permission from Dr. Traba.

PREREQUISITES: 40 weeks of clerkships including Medicine and Pediatrics



**DESCRIPTION OF ELECTIVE:** Goals and objectives: The Acting Internship in Pediatrics seeks to enhance the skills acquired during the third-year clerkship and provide the student the opportunity to function as a first-year pediatric resident.

At the conclusion of this experience, the AI will be able to:

**Knowledge:**

- a. Demonstrate competence in the evaluation, diagnoses, management and disposition of patients with the common inpatient pediatric problems, including knowledge of the anatomic and pathophysiologic correlates of disease and relevant clinical pharmacology.

**Skills:**

- a. Elicit a thorough, accurate and focused history with emphasis on behavioral, psychosocial, environmental as well as medical aspect of illness
- b. Conduct a comprehensive initial physical examination as well as focused, problem-specific physical examinations to evaluate patients with fever, fluid imbalance and changes in mental status
- c. Analyze the data base and formulate a thorough problem list with an appropriate differential diagnoses for each problem
- d. Request and interpret problem-specific and cost-effective diagnostic tests
- e. Present patient data thoroughly and concisely and in both written and verbal formats
- f. Communicate effectively with patients and families, including discussion of diagnoses and prognosis and education about disease processes
- g. Communicate effectively with other members of the healthcare team, including nurses, social workers, dietitians, senior residents, attendings, consultants and colleagues
- h. Write clear, specific, comprehensive and accurate admitting orders, prescriptions, progress notes and discharge summaries
- i. Effectively organize, prioritize and manage daily patient care activities
- j. Demonstrate the ability to perform common procedures, including venipuncture, intravenous catheter insertion, blood culture, urethral catheterization and nasogastric tube insertion
- k. Teach and supervise junior medical students
- l. Plan for timely discharge and appropriate disposition and follow-up for each patient.

**Attitudes/Professional Development:**

- a. Recognize enhanced confidence in his/her abilities to assume primary responsibility for the care of patients and function competently as a first-year resident
- b. Demonstrate professionalism in all clinical interactions including tolerance, sensitivity, cultural awareness, intellectual curiosity, initiative, responsibility and reliability
- c. Understand the role and appreciate the essential contributions of all providers within the healthcare system
- d. Appreciate the importance of continually improving one's practice based on self- and external review of practice parameters and critical appraisal of the scientific literature.

**Format:** Students are oriented on the first day and assigned to the inpatient team at University Hospital comprised of a senior resident, first year resident, third year medical students and a faculty attending. Assignment is to the general pediatric inpatient unit. The duties and responsibilities of acting interns are identical to those of the PGY-1 residents. Acting interns are expected to attend weekly Grand Rounds and daily Morning Report, attending rounds and noontime conference.

**Evaluation:** Students are evaluated by the senior resident, chief resident and team attending. Evaluation is based on subjective assessment of knowledge, proficiency in history-taking and physical examination, clinical judgment, presentations, record-keeping and interpersonal skills, using an evaluation form designed by the department.

As Acting Interns are integral members of the patient care team, regular attendance and participation are essential. Unexcused absences are not allowed; excused absences for interviewing are strongly discouraged.

## **PEDS 9006 - PEDIATRIC OPHTHALMOLOGY**

DIRECTOR: Dr. Suqin Guo

LOCATION: DOC 6<sup>th</sup> Floor, 90 Bergen Street, Newark and Outpatient Operating Room

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: **Students entering Pediatrics or Ophthalmology residencies only**

DESCRIPTION OF ELECTIVE: This course is only available to fourth year medical students who are planning a career in Pediatrics or Ophthalmology who wish to gain familiarity with common ocular disorders that affect children. Only students who are entering the match or have matched in either pediatrics or ophthalmology are eligible to enroll in this course. Emphasis will be placed on outpatients but will include inpatient evaluations for retinopathy of prematurity and exposure to surgery. Students will learn ophthalmoscopy and other diagnostic skills essential to the practice of pediatrics. Opportunity for participation in a clinical research project is available. Students will be tested as part of their grade.

REPORTING INSTRUCTIONS: On the first day of the elective, students should report to the 6<sup>th</sup> Floor of the Doctor's Office Center (Department of Ophthalmology). The week before the elective is to begin, the student can contact Ms. Mary Carola by e-mail at [carola@njms.rutgers.edu](mailto:carola@njms.rutgers.edu) for any questions.

## **PEDS 9009 - PEDIATRIC GASTROENTEROLOGY**

DIRECTOR: Dr. Iona Monteiro

LOCATION: University Hospital/DOC 5100

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year, except June and July

NUMBER OF STUDENTS PER ROTATION: 3

PREREQUISITE: Pediatrics Clerkship

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. The student is expected to review the Pediatric Gastroenterology section of a Pediatric textbook.

REPORTING INSTRUCTIONS: Please contact Dr. Monteiro via email at [monteiim@njms.rutgers.edu](mailto:monteiim@njms.rutgers.edu) one week prior to the start date to establish the location and time for the student to report on the first day of the elective.

## **PEDS 9013 – PEDIATRIC GASTROENTEROLOGY (NBIMC)**

DIRECTOR: Dr. Elise Foglio

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce students to pediatric gastroenterology. 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. 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. The student is expected to review the Pediatric Gastroenterology section of a Pediatric textbook.

### **OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam.
2. Identify the signs/symptoms of the most common pediatric gastroenterology disorders.
3. Describe indications for consultation in pediatric gastroenterology.
4. Describe the risks/benefits of upper and lower endoscopy.
5. Present patient data thoroughly in both written and verbal formats.
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

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

DIRECTORS: Dr. Kristin Wong

LOCATION: University Hospital, ACC F-Level

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year EXCEPT JULY

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: Pediatrics and Medicine clerkships

**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 may have the chance to round inpatient with a Med-Peds attending.

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

- Obtain further knowledge of pathophysiology and experience in the proper diagnosis and treatment of disease in patients of all ages.
- 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.
- Obtain communication skills in counseling patients and families: anticipatory guidance, nutrition, school issues, smoking cessation, diabetes, depression, asthma, COPD and hypertension.
- Describe indications for consultation and referral for the most common diseases affecting adult and pediatric patients.
- Describe indications/criteria for admissions to the inpatient setting for adults and pediatric patients.
- Evaluate the business management of an urban ambulatory practice such as healthcare coverage, managed care, proper billing/coding, and reimbursements.

**REPORTING INSTRUCTIONS:** Students should email Dr. Wong prior to the start of the elective for instructions on when to report on the first day of the elective. Dr. Wong can be reached at [kgw22@njms.rutgers.edu](mailto:kgw22@njms.rutgers.edu) or office phone (973) 972-4736, or pager (973) 203-4774.

### **PEDS 9017 – MEDICINE/PEDIATRICS (NBIMC)**

**DIRECTOR:** Dr. Jon Sicut

**LOCATION:** Newark Beth Israel Medical Center

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** None

**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. This elective will provide students with a better understanding of the scope and practice of ambulatory medicine, with a focus on preventive care and chronic disease management, while highlighting the health needs of Newark's underserved population.

#### **OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam.
2. Identify and summarize a differential diagnosis of illnesses in both pediatric and adult patients: fever, vomiting, headache, chest pain, abdominal pain, wheezing, joint pain, backache.
3. Perform counseling for 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. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

## **PEDS 9025 – PEDIATRIC NEUROLOGY (NBIMC)**

DIRECTOR: Dr. Misbah Salam

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce students to pediatric neurology. Students participate on the clinical service which includes both inpatient and outpatient experiences. They are given supervised responsibility for patients. Students participate in consults, teaching rounds, lectures, and clinics. Students can expect to see a wide variety of patients including such disorders as autism, ADHD, learning disabilities, cerebral palsy, seizures, neuromuscular disorders, headaches and metabolic disorders. Neurodiagnostic techniques such as CT scan, EEG, and MRI will be taught.

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam.
2. Identify the signs/symptoms of the most common pediatric neurology disorders.
3. Describe indications for consultation in pediatric neurology.
4. Present patient data thoroughly in both written and verbal formats.
5. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

## **PEDS 9030 - AMBULATORY PEDIATRICS**

DIRECTOR: Dr. Hanan Tanuos

LOCATION: Doctors Office Center (973) 972-0543

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Pediatrics

**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 to report to at 9am daily to DOC 5100.

Students are expected to attend weekly Grand Rounds. 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.

REPORTING INSTRUCTIONS: Students should report to DOC 5100 at 9:00 a.m.

### **PEDS 9035 – CLIMATE HEALTH AND GENERAL ENVIRONMENT (CHanGE)**

DIRECTOR: Dr. Khalil Savary and Dr. Catherine Chen

LOCATION: Virtual sync and async meetings

DURATION: 2 weeks only

WHEN OFFERED: 9/23/24-10/4/24, 1/27/25-2/7/25, and 3/24/25-4/4/25 ONLY

NUMBER OF STUDENTS PER ROTATION: 5

#### **COURSE DESCRIPTION:**

The goal of this interdepartmental and interinstitutional elective is to give fourth-year medical students across Rutgers campuses the opportunity to learn about climate change in the context of healthcare and medicine from experts in the field from NJMS and RWJMS and nationally. We will create a forum for students to participate in custom crafting a semi structured approach to learning about environmental health through field work, environmental health research and a community education project/ or a new project with approval of the course director. During the course, students will complete both "ClimateRx" and select Emory Climate health education learning modules that will teach them about the role of climate change in medicine.

ClimateRx helps healthcare providers and health professionals to educate patients on the impacts of climate change on their health, ways to protect their health in a changing climate, and how to get more involved. ClimateRx provides tools, training, peer-reviewed information, and opportunities to take action.

Emory's modules are designed for M3 and M4 students who are interested in furthering their understanding of the intersection of the climate crisis and clinical medicine. Students will learn about recognizing, managing, and mitigating the many-faceted consequences of climate change for health and healthcare delivery that they will face in their practice. Lectures are online, delivered by climate and health experts from around the country.

At the end of the course, students will have 2 presentations: 1 about how their future specialty is planning to address climate health, and 1 on a climate health-related topic, project, or research paper of their choice in the form of a PowerPoint.

This elective will help students gain a better understanding of the impact of climate change in healthcare across specialties and time.

After this elective, the student will be able to:

1. Define and explain the fundamental concepts related to patient safety, including adverse events, near misses, and medical errors with a focus on the significance these play in the healthcare setting
2. Discuss methods for identifying and analyzing the root causes of patient safety incidents
3. Recognize the role of patients and their families in promoting safety and learn strategies that focus on engaging patients in their care and encourage participation in safety measures
4. Understand the principles of continuous quality improvement and learn how to use these methodologies to enhance patient safety
5. Outline strategies to minimize healthcare-associated infections and ensure a safe environment for patients
6. Explore the impact of human factors such as fatigue and stress on patient safety
7. Gain knowledge of regulatory standards and guidelines related to patient safety
8. Learn the importance of reporting systems for adverse events and near misses

Key responsibilities of the student while on elective:

1. The student is expected to create a project, centered around environmental health, that will allow them to meet course objectives
2. The student is expected to complete "2 bundles" - about 4-5 lectures from Emory environmental health modules and all of the climate Rx curriculum
3. The student is expected to review current literature regarding climate change and environmental health.
4. Participate in En-roads workshop
5. The student is expected to update the course director on their progress with the project.
6. The student is expected to present a PowerPoint on an environmental health-related topic/research paper of their choice.

REPORTING INSTRUCTIONS: Students should reach out to the course director for instructions on where and when to report for the first day of the elective.

## **PEDS 9045 – PEDIATRIC CARDIOLOGY (NBIMC)**

DIRECTOR: Dr. Rajiv Verma

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: This elective is designed to introduce students to pediatric cardiology. 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. Emphasis will be on diagnosis and treatment of the most common cardiac disorders; interpretation of ECHO's and EKG's; recognition and treatment of cardiac



emergencies; introduction to diagnostic and interventional catheterization as well as different types of cardiac surgical procedures. Basic knowledge will be evaluated in cardiac anatomy and physiology and their application in congenital and acquired heart diseases.

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam.
2. Identify the signs/symptoms of the most common pediatric cardiac disorders, including congenital and acquired heart diseases.
3. Describe indications for consultation in pediatric cardiology.
4. Interpret EKGs in children.
5. Present patient data thoroughly in both written and verbal formats.
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

**PEDS 9055 – PEDIATRIC HEMATOLOGY/ONCOLOGY (NBIMC)**

**DIRECTOR:** Dr. Shalu Narang

**LOCATION:** Newark Beth Israel Medical Center

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** None

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce students to pediatric hematology/oncology. Students will spend the majority of their time in the outpatient clinic, learning about the evaluation and treatment of blood disorders and cancer. Opportunities will be available to attend inpatient rounds on the Hematology/Oncology service. Students will attend weekly Tumor Board meetings and review bloodsmear and bone marrow pathology.

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam.
2. Identify the signs/symptoms of the most common pediatric hematology/oncology disorders.
3. Describe indications for consultation in pediatric hematology/oncology.
4. Present patient data thoroughly in both written and verbal formats.
5. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.



## **PEDS 9070 - PEDIATRIC ENDOCRINOLOGY**

DIRECTOR: TBD

LOCATION: University Hospital, Doctors Office Center

DURATION: 2 or 4 weeks

WHEN OFFERED: **NOT CURRENTLY OFFERED – DO NOT REGISTER**

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: Pediatrics

DESCRIPTION OF ELECTIVE: This elective is designed to introduce the student to the clinical practice of pediatric endocrinology and diabetes. The student will actively participate in the evaluation of outpatients attending our service. These patients include children with Type 1 and 2 diabetes mellitus, as well as a variety of endocrine disorders such as congenital adrenal hyperplasia, congenital hypothyroidism, hyperthyroidism, growth hormone deficiency, obesity, etc.

He/she will also become involved in the care of hospitalized patients who are either acutely ill or have been admitted for diagnostic evaluations. The student will be encouraged to pursue an independent line of investigation as his or her interest and time allow. Students with interests in specific areas of endocrinology will be accommodated, if possible, to pursue their own independent course of study. Students are expected to give a short talk on a topic of their choice at the end of the elective.

REPORTING INSTRUCTIONS: Students should contact Dr. Khokhar prior to the first day of the elective at [ak1598@njms.rutgers.edu](mailto:ak1598@njms.rutgers.edu) or 217-213-2924 (cell). Students should report to DOC 4300 at 9:30 AM the first morning of the elective.

## **PEDS 9080 – ADVOCACY AND COMMUNITY HEALTH**

DIRECTOR: Jennifer Rosen Valverde  
Clinical Law Professor  
[Jnrval@law.rutgers.edu](mailto:Jnrval@law.rutgers.edu), 973-353-3181

LOCATION: H.E.A.L. Collaborative, Rutgers Law School/Rutgers DOC

DURATION: 4 weeks only

WHEN OFFERED: **CURRENTLY NOT OFFERED – DO NOT REGISTER**

NUMBER OF STUDENTS PER ROTATION: 2

DESCRIPTION OF ELECTIVE: This elective is designed to introduce fourth year students to interprofessional practice and social determinants of health. Students will collaborate with graduate students in law, social work, and public health as well as community members to address the non-medical causes of patient health problems. The students will be expected to perform multi-disciplinary patient interviews, review records, access non-medical resources for children and families and advocate for families where appropriate.

During his rotation, students will be required to complete the following assignments:

- i. Spend 2-3 hours observing one of the following settings: housing course, welfare office, homeless shelter, local emergency room waiting room, local health clinic waiting room or food pantry/soup kitchen that serves low income Newark residents. Students are not permitted to use electronic devices, read books, or otherwise distract themselves during observation time. They must observe and take notes on what they

see and hear and write a journal entry describing the experience and the impact of what is observed on health.

- ii. Actively participate in a client interview with H.E.A.L. Collaborative without restricting areas of focus to medicine/health. What information have you learned? How, if at all, does the information affect child and family health and well-being? Write a journal entry on the experience.
- iii. Identify a social issue that impacts the pediatric population and is important to you. Research data with proper citations to support your position on the issue and its effects on patient health. Identify three laws or policies that directly or indirectly affect the issue. Write a journal entry summarizing the information you learn and your reflections about the experience.
- iv. Take a Newark city bus from one end of the city to the other. Pay attention to the neighborhoods and take notes on what you see. Focus in particular on placements and numbers of fast food restaurants, liquor stores, bars, housing/building conditions, traffic patterns, school and daycare locations, supermarkets, corner stores, community centers, public libraries, etc. Define structural determinants of health and write a journal entry on what you observe, structural determinants and the impact of this on health.

REPORTING INSTRUCTIONS: Students should contact Jennifer Rosen Valverde, Esq./MSW ([jnrvai@law.rutgers.edu](mailto:jnrvai@law.rutgers.edu)) and Jessica Selecky ([jselecky@law.rutgers.edu](mailto:jselecky@law.rutgers.edu)) two days prior to the commencement of the rotation to determine where to meet on the first day.

### **PEDS 9110 - NEONATOLOGY**

DIRECTOR: Dr. Onajovwe Fofah

LOCATION: University Hospital, FICN (F-128)

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: Pediatrics

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 9115 – NEONATOLOGY (NBIMC)**

DIRECTOR: Dr. Bellipady Rai

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**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, and lectures. 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.

**OBJECTIVES:**

1. Perform initial as well as daily physical examinations and review of pertinent ancillary studies.
2. Identify common newborn diagnoses, including complications of prematurity, infants of diabetic mothers, congenital heart disease, and other congenital anomalies.
3. Demonstrate the ability to collect, analyze, summarize and succinctly present the relevant medical information.
4. Demonstrate review of appropriate literature on rounds and in a formal presentation.
5. Present patient data thoroughly in both written and verbal formats
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

**PEDS 9145 – PEDIATRIC PULMONOLOGY**

**DIRECTOR:** Dr. Khalil Savary  
[Kws51@njms.rutgers.edu](mailto:Kws51@njms.rutgers.edu); 973-972-8801

**LOCATION:** University Hospital

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year by arrangement

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** Prior approval required

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce fourth year students to pediatric pulmonology. The student will be expected to perform initial patient interviews, and follow up on patient interviews, physical examinations and review and 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 topics will be reviewed:

- 1) Structure and function of the normal and diseased lung in children
- 2) Clinical evaluation of infants/children with pulmonary disease
- 3) Pulmonary function tests in children and chest radiographs
- 4) Diagnostic procedures such as flexible fiberoptic bronchoscopy
- 5) Children dependent on respiratory technology
- 6) Drug administration by inhalation in infants/children and home treatment plans.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to DOC 4300, Dr. Khalil Savary, at 9:00 a.m.

## **PEDS 9165 – PEDIATRIC CRITICAL CARE (NBIMC)**

DIRECTOR: Dr. Derrick McQueen

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce students to pediatric critical care. The student will become an integral part of the team managing critically ill patients in pediatrics. 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 pediatric critical care medicine. Students will also participate in insertion of central lines and arterial lines for monitoring, ventilator management, and resuscitation.

### **OBJECTIVES:**

1. Perform initial as well as daily patient interviews, physical examinations and review of pertinent ancillary studies.
2. Identify common pediatric critical care diagnoses and propose appropriate management plans.
3. Demonstrate the ability to collect, analyze, summarize and succinctly present the relevant medical information.
4. Demonstrate review of appropriate literature on rounds and in a formal presentation.
5. Present patient data thoroughly in both written and verbal formats
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

## **Additional Electives**

**PEDIATRIC EMERGENCY MEDICINE** – under Department of Emergency Medicine

**PEDIATRIC NEUROLOGY** – under Department of Neurology

**PEDIATRIC PHYSICAL MEDICINE AND REHABILITATION** – under Department of Physical Medicine and Rehabilitation

## DEPARTMENT OF PHYSICAL MEDICINE AND REHABILITATION

The Department of Physical Medicine and Rehabilitation encourages students to participate in our electives for an introduction to our field. With the number of debilitating diseases and injuries, such as multiple sclerosis, stroke, cancer, spinal cord injury and traumatic brain injury, that cause long-term disabilities, it is important that medical student be exposed to the principles of Physical Medicine and Rehabilitation (PM&R). Because electives are offered at various locations, a preceptor will be assigned to each student by the Chair's office support staff. Evaluations are performed by the preceptor using the appropriate evaluation form.

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

DIRECTOR: Dr. Steven Kirshblum

LOCATIONS: University Hospital and/or Doctors Office Center (Newark campus); Kessler Institute for Rehabilitation - (West Orange, Saddlebrook); Department of VA New Jersey Healthcare System - (East Orange Lyon's); Children's Specialized Hospital (Mountainside); Jersey City Medical Center (Jersey City); Cooperman Barnabas ACC (Livingston); Newark Beth Israel Medical Center (Newark); Bergen New Bridge Medical Center (Paramus); and private physicians' offices (northern NJ)

DURATION: 2 or 4 weeks

WHEN OFFERED: May, June, July, August, November, December, and January. Other months will require approval from the department administrator, Brian DaSilva ([dasilvba@njms.rutgers.edu](mailto:dasilvba@njms.rutgers.edu))

NUMBER OF STUDENTS PER ROTATION: 8

PREREQUISITES: None

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 musculoskeletal conditions. 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.

REPORTING INSTRUCTIONS: Approximately 1-2 weeks prior to the start of the student's rotation, PM&R department staff will provide the student with placement instructions via email.

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

**DIRECTOR:** Dr. Kate Bentley

**LOCATION:** Children's Specialized Hospital and affiliates (Mountainside, Clifton, southern NJ if preferred)

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** May, June, July, August, November, December, and January. Other months will require approval from the department administrator, Brian DaSilva (dasilvba@njms.rutgers.edu)

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** None

**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.

**REPORTING INSTRUCTIONS:** Approximately 1-2 weeks prior to the start of the student's rotation, PM&R department staff will provide the student with placement instructions via email.

## **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 or Lyons; Jersey City Medical Center (Jersey City); Cooperman Barnabas ACC (Livingston); Newark Beth Israel Medical Center (Newark); Bergen New Bridge Medical Center (Paramus); and private physician's offices (northern NJ)

**DURATION:** 4 weeks

**WHEN OFFERED:** By arrangement

**PRIOR APPROVAL REQUIRED:** Yes, with completion of Research request questionnaire.

**NUMBER OF STUDENTS PER ROTATION:** 2

**PREREQUISITES:** None

**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.

**REPORTING INSTRUCTIONS:** Approximately 1-2 weeks prior to the start of the student's rotation, PM&R department staff will provide the student with placement instructions via email.

### **REHB 9004 – MUSCULOSKELETAL (MSK) SPORTS MEDICINE CLINICAL ROTATION**

**DIRECTORS:** Dr. Steven Kirshblum. Attendings include Drs. Patrick Foye, Roger Luo, Zivya Petrin, Benjamin Levy, Kathy Chou, and Todd Stitik

**LOCATION:** University Hospital, Doctor's Office Center, Newark Beth Israel, Department of VA New Jersey Healthcare System - East Orange or Lyons, Kessler Institute for Rehabilitation (West Orange); Jersey City Medical Center (Jersey City); Cooperman Barnabas ACC (Livingston); Newark Beth Israel Medical Center (Newark); Bergen New Bridge Medical Center (Paramus); and private physicians' offices (northern NJ)

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** May, June, July, August, November, December, and January. Other months will require approval from the department administrator, Brian DaSilva (dasilvba@njms.rutgers.edu)

**NUMBER OF STUDENTS PER ROTATION:** 1 (additional student with approval only)

**PREREQUISITES:** None

**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.

**REPORTING INSTRUCTIONS:** Approximately 1-2 weeks prior to the start of the student's rotation, PM&R department staff will provide the student with placement instructions via email.

### **REHB 9005 MUSCULOSKELETAL (MSK) SPORTS MEDICINE RESEARCH**

**DIRECTORS:** Dr. Steven Kirshblum. Attendings include Drs. Patrick Foye, Kathy Chou, Roger Luo, Zivya Petrin, Benjamin Levy and Todd Stitik

**LOCATION:** University Hospital, Doctor's Office Center, Newark Beth Israel, Department of VA New Jersey Healthcare System - East Orange or Lyons, Kessler Institute for Rehabilitation (West Orange); Jersey City Medical Center (Jersey City); Cooperman Barnabas ACC (Livingston); Newark Beth Israel Medical Center (Newark); Bergen New Bridge Medical Center (Paramus); and private physicians' offices (northern NJ)



DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year by arrangement

PRIOR APPROVAL REQUIRED: Yes, with completion of Research request questionnaire – contact directors

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

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 9100 - GERIATRIC REHABILITATION**

DIRECTOR: Dr. Uri Adler

LOCATION: Kessler Institute for Rehabilitation (West Orange and Saddlebrook)

DURATION: 2 or 4 weeks

WHEN OFFERED: May, June, July, August, November, December, and January. Other months will require approval from the department administrator, Brian DaSilva (dasilvba@njms.rutgers.edu)

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Medicine Clerkship

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.

REPORTING INSTRUCTIONS: Approximately 1-2 weeks prior to the start of the student's rotation, PM&R department staff will provide the student with placement instructions via email.



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

**DIRECTORS:** Drs. Jeremiah Nieves, Brittany Snider, and Carol Gill

**LOCATIONS:** Kessler Institute for Rehabilitation (West Orange); VA NJ Healthcare System (East Orange)

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** May, June, July, August, November, December, and January. Other months will require approval from the department administrator, Brian DaSilva (dasilvba@njms.rutgers.edu)

**NUMBER OF STUDENTS PER ROTATION:** 3

**PREREQUISITE:** REHB 9000

**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.

**REPORTING INSTRUCTIONS:** Approximately 1-2 weeks prior to the start of the student's rotation, PM&R department staff will provide the student with placement instructions via email.

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

**DIRECTOR:** Dr. John Bach

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

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** May, June, July, August, November, December, and January. Other months will require approval from the department administrator, Brian DaSilva (dasilvba@njms.rutgers.edu)

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** None

**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. The 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. Describe the important elements of rehabilitation consultation for inpatient medical/pediatric services.

Format: The student will attend and play an active role in the Muscular Dystrophy Association clinic.

REPORTING INSTRUCTIONS: Approximately 1-2 weeks prior to the start of the student's rotation, PM&R department staff will provide the student with placement instructions via email.

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

DIRECTOR: Drs. Neil Jasey, Peter Yonclas, Arline Edmond, and Jennifer Russo

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

DURATION: 2 or 4 weeks

WHEN OFFERED: May, June, July, August, November, December, and January. Other months will require approval from the department administrator, Brian DaSilva (dasilvba@njms.rutgers.edu)

NUMBER OF STUDENTS PER ROTATION: 3

PREREQUISITES: None

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.

REPORTING INSTRUCTIONS: Approximately 1-2 weeks prior to the start of the student's rotation, PM&R department staff will provide the student with placement instructions via email.

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

DIRECTORS: Drs. Thomas Agesen, Jay Bowen, Boqing Chen, Brett Gerstman, Robert Vrablik, and Ian Wendel

LOCATIONS: Physicians' offices in the northern NJ area

DURATION: 2 or 4 weeks

WHEN OFFERED: May, June, July, August, November, December, and January. Other months will require approval from the department administrator, Brian DaSilva (dasilvba@njms.rutgers.edu)

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

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.

REPORTING INSTRUCTIONS: Approximately 1-2 weeks prior to the start of the student's rotation, PM&R department staff will provide the student with placement instructions via email.

## DEPARTMENT OF PSYCHIATRY

Evaluation: Students are evaluated on the following:

- attendance, cooperation, and attitude
- fund of knowledge of the subject
- capacity to apply knowledge as problems are encountered
- reliability and judgment
- ability to relate to patients

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

DIRECTOR: Dr. Najeeb Hussain, Behavioral Health Sciences Building, Room E-1447; UH G-Yellow

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

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

Note: This sub-internship does not fulfill the "Acting Internship" requirement of New Jersey Medical School.

First day reporting instructions: Students are to report to G-Yellow at 9:00 AM on the first day of their elective. Have EPIC credentials in order and wear a Rutgers ID Badge.

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

DIRECTOR: Dr. Manjula Chilakapati, MD

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

DURATION: 2 or 4 weeks

WHEN OFFERED: **NOT CURRENTLY OFFERED – DO NOT REGISTER**

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

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.

Note: This sub-internship does not fulfill the "Acting Internship" requirement of New Jersey Medical School.

Key responsibilities of the student while on elective: The student is expected to see patients in the unit and present findings to supervising clinicians on a daily basis. The student will chart notes on the patients daily. The student is expected to attend morning report and treatment plan meetings. The student is expected to report at least 1 case report with detailed treatment plan. The student is also expected to attend all didactic lectures given at the VANJHC facility during the rotation.

First day reporting instructions: Please report to EOVMC room 12-058 to Remona Jones or Wanda George.

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

DIRECTOR: Dr. Eric Jarmon

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

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.

REPORTING INSTRUCTIONS: On the first day of the elective, the student should report to UH C-224, Psychiatric Emergency Services, at 09:00 a.m. The student must wear his/her white coat and bring his/her ID, stethoscope, reflex hammer and have computer access to EMR.

## **PSYC 9015 – INTEGRITY HOUSE**

DIRECTOR: TBD

LOCATION: Integrity House

DURATION: 2 or 4 weeks

WHEN OFFERED: **NOT CURRENTLY OFFERED – DO NOT REGISTER**

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Prior approval required

**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 supervision of Voluntary clinical faculty and Staff of the Therapeutic Community at Integrity, 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 especially for those with addictive disorders.

**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 for individuals with addictive disorders.

First day reporting instructions: Student will receive a detailed schedule prior to the start of the rotation. The student must wear his/her white coat, Rutgers ID and have a stethoscope.

**PSYC 9020 - CHILD AND ADOLESCENT PSYCHIATRY**

DIRECTOR: Dr. Najeeb Hussain

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: during elective periods but not during July and August

NUMBER OF STUDENTS PER ROTATION: 2

**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 psychiatry, including emergency and crisis evaluation and treatment and consultation to medically ill youth. 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 may 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 Clerkship director prior to beginning the rotation. Students are expected to see patients in University Hospital Psychiatric Emergency Services and inpatient Consultation Services for Children and Adolescents and provide an encounter note in EPIC and report to elective director so patient can be discussed with the Child Attending on duty.

**GOALS:** The goal of the medical student elective in Child and Adolescent 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. Students will be introduced to the health disparities and social determinants of health through the lens of children and adolescents.

**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.

**First day reporting instructions:** Student should report to UH Psychiatric Emergency Services, Room C 224 in UH by 0900 am with white coat, Rutgers ID badge and stethoscope.

## **PSYC 9022 – CHILD AND ADOLESCENT PSYCHIATRY/TRINITAS**

**DIRECTOR:** Dr. Rehan Malik

**LOCATION:** Trinitas Regional Medical Center

**DURATION:** 4 weeks only

**WHEN OFFERED:** Throughout the academic year (drug screen will be required prior to start date)

**NUMBER OF STUDENTS PER ROTATION:** 1

**COURSE DESCRIPTION:** 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 overview of child psychiatry, including learning how to differentiate common childhood psychiatric disorders, utilize various strategies to build an empathic and non-judgmental approach, and understand importance of biological, psychological, and social factors in child's current presentation. In addition, the 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. Furthermore, we will discuss the effects of childhood trauma on emotional and cognitive development. We will critically analyze and compare the clinical presentation of various common psychiatric conditions between adult and children.

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

1. Demonstrate an empathic and non-judgmental approach while evaluating some challenging interactions with children, adolescent, and their families.
2. Apply bio-psycho-social formulation to understand various factors contributing to the child current presentation.
3. Compare differences in presentation of common psychiatric disorders in children and adults.
4. Utilize DSM-5 criteria to diagnose some complex cases.
5. Discuss resources how to get involved in scholarly work and mentorship regionally and nationally.

Key responsibilities of the student while on elective:

1. Independently evaluate patients and present them to the attendings/residents.
2. Round with the attending and present to the faculty on a daily basis.
3. Complete required readings related to child psychiatry.

**REPORTING INSTRUCTIONS:** Medical Education Office, Trinitas Regional Medical Center, 225 Williamson St.

**PSYC 9025 – ADDICTION MEDICINE (FOCUS ON OPIOID USE DISORDER AND SOCIAL DETERMINANTS OF HEALTH)**

DIRECTOR: Dr. Emily Buirkle

LOCATION: The CARE Center and the UH Addiction Consultation Service; F-Level, Behavioral Health Sciences Building

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

DESCRIPTION OF ELECTIVE: This elective focuses on the assessment and treatment of patients with substance use disorders in both inpatient and outpatient settings. Students will split their time between the UH Addiction Consultation Service and the outpatient CARE Center (Comprehensive Addiction Resources & Education). Our Addiction Consultation Service is staffed by an addiction medicine fellow, two community coordinators, and other rotating learners. Attending coverage is provided by attendings from OB/GYN, internal medicine, emergency medicine/toxicology, and psychiatry which allows for a multidisciplinary perspective on cases. Students will join the daily workflow on the service, carry a patient caseload, and present during rounds.

Students will also rotate in our outpatient CARE Center on the F-level in the Behavioral Health Sciences Building. This is a grant-funded clinic which provides medication management and wraparound services for residents of Newark and surrounding areas who struggle with opioid use disorder and other associated substance/mental health disorders. There is a strong focus on serving patients who are experiencing homelessness and/or who have criminal justice involvement, and anyone with deficits in their social determinants of health. Students will see patients in a preceptorship model: they will reside in their own office, see patients independently, and then present to the faculty preceptor. The preceptor will then see the patient along with the student and help the student write prescriptions, schedule a follow-up appointment, and provide relevant patient education. There is a large interdisciplinary team to offer support and treatment is delivered in a team-based approach.

**OBJECTIVES:**

- 1) To develop comfort with both inpatient and outpatient evaluation and follow-up visits focused on substance use issues
- 2) To improve the ability to develop a rapport with substance-using patients and demonstrate qualities of empathy and non-judgment
- 3) To review assigned readings/lectures and participate in our addiction medicine fellowship didactic series

First day reporting instructions: Students will receive an e-mail with instructions prior to the start of the rotation. Inquiries can be directed to Sherry Williams at saw70@njms.rutgers.edu.

**PSYC 9030 - CONSULTATION-LIAISON**

DIRECTOR: Dr. Eric Jarmon

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2



PREREQUISITES: None

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.

REPORTING INSTRUCTIONS: Students will report to the Consultation/liaison Service team by 09:15 am in Room G300, outside G Yellow inpatient unit UH on the first day of the elective.

### **PSYC 9040 - RESEARCH IN PSYCHIATRY**

DIRECTOR: Dr. Ozlem Gunal

LOCATION: Department of Psychiatry, BHSB F-level, & other sites

DURATION: 4 - 8 weeks

WHEN OFFERED: Throughout the academic year with approval from Dr. Gunal

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: available only on special request to Dr. Gunal (MUST contact at least 6 weeks prior to rotation date)

DESCRIPTION OF ELECTIVE: Students will have the opportunity to participate in a choice of basic and clinical science research activities in psychiatry. Prior to beginning the elective, students should make an appointment with Dr. Gunal ([og80@njms.rutgers.edu](mailto:og80@njms.rutgers.edu)) to plan the elective well in advance.

### **PSYC 9091 - SUBSTANCE USE DISORDERS**

DIRECTORS: Christopher Gates, PhD.

DURATION: 2 or 4 weeks

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

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

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.

First day reporting instructions: Students should contact Mr. Kenneth Hopper at [Kenneth.hopper3@va.gov](mailto:Kenneth.hopper3@va.gov) prior to the start of the rotation for reporting instructions.

## DEPARTMENT OF RADIATION ONCOLOGY

### RADO 9030 - RADIATION ONCOLOGY

DIRECTOR: Dr. Malcolm Mattes  
[mattesmd@cinj.rutgers.edu](mailto:mattesmd@cinj.rutgers.edu)

LOCATION: University Hospital Cancer Center (205 S Orange Ave, Newark, NJ)

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: Radiation therapy has an important role in both the curative and palliative treatment of nearly all human malignancies, and is one of the three primary cancer treatment modalities alongside surgery and systemic therapy. This elective is designed to introduce medical students to the field of radiation oncology, and the integration of radiation therapy into multidisciplinary cancer care. Students will have the opportunity to participate in all aspects of patient care, including the initial consultation with the radiation oncologist where it is determined if radiation is indicated, radiation treatment planning, treatment delivery, management of side effects while patients are on treatment, and monitoring for recurrence in the follow-up period. Students will also attend all departmental patient care meetings and multidisciplinary tumor boards.

Evaluation: 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: Students should watch the following virtual lecture prior to the start of the rotation: <https://www.astro.org/Affiliate/Medical-Students/About-the-Field-of-Radiation-Oncology>. The radiation oncology department at NJMS and RWJMS is a joint department under the Cancer Institute of New Jersey. On Fridays, all residents have an academic day, where radiation oncology residents learn about physics, radiobiology, and clinical radiation oncology. NJMS students are welcome to attend these lectures if patient-care responsibilities allow.

Key Responsibilities of the student while on elective:

- 1) See as many outpatient & inpatient consultations as possible, and present the findings to faculty
- 2) Attend all departmental meetings and tumor boards with faculty
- 3) Observe radiation treatment delivery with the radiation therapists
- 4) Observe a CT simulation with the radiation therapists
- 5) Participate in radiation treatment planning with the radiation oncologist and medical dosimetrist/physicist

REPORTING INSTRUCTIONS: Report to the radiation oncology department on the A-level (basement room A1120, 973-972-5053) of the cancer center (205 S Orange Ave, Newark, NJ) on the first Monday of the rotation at 8:00am. Ask for Dr. Malcolm Mattes when you arrive. Wear a white coat and ID badge. Email Dr. Mattes at least 24 hours in advance to receive orientation materials for the rotation.

## DEPARTMENT OF RADIOLOGY

The purpose of these electives is to provide the medical student with an in-depth exposure to a broad range of radiology as practiced in different types of hospitals.

The evaluation of student performance is generally subjective (except for RAD 9010, see below). When a student completes an elective in University Hospital, several factors are considered, such as the student's enthusiasm and attendance, how the student relates to residents and attending, and the student's general knowledge of the subject matter. At the end of the month a written and oral exam is given. After discussion with attending and residents a report with a grade is submitted to the Registrar's Office. When a student completes an elective at an outside institution, the director of the program at that institution submits a report with a grade directly to the Registrar's Office.

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

DIRECTORS: Dr. Andrzej Jedynak

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 7

PREREQUISITES: None

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 recommended text is "Learning Radiology: Recognizing the Basics" by William Herring 4th Ed., 2020) which is freely available as an e-book from the NJMS Library. 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. Scores from presentations, assignments, examinations and optional projects are added to determine the overall grade for the course. An optional project (case report, preparation of an educational exhibit or review paper on a contemporary radiology issue) can be submitted for extra credit.

REPORTING INSTRUCTIONS: Students should report to MSB, F-506 to Anny Robles at 9:00 a.m. on the first day of the rotation.

### **RAD 9015 – RADIOLOGY (NBIMC)**

DIRECTOR: Dr. Michael Sadler

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: July to April

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: Students rotate through general radiology, neuroradiology, mammography, diagnostic ultrasound, nuclear medicine, musculoskeletal radiology, thoracic radiology, and interventional radiology. 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.

**OBJECTIVES:**

1. Identify the indications, contraindications, risks and costs of commonly used imaging procedures.
2. Describe patient safety issues relating to radiology.
3. Recognize basic anatomic structures as they appear on imaging studies in the normal patient and in common disease states.
4. Interpret plain radiographs as well as basic skills in CT, MRI, and ultrasound.

REPORTING INSTRUCTIONS : On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233

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

DIRECTOR: Dr. Abhishek Kumar

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year by permission

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Permission of the course director

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.

REPORTING INSTRUCTIONS: Students should report to UH, C-318 on the first day of the rotation. The IR Suite is located on C-level, room 235.

### **RAD 9090 - RESEARCH IN RADIOLOGY**

DIRECTOR: Dr. Pratik Shukla

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year, by permission only

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: Permission of the elective director

DESCRIPTION OF ELECTIVE: This elective is designed for medical students to participate in clinical or basic radiologic research, either in an ongoing project or in a project of the student's initiation. Research can be done in any of the subspecialty areas or a composite of these areas and must be coordinated with the faculty supervisor. During this elective, it is expected that the student will actively participate in multiple research projects with radiology faculty and residents, and will present research findings to the faculty. The project will culminate in a paper and presentation.

REPORTING INSTRUCTIONS: On the first day of the elective, the student should report to University Hospital, Suite C-318 at 8:00 a.m.

### **RAD 9110 – INTRODUCTION TO NEURORADIOLOGY**

DIRECTORS: Dr. Esther Nimchinsky

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year with permission

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Student must meet with Dr. Nimchinsky for approval prior to registration

DESCRIPTION OF ELECTIVE: This elective is designed to introduce fourth year students to clinical neuroradiology. It can serve as a first introduction to Neuroradiology, or if taken subsequent to the third year elective, will build on the knowledge and skills already acquired. Students will review clinical neuroanatomy of the brain, spine, head and neck, and sit with a neuroradiologist as he or she reads CT and MRI scans from the hospital, emergency department and the outpatient setting. They will be required to read select scans on their own to understand the process of radiology reporting, and review them with the attending. They will follow the workflow of the reading room from consultations with clinical teams, annotation of scans, quality control, scan acquisition, postprocessing, radiology reading, and incorporating data from the medical record into the differential diagnoses. They will attend ENT and Brain/Spine tumor boards, as well as Neuropathology and Orbit conferences, to learn more about the role of Neuroradiology in conjunction with these affiliated services. They will also participate in neuroradiologic procedures such as lumbar punctures, myelograms, cisternograms and biopsies, as they arise.

Key responsibilities of the student while on elective:

1. The student is expected to read the assigned text prior to beginning the elective. The reading assignment will be determined for each student by the course director and tailored to the level of proficiency of the student and the number and types of other Radiology electives already taken (Diagnostic Radiology, 3rd year Neuroradiology).
2. The student will be expected to report to the reading room in a timely manner every day and stay in the reading room with the faculty and residents until the end of the work day.
3. The student is expected to sit with the Neuroradiology attending and/or residents to learn the mechanics of radiology reading and report generation, as well as choice and refinement of imaging techniques.
4. The student is expected to refer to the medical record throughout the day to obtain clinical data and elements of history that are necessary for the interpretation of scans.
5. The student is expected to search the medical literature on a daily basis to increase his or her knowledge of Neuroradiology, and to learn more about evolving techniques in neuroradiology.
6. The student will participate in neuroradiologic procedures as they occur during the elective.
7. The student will spend time in the CT and MRI control rooms observing the mechanics and challenges of scan acquisition.
8. The student will generate 10 or 20 radiology reports (average 5 per week) for assigned cases and submit them to the Neuroradiology attending for evaluation.
9. The student will present two or four (average 1 per week) interesting cases to the Neuroradiology service in Powerpoint form, in compliance with HIPAA regulations
10. The student will complete a quiz at the end of the rotation to evaluate his or her progress.

**REPORTING INSTRUCTIONS:** The student will have read the assigned text prior to beginning the elective. He or she will present to the main Reading Room, C-318 at 8 am, and ask for the Neuroradiology-CT reading station and attending.

## DEPARTMENT OF SURGERY

### **SURG 9012 – SURGICAL ETHICS**

DIRECTOR: Dr. Michael Shapiro

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year by permission

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Preapproval from course director

**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.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to MSB G-506b at 7:00 am. The student must wear his/her white coat and bring his/her ID. Please contact Dr. Shapiro the week before the elective to confirm the meeting location, and any appropriate reading.

### **SURG 9015 – SURGICAL ONCOLOGY (NBIMC)**

DIRECTOR: Dr. Kevin Clarke

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 weeks ONLY

WHEN OFFERED: Throughout the academic year by arrangement, please contact Cassandra Struck at [rotators@rwjbh](mailto:rotators@rwjbh); Phone: 973-926-3233.

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Surgery Clerkship, permission from department

**DESCRIPTION OF ELECTIVE:** This elective is designed to introduce the student to the principles of surgical

oncology, focused on pre-operative evaluation, selection of operations, and post-operative care. Activities include formal rounds with residents and faculty as well as a series of conferences which the student may attend.

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam
2. Identify oncologic conditions for which surgical intervention or consultation is necessary.
3. Outline the principles of pre- and post-operative care.
4. Explain the key components of the surgical oncology procedure as well as surgical anatomy and pathology.
5. Demonstrate review of appropriate surgical oncology literature on rounds and in a formal presentation.
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233.

**SURG 9020 - ADULT CARDIOTHORACIC SURGERY**

**DIRECTOR:** Dr. Huzaifa Shakir ([shakirhu@njms.rutgers.edu](mailto:shakirhu@njms.rutgers.edu))

**ADDITIONAL FACULTY:** Dr. Justin Sambol, Dr. Persida Drotar, Dr. Christos Stavropolous

**LOCATION:** University Hospital, F-4

**DURATION:** 4 - 8 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** Student must have received a HP or better in Surgery Clerkship

**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.

**Required reading:** Cardiac Surgery in the Adult 5<sup>th</sup> edition (Cohn, Adams), Surgery of the Chest (Sabiston and Spencer)

**REPORTING INSTRUCTIONS:** Students should page 973-421-0690 for reporting information. Contact phone: Marie Baptiste NP, 973 9726810

**SURG 9025 – CARDIOTHORACIC SURGERY (NBIMC)**

**DIRECTOR:** Dr. Ravi Karanam

**LOCATION:** Newark Beth Israel Medical Center



DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year by arrangement, please contact Cassandra Struck at [rotators@rwjbh](mailto:rotators@rwjbh); Phone: 973-926-3233.

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

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.

OBJECTIVES:

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam
2. Identify conditions requiring cardiothoracic surgery and/or when consultation is necessary.
3. Outline the principles of pre- and post-operative care.
4. Explain the key components of the cardiothoracic procedure as well as surgical anatomy and pathology.
5. Demonstrate review of appropriate cardiothoracic literature on rounds and in a formal presentation.
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants

REPORTING INSTRUCTIONS: On the first day of the elective the student should report to Cassandra Struck, Student Coordinator, at NBIMC in the Newark Strong Lobby. E-mail: [rotators@rwjbh.org](mailto:rotators@rwjbh.org); Phone: 973-926-3233. Students must present their evaluation on the first day to Dr. Karanam.

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

DIRECTORS: Dr. Michael Shapiro

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Medicine, General Surgery

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.

REPORTING INSTRUCTIONS: Students should contact Dr. Shapiro's office (973-972-6639, [mes362@njms.rutgers.edu](mailto:mes362@njms.rutgers.edu)) the week prior to the start of the rotation to confirm the team assignment, and

which Chief Resident to meet with on the Monday of the rotation, followed by MSB B-624 for registration by Ms. Deyse Ribau ([ribaudd@njms.rutgers.edu](mailto:ribaudd@njms.rutgers.edu)).

### **SURG 9058 – GENERAL SURGERY/COOPERMAN BARNABAS MEDICAL CENTER**

DIRECTOR: Dr. Frank Traupman

LOCATION: Cooperman Barnabas Medical Center, Livingston, NJ

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year, with permission from the course director

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Prior approval from the course director

DESCRIPTION OF ELECTIVE: The student on this rotation is assigned to a general surgery team. He/she functions under close supervision of teaching residents and attending staff. A student with a defined interest in a surgical specialty may elect to participate on services with emphasis on vascular, gastrointestinal, and/or transplant surgery. Opportunity to observe cardiac procedures is also provided. 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 clinical teaching rounds and attend regularly scheduled conferences with the Department of Surgery. He/she participates in the preoperative, operative and postoperative aspects of patient care on the surgical services and is expected to prepare for operative cases by way of appropriate reading.

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

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 the Medical Student Coordinator. This will be followed by an orientation in the Department of surgery with Anna Gritschke.

### **SURG 9059 – BURN SERVICE/COOPERMAN BARNABAS MEDICAL CENTER**

DIRECTOR: Dr. Michael A. Marano

LOCATION: Cooperman Barnabas Medical Center Burn Unit, Livingston, NJ

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year, with permission from the course director

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Prior approval from the course director

DESCRIPTION OF ELECTIVE: The student will be assigned to the Burn Service, which includes the Burn Intensive Care Unit and Burn Step-Down Unit. He/she will function under the close supervision of teaching residents and attending staff. The student will participate in the care of burned patients including preoperative,

operative and postoperative aspects of care. 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 surgeon is based on multiple factors including fund of knowledge, level of participation in patient care, and ability to assume progressive responsibility. Student assessment is based on demonstrated learning experiences gained through direct patient care, lectures, and reading assignments. A performance evaluation includes a level-specific assessment with regard to patient care, medical knowledge, communication skills and professionalism.

**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 the Medical Student Coordinator. This will be followed by an orientation in the Department of surgery with Anna Gritschke.

## **SURG 9061 - LIVER TRANSPLANT AND HEPATOBILIARY SURGERY**

**DIRECTOR:** Dr. Grace Lee-Riddle

**LOCATIONS:** University Hospital and Ambulatory Care Center

**DURATION:** 2 or 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** Medicine, Surgery

**DESCRIPTION OF ELECTIVE:** During their rotation on the Liver Transplant and HPB Surgery Service, students will be able to participate in all the surgical procedures performed in the division. These include 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 end-stage liver disease and hepatobiliary pathologies. 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 multidisciplinary rounds and conferences. As a fourth year elective, it will be expected that the student participate in direct patient care including wound management, coordinating consultants for patients, and evaluating new consults to the service. They may have the opportunity to present a topic that is of interest or one may be assigned to them during the rotation.

Students should be aware that most donor procurements and transplant procedures are not elective procedures; therefore, they are unpredictable and may occur during off-hours. To obtain the most opportunity from this rotation, the student should expect to be available during off-hours during this rotation. Weekend participation is highly encouraged. Time off will align with ACGME work hour guidelines for residents in the field of surgery.

**REPORTING INSTRUCTIONS:** Students will receive reporting instructions from the department administrator, Ms. Melissa Lugardo (lugardme@uhnj.org), prior to the start of the rotation.

## **SURG 9095 – MINIMALLY INVASIVE AND WEIGHT-LOSS SURGERY**

DIRECTOR: Dr. Danbee Kim

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** This elective is designed to provide the fourth year student with exposure to minimally invasive surgery and weight-loss surgery/management. Students will have the opportunity to evaluate patients in the office both prior to and after surgery, participate in working with patients enrolled in our multidisciplinary weight-management program, observe minimally invasive surgery (including robotic surgery) in the operating room, and follow patients admitted to the hospital after surgery or who require consultation by MIS/bariatrics. Students will also be able to learn about how to use the robot, do simulations such as basic laparoscopy (FLS), robotic simulations, as well as the complex workup and preparation of weight-management for patients with obesity.

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. Student is expected to attend bariatric clinic and multidisciplinary weight-management conference
4. Student is expected to perform basic laparoscopic skills at the sim lab according to the FLS testing guidelines
5. Student is expected to complete robotic simulations with the Da Vinci console simulation system
6. Student should present one journal for weekly journal club on topic of MIS and/or bariatric surgery
7. Student may participate in clinical research regarding MIS/bariatric surgery, if interested.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to MSB G-506b at 7:30 am. The student must wear his/her white coat and bring his/her ID. Please contact Dr. Kim the week before the elective to confirm the meeting location, and any appropriate reading.

## **SURG 9100 – GLOBAL SURGERY**

DIRECTOR: Drs. Ziad Sifri and Harsh Sule

LOCATION: Sierra Leone, Ghana, Peru, other sites TBA

DURATION: 4 weeks

WHEN OFFERED: Please contact Dr. Sifri and/or Dr. Sule for permission, must be arranged during a block in which a surgical mission will occur.

NUMBER OF STUDENTS PER ROTATION: 6

PREREQUISITES: Students are highly encouraged to participate in the Global Surgery non-credit elective prior to this clinical rotation.

**DESCRIPTION OF ELECTIVE:** The Global Surgery Elective will be offered in collaboration with ISHI (International Surgical Health Initiative) in several Low and Middle Income countries (LMIC) where surgical missions are organized. Each country offers a unique surgical and cultural experience for the student to experience in-person. In order to receive credit, satisfactory completion of the following three components is required: 1. Development of a scholarly project; 2. Participation in a surgical mission; 3. Provide feedback

At the start of the elective, the student will agree with the mentor on a scholarly project. The project could be a write up, poster presentation, or a talk. Option# 1) The write up must deal with a subject relevant to Global Surgery in the specific region chosen for the elective and it must be 4-6 pages in length, double-spaced. It can compare and contrast the US and the host country's health care systems and delivery of surgical care. Option #2) The poster presentation should involve a project performed during the elective abroad. Option #3) The talk should include details of the surgical mission, student's responsibilities, surgical diseases encountered, and lessons learned (and given to the *NJMS ISHI student club*). The scholarly project selected by the student is not graded but is required to successfully complete the course.

In the host country, students will be involved in clinical care of surgical patients from urban and rural areas under direct supervision of NJMS surgical faculty. Through these experiences, students will gain knowledge of access to surgical care, burden of surgical disease, challenges to deliver care in a resource-limited environment, and common diseases specific to the host countries. The student will learn how to communicate and provide culturally effective care to patients and learn about issues related to health equity in these settings. The student will learn about the local surgical care and how to develop innovative solutions with limited resources.

Prior to departure, each student will be required to have a travel consultation with a physician from the Student Health and Wellness Center. Additionally, travel must be considered safe by the Rutgers Office of Risk and Claims. This determination is made in conjunction with the NJMS Office of the Registrar and is based upon the U.S. Department of State travel alerts, advisories, safety and security statements. The safety decision made by these offices is considered final. Travel expenses are the responsibility of each student. Following participation in the host country, each student will also be required to complete a standard student feedback evaluation form about their learning experience at the global health site.

**REPORTING INSTRUCTIONS:** Students should contact Dr. Sifri prior to the first day to receive specific reporting instructions.

## **SURG 9181 - PLASTIC SURGERY**

**DIRECTOR:** Dr. Edward Lee

**ADMINISTRATOR:** Amy Stolar

**LOCATION:** Ambulatory Care Center, E-1620

**DURATION:** 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 4

**PREREQUISITES:** Surgery and Medicine Clerkships

**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.

REPORTING INSTRUCTIONS: Students should contact Ms. Stolar at 973-972-5377 prior to the first day of the rotation. Monday morning conference starts at 7:00 a.m. in ACC E1635/E1620. Ms. Stolar will provide you with additional contact information for the residents and attendings on service.

### **SURG 9185 – HAND SURGERY**

DIRECTOR: Dr. Edward Lee

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

DESCRIPTION OF ELECTIVE: This elective is designed to provide focused exposure to hand surgery. The interaction with faculty and residents is designed to be clinically oriented. 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 examination in daily presentations of patient conditions and monthly formal diagnostic reviews.

Key responsibilities of the student while on elective:

1. The student will be expected to participate in patient assessments in the ER, inpatient unit and clinics.
2. The student will be expected to participate in operative cases, round and document in the medical records daily progress notes for patients under the care of the plastic surgery – hand service, including consultations from other services.
3. The student will be expected to participate in weekly plastic surgery conference.

REPORTING INSTRUCTIONS: Students should reach out to Dr. Lee prior to the 1<sup>st</sup> day of the rotation for reporting instructions.

### **SURG 9186 – CLINICAL RESEARCH AND APPLICATION IN PLASTIC SURGERY**

DIRECTOR: Dr. Edward Lee

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year by arrangement

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Permission from the course director

**DESCRIPTION OF ELECTIVE:** This elective is designed to teach 4th year medical students about research processes as they occur in the practice of plastic surgery. This elective will also allow them to practice and demonstrate the ability to develop a research project and plan accordingly. Students will work closely with faculty and staff in expertise in plastic surgery.

Key responsibilities of the student while on elective:

1. The student will be expected to participate in all required didactics.
2. The student will be expected to complete a literature review on a clinical research topic in plastic surgery.
3. The student will be expected to submit an abstract and/or manuscript for review.

**REPORTING INSTRUCTIONS:** Students should reach out to Dr. Lee prior to the 1<sup>st</sup> day of the rotation for reporting instructions.

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

**DIRECTOR:** Dr. Amy Gore

**LOCATION:** New Jersey Trauma Center at University Hospital

**DURATION:** 4 weeks

**WHEN OFFERED:** Throughout the academic year

**NUMBER OF STUDENTS PER ROTATION:** 2

**PREREQUISITE:** General Surgery

**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. Gore and the Trauma Faculty, the Trauma Fellows, and the Chief Resident, based upon presentations, observed skills, judgment and clinical performance.

**REPORTING INSTRUCTIONS:** Students should report to UH E-349 on Monday at 7:00 a.m. for Morning Report/Rounds, followed by MSB B-624 for registration by Ms. Deyse Ribau ([ribaudd@njms.rutgers.edu](mailto:ribaudd@njms.rutgers.edu)).

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

**DIRECTOR:** Dr. Nina Glass [ng470@njms.rutgers.edu](mailto:ng470@njms.rutgers.edu)

**ADMINISTRATOR:** Rimi Dhar [rd966@njms.rutgers.edu](mailto:rd966@njms.rutgers.edu)

**LOCATION:** University Hospital, E Green Surgical ICU

**DURATION:** 4 weeks

**WHEN OFFERED:** Throughout the academic year



NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** The student will become an integral part of the team managing critically ill patients. Each student will function as a subintern and be responsible for performing history and physical exam assessments on patients each day and then presenting them during rounds (beginning with 1-2 patients and advancing as they become more comfortable with the systems-based approach to caring for critically ill patients). Teaching rounds will be made daily with the full team including students, residents, fellows, and attending staff. On rounds, discussions will focus on the pathophysiology of each of the problems presented. Students will be given selected readings in critical care and we will try to get them to present in journal club during their month on service. Students will also participate in bedside procedures with the team including insertion of central lines and arterial lines for monitoring, bedside tracheostomy and percutaneous endoscopic gastrostomy placement, as well as ventilator management, and resuscitation. They will take call with a resident team approximately every 3 days

**REPORTING INSTRUCTIONS:** Students will get email from Ms. Dhar ahead of their start date (or can reach out if they have not) and should plan to report to UH E-349 on Monday at 7:30 a.m. for Morning Report/Rounds, followed by MSB B-624 for registration by Ms. Deyse Ribau ([ribaudd@njms.rutgers.edu](mailto:ribaudd@njms.rutgers.edu)). We will also do a brief orientation and debrief with the course director during the first and last weeks respectively.

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

**DIRECTOR:** Dr. Fariborz Rezai

**LOCATION:** Cooperman Barnabas Medical Center, Livingston, NJ

**DURATION:** 4 weeks

**WHEN OFFERED:** Throughout the academic year, with permission from the course director

**NUMBER OF STUDENTS PER ROTATION:** 1

**PREREQUISITES:** Prior approval from the course director

**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.

**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 the Medical Student Coordinator. This will be followed by an orientation in the Department of surgery with Anna Gritschke.



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

DIRECTOR: Dr. Robert Weiss  
[weissre@cinj.rutgers.edu](mailto:weissre@cinj.rutgers.edu)

ADMINISTRATOR: Shaniqua Mitchell, [mitch1@njms.rutgers.edu](mailto:mitch1@njms.rutgers.edu)

LOCATION: University Hospital and Department of Veterans Affairs Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Medicine, General Surgery

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.

REPORTING INSTRUCTIONS: Students should report to ACC G-1680, at 8:30 a.m. for location assignment. Phone number: (973) 972-4418 (ask for Shaniqua).

This elective is not open to international visiting medical students.

## **SURG 9255 – UROLOGY (CBMC)**

DIRECTOR: Dr. Rahuldev Bhalla

LOCATION: Cooperman Barnabas Medical Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

DESCRIPTION OF ELECTIVE: This elective is designed for the medical student contemplating a career in Urology. This four week rotation will be a rich educational experience for you to expand your knowledge of general urology and subspecialty urology and to get to know our department. Urology is the study and treatment of diseases of the male and female genitourinary tract in both adult and pediatric patients. Urologists both medically and surgically manage urologic diseases including urologic malignancies, stone disease, acquired and congenital genitourinary anomalies, erectile dysfunction and transgender health. The student will be a part of the urologic team and participate actively in the clinic, the OR, and on rounds.

Key responsibilities of the student while on elective:

1. The student will be expected to participate in patient assessments in the ER, inpatient unit and clinics.
2. The student will be expected to participate in operative cases.
3. The student will be expected to round and document in the medical records daily progress notes for patients under the care of the urology service, including consultations from other services.

REPORTING INSTRUCTIONS: Students should reach out to the Office of Medical Education on the first day

of the rotation.

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

COURSE DIRECTOR: Joe Huang, MD  
Associate Professor of Surgery  
Division of Vascular Surgery  
Rutgers – New Jersey Medical School  
Phone: 973-972-6295  
Email: [joe.huang.md@njms.rutgers.edu](mailto:joe.huang.md@njms.rutgers.edu)

Coordinator: Tina Surrency-Scioscia  
Phone: 973-972-6295  
Email: [tbs40@njms.rutgers.edu](mailto:tbs40@njms.rutgers.edu)

LOCATION: University Hospital, Newark, NJ

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year, with Dr. Huang's permission

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Permission from course director

DESCRIPTION OF ELECTIVE: Students interested in surgery or vascular surgery will work with attendings, vascular fellows, and residents, while functioning as a sub-intern on the University Hospital Vascular Surgery Service.

The student will be exposed to the field of vascular and endovascular surgery by learning about the pathophysiology and management of peripheral arterial and venous diseases. Pathologies encountered will include aortic aneurysms, carotid occlusive disease, lower extremity arterial disease, venous disease, and dialysis access needs. By following pre- and post-op patients, evaluating consults, and seeing patients in the office, the student will become familiar with the evaluation and diagnostic testing modalities for these conditions. Through office procedures, endovascular suite interventions, and operating room cases, the student will learn about the medical, endovascular, and open methods of treat these patients.

Students will also attend weekly pre-operative conferences, monthly journal clubs, and monthly morbidity & mortality conferences.

REPORTING INSTRUCTIONS: Prior to the start of the elective, students should contact the Division of Vascular Surgery Coordinator to find out where to report.

### **SURG 9267 – VASCULAR SURGERY (NBIMC)**

DIRECTOR: Dr. Bruce Brener

LOCATION: Newark Beth Israel Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

**DESCRIPTION OF ELECTIVE:** The student will be exposed to the field of vascular and endovascular surgery by learning about the pathophysiology and management of peripheral arterial and venous diseases. Pathologies encountered will include aortic aneurysms, carotid occlusive disease, lower extremity arterial disease, venous disease, and dialysis access needs. By following pre- and post-op patients, evaluating consults, and seeing patients in the office, the student will become familiar with the evaluation and diagnostic testing modalities for these conditions. Through office procedures, endovascular suite interventions, and operating room cases, the student will learn about the medical, endovascular, and open methods of treat these patients.

**OBJECTIVES:**

1. Perform a thorough, accurate and focused history that includes the medical, behavioral, psychosocial and environmental aspect of illness, as well as physical exam.
2. Identify conditions requiring vascular surgery and/or when consultation is necessary.
3. Outline the principles of pre- and post-operative care.
4. Explain the key components of the vascular procedure as well as surgical anatomy and pathology.
5. Demonstrate review of appropriate vascular surgery literature on rounds and in a formal presentation.
6. Communicate effectively with other members of the healthcare team, including nurses, social workers, attendings and consultants.

**REPORTING INSTRUCTIONS:** On the first day of the elective the student should report to Yashonda Thomas, Manager, at NBIMC, Medical Education Office. E-mail: [Yashonda.Thomas@rwjbh.org](mailto:Yashonda.Thomas@rwjbh.org); Phone: 973-926-6946

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

**DIRECTOR:** Dr. Vincent Ziccardi

**LOCATION:** University Hospital C-401

**DURATION:** 2 - 4 weeks

**WHEN OFFERED:** Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: General Surgery

**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.

REPORTING INSTRUCTIONS: Students should contact Ms. Kisha Wesley, Residency Coordinator, at (973) 972-3126 or [wesleykn@sdm.rutgers.edu](mailto:wesleykn@sdm.rutgers.edu) for reporting instructions.

### **Additional Electives**

**ADVANCED SURGICAL ANATOMY OF NEUROSURGERY AND OTOLARYNGOLOGY**  
(under Office of Education)

**SURGICAL BOOT CAMP** (under Office of Education)