

RUTGERS

New Jersey Medical School

ELECTIVES for **Fourth Year Students** *2016-2017*

*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

N.B. This brochure is for informational use only and does not constitute a contract between NJMS and any student. It may be changed by NJMS without prior notice to students. Any rules, regulations, policies, procedures or other representations made herein may be interpreted and applied by NJMS to promote fairness and academic excellence, based on the circumstances of each individual situation.

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 the 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.

Students may only apply a maximum of eight (8) credits of longitudinal coursework towards their requirements for degree. Longitudinal coursework consists of: 1) CALM, 2) mini-medical school, 3) SFHCC, 4) Longitudinal Community Partnership Elective, 5) Scholars Program in Family Medicine, 6) Scholars Program in Physical Medicine and Rehabilitation.

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

There are NJMS electives and outside elective courses (externships) that can be scheduled in the fall (June through November) and spring (December through May). NJMS electives are those offered at NJMS and its affiliates. Externships are those offered at other medical schools (see the section "Externships" for more complete information).

Fall Electives are NJMS electives taken in June - November. Registration for these electives is conducted by the Registrar's Office. Students are asked to pick a first, second, and third course choice 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 December - May. Instructions and forms are e-mailed to fourth year students in September. Upon completion of spring elective registration for NJMS students, visiting student elective request are processed on a space available basis.

Students who are out of state or abroad during the registration period must contact the Office of the Registrar to procure the Elective Selection Form. Registrations are processed in the order determined by lottery position.

Externships/Outside Electives Registration

Many NJMS students choose to do elective courses at other LCME-accredited medical institutions, or at a hospital located in another country, during their third or fourth year. Since each school has its own procedure and may require completion of a visiting student or non-degree student application, it is advantageous to contact potential host institutions as early as possible to determine requirements and obtain copies of required forms.

A student will not be approved to do an externship if he/she has any unresolved unsatisfactory grades in NJMS courses.

The NJMS Registrar's Office must be notified of a student's acceptance into an externship no later than four (4) weeks prior to the externship start date.

To register for an externship:

1. Contact the other medical school/host institution for its visiting student application. Many schools have rotation dates that do not match the NJMS calendar. Please take dates into consideration when planning your schedule. Externship dates cannot overlap with scheduled NJMS rotations.
2. Fill out the application and obtain any necessary supporting documents, i.e. transcript, processing fees, certification of health insurance coverage, etc. Do not send in the application at this time; hold materials until you complete steps 3 and 4.
3. Obtain a *Request for Approval of a Third or Fourth Year Externship* form from the Registrar's Office. Fill out the top portion of this form and take it to the chair of the corresponding NJMS department.
4. Obtain pre-approval and a signature from the chair of the corresponding NJMS department (Step B. on the form). Bring the signed copy of the form to the Registrar's Office with a signed Waiver and Release Agreement required for use prior to participation in a university approved educational activity. Within 3 business days, a Registrar office staff member will make a copy of the forms for your file. The Registrar's Office will then review your academic record and give final approval of the externship (Step C. on the form). Two letters will be generated for you: A letter of externship approval and a letter of malpractice liability coverage.
5. Send the application, all supporting documentation, including the *Request for Approval of a Third or Fourth Year Externship* form, to the host institution.

Students applying to schools that use the Visiting Student Application System (VSAS) can get information about the process through their website: www.aamc.org/students/medstudents/vsas/

6. Upon notification of acceptance by the host institution, **you must provide the NJMS Registrar with the written approval.** Typically this information is detailed in an acceptance letter or email notification for VSAS programs. If you do not receive a formal acceptance letter you must obtain written confirmation of acceptance on the *Request for Approval of a Third or Fourth Year Externship Form* from the host institution. Notification of acceptance and your intent to enroll must be given to the Registrar's Office no later than four (4) weeks prior to the externship start date. Upon receipt of this information you will become officially registered for the externship. Please note: While enrolled at the host institution you will be expected to abide by all of their rules and policies.

Occasionally, it becomes necessary for a student to cancel an outside elective. It is the student's responsibility to notify both the sponsor of the course and the NJMS Registrar's Office of such a change within four (4) weeks prior to the start date.

7. You are requested to take an evaluation form: *Summary Evaluation of Student Performance in Clinical Courses* to the externship sponsor. Request the evaluation form be completed and returned to the NJMS Registrar's Office **within two weeks** following completion of the elective. It is your responsibility to see that an evaluation is mailed to the NJMS Registrar. You will not be awarded credit for the course until and unless we receive this evaluation. The evaluation submitted by the other school will be available for you to review in the Registrar's Office.

Expectation to Travel to Affiliate Sites Policy

During the course of their education, students enrolled in the doctor of medicine degree program at 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 Request for Accommodations process. 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/policies/documents2/NJMSSAExpectationtoTraveltoalltrainingSitesPolicy72013.docx

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:

- severe personal illness;
- birth of a child;
- mandatory jury duty;
- serious illness or death of an immediate family member¹;
- 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; he/she must speak to the clerkship/elective or his/her 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."

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.

¹Members 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 VSAS, the Visiting Student Application Service.

Applications may be submitted through VSAS starting on or about April 15, 2016; they will be reviewed beginning May 31, 2016. To apply to our institution, please complete and send us a VSAS 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. For more information on VSAS, please visit www.aamc.org/students/medstudents/vsas or contact VSAS at vsas@aamc.org or (202) 478-9878. VSAS 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 June. We begin processing applications for the spring term in December. 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

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:

1. 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.
2. 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.
3. A description of the New Jersey Medical School process for responding to allegations of mistreatment.
4. 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/policies/documents2/NJMS_PolicyontheLearningEnvironment72013.docx

THE NEW JERSEY MEDICAL SCHOOL

CODE OF PROFESSIONAL CONDUCT

The 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:

- to be aware of and to abide by all applicable federal, state and local civil and criminal laws and regulations;
- 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.
- 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.
- 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.
- 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/policies/documents2/NJMS_CodeofProfessionalConduct72013.docx

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 Clinical 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. Discuss the situation with the Associate Dean for Student Affairs (ADSA) and through this consultation 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.
2. The Course Director/Clerkship Director/Faculty/Administrator must discuss the form with the student. The student must sign to acknowledge receipt of the form.
3. The form is submitted to the ADSA who meets with the student to design and implement the plan for professional development.
4. The ADSA provides feedback to the Course Director/Clerkship Director/Faculty/Administrator as to the outcome of the report and involves faculty in the plan for professional development as necessary.
5. The form 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 only one form in the third or fourth year and has had no prior forms submitted on his/her 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.

**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

Hackensack University Medical Center
30 Prospect Avenue
Hackensack, NJ 07601
Telephone: (551) 996-2000

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

Matheny Medical and Educational Center
P.O. Box 339, Highland Avenue
Peapack, NJ 07977
Telephone: 908-234-0011

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

St. 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 2016 - 2017

	CALENDAR DATES			BROCHURE DESIGNATION
2016	June 6	to	July 1	June
	July 5	to	July 29	July
	August 1	to	August 26	August
	August 29	to	September 23	September
	September 26	to	October 21	October
	October 24	to	November 18	November
	November 28	to	December 23	December

Winter recess begins at 5:00 p.m. on Friday, December 23, 2016. Classes resume on Tuesday, January 3, 2017.

2017	January 3	to	January 27	January
	January 30	to	February 24	February
	February 27	to	March 24	March
	March 27	to	April 21	April
	April 24	to	May 12	May

DEPARTMENT OF ANESTHESIOLOGY

ANES 9000 - GENERAL ANESTHESIA

DIRECTOR: Dr. Lawrence Chinn

LOCATION: University Hospital

DURATION: 2 - 4 weeks

WHEN OFFERED: June, August - May

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.

A lecture series designed specifically for the medical student will enhance the knowledge gained from "hands on" experience in the operating room. A typed, one page write-up on an interesting case or a reflection of the rotation is required of all 4-week students. 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. Chinn at MSB E-545 at 6:45 a.m. on the first day of the elective and then report to Lisa Chappelle in MSB E-547 at 10:00 a.m. to receive elective items (textbook, lecture schedule, scrubs, etc).

ANES 9001 - OBSTETRICAL ANESTHESIA

DIRECTOR: Dr. Antonio Gonzalez-Fiol

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: June, August - May

NUMBER OF STUDENTS PER ROTATION: 1

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

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. Gonzalez-Fiol at gonzala6@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: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: Permission of the Program Director

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 a wide variety of 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.

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 - 12 weeks

WHEN OFFERED: By arrangement with Catherine Schoenberg, MSB H578

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

PREREQUISITE: Permission of the Program Director

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, Cathy Schoenberg.

REPORTING INSTRUCTIONS: Please contact Ms. Schoenberg 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: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4

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 ADMC 11 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: William O'Brien

LOCATION: University Hospital EMS, University Hospital Emergency Department

DURATION: 2 or 4 weeks (discuss with course director)

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

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

REPORTING INSTRUCTIONS: Students must contact Mr. O'Brien (obrienwe@uhnj.org) at least two weeks prior to the start of the rotation to discuss meeting time and location. Further reporting information will be provided by email.

EMED 9020 – BEDSIDE EMERGENCY ULTRASOUND

DIRECTOR: Dr. Trevor Dixon

LOCATION: NJMS

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year by permission

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Prior departmental approval

DESCRIPTION OF COURSE: 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. This elective will serve to develop a comprehensive understanding of basic bedside ultrasonography. This course will comprise a combination of self-directed study sessions, lectures and practical sessions where the student will have the opportunity to demonstrate their understanding of the core ultrasound applications, their clinical indications and interpretation as well as develop the ability to use ultrasound guidance to facilitate procedures such as intravenous line placement.

During this elective it is expected that the student will read assigned topics on a daily basis. The student is expected to be familiar with the assigned topics prior to discussion and practice in class. In order to be successful in this course, the student must participate in self-directed study sessions and prepare questions/comments that will be discussed during roundtable with the director. Each day, the student is expected to log onto www.emsono.com/acep/ACEP_EUS_Exam.html to complete a practice quiz pertaining to the topic of the day. The student will be provided a grade at the end of each quiz; however, this grade will not be factored into the student's final grade. It is expected that the student utilize this tool to understand his/her weaknesses in order to improve performance and understanding of the topic.

Through simulation, didactics, group learning and patient interactions, the student will obtain a solid foundation on some of the core competencies for ultrasound examination in the emergency department. At the end of the rotation, the student will present a topic of interest to the group and will effectively explain how to perform the exam; its indications, normal and abnormal findings. At the end of the rotation, the student will complete a brief written examination and a practical/competency examination that will factor into the student's grade for the elective. The student will be required to complete a minimum of 50 images and submit to the director for review by the end of the rotation.

REPORTING INSTRUCTIONS: Students should report to ultrasound director's office in ADMC building; at this time, schedule and orientation material, and pre-test will be provided.

EMED 9030 – MEDICAL TOXICOLOGY

DIRECTOR: Dr. Steven Marcus

LOCATION: ACC G-1600

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year, by permission only

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Permission from the course director – contact Bruce Ruck, PharmD at bruck@njpies.org or (973) 972-9280

DESCRIPTION OF ELECTIVE: 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. The student will complete a project related to 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. Develop a differential diagnosis and appropriate care plan for a variety of overdose situations
3. Recognize important toxidromes encountered commonly in clinical practice.
4. Demonstrate a working knowledge of antidotes used for poisoned patients and when they are indicated.

REPORTING INSTRUCTIONS: The student must call the staff assistant at 973-972-9280 at least two weeks in advance to schedule an appointment with Dr. Marcus on the first day of the elective.

EMED 9245 - EMERGENCY MEDICINE

DIRECTOR: Michael Anana, MD (ananami@njms.rutgers.edu)

ADMINISTRATIVE CONTACT: Deyse Ribaud, ribaudd@njms.rutgers.edu, (973) 972-3762

LOCATION: University Hospital, Department of Emergency Medicine

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Completion of all third year required clerkships.

DESCRIPTION OF COURSE: This course is a four week clinical rotation in the Emergency Department (ED) at University Hospital. The course is offered to fourth-year medical students.

- 1) Students will do ten 12-hour shifts per 4-week rotation. Shifts will be a combination of 7a-7p and 7p-7a shifts to be worked over a combination of weekdays, weeknights, and weekends.
- 2) Students will attend our Emergency Medicine conferences that are held each Wednesday from 8am-1pm.

At UH, students will see patients with a wide range of presenting signs and symptoms that include trauma, chest pain, vaginal bleeding and abdominal pain. Students will be responsible for performing focused history and physical examinations on ED patients. Formulation of diagnostic and treatment plans will be in conjunction and under the supervision of the ED attending physicians. Students are encouraged to perform any necessary diagnostic, resuscitative and/or therapeutic procedures that may be necessary for patient care under direct supervision of the ED attending physician. Students are expected to follow-up on any diagnostic studies for the patients that they are following. Students are also encouraged to learn when and how to appropriately involve consultation services in patient evaluation and care. Students will be graded on their clinical performance via evaluations by the ED attending physicians. Mid-rotation feedback regarding clinical performance is provided. Students will also design and execute a 1 hour power point lecture to be given to other rotating medical students on an Emergency Medicine core topic. This lecture should be case-based. 1-3 current and recent journal articles related to the case should be incorporated. The topic and date for delivery of this lecture should be discussed with Dr. Anana/Lamba at the beginning of the elective.

Course Goals: The goals of the Emergency Medicine elective are for the students to (a) demonstrate focused history and physical examinations based on presenting symptoms, (b) demonstrate differential diagnoses appropriate for patients presenting symptoms, (c) develop appropriate diagnostic and treatment plans for ED patients, (d) demonstrate knowledge for resuscitative requirements of patients in shock or cardiac arrest, (e) demonstrate the ability to incorporate psycho-social factors into patient assessment and treatment plans, (f) become proficient in basic EM procedural skills.

Course Objective: Instruct fourth-year medical students how to clinically evaluate patients, formulate diagnostic and treatment plans, and prioritize patient care in the ED. This will be done by direct supervision by ED attending physicians.

Course grade: 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. The power point lecture carries 25% of the final grade. The student is to hand in 10 shift evaluations for each of the 10 clinical shifts they do in the department. The clinical component is 75% of the final grade.

EMED 9250 - EMERGENCY MEDICINE/HACKENSACK

DIRECTOR: Dr. Christine Fernandez

LOCATION: Hackensack University Medical Center

DURATION: 4 weeks

WHEN OFFERED: Prior approval by the preceptor is necessary. Please contact Karyna Miranda, the Program Assistant in the Office of Academic Affairs, phone (551) 996-2016 and email: KMiranda@HackensackUMC.org.

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Prior departmental approval

DESCRIPTION OF COURSE: This course is a four week clinical rotation in the Emergency Department (ED) at HackensackUMC. The course is offered to fourth year medical students. Student will do ten 12 hour shifts per 4 week rotation. Shifts will be a combination of 7a-7p and 7p-7a shifts to be worked over a combination of weekdays, weeknights, and weekends.

At HackensackUMC, students will see patients with a wide range of presenting signs and symptoms that include trauma, chest pain, vaginal bleeding and abdominal pain. Students will be responsible for performing focused history and physical examinations on ED patients. Formulation of diagnostic and treatment plans will be in conjunction and under the supervision of the ED attending physicians. Students are encouraged to

perform any necessary diagnostic, resuscitative and/or therapeutic procedures that may be necessary for patient care under direct supervision of the ED attending physician. Students are expected to follow-up on any diagnostic studies for the patients that they are following. Students are also encouraged to learn when and how to appropriately involve consultation services in patient evaluation and care. Students will be graded on their clinical performance via evaluations by the ED attending physicians. Mid-rotation feedback regarding clinical performance is provided.

Key responsibilities of the student while on elective: Students will be expected to evaluate patients and present to the EM physician preceptor to discuss patient specific plan of care.

Course Grade: 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. The power point lecture carries 25% of the final grade. The student is to hand in 10 shift evaluations for each of the 10 clinical shifts they do in the department. The clinical component is 75% of the final grade. Students will be evaluated on the NJMS evaluation form.

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

Additional Electives

EMERGENCY MEDICINE BOOT CAMP (under Office of Education)

INTRODUCTION TO TERROR MEDICINE (under Office of Education)

PEDIATRIC EMERGENCY MEDICINE (under the Department of Pediatrics)

DEPARTMENT OF FAMILY MEDICINE

All electives must be approved by Norma Hernandez (973) 972-3188

FMED 9010 - AMBULATORY FAMILY PRACTICE

DIRECTORS: Dr. Chantal Brazeau

LOCATION: Affiliated Family Practice Units or community preceptors

DURATION: 2 or 4 weeks

WHEN OFFERED: September - May, with approval from Norma Hernandez

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 care 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.

FMED 9040 - RESEARCH IN FAMILY MEDICINE

DIRECTOR: Dr. Steven Keller

LOCATION: BHSB, E-1459

DURATION: 4 weeks

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

NUMBER OF STUDENTS PER ROTATION: 6

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: The objective of this elective is to have the student become a clinical researcher in QA/QI in the discipline of Family Medicine. The student will have a choice of clinical topics of interest to the student and will design their own study.

Individual guidance and feedback will be provided by the course directors and the members of the

Department. Students will learn the value and distinctions of QA/QI studies and be mentored in research design, development of the QA/QI research question, data analysis, statistics, and presentation of the results to other clinicians and if warranted writing for publication. All students wishing to take this elective should meet with the course directors 2-3 months before the elective to plan an adequate coordination of effort and ensure a “product” of this elective that will be of value to the student.

FMED 9060 - STUDENT FAMILY HEALTH CARE CENTER

DIRECTOR: Dr. Michael Gerstmann

LOCATION: Doctors Office Center

DURATION: 20 clinic sessions during third and fourth years (four weeks credit)

WHEN OFFERED: Throughout the academic year - credit will be given in the fourth year

NUMBER OF STUDENTS PER ROTATION: Unlimited

PREREQUISITE: Twenty (20) nights' participation in first and/or second year

DESCRIPTION OF ELECTIVE: The Student Family Health Care Center (SFHCC) has been providing family-centered health care to Newark residents since 1967. The SFHCC is organized and conducted by medical students with the guidance of a faculty advisor. Participants gain experience working as members of health care teams and are given responsibility for patient care commensurate with their level of training. The Center affords a unique opportunity to participate in the continuing medical care of ambulatory patients.

Sessions are held on Tuesday and Thursday from 5:30 pm to roughly 9:00 p.m. During the first half-hour of each session, a third-year student presents a topic related to the outpatient management of common medical problems. After the lecture, students either see patients or attend a teaching session, depending on the number of students and patients present on a given evening. The elective runs from June through May of the academic year.

Students in the classes of 2016, 2017 and 2018 may be eligible to receive up to four (4) weeks of elective credit for participating in SFHCC. To be eligible to receive this credit a student must complete **the following requirements:**

- Twenty (20) clinic sessions during the first and second years (combined)
First and second year competencies
- Twenty (20) clinic sessions during the third and fourth years (combined)- Must be completed by December of fourth year
Third and fourth year competencies
- Participate in the ongoing care of one patient for a minimum of three visits
- Participate in reflection sessions about the SFHCC experience
- Present a lecture in the third or fourth year
- View required podcasts
- Completion of all required program surveys
- Additional responsibilities as determined by current student directors

The Student Family Health Care Center is administered through the Department of Family Medicine, BHSB E-1557. The clinical aspect of SFHCC takes place at the **DOC 4400**. Lectures are in the second year lecture hall (MSB B 552).

This elective is not open to visiting medical students.

FMED 9090 - SCHOLAR'S PROGRAM IN FAMILY MEDICINE

DIRECTOR: Dr. Steven Keller

DURATION: One week of fourth year elective credit will be awarded for each 40 hours, time to be monitored by program mentor

LOCATION: Medical Sciences Building

WHEN OFFERED: Throughout the academic year - credit will be given in the fourth year

NUMBER OF STUDENTS PER ROTATION: Unlimited

PREREQUISITE: Approval from Dr. Keller, students must apply for acceptance into the program

DESCRIPTION OF ELECTIVE: *For a more detailed description of the program, please visit the Registrar's Office.* The Scholar's Program in Family Medicine will offer longitudinal educational experiences in Family Medicine throughout the four years of medical school, including a formal scholarly activity that will result in a presentation or publication for all participants. A minimum of one year is required to fulfill program requirements. Students must apply for acceptance into the program.

The Scholar's project will be approved and followed by the mentoring faculty and the Scholars Program Director throughout the duration of the project.

The goal of the Scholar's Program in Family Medicine is to expose students to the scholarly aspects of the discipline of Family Medicine by having the student participate in longitudinal teaching activities and scholarly projects on research, service or clinical topics pertinent to Family Medicine.

Objectives:

By the end of their Scholar's Program experience, students will:

1. Have developed a solid mentoring relationship with a Family Medicine faculty member
2. Describe and contrast scholarly activities that occur in the field of Family Medicine
3. With mentor guidance, develop and fulfill individual goals and objectives for their Scholar's Program experience specific to their scholarly interests
4. Plan, review, reflect on, and complete a scholarly project on a research, service or clinical family medicine topic that results in an at least regional, reviewed presentation and/or publication
5. Experience a community of students with similar scholarly interests.

FMED 9100 – STUDENT-RUN FREE CLINIC VISITING STUDENT ELECTIVE

DIRECTOR: Drs. Chantal Brazeau and Steven Keller

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

DURATION: 2 weeks only

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

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Open to VISTING STUDENTS ONLY

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

DEPARTMENT OF MEDICINE

MED 9004 – PALLIATIVE CARE

DIRECTOR: Susanne Walther, APN
Department of Surgery – 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, 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 by arrangement with Dr. Capitle

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: Permission from course director

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 1:00 PM. The phone number for the office is (973) 972-0051.

MED 9008 - LIVER DISEASE AND HEPATITIS C

DIRECTOR: Dr. Nikolaos Pysopoulos

LOCATION: University Hospital and Liver Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: None

DESCRIPTION OF ELECTIVE:

a) Objectives: This elective exposes fourth year medical students to the Liver program at the New Jersey Medical School and Liver Center. It will focus on the current approach to viral hepatitis C and other liver

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

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

b) Format:

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

REPORTING INSTRUCTIONS: On the first day of the elective, the student should call Cassandra Edwards at 973-972-5252 at 9:00 a.m. for reporting instructions.

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 by arrangement with Dr. Capitle

NUMBER OF STUDENTS: 2

PREREQUISITE: Permission from course director

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 1:00 PM. The phone number for the office is (973) 972-0051.

MED 9025 – CRITICAL CARE MEDICINE/ST. BARNABAS MEDICAL CENTER

DIRECTOR: Dr. Kristin Fless

LOCATION: Saint 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 administrative assistant, Barbara Dunne at 973-322-2782 at least 2 weeks prior to the start of the elective.

DESCRIPTION OF ELECTIVE: The critical care medicine elective at Saint 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 a 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, 5th floor, East Wing, Suite 501 at 9:30 a.m. on Monday for registration and facility orientation with Debra Likon, Medical

Student Coordinator. Student Parking: Upper Lot #5 - 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 5. Students are expected to report with white coat and stethoscope.

MED 9035 – LONGITUDINAL COMMUNITY PARTNERSHIP ELECTIVE (LCPE)

DIRECTORS: Drs. **Ana Natale-Pereira** and Chantal Brazeau

LOCATION: Community-based organizations as listed in course description

DURATION: 80 hours over four years will earn 2 weeks credit

WHEN OFFERED: Throughout the academic year - credit will be given in the fourth year

NUMBER OF STUDENTS PER ROTATION: Unlimited

COURSE DESCRIPTION: New Jersey Medical School (NJMS) students recognize the need to reach out proactively to the Newark community by organizing and participating in health screenings, medical education meetings, and other, similar, community service initiatives. **Service Learning** is defined as a “course-based, credit bearing educational experience in which students a) participate in an organized service activity that meets identified community needs and b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility.” **The goal of the LCPE is to provide medical students with a structured framework for their community educational and outreach activities, in a way that meets service learning goals and objectives.**

Currently, community service activities take place through SHARE (Student Health Advocacy for Resources and Education), individually by self-initiation, or through the SFHCC or via the Office of Diversity and Community Engagement. The LCPE will allow the students to structure their community engagement with specific service and learning objectives in mind. **There is flexibility in the design of the activity and the level of commitment.** Students are encouraged to participate, even for less involved community activities where service learning is applicable.

The requirements for the students to obtain credit towards the 80 hours are as follows:

- Over the four year period, interested students will be expected to lead at least one project where they will be involved in all 6 steps of project development and implementation.
- Students may also accumulate hours toward the elective by participating in community activities developed by other students, but must do a pre and post reflection essay for any activity to count toward this elective.
- Each student will be expected to maintain a portfolio documenting the time devoted to each activity or step of the project, to be approved by the elective director.

For the full 6-step project, the student is expected to:

- Submit a one page needs assessment developed in collaboration with the community organization where the activity will take place.
- Submit a log sheet of community risk factors affecting the health of the community in direct relationship with the partnering site where the activity will take place.
- Submit a 1-2 page proposal for a service learning activity either as an individual effort or as part of a group effort through the existing opportunities at NJMS.
- Complete a Pre Service Reflection Essay and a Post Service Reflection Essay when participating in an activity.
- Present to SHARE and SFHCC community presentations: “Lessons learned from my service learning activity.”

Students can see Dr. Natale-Pereira (natalean@njms.rutgers.edu) or Dr. Brazeau for a more detailed description of the projects involved in this elective.

Students should register for the Longitudinal Community Partnership (LCPE) non-credit elective for the terms during which they will be participating in the program.

MED 9040 - CARDIOVASCULAR DISEASES

DIRECTOR: Dr. Christine Gerula
gerula@njms.rutgers.edu, 973-972-5291

ADMINISTRATIVE CONTACT: Diana DeJesus, dejesudi@njms.rutgers.edu, 973-972-5291

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: June, September - May

NUMBER OF STUDENTS PER ROTATION: 6

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 H-342 at 8:00 a.m. If the rotation begins any other day of the week, students should report to Ms. Diana DeJesus in MSB I-538 at 9:00 a.m. (973-972-5291). On the first day of the rotation, students will receive final assignments of their rotation (University Hospital vs. East Orange VA Hospital).

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 Raof
- **Critical Care Medicine, 4th 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 9060 - DERMATOLOGY

DIRECTOR: Dr. Robert A. Schwartz

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

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4

DESCRIPTION OF ELECTIVE: In this program, the student is assigned to work with the faculty in dermatology. The program is arranged to provide in-depth experience in the prevention, diagnosis and treatment of dermatologic disorders. Attention is focused on an understanding of dermal physiology, pathology and pharmacology as well as experience in clinical dermatology. This is obtained at inpatient and outpatient services at the University Hospital, and at the Department of Veterans Affairs Medical Center in East Orange. The student receives an appropriate examination on various facets of dermatology at the end of the rotation. The following objectives should be fulfilled by the student: obtain additional knowledge of common skin lesions, correlate clinical skin lesions with skin biopsies, acquire further experience in diagnosis and treatment of common skin disorders.

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

REPORTING INSTRUCTIONS: On Monday, Wednesday and Friday, students should report to the Dermatology clinic, F-level, Ambulatory Care Building at 9:00 a.m. On Tuesday or Thursday, students should report to the East Orange VA at 8:00 a.m.

MED 9070 - ENDOCRINOLOGY

DIRECTOR: David Bleich, M.D.
bleichda@njms.rutgers.edu

ADMINISTRATIVE CONTACT: Marsha Taylor, taylorm2@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), hyperlipoproteinemias. 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. 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 9092 – GERIATRICS

DIRECTOR: Drs. Manisha Parulekar

LOCATION: Hackensack University Medical Center

DURATION: 4 weeks

WHEN OFFERED: September - May

NUMBER OF STUDENT PER ROTATION: 2

PREREQUISITES: None

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

In this rotation, the student will work on the acute geriatric floor at Hackensack University Medical Center and participate in rounds and patient assessment. Issues of great concern to all of us as we age, such as incontinence, dementia and falling, will be discussed. He/she will have an experience in a long term care facility, assisted living facility, attend geriatrics clinic and work with other professionals in the care of the older patient. A geriatrics syllabus and research opportunities will be provided.

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

GOALS OF THE ELECTIVE:

1. Increase knowledge and develop skills in geriatric assessment.

2. Appreciate the heterogeneity of health and function in older adults and learn about physiology of aging. 3. Develop an understanding of health aging. 4. Change in attitude towards the aging population.

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

MED 9106 - ACTING INTERNSHIP IN INTERNAL MEDICINE

DIRECTOR: Alla Fayngersh, M.D.
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:

- a. History taking.
- b. Complete physical examination.
- c. 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.
- d. 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:

- a. Morning report, where patients hospitalized during the previous twenty-four hours are reviewed.
- b. 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.
- c. Departmental grand rounds in the Medical Sciences Building, Tuesdays, 8:00 A.M.- 9:00 A.M.
- d. 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. Zamir Brelvi

LOCATION: This elective is based at University Hospital and the Department of Veterans Affairs Medical Center in East Orange. It is supervised by Dr. Zamir Brelvi and associates.

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.

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

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

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

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. (Cassandra Edwards: Program Coordinator, arisedck@njms.rutgers.edu) 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 9150 - INFECTIOUS DISEASES

DIRECTOR: Dr. Lisa Dever

DIVISION CHIEF: Dr. David Alland

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

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

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 for information.

MED 9160 - FUNDAMENTAL PROCEDURES IN CLINICAL MEDICINE

DIRECTORS: **Dr. Alla Fayngersh** and Dr. Rajesh Kothari
(fayngeal@njms.rutgers.edu, rajesh.kothari@va.gov)

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

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 are fundamental skills that are best developed through repeated exposure and practice. This elective, offered in conjunction with the Department of Emergency Medicine at the East Orange VA Healthcare System in East Orange, NJ provides a structured laboratory style experience for students who wish to have additional opportunities to learn and practice common bedside procedures under the supervision of experienced faculty and laboratory supervisors. 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 various clinical settings and, with supervision, 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. Fayngersh (fayngeal@njms.rutgers.edu) for reporting instructions 2 weeks before the start of the elective. Students must provide the VA (Ms. Mercedes Chambliss at 973-676-1000 ext. 1149) with DOB and Social Security Number for background check and fingerprinting at least 2 weeks before the elective for federal government clearance. Failure to do so will delay the start of the elective.

MED 9170 - NEPHROLOGY

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

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

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 and see Ms. Vivian Romero at 9:30 a.m. (romerovi@njms.rutgers.edu).

MED 9180 - HEMATOLOGY/ ONCOLOGY

DIRECTORS:

Dr. Pankhoori Saraf (University Hospital, Newark: 973-972-6257)
 Dr. Victor Chang (East Orange VA Medical Center: 973-676-1000)
 Dr. Stewart Goldberg (Hackensack Univ. Med Center: 201-996-5900)

LOCATION:

University Hospital, Newark
 Department of Veterans Affairs Medical Center, East Orange
 Hackensack University Medical Center

DURATION: 2 or 4 weeks (4 weeks preferred)

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: Medicine, General Surgery

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

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

- Understand basic principles of oncology, including radiation therapy, chemotherapy and surgery, as well as multimodality treatment.
- Acquire basic knowledge of tumor epidemiology, tumor biology, clinical pharmacology, clinical immunology, tumor markers and paraneoplastic syndromes.
- Be exposed to ongoing clinical research such as early clinical trials of new anti-cancer agents (Phase I, Phase II) and multicenter Oncology Group trials.

Students are encouraged to use Hoffman R, et al, editors **Hematology, Basic Principles and Practice** (Churchill, Livingston, New York, 3rd 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 9210 - PULMONARY DISEASES

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

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

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, ventilation/perfusion scans, respiratory microbiology and lung history.
- 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 9241 - GLOBAL TUBERCULOSIS INSTITUTE

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

ADMINISTRATIVE CONTACT: Patricia Woods (patty.woods@rutgers.edu, 972-0978)

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

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

WHEN OFFERED: Permission required - please contact Patricia Woods for available dates and approval

NUMBER OF STUDENTS PER ROTATION: 2

DESCRIPTION OF ELECTIVE: The following objectives must be fulfilled:

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

The course will introduce students to the interdisciplinary approach necessary for TB control and encompass various educational activities in the areas of TB clinical management, research, patient education and disease control. Students accompany our attending physician for clinic rotation. Students attend our weekly TB Grand Rounds where difficult cases are discussed among our multidisciplinary clinic staff. In addition, they accompany a nurse case manager or Directly Observed Therapy outreach worker to learn about the various methods of therapy administration and issues in patient care such as poverty, substance abuse, and homelessness. Students may also have an opportunity to meet with our PHRI laboratory personnel to learn about basic research in molecular mechanisms of drug resistance in mycobacteria.

REPORTING INSTRUCTIONS: Medical students should plan to arrive at the Global Tuberculosis Institute at 9:00 a.m. on the first day of the rotation, and report to Education & Training – 1st floor, West Wing of the ICPH building located at 225 Warren St., Newark, NJ. Phone: 973-972-0978 or -0989. Parking is available in the lot across the street (on Newark St.) with valid parking hang tag.

DEPARTMENT OF MICROBIOLOGY, BIOCHEMISTRY AND MOLECULAR GENETICS

MICR 9002 - SPECIAL TOPICS IN PREVENTIVE MEDICINE

DIRECTOR: Dr. John Bogden

LOCATION: Medical Sciences Building

DURATION: 4 weeks

WHEN OFFERED: August - March

NUMBER OF STUDENTS PER ROTATION: 1 or 2 (maximum)

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: The course objective is to improve a student's skills in critical review of the medical literature and thereby enhance the student's ability to engage in the evidence-based practice of medicine and lifelong learning. The course requires the preparation of a critical essay on a topic in preventive medicine or public health. The student will conduct a review of literature on the topic under the direction of the Course Director. Frequent communication with the Course Director is required while taking the course. Credit for the course will be given only after an outline, draft and final versions of a manuscript on the approved topic have been submitted. The grade for the course will be based on the quality of the manuscript, especially content that demonstrates critical thinking skills.

Students are encouraged to suggest a topic of considerable interest to them. The final choice of topic will be made by mutual student/course director agreement. The range of possibilities is broad, including topics within the disciplines of community health, environmental health, epidemiology, health care delivery, health economics, nutrition, primary and secondary disease prevention, and other preventive medicine/public health subjects. A topic related to the residency training program that the student will pursue may be suitable.

REPORTING INSTRUCTIONS: The student should report to MSB F-590 on or before the first day of the rotation. Contact the course director at least one week in advance at 973-972-5432 or via email (john.bogden@rutgers.edu) to schedule a meeting time.

DEPARTMENT OF NEUROLOGICAL SURGERY

NSUR 9000 - ACTING INTERNSHIP IN NEUROLOGICAL SURGERY

DIRECTOR: Dr. Antonios Mammis
antonios.mammis@rutgers.edu, 973-972-4836

LOCATION: University Hospital

DURATION: 2 or 4 weeks

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

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Medicine, General Surgery, Neurology, prior approval 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 recommended for students interested in neurosurgery, neurology, trauma surgery or critical care.

REPORTING INSTRUCTIONS: On the first day of the rotation, students should report to the Neuro ICU at 7:00 a.m.

This elective is not open to international medical students.

NSUR 9010 – INTERVENTIONAL NEUROLOGY/ENDOVASCULAR NEUROSURGERY/ NEUROINTERVENTIONAL RADIOLOGY

DIRECTOR: Dr. Paul Singh
Paul.singh@rutgers.edu, 973-972-4744

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

DESCRIPTION OF ELECTIVE: Interventional Neurology/Endovascular Neurosurgery/Neurointerventional 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 neurointerventional teaching rounds and conferences and have exposure to both residents and fellows in the field.

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. Chirag Gandhi

LOCATION: NJMS

DURATION: 4 - 8 weeks

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.

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

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

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

Learning outcomes & evaluation methods:

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

NSUR 9243 - RESEARCH IN HISTORICAL MEDICINE

DIRECTOR: Dr. Peter Carmel

LOCATION: Doctors Office Center 8100

DURATION: 4 weeks

WHEN OFFERED: June – November, via application process

NUMBER OF STUDENTS PER ROTATION: 6

PREREQUISITES: A student seeking permission to enroll must provide the Elective Director with a proposed idea/outline for a project at least six weeks prior to the start date of the elective. This elective must be pre-approved by Dr. Carmel at least four weeks prior to the start date of the elective.

DESCRIPTION OF ELECTIVE: This elective is designed to permit students with an interest in the history of medicine to pursue an in-depth investigation of a particular subject or individual. Students enrolled in this elective are required to prepare an original manuscript suitable for publication in a peer reviewed medical journal. Students are expected to devote at least 37.5 hours per week on their project and a written progress report on their project must be submitted to their research mentor on a weekly basis. The project must be completed in full by the end date of the elective and the final draft copy of the original manuscript must be submitted on the last day of the rotation. Incomplete grades will not be assigned. Please note: an Honors grade will only be awarded if the resulting manuscript is deemed suitable for publication in a peer-reviewed medical journal.

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

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: Dr. Peter Dowling

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

DURATION: 8 weeks minimum

WHEN OFFERED: November - May (with permission from Dr. Hidalgo)

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

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. Andrea Hidalgo

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. Hidalgo)

NUMBER OF STUDENTS PER ROTATION: 1

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. Hidalgo (hidalgan@njms.rutgers.edu) one week prior to the start of the course for reporting instructions.

NEUR 9011 - NEUROLOGY CONSULTATION

DIRECTORS: Dr. Andrea Hidalgo

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. Hidalgo)

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Neurology

DESCRIPTION OF ELECTIVE: Taken after the Neurology Clerkship, this elective offers further training in neurology. The student participates in seeing neurology consultations with senior residents and attending neurologists.

REPORTING INSTRUCTIONS: The student should contact Dr. Hidalgo (hidalgan@njms.rutgers.edu) one week prior to the start of the course for reporting instructions.

NEUR 9012 - NEUROLOGY PRECEPTORSHIP

DIRECTOR: Dr. Stephen S. Kamin

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. Kamin. Dr. Kamin should be contacted at kaminst@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

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Pediatrics or 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 page the Pediatric Neurology fellow at (973) 281-3351 at 9:00 a.m. on the first day of the elective.

Additional Elective

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

DEPARTMENT OF OBSTETRICS, GYNECOLOGY, AND WOMEN'S HEALTH

OBG 9003 - ACTING INTERNSHIP IN OBSTETRICS AND GYNECOLOGY

DIRECTOR: Dr. Lisa Pompeo

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: June – November; February - May

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.
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 Ob/Gyn service, including consultations from other services.
4. 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. Lisa Pompeo

LOCATION: University Hospital

DURATION: 2 or 4 weeks

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

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology 3rd 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.

OBG 9020 - GYNECOLOGIC ONCOLOGY

DIRECTOR: Dr. Bernadette Cracchiolo

LOCATION: University Hospital and Ambulatory Care Center

DURATION: 4 weeks

WHEN OFFERED: By arrangement with course director – cracchbm@njms.rutgers.edu

NUMBER OF STUDENTS PER ROTATION: 2

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 9022 – GYNECOLOGIC ONCOLOGY

DIRECTOR: Ami P. Vaidya, M.D.
Vice Chair, Department Obstetrics & Gynecology

Phone: (201) 996-5374

LOCATION: Hackensack University Medical Center

DURATION: 4 weeks

WHEN OFFERED: By permission from course director.

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics, Gynecology, and Women's Health Clerkship

DESCRIPTION OF ELECTIVE: Students will develop a deeper understanding of cancer care for gynecologic malignancies by participating in outpatient activities, 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.

Objectives:

- 1) Be able to describe diagnostic techniques for gynecological malignancies.
- 2) Be able to describe various management plans for gynecological malignancies, including surgery, chemotherapy, and radiation therapy.
- 3) Be able to describe risks and benefits of various management strategies, as well as, toxicities and their management.
- 4) Understand basic principles of palliative care/end of life care.

Learning Outcomes & Evaluation Methods: During the elective it is expected that a student will conduct patient interviews and physical exams as well as generate differential diagnosis and begin to formulate a treatment plan. It is expected that the student will present these findings to clinical faculty on a patient by patient basis, receiving immediate feedback and guidance from supervising residents and faculty. It is expected that the student will participate in any family/team meetings regarding patients under their care, including but not limited to discussions of end of life care. The student's clinical grade will be computed using the NJMS Evaluation Form.

Key Responsibilities of the Student while on Elective:

1. The student will be expected to participate in gynecologic oncology outpatient assessments.
2. The student will be expected to participate in gynecology oncology 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 gynecological oncology service, including consultations from other services.
4. The student will be expected to participate in all tumor boards and pathology conferences, including preparation of materials used during conference as assigned by the attending gynecological oncologist.

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

OBG 9030 - WOMEN'S REPRODUCTIVE CHOICES

DIRECTOR: Dr. Natalie Roche

LOCATION: University Hospital, F-245, (973) 972-5840 or (973) 972-7827

DURATION: 2 weeks

WHEN OFFERED: Throughout the academic year by arrangement

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology 3rd year clerkship, approval of Dr. Roche

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.

OBG 9051 - PRENATAL DIAGNOSIS

DIRECTOR: **Dr. Joseph Apuzzio** and Dr. Vijaya Ganesh

LOCATION: University Hospital and Ambulatory Care Center, 140 Bergen Street, C-Level

DURATION: 4 weeks

WHEN OFFERED: September - May

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology 3rd year clerkship

DESCRIPTION OF ELECTIVE: The student will spend the first week in basic ultrasound examinations, starting at 9:00 a.m. in the Ambulatory Care Center, C-level Obstetrics and Gynecology Suite. The student should ask for Mr. Patel, who is the chief technologist for the obstetric/gynecologic sonography unit. During the month, the student will follow and review data and ultrasonographic findings of pregnant patients referred for suspected genetic or structural problems. The student will be asked to present one or more topics per week to the Maternal Fetal Medicine group on Monday afternoons at 3 p.m. Obstetrical Rounds located in University Hospital, F-Green dayroom.

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 work with the senior resident in the Antepartum Unit 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 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 problems.

This elective is not open to international medical students.

OBG 9071 - OBSTETRICAL IN-PATIENT LABOR AND DELIVERY SERVICE

DIRECTOR: Dr. Lisa Pompeo

LOCATION: University Hospital

DURATION: 2 - 8 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Obstetrics and Gynecology

DESCRIPTION OF ELECTIVE: The student will be responsible to junior and senior Residents in the Labor and Delivery Suite and act as 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. During the first week, the student will spend mornings in ultrasound instruction.

This elective is not open to international medical students.

REPORTING INSTRUCTIONS: Students should report to Room F-246/247, University Hospital, or, if closed, to 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: August, September, October and November

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 for the Departmental Research meeting.

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: **Drs. Lisa Pompeo** (2-5957, pompeoli@njms.rutgers.edu) and Laura Goldsmith (2-5516, goldsmith@njms.rutgers.edu)

LOCATION: Medical Science Building

DURATION: 4 - 8 weeks

WHEN OFFERED: Throughout the academic year with permission and advance arrangements with Dr. Pompeo and Dr. Goldsmith

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 9020 – INTRODUCTION TO TERROR MEDICINE

DIRECTOR: **Dr. Leonard Cole** (lcole2@verizon.net) and Dr. Gregory Sugalski

LOCATION: New Jersey Medical School

DURATION: 2 weeks

WHEN OFFERED: February 27, 2017 – March 10, 2017 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 combined oversight of the Department of Emergency Medicine and the Terror Medicine and Security Program of the NJMS Center for BioDefense, 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, psychological effects, bystander control and contribution of non-traditional health-care providers. Students will also participate in tabletop and hands-on terror response exercises at the NJMS Simulation Center. 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.

During this elective each student will choose one of the following three projects to satisfactorily complete the course:

- 1) Write a 1-2 page paper about terror medicine that summarizes key lessons learned from the course and proposes ideas for advancing the field;
- 2) Write a 5+ page paper on a specified aspect of terror medicine (developed in consultation with the course director). The aim is a quality contribution worthy of possible publication;
- 3) Develop a simulation-based case of terrorism that tests preparedness, incident management, nature of injuries, and psychological issues related to that specific act of terrorism. The write-up should aim to be a quality contribution worthy of possible publication.

REPORTING INSTRUCTIONS: The student should meet with Dr. Cole to discuss the elective. This meeting should occur one or two months prior to the start of the course. On the first day of the elective the student should report to the Emergency Medicine conference room located on M level, room M219 at 10:00 a.m. The student must wear his/her white coat and bring his/her ID.

EDUC 9025 – INTRODUCTION TO EDUCATIONAL INFORMATICS

DIRECTOR: Dr. Aleksey Tentler

LOCATION: NJMS

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

WHEN OFFERED: Throughout the academic year, December and January by permission ONLY

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: Student should contact Dr. Tentler at Tentler.MD@rutgers.edu to arrange a time and place to meet on the first day.

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 some aspect(s) of healthcare outside of the U.S. Students are responsible for identifying and, subject to review and approval by the Registrar, successfully applying to either an established or a novel qualified international health program. 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. Once an approved program has been identified, the student must design and propose (in writing) an independent study project, which must be submitted to, discussed with, and approved by the Elective Director at least eight (8) weeks in advance of the start date of the elective. The approved proposal should identify a scholarly work product (e.g., paper [minimum of 1500 words], poster presentation, lecture)

reflective of the goals and objectives of the independent study project, which the student will be required to complete and submit/present within four (4) weeks of completion of the elective.

The course grade will be based on evaluations by the responsible on-site supervising physician preceptor and the Elective Director, 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 9040 - OB/GYN RESIDENT READINESS TRAINING

DIRECTOR: Dr. Lisa Pompeo

LOCATION: University Hospital

DURATION: 2 weeks

WHEN OFFERED: TBD, Ob/Gyn students will be contacted with more information

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. Devashish Anjaria

LOCATION: University Hospital

DURATION: 2 weeks

WHEN OFFERED: 4/24/17 – 5/5/17 ONLY

NUMBER OF STUDENTS PER ROTATION: 10

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:

- Students must attend all sessions (skills practice, dissection, case presentations).
- Students will be required to successfully perform a series of basic surgical skills.
- Students will present oral cases simulating the patient presentations at bedside rounds, emphasizing succinct, accurate delivery of relevant data.
- Students will be required to complete one hypothetical operative report simulating the dictations of operations that will be required for surgical residency.

REPORTING INSTRUCTIONS: Students should contact Marquiah Geiger, Department of Surgery, 973-972-6653, geigermh@njms.rutgers.edu for location and orientation instructions prior to the start of the rotation.

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: 3/27/17 – 4/7/17 ONLY

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:

- Attend all sessions (skills practice, lectures, dissections, case presentations)
- Attend at least three neurosurgical and three otolaryngology procedures in the operating room
- Attend weekly neuroradiology grand rounds
- Successfully describe the anatomy of a few basic neurosurgical and otolaryngology procedures
- Present one surgical case going over the anatomy and its relevancy to the surgical procedure

- Complete one hypothetical operative report simulating the dictations of operations that will be required for surgical residency.

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

EDUC 9070 – EMERGENCY MEDICINE BOOT CAMP

DIRECTORS: Drs. Harsh Sule and Michael Anana

LOCATION: NJMS, CSC, and UH

DURATION: 2 weeks

WHEN OFFERED: 3/27/17 – 4/7/17 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:

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

REPORTING INSTRUCTIONS: Students should email Dr. Sule (hs627@njms.rutgers.edu) for reporting instructions and course materials 2 weeks before the beginning of the elective.

EDUC 9100 – THE OFFICE OF EDUCATION FELLOWSHIP

DIRECTOR: Dr. Sangeeta Lamba

LOCATION: NJMS Office of Education

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year by permission

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Permission from the course director

DESCRIPTION OF ELECTIVE: Teaching is a core expectation for resident physicians; however, they receive little formal education and training for this role in medical school. Studies have suggested that as the clinical responsibilities and stress of residency increase, participation and interest in teaching decreases. Therefore, providing medical students with a dedicated time to focus on developing effective teaching skills prior to beginning their residency program may ultimately promote increased quantity and quality of teaching during residency.

The goal of this 4-week elective is to provide fourth year medical students formal instruction on medical education, and to provide an opportunity to specifically focus on improving their clinical teaching and didactic presentation skills. Students will have the opportunity to explore learning and teaching theories to examine their own learning and teaching, as well as to develop a teaching philosophy that will inform and guide them in their future role as a resident physician. Students will be exposed to education evaluation and research in order to develop systems that examine the impact of teaching.

The elective will be four 40 hour weeks. Activities will be scheduled to allow for as many of the following activities as possible:

- Learning and teaching theories – the student will be provided time and guidance on developing a written teaching philosophy. Assigned reading required.
- Clinical or course teaching – the student will be assigned to complete teaching time in either course and/or clerkships. In addition, students may seek to conduct clinical teaching shifts in the specialty of their choice with the clerkship director's permission.
- Clinical Skills Center – the student will be available to the Clinical Skills Center to assist third year students that are seeking pre-OSCE assistance.
- Evaluation – the student will develop and conduct an evaluation that uses both quantitative and qualitative methods to evaluate a specific area of a course or clerkship (with director's permission).
- Educational Research – the student will have the opportunity to participate in the development of an educational research project. Alternatively, they may assist in ongoing projects. Assigned reading required.
- Presentation – the student will develop a PowerPoint presentation or project to present a selected educational research article to faculty and students. Assigned reading required.
- Test-item writing – the student will have the opportunity to consult with basic scientists to offer clinical vignette suggestions for basic science exam questions. Assigned reading required.
- Education meetings – the student will attend all curriculum meetings and Office of Education meetings where appropriate.

REPORTING INSTRUCTIONS: Student should report to Dr. Lamba in the Office of Education, MSB C-642 on the first day of the rotation.

DEPARTMENT OF OPHTHALMOLOGY

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. If the preparation of a manuscript is required, it must be suitable for publication or for presentation.

OPH 9000 - OPHTHALMOLOGY

DIRECTOR: Dr. Suqin Guo

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

CONTACT PERSON: Barbara Churchill (churchbf@njms.rutgers.edu) 973-972-2036

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

DURATION: 4 weeks

WHEN OFFERED: June, August - May

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 6th 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. Fran Patterson

ADMINISTRATIVE CONTACT: Ms. Marie Birthwright (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 Dr. Patterson.

ORPS 9005 - PEDIATRIC ORTHOPAEDICS

DIRECTOR: Dr. Sanjeev Sabharwal

ADMINISTRATIVE CONTACT: Ms. Marie Birthwright (973) 972-3860

LOCATION: University Hospital and Affiliated Institutions

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Pediatrics or Family Medicine or Surgery

DESCRIPTION OF ELECTIVE: The objective of this rotation is to expose the medical student to the art of history taking, physical examination and decision making in a child with musculoskeletal problems. The student will attend pediatric orthopaedic clinics, private office, participate in in-patient care and assist in the operating room. Typical orthopaedic problems such as pediatric fractures, congenital and developmental musculoskeletal problems, neuromuscular diseases as well as spinal deformities will be encountered. The student will be required to attend daily orthopaedic teaching rounds as well as have a weekly didactic session on a common pediatric orthopaedic problem. Night call is optional. Based on the students' interests and availability, the elective can be modified with regards to focus on an outpatient versus surgical experience. The student is required to give a short (15-20 minute) presentation on a Pediatric Orthopaedic topic towards the end of the rotation.

A reference book on Pediatric Orthopaedics can be picked up from Ms. Marie Birthwright or Ms. Latoya James in ACC 7300 at the beginning of the rotation. This book should be returned to them at the completion of the rotation. A CD containing pertinent review articles will also be provided. The student is required to fill out a feedback form regarding their experience and any suggestions to improve the rotation.

This elective is not open to international medical students.

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 Dr. Sabharwal or the senior orthopaedic resident on the Pediatric Orthopaedic service.

ORPS 9116 - ACTING INTERNSHIP IN ORTHOPAEDICS

DIRECTOR: Dr. Fran Patterson

ADMINISTRATIVE CONTACT: Ms. Marie Birthwright (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 Dr. Patterson.

ORPS 9192 - ORTHOPAEDIC RESEARCH

DIRECTOR: Dr. J. Christopher Fritton

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. Fritton 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. Fritton.

REPORTING INSTRUCTIONS: Students should contact Dr. Fritton (2-2595; Office CC G-1216) 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. Chan (Richard) Park** and Dr. Evelyne Kalyoussef

ADMINISTRATIVE CONTACT: Faye Wiggins

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, Otolaryngology

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

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

ADMINISTRATIVE CONTACT: Faye Wiggins

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 Janice Conaway 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: **Drs. Kenneth M. Klein** and Stephen Peters

LOCATION: Pathology Department, University Hospital (E-163)

DURATION: 2 or 4 weeks

WHEN OFFERED: June - October, February - May

NUMBER OF STUDENTS PER ROTATION: 3

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-163, University Hospital at 8:00 AM on the first day of the rotation.

PATH 9005 - CELLULAR AND SUBCELLULAR STUDIES OF CANCER

DIRECTOR: Dr. George Studzinski

LOCATION: Pathology Department, Medical Sciences Building, Room C-546, studzins@njms.rutgers.edu

DURATION: 4 - 12 weeks

WHEN OFFERED: Throughout the year by arrangement with Dr. Studzinski

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Signature required

DESCRIPTION OF ELECTIVE: A short course designed as an introduction to research in experimental pathology with special emphasis on preparation of a research project in any branch of the medical sciences. Attention is directed to selection of a project, its planning and preparation, as well as experimental approach and methodology. Practical experience in tissue culture, differentiation of leukemic cells and an introduction to the use of DNA recombinant technology to study disease are included. Grades are awarded on the basis of performance in assigned tasks and a presentation at the end of the course.

PATH 9014 - FORENSIC PATHOLOGY

DIRECTORS: Dr. Andrew L. Falzon

LOCATION: Acting State Medical Examiner, Newark

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 3

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: This elective in forensic pathology offers the opportunity to witness and participate in medicolegal autopsies. Cases are routinely reviewed at 8:30 each morning, and autopsies commence shortly afterward. The office performs an average of six autopsies per day, and they reveal a wide range of natural disease, trauma, and chemical injury. The student will also have the opportunity to report to death scenes with a forensic investigator or with an on call physician. In addition, the student can observe pre-trial preparations between medical examiners and attorneys on various civil and criminal cases as well as attend a few trials where the medical examiners testify as expert witnesses. There are lectures by staff Forensic Pathologists in which a particular topic is discussed in detail. An interesting and complex case, where the cause or manner of death is a problem, is often discussed informally after the autopsy. Opportunities exist to learn from our very modern toxicology laboratory. The staff, including the doctors, are more than willing to teach and explain, and the students' experience here should be very rewarding. This elective is educational for students of varying subspecialty interests for future residency, both clinical and non-clinical.

Students should contact Ms. Roseann Viola at the Regional Medical Examiner's Office at least two weeks prior to the course start date (973) 648-7258.

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. Formal approval from the Chairman is required for any elective taken outside of University Hospital or Hackensack University Medical Center.

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 or Hackensack University 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:

- 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:

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

Attitudes/Professional Development:

- Recognize enhanced confidence in his/her abilities to assume primary responsibility for the care of patients and function competently as a first-year resident
- Demonstrate professionalism in all clinical interactions including tolerance, sensitivity, cultural awareness, intellectual curiosity, initiative, responsibility and reliability
- Understand the role and appreciate the essential contributions of all providers within the healthcare system
- 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. Rudolph S. Wagner

LOCATION: DOC 6th Floor, 90 Bergen Street, Newark and Outpatient Operating Room, second floor, Clara Maass Medical Center, 1 Clara Maass Drive, Belleville, NJ

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Pediatrics

DESCRIPTION OF ELECTIVE: This course is designed for medical students interested in Pediatrics or Ophthalmology who wish to gain familiarity with common ocular disorders that affect children. 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. This course is not designed for students with a primary interest in Ophthalmology, although all students are welcome. Opportunity for participation in a clinical research project is available.

REPORTING INSTRUCTIONS: On the first day of the elective, students should report to the 6th Floor of the Doctor's Office Center (Department of Ophthalmology). The week before the elective is to begin, the student should contact Dr. Wagner by e-mail at wagdoc@comcast.net for specific instructions about the schedule as it varies during each rotation, particularly regarding the operating room schedule. Dr. Wagner may also be reached at (973) 751-1702.

PEDS 9008 - PEDIATRIC CRITICAL CARE

DIRECTOR: Dr. Dianne Sin Quee

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Medicine, Pediatrics

DESCRIPTION OF ELECTIVE: The objective of this elective is to expose students to management problems of critical care in pediatric patients. The student will be required to participate in rounds, conferences and discussions as well as literature review involving patients admitted to the unit during that month.

REPORTING INSTRUCTIONS: Students should report to G-Green PICU at 7:00 a.m. on the first day of the rotation. The third year resident will assign patient responsibilities. PICU telephone: x3784

PEDS 9009 - PEDIATRIC GASTROENTEROLOGY

DIRECTOR: Dr. Iona Monteiro

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year, except December

NUMBER OF STUDENTS PER ROTATION: 3

PREREQUISITE: Pediatrics

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.

REPORTING INSTRUCTIONS: Please contact Dr. Monteiro via email at 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 9015 – MEDICINE AND PEDIATRICS

DIRECTORS: Dr. Nelson Aluya

LOCATION: University Hospital, NJMS and DOC

DURATION: 4 weeks

WHEN OFFERED: August - May

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 will have the chance to round inpatient with the Med-Peds attending.

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

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

REPORTING INSTRUCTIONS: Students should email Dr. Aluya prior to the start of the elective for instructions on when to report on the first day of the elective.

PEDS 9020 - PEDIATRIC INFECTIOUS DISEASES

DIRECTOR: Arry Dieudonne, MD

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

PEDS 9022 - PEDIATRIC INFECTIOUS DISEASES

DIRECTOR: Dr. Julia Piwoz

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

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Pediatrics

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

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

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

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

PEDS 9030 - AMBULATORY PEDIATRICS

DIRECTOR: Dr. Chitra Reddy

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

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

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

PEDS 9060 - DEVELOPMENTAL PEDIATRICS

DIRECTORS: Drs. Randye Huron and Punam Kashyap

LOCATION: Institute for Child Development, Hackensack University Medical Center

DURATION: 4 weeks

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

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Prior approval required

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

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

PEDS 9061 - PEDIATRIC HEMATOLOGY AND ONCOLOGY

DIRECTOR: Dr. Michael Harris

LOCATION: Tomorrow's Children's Institute, Hackensack University Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Pediatrics

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

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

PEDS 9062 - DERMATOLOGY

DIRECTORS: **Drs. Robert A. Schwartz**, Camila Krysicka Janniger, W. Clark Lambert

LOCATION: University Hospital and Doctors Office Center

DURATION: 2 - 8 weeks

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

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Dermatology (MED 9060)

DESCRIPTION OF ELECTIVE: This clerkship covers all aspects of dermatology, with special emphasis on pediatric dermatology. Student(s) may delve in depth into areas of this discipline. Student(s) will attend dermatology conferences and may (by invitation) attend pediatric genetics conferences as well. Student(s) evaluation is done by mentor. Evaluation is based upon interest, enthusiasm, and performance.

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

PEDS 9066 - PEDIATRIC CRITICAL CARE MEDICINE

DIRECTOR: Dr. Bruce Friedman

LOCATION: Hackensack University Medical Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Pediatrics

DESCRIPTION OF ELECTIVE: This elective will acquaint the student with the basic approach to care of the critically ill child. The student will be a member of the critical care team involved in patient management and critical care rounds. Interpretation of laboratory data and improvement of technical skills will be encouraged.

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

PEDS 9081 - CLINICAL GENETICS

DIRECTOR: **Dr. Franklin Desposito** and Dr. Beth Pletcher
(973) 972-0673 or beeper (973) 312-4862

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Medicine, Obstetrics and Gynecology, and Pediatrics desirable but not essential

DESCRIPTION OF ELECTIVE: An elective in clinical genetics offers an overview of the field including exposure to a variety of common genetic disorders and birth defects. It provides an understanding of the reasons families seek genetic information and counseling. The specific learning experience will include familiarity with obtaining a genetic history and family pedigree, attention to human variation during physical examination, process analysis into the cause of birth defects and congenital malformations, exposure to our cytogenetic and biochemical laboratories, and an understanding of the multi-disciplinary approach to the field

including the roles of other medical disciplines (genetic counselors, ethics, obstetrics and dentistry). On-going research endeavors are available and encouraged.

REPORTING INSTRUCTIONS: Students should email Dr. Pletcher (pletchba@njms.rutgers.edu) and Dr. Desposito (desposfr@njms.rutgers.edu) on Thursday or Friday prior to the start of the elective to receive reporting instructions.

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 9120 - ACID-BASE, FLUID AND ELECTROLYTES

DIRECTOR: Dr. Constancia Uy

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: June, August, February, March and April

NUMBER OF STUDENTS PER ROTATION: 10

PREREQUISITE: Pediatrics or Medicine

DESCRIPTION OF ELECTIVE: This elective will cover the basic concepts of renal physiology, water, electrolytes, and acid-base metabolism with application through patient contact. The format includes daily rounds, seminars, and conferences at University Hospital as well as affiliate hospitals. There will be ample time for library work.

Students will be evaluated on the basis of their gain of knowledge as judged by contribution during the seminars and rounds, and by their work-ups and case presentations.

REPORTING INSTRUCTIONS: Students should report to UH F-Conference Room at 8:15 a.m. on the first day of the elective. Bring a calculator. Textbook: Clinical Physiology of Acid-Base & Electrolyte Disorders by Rose & Post, 5th ed. Contact information: Email Dr. Uy at someraco@njms.rutgers.edu, or call the secretary at 973-972-0827.

PEDS 9121 - PEDIATRIC NEPHROLOGY

DIRECTOR: Dr. Constancia Uy

LOCATION: University Hospital and major affiliated hospitals

DURATION: 4 weeks

WHEN OFFERED: June, August, February, March and April

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: Pediatrics or Medicine

DESCRIPTION OF ELECTIVE: The elective will cover the most frequent clinical conditions in pediatric nephrology, such as nephrotic syndrome, acute glomerulonephritis, urinary tract infections, hypertension, acute and chronic renal failure, and disorders of fluid and electrolytes. The format includes daily rounds, weekly clinics, observations of extracorporeal procedures, seminars, conferences and journal clubs at University Hospital as well as affiliated hospitals. There will be ample time for laboratory work and the student has the opportunity to research a specific subject during the rotation.

Evaluation will be based on the gain in knowledge, as judged by contribution during the seminars and rounds, and by work-ups.

REPORTING INSTRUCTIONS: Students should report to UH F-Conference Room at 8:15 a.m. on the first day of the elective. Bring a calculator. Textbook: Clinical Physiology of Acid-Base & Electrolyte Disorders by Rose & Post, 5th ed. Contact information: Email Dr. Uy at someraco@njms.rutgers.edu, or call 973-972-0827.

PEDS 9142 - PEDIATRIC PULMONARY MEDICINE

DIRECTOR: Dr. Evelyn Montalvo Stanton

LOCATION: Rutgers New Jersey Medical School, DOC Suite 5200
Office: 973-972-8801
Email: montalev@njms.rutgers.edu

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year with approval by the elective director at least 6 weeks in advance.

NUMBER OF STUDENTS: 2

PREREQUISITE: Pediatrics

DESCRIPTION OF ELECTIVE: This elective will provide the student an opportunity to: 1) review the structure and function of the normal and diseased lung in children, 2) gain experience in the clinical evaluation of infants/children with pulmonary disease, 3) learn how to interpret pulmonary function tests in children and chest radiographs, 4) learn about different diagnostic procedures such as flexible fiberoptic bronchoscopy, 5) learn about children dependent on Respiratory Technology, and 6) drug administration by inhalation in infants/children and home treatment plans.

PEDS 9151 - PEDIATRIC EMERGENCY MEDICINE

DIRECTOR: Dr. Noah Kondamudi and staff

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 4 (students are on opposite shifts)

PREREQUISITE: Pediatrics, Medicine, Surgery

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 attendings, and present these cases to the attending physicians. The focus will be on the history taking and examination of children of all ages, and on 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, orthopaedic films).

While on this rotation, the student will work approximately 12 shifts of twelve hours each; times and dates will be arranged with the attending at the beginning of the month. The shift schedule will include some nights and weekends. S/he will participate in the management of pediatric trauma patients in conjunction with the Emergency Department residents and attendings, and possibly pediatric Psych emergencies as they present. There will be an opportunity to discuss and learn about child abuse evaluation and referral and DYFS policies and procedures. Students will have the opportunity to attend pediatric departmental conferences and grand rounds. They will also attend conferences given by pediatric Emergency Medicine attendings on core topics. They may have the opportunity to ride one shift in the ambulance if they are interested in this experience (highly recommended). Students will be given an opportunity to write up an interesting case for possible publication in clinical literature.

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

REPORTING INSTRUCTIONS: Students must contact Dr. Kondamudi via e-mail one month prior to the start of the rotation (kondamnp@njms.rutgers.edu).

Additional Electives

PEDIATRIC NEUROLOGY – under Department of Neurology

PEDIATRIC ORTHOPAEDICS – under Department of Orthopaedics

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

PEDIATRIC RADIOLOGY – under Department of Radiology

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 students be exposed to the principles of rehabilitation medicine. 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 department evaluation form.

Note: Elective rotations in this department are open to students from LCME schools only.

REHB 9000 - ACTING INTERNSHIP IN PHYSICAL MEDICINE AND REHABILITATION

DIRECTOR: Dr. Patrick Foye

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

DURATION: 2 or 4 weeks

WHEN OFFERED: June, July, August, November, December, January, and May only.

NUMBER OF STUDENTS PER ROTATION: 8

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: Exposure to the field of comprehensive rehabilitation medicine is offered at any of the above-stated locations. The student becomes part of the team, taking histories and performing physical examinations of patients with neurological and orthopaedic problems. The individual patients are then followed by the student through the different treatment areas, and the student is involved actively in the diagnosis and treatment planning of his/her patients, as well as the comprehensive social and psychological evaluation and treatment and discharge planning. This includes the care and treatment of spinal cord injured patients, including the care of the neurogenic bladder, stroke, prescription and training in the use of prostheses for comprehensive care of the amputee and exposure to other selective neurological or orthopaedic categories and their rehabilitation retraining.

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; both inpatient and outpatient services are included.

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 2-3 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. Michael Armento

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

DURATION: 2 or 4 weeks

WHEN OFFERED: June, July, August, November, December, January, and May only.

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 2-3 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

DURATION: 2 or 4 weeks

WHEN OFFERED: By arrangement

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 2-3 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/PAIN CLINICAL ROTATION

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

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

DURATION: 2 or 4 weeks

WHEN OFFERED: June, July, August, November, December, January, and May only.

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 2-3 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/PAIN RESEARCH

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

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

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

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.

REHB 9006 - PAIN MANAGEMENT: INTERVENTIONAL PROCEDURES CLINICAL ROTATION

DIRECTOR: Dr. Patrick Foye/Dr. Todd Stitik

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

DURATION: 4 weeks

WHEN OFFERED: June, July, August, November, December, January, and May only.

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

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

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

REPORTING INSTRUCTIONS: Approximately 2-3 weeks prior to the start of the student's rotation, the student should contact Dr. Foye and Dr. Stitik to finalize arrangements for where to report on the first day. Usually, this will involve reporting to the DOC 3100, 90 Bergen Street, Newark, unless otherwise specified by the PM&R department.

REHB 9010 - SCHOLAR'S PROGRAM IN PHYSICAL MEDICINE AND REHABILITATION

DIRECTOR: Dr. John Bach

LOCATION: University Hospital/Doctor's Office Center (Newark campus)

DURATION: 80 hours during first through fourth years will earn 2 weeks credit

WHEN OFFERED: Throughout the academic year - credit will be awarded in the fourth year

NUMBER OF STUDENTS PER ROTATION: Unlimited

PREREQUISITE: Students should register for the Scholar's Program in Physical Medicine and Rehabilitation non-credit elective for each term that they plan to participate. Hours will be tallied and presented to the Registrar's Office in their fourth year.

DESCRIPTION OF ELECTIVE: Scholar's Program in Physical Medicine and Rehabilitation is a longitudinal elective designed to expose students to the scholarly aspects of the discipline of Physical Medicine and Rehabilitation by having students participate in research and research related clinical topics pertinent to PM&R. Students may participate for 1 to 4 years in the program (minimum 1 year) culminating in a scholarly presentation as part of our annual resident and fellow research presentation day and a peer-reviewed article submission and/or thesis. Hours accumulated in the program throughout medical school are credited as a fourth year elective (40 hours per credit week). An individual mentor will be assigned to each scholar and the program will be tailored to the level and interest of each student. Research opportunities will be offered in sports medicine, musculoskeletal medicine, pulmonary physical medicine, neuromuscular rehabilitation, and quality of life/ethics. The student will keep an accounting of the time spent in the program and review this as part of monthly progress sessions with the department's Director of Medical Student Education and his/her mentor. Time recorded on the portfolio can be applied to obtain credits toward the program commensurate with time requirements of other NJMS electives, e.g. 40 portfolio hours would equal 1 week elective or 1 credit. Credits will be applied in May of the fourth year of medical school similar to other NJMS programs that apply longitudinal credits in fourth year. Student transcript will reflect the duration of the student's participation in the Scholar's Program. If a student chooses to use other existing electives to work on their project (e.g. a fourth year research elective), credits for such electives cannot be counted towards the scholar's program electives (i.e. credits cannot be counted twice). In addition, any time for which the student receives a stipend (such as summer research) may not be used toward the elective credits of the scholar's program, although such a summer program could enhance the scholar's project.

A maximum of 4 weeks of credit can be applied to fourth year. A minimum of one year participation in the scholar's program is necessary to ensure appropriate rigor and completion of at least a basic scholarly project (as described above) and to obtain credit for the program. For a typical student, credits are reported to the Registrar's Office by March of the fourth year. Therefore, the latest a student can enter the program is March of the third year.

Benefits of this program include longitudinal mentorship and support from other scholars, fourth year credits for time spent on the project, experience in academic presentations, submitting a manuscript/theses and CV building, and a note on the final transcript about participation in the program.

Learning outcomes & evaluation methods:

1. Describe issues concerning the use of experimental interventions in clinical practice.
2. Acquire proficiency in research design, organization and execution.
3. Develop proficiency in diagnosis and clinical management of the diagnoses of the research subjects.

This elective is not open to visiting medical students.

REHB 9100 - GERIATRIC REHABILITATION

DIRECTOR: Dr. Bruce Pomeranz

LOCATION: Kessler Institute for Rehabilitation (Saddlebrook)

DURATION: 2 or 4 weeks

WHEN OFFERED: June, July, August, November, December, January, and May only.

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 2-3 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: Dr. Steven Kirshblum and Dr. Carol Gill

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

DURATION: 2 or 4 weeks

WHEN OFFERED: June, July, August, November, December, January, and May only.

NUMBER OF STUDENTS PER ROTATION: 2

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.

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

REPORTING INSTRUCTIONS: Approximately 2-3 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: 4 weeks

WHEN OFFERED: June, July, August, November, December, January, and May only.

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. They will learn cardiopulmonary, orthopaedic, nutrition and other therapeutic interventions and equipment that affect survival and quality of life as well as manage common musculoskeletal syndromes. Students will round with the preceptors in University Hospital to observe the use of noninvasive physical medicine aids in extubation and decannulation of patients with ventilator failure due to musculoskeletal conditions and perform inpatient rehabilitation consultations with the PM&R residents.

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

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

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

REPORTING INSTRUCTIONS: Approximately 2-3 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: Dr. Peter Yonclas

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

DURATION: 2 or 4 weeks

WHEN OFFERED: June, July, August, November, December, January, and May only.

NUMBER OF STUDENTS PER ROTATION: 2

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 2-3 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. Robert Vrablik** and Thomas Cava

LOCATIONS: Physicians' offices in the northern NJ area

DURATION: 2 or 4 weeks

WHEN OFFERED: June, July, August, November, December, January, and May only.

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 2-3 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

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.

REPORTING INSTRUCTIONS: Students are to report to G-Yellow at 9:00 AM on the first day of their elective.

PSYC 9008 - SUBINTERNSHIP IN V.A. PSYCHIATRY

DIRECTOR: Dr. Manjula Chilakapati

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

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 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.

PSYC 9010 – PSYCHIATRIC EMERGENCY SERVICES

DIRECTOR: Dr. Cheryl Ann Kennedy

LOCATION: University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Once registered, the student must email Dr. Kennedy (kennedy@njms.rutgers.edu) to confirm rotation dates.

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 8:30 a.m. The student must wear his/her white coat and bring his/her ID, stethoscope, reflex hammer and PDA and have computer access to EMR.

PSYC 9020 - CHILD AND ADOLESCENT PSYCHIATRY

DIRECTOR: Dr. Tolga Taneli, BHSB Room F1542

LOCATION: Behavioral Health Sciences Building, University Hospital

DURATION: 2 or 4 weeks

WHEN OFFERED: June, September – May, with permission of the course director

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: All students must contact the Training Director of Child Psychiatry Residency Program (973-972-0814) *at least one month prior* to their desired rotation month in order to receive permission to participate in this elective. *The rotation is not available in July & August.*

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

GOALS: The goal of the medical student elective in child psychiatry is to 1) familiarize the student with what a child and adolescent psychiatrist does, 2) to teach the student about the psychosocial aspects of health care, 3) to acquaint the student with diagnosis and treatment of the emotionally and behaviorally disturbed child/adolescent, and, 4) to improve understanding of the underlying problems via the biopsychosocial model.

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

PSYC 9030 - CONSULTATION-LIAISON

DIRECTOR: Dr. Rashi Aggarwal, BHSB F-level

LOCATION: University Hospital

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 in the Behavioral Health Sciences Building, room E-1538 (Residents' Library) at 9:15 AM on the first day of their elective.

PSYC 9040 - RESEARCH IN PSYCHIATRY

DIRECTOR: Dr. Cheryl Kennedy

LOCATION: Department of Psychiatry, BHSB F-level, & other sites

DURATION: 4 weeks

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

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: available only on special request to Dr. Kennedy (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. Kennedy (2-5598, kennedy@njms.rutgers.edu) to plan the elective well in advance.

PSYC 9070 - AMBULATORY PSYCHIATRY

DIRECTOR: Dr. Diego Coira

DURATION: 4 weeks

LOCATION: Hackensack University Medical Center

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

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

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

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

PSYC 9091 - SUBSTANCE ABUSE

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

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.

DEPARTMENT OF RADIATION ONCOLOGY

RADO 9030 - RADIATION ONCOLOGY

DIRECTOR: Dr. Sabin Motwani motwansa@cinj.rutgers.edu

LOCATION: University Hospital

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

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

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

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

Key Responsibilities of the student while on elective:

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

REPORTING INSTRUCTIONS: The student should report to the ENT conference room in the Cancer Center F-1196 at 8:00 a.m. on the first Monday of 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. 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 9001 - PEDIATRIC RADIOLOGY

DIRECTOR: Dr. Neha Kothari

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: June, September, October, November, January, and February

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITE: Pediatrics

DESCRIPTION OF ELECTIVE: The purpose of this elective is to give the student the opportunity to observe the practice of Pediatric Radiology on a daily basis. The student is present during film reading sessions, and observes the various special procedures that are done every day. Texts and articles, as well as the pediatric teaching film file, are available for study. The student will prepare a PowerPoint presentation on the pediatric radiology topic of their choosing.

It is anticipated that the student will become more aware of the role of radiology in clinical practice. The various types of radiologic and ultrasound imaging will be seen every day and the advantages and disadvantages of each modality and examination will be discussed. The importance of communication between the clinician and the radiologist will be stressed. Student evaluation is based on attendance, attitude, general knowledge, and radiology presentation.

REPORTING INSTRUCTIONS: Students should report to UH, C-318A, at 8:30 a.m. on the first day of the rotation.

RAD 9010 - DIAGNOSTIC RADIOLOGY

DIRECTORS: Dr. Pierre Maldjian

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 faculty. Teaching sessions where the medical students present interesting cases are also incorporated. The students are expected to attend departmental conferences. Lectures in medical decision making as they relate to diagnostic imaging will be given by the chairman. 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 Radiology attending or resident physician. Computed tomography, nuclear medicine, magnetic resonance and ultrasound evaluations are essential elements in the program. A better understanding of the imaging modalities, their limitations, advantages and costs will also emerge from the experience. Student evaluation is based upon participation in the conferences, attendance, presentation of cases, and a written and practical examination. Students may also write an optional case report or review a paper on a contemporary radiology issue for extra credit.

REPORTING INSTRUCTIONS: Students should report to UH, C-318A at 9:00 a.m. on the first day of the rotation.

RAD 9020 - INTERVENTIONAL AND VASCULAR RADIOLOGY

DIRECTOR: Dr. Sohail Contractor

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

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 (Dr. Contractor's office) on the first day of the rotation. The IR Suite is located on C-level, room 235.

RAD 9090 - RESEARCH IN RADIOLOGY

DIRECTOR: Dr. Sohail Contractor

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.

DEPARTMENT OF STUDENT AFFAIRS

OE 9005 - COLLABORATIVE APPROACH TO LEARNING MEDICINE PROGRAM (C.A.L.M.)

DIRECTOR: Dr. Sarah Karl

LOCATION: NJMS

DURATION: 80 hours mentoring during second through fourth years will earn 2 weeks credit

WHEN OFFERED: Throughout the academic year - credit will be given in the fourth year

NUMBER OF STUDENTS PER ROTATION: Unlimited

PREREQUISITE: Registration for this elective occurs through the Center for Academic Success and Enrichment/Office of Student Affairs. Applicants for the CALM Student Coordinator positions submit applications and are interviewed by the Director and must also be approved by the Associate Dean of Student Affairs. Applicants for CALM Mentors apply by application and short essay; must meet minimum professional and academic standards, including HP or H in any courses where they will be doing individual academic mentoring.

DESCRIPTION OF ELECTIVE: Collaborative Approach to Learning Medicine (C.A.L.M.) is a student-to-student mentoring and training program open to NJMS students in the second through fourth years of medical school. Students provide support for NJMS in assisting the transition of underclass students as they master academic and transitions through phases of medical education. Mentors are trained to be knowledgeable in outreach, early intervention for referral and ongoing building of peer “families” for medical students, intended to reach longitudinally across the four years of medical education. The didactic training is based in interactive lectures provided by faculty, administration, mental health and student wellness health providers and focuses on outreach skills, listening skills, signs and symptoms of early academic and psychosocial problems prevalent in medical students. Students log hours on a monthly basis; accrual of 80 hours within a 3 year period is required for award of elective credit in the fourth year. Activities include group meetings, individual contacts made on a monthly basis, availability on ad hoc basis for mentees needing academic or psychosocial support.

Learning outcomes & evaluation methods:

1. Student Logs: students provide monthly logs with quantitative and qualitative information on outreach activities. Quantitative aspects document hours of service; qualitative aspects document the practice of key learning objectives (i.e. whether the primary focus of the mentoring activity was academic, psychosocial, self-care, or referral).
2. Attendance at training sessions conducted by health, mental health and academic faculty.
3. Conducting small group or individual sessions to address particular needs during a course or period of time when content focus is specialized; or service on a panel or discussion group dealing with a transition topic relevant to mentees.
4. Before awarding of credit, both CALM coordinators and faculty advisor certify students as having met the required 80 hours of participation with a requisite level of professionalism.
5. Coordinators survey students “lost” to the tutoring/mentoring process to determine reasons for student non-participation.
6. CALM survey to assess strengths and weaknesses of program components and identify future directions.

This elective is not open to visiting medical students.

DEPARTMENT OF SURGERY

SURG 9020 - ADULT CARDIOTHORACIC SURGERY

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

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

LOCATION: University Hospital

DURATION: 4 - 8 weeks

WHEN OFFERED: Throughout the academic year

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. At times during the rotation, there will also be opportunities for research work in this field.

REPORTING INSTRUCTIONS: Students should report at 9:00 a.m. to UH F-102 on the first day of the elective. Telephone: x3555

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: 12

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 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).

SURG 9053 - ACTING INTERNSHIP / HACKENSACK

DIRECTOR: Dr. Douglas Benson

LOCATION: Hackensack University Medical Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: General Surgery, Surgical Subspecialties

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

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

SURG 9055 - ACTING INTERNSHIP /ST. MICHAEL'S

DIRECTOR: Dr. Zafar Jamil

LOCATION: St. Michael's Medical Center

DURATION: 2 or 4 weeks

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

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Medicine, General Surgery, preapproval from St. Michael's

DESCRIPTION OF ELECTIVE: Working under close supervision of the attending and resident staff, students participate in the care of a wide variety of general surgical cases including intensive care and total parenteral nutrition. Depending upon the student's specific interest, special arrangements may be made for the student to follow a specific variety of surgical problems, including vascular and cardiovascular surgery.

SURG 9056 - ACTING INTERNSHIP/V.A.

DIRECTOR: Dr. Charles Tischler

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

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Medicine, General Surgery

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

REPORTING INSTRUCTIONS: Students should report to the Surgical Office (Ward 2A, Room 2-127) at 8:00 a.m. on the first day of the elective.

SURG 9058 – GENERAL SURGERY/ST. BARNABAS MEDICAL CENTER

DIRECTOR: Dr. Ronald S. Chamberlain

LOCATION: Saint 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, 5th floor, East Wing, Suite 501 at 9:30 a.m. on Monday for registration and facility orientation with Debra Likon, Medical Student Coordinator. This will be followed by an orientation in the Department of surgery with Anna Gritschke. All administrative matters related to this elective, including student evaluation, will be coordinated by Debra Likon and Anna Gritschke through the Department of Surgery office.

SURG 9059 – BURN SERVICE/ST. BARNABAS MEDICAL CENTER

DIRECTOR: Dr. Michael A. Marano

LOCATION: Saint 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, 5th floor, East Wing, Suite 501 at 9:30 a.m. on Monday for registration and facility orientation with Debra Likon, Medical Student Coordinator. This will be followed by an orientation in the Department of surgery with Anna Gritschke. All administrative matters related to this elective, including student evaluation, will be coordinated by Debra Likon and Anna Gritschke through the Department of Surgery office.

SURG 9060 - PODIATRIC SURGERY

DIRECTOR: Dr. Warren Chiodo
(973) 972-5088, chiodowa@uhnj.org

LOCATION: University Hospital, G-142

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: The elective is suggested for the student who desires exposure to pathology of the lower extremity. The student will be exposed to a variety of clinical and operative experiences including trauma, reconstructive surgery, podopediatrics, vascular disease, dermatologic and neurologic phenomena of the foot and leg. The student will be expected to attend all rounds, surgery, clinics and patient discussions. Academic teaching rounds include: radiology rounds, journal club, resident and attending lectures, preoperative conference, and clinic conference. Students are also expected to prepare a fifteen minute academic presentation at the end of the rotation.

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

REPORTING INSTRUCTIONS: Students should report to UH G-142 at 6:30 a.m. on the first day of the rotation. Please call the resident's office (973-972-6043) or page the residents (973-259-2696) prior to starting the rotation.

SURG 9061 - TRANSPLANTATION SURGERY

DIRECTOR: Dr. Dorian Wilson

LOCATIONS: University Hospital and Doctors Office Center

DURATION: 2 or 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Medicine, General Surgery

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

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

REPORTING INSTRUCTIONS: Students should alert Dr. Wilson of their participation in the elective via email (wilsondo@njms.rutgers.edu) not later than the Friday prior to the beginning of the elective. The student should report to University Hospital at 9:00 a.m. on their first day and page the transplant resident at (973) 312-3984, who will provide a brief introduction. Students are a welcomed addition to the Liver Transplant Service, are treated as such, and are rapidly incorporated into the team. There is continual interaction between the students, residents and the transplant faculty responsible for making rounds.

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 9184 - PLASTIC SURGERY

DIRECTOR: Drs. Stephen Colen

LOCATION: Hackensack University Medical Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Surgery Clerkship

DESCRIPTION OF ELECTIVE: This is a comprehensive course covering all aspects of plastic surgery. Students will be required to attend conferences at University Hospital, but will obtain their clinical exposure at HUMC.

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

SURG 9195 - TOPICS IN SURGICAL RESEARCH

DIRECTOR: Dr. Charles R. Spillert

LOCATION: G-502, Medical Sciences Building, (973) 972-4530, spillecr@njms.rutgers.edu

DURATION: 4 weeks

WHEN OFFERED: September - May

NUMBER OF STUDENTS PER ROTATION: 4

PREREQUISITES: None

Please call or email me your phone number prior to the first day of the rotation.

DESCRIPTION OF ELECTIVE: Studies involving projects in a variety of experimental models are available in the Surgical Research Laboratory. Alternatively, a student may prepare a manuscript on a clinically related topic. Students are encouraged to submit their completed research for publication.

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

SURG 9232 - TRAUMA TEAM ACTING INTERNSHIP

DIRECTOR: Dr. David H. Livingston

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. Livingston 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).

SURG 9233 - SURGICAL INTENSIVE CARE UNIT

DIRECTOR: Dr. Leslie Tyrie

LOCATION: University Hospital

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. Rounds will be made daily with the attending staff. Each student will function as a subintern and be responsible for presentation of one patient each day. On rounds, discussion will focus on the pathophysiology of each of the problems presented. Students will be given selected readings in critical care medicine. Students

will also participate in insertion of central lines and arterial lines for monitoring, ventilator management, and resuscitation.

REPORTING INSTRUCTIONS: Students should 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 (ribaidd@njms.rutgers.edu).

SURG 9235 - CRITICAL CARE PROBLEMS IN SURGERY

DIRECTORS: Drs. D. John LoCurto and J. Martin Perez

LOCATION: Hackensack University Medical Center

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITE: General Surgery

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

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

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

DIRECTOR: Dr. Paul Yodice

LOCATION: Saint 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, 5th floor, East Wing, Suite 501 at 9:30 a.m. on Monday for registration and facility orientation with Debra Likon, Medical Student Coordinator. This will be followed by an orientation in the Department of surgery with Anna Gritschke. All administrative matters related to this elective, including student evaluation, will be coordinated by Debra Likon and Anna Gritschke through the Department of Surgery office.

SURG 9253 - UROLOGY - ACTING INTERNSHIP

DIRECTOR: Dr. Robert Weiss
weissre@cinj.rutgers.edu

ADMINISTRATOR: Shaniqua Mitchell, mitches1@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 9260 - ACTING INTERNSHIP IN VASCULAR SURGERY

DIRECTOR: Dr. Zafar Jamil

LOCATION: St. Michael's Medical Center

DURATION: 2 or 4 weeks

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

NUMBER OF STUDENTS PER ROTATION: 2

PREREQUISITES: Medicine, General Surgery

DESCRIPTION OF ELECTIVE: Working under close supervision of the attending and resident staff, students participate in the active care of a wide variety of general surgical problems. Depending upon the student's specific interest, special arrangements may be made for the student to follow a specific surgical problem, including vascular and cardiovascular surgery. A research project which may be of a clinical nature will be encouraged.

SURG 9266 – ACTING INTERNSHIP IN VASCULAR AND ENDOVASCULAR SURGERY

DIRECTOR: Michael Curi, MD, MPA
curi@njms.rutgers.edu

LOCATION: University Hospital

DURATION: 4 weeks

WHEN OFFERED: Throughout the academic year, with Dr. Curi's permission

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: Permission from course director

DESCRIPTION OF ELECTIVE: Students with an interest in Vascular Surgery can experience working on the service functioning as an intern. Rounds are conducted daily prior to going to the operating room or clinic. In the operating room, the student will assist with open and endovascular procedures. They will assist in the post-operative care by writing brief operative notes and participate in all peri-operative care of the patient. In the office/clinic, students will see patients, take H & P's, and present the patient to the attending who then sees the patient with the student. Students will be taught how to write orders by faculty and residents.

REPORTING INSTRUCTIONS: The day prior to the start of the elective, students should contact Dr. Curi by phone (973-972-6295) or pager (973-203-0105) to find out where to report and familiarize himself/herself with current patients on the service.

SURG 9270 - RESEARCH PROJECT IN UROLOGY

DIRECTOR: Dr. Robert Weiss
weissre@cinj.rutgers.edu

ADMINISTRATIVE CONTACT: Shaniqua Mitchell, mitches1@njms.rutgers.edu

DURATION: 4 weeks

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

NUMBER OF STUDENTS PER ROTATION: 1

PREREQUISITES: None

DESCRIPTION OF ELECTIVE: At least four weeks will be spent in the lab of the research director. The student will be involved in a research project. The student will learn and be given the opportunity to perform experimental techniques. These techniques will include methods of cell line culturing and growth, small animal cellular protein analysis via gel electrophoresis and immunochemistry and mRNA investigation via Northern

blotting with cDNA hybridization. The student will have weekly sessions to plan and complete a research project. The project will be designed based on the individual interests of the student.

This elective offers exposure to basic science research related to the field of urology, and provides the student with the opportunity to master research techniques, as well as to write and publish a paper or abstract.

Students are evaluated on the basis of their enthusiasm, interest, and completion of their project. Students are required to write up their research activities in either formal paper or abstract form.

This elective is not open to international visiting medical students.

SURG 9300 - ORAL AND MAXILLOFACIAL SURGERY

DIRECTOR: Dr. Vincent Ziccardi

LOCATION: University Hospital

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 for reporting instructions.

Additional Electives

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

RESEARCH IN HISTORICAL MEDICINE (under Neurological Surgery)

SURGICAL BOOT CAMP (under Office of Education)