### Calendar for Four Week Periods

#### 2017-2018

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The SUNY Upstate Medical University College of Medicine Course Selection Book is published in the month of February prior to the academic year that it is referenced to. The College of Medicine 2017-2018 academic year runs from May 30, 2017 through May 27, 2018. The Course Selection Book is printed as a convenient carry-around reference guide for students, faculty and staff. However, please be aware that there may be changes to the College of Medicine course offerings throughout the year, so the most up-to-date, accurate information on course offerings for the College of Medicine is available in MyUpstate.

https://bannerweb.upstate.edu/
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CELL & DEVELOPMENTAL BIOLOGY
Teaching in Human Anatomy .... ANAT0405
1 TO 5 Credits Basic Science Selective, Concurrent Elective, Pass/Fail Grading
ELECTIVE DIRECTOR: Dr. Robert Zajdel
CONTACT: zajdelr@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 12
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: Students are expected to assist in teaching gross anatomy to first year medical students. Emphasis is placed upon laboratory activities, including helping with daily dissections, working with students in small group sessions to facilitate an understanding of sectional and radiographic anatomy, and providing an opportunity to appreciate the application of gross anatomy to clinical medicine. Students may be asked to assist in the laboratory outside of designated class time and to offer individualized instruction to students experiencing difficulty in the course. Teaching assistants will be required to provide a log of their contact hours to the course director. Credit for the elective will be awarded on a basis of time spent in teaching in the laboratory, tutoring, or preparing teaching specimens.

Teaching in Neuroanatomy ...... ANAT0409
1 TO 5 Credits Basic Science Selective, Concurrent Elective
ELECTIVE DIRECTOR: Dr. Dana Mihaila
CONTACT: mihailda@upstate.edu
PREREQUISITES: Neuroscience
MAXIMUM NUMBER OF STUDENTS: 999
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: To review, master, and teach functional neuroanatomy to first year medical students using case studies to focus learning. Teaching a discipline is one of the best ways of learning and reinforcing this material. Moreover, returning to the neuroanatomy laboratory portion of the Neuroscience course after the Neuroscience clerkship reinforces the clinical experience and prepares the student for residency. Almost any clinical discipline will benefit from this review. Moreover, the student is able to reinforce the basic science education of the 1st year student by expanding on the more advanced student’s clinical experience. Activities will include review of the neuroanatomy syllabus and brain and cross sectional anatomy, meeting with all faculty, neurosurgery residents, and other graduate and medical student assistants to review clinical case and laboratory material prior to each of the 10 laboratory units, teaching and giving chalk talks in the laboratory with a faculty mentor, and tutoring students in difficulty outside scheduled laboratory hours. This elective takes place during time the neuroanatomy laboratory is taught during the Neuroscience course, usually beginning at the end of the first week in April and continuing through the laboratory examination seven weeks later. It may be taken for 3-5 credit hours, depending on the beginning and end of elective time. Introductory brain anatomy is especially heavy during the first 2 weeks, and review and case study analysis is especially heavy during the last week of the course. Elective time should include one of these periods. Time requirements are dependent on student participation in laboratory and pre-lab conferences. Close faculty interaction allows careful assessment of student’s knowledge and teaching abilities.

Teaching in Human Anatomy .... ANAT0410
4 Credits Pass/Fail Grading
ELECTIVE DIRECTOR: Dr. Robert Zajdel
CONTACT: zajdelr@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: This elective is designed to provide medical students, especially those with an interest in the musculoskeletal system, with an opportunity to actively participate in teaching gross anatomy to first year students in the Doctor of Physical Therapy (DPT) program. Emphasis is placed upon demonstrating prosected specimens to the students, assisting students with their dissections, preparing and delivering 2 lectures, and conducting small group laboratory problem solving. Weekly activities will include involvement in laboratory teaching, laboratory problem solving sessions, and review and student sessions. Students will also help with the laboratory examination seven weeks later. It may be tailored to each student. Preoperative evaluation for those interested in family practice, internal medicine, or surgery will be available. Skills...

ANESTHESIOLOGY
Anesthesiology & Basic Life Support - Upstate.................................ANES0801
4 Credits
ELECTIVE DIRECTOR: Dr. Jesus Calimlim
CONTACT: sellink@upstate.edu
PREREQUISITES: Surgery
MAXIMUM NUMBER OF STUDENTS: 3
PERIODS OFFERED: 001, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: (Cannot accept students in July or August). The elective is designed to be both flexible and educational. In order to fully explore what the exciting field of anesthesia has to offer to all medical students, emphasis will be placed on practical clinical activities according to the student’s individual interests and motivation. Students will participate in patient care directly, with an attending as an acting resident (AI). Knowledge and clinical skills gained will be useful in virtually any field the student pursues. Procedures such as mask ventilation, endotracheal intubation and IVs will be available daily. Patient selection will be tailored to each student. Preoperative evaluation for those interested in family practice, internal medicine, or surgery will be available. Skills...
and knowledge of emergency care or intensive care, such as airway management and invasive hemodynamic monitoring will also be available. Students interested in pediatrics or OB/GYN will also find clinical experiences and interesting patients available. Since the subject of anesthesia encompasses a large subject area, any student will find a topic of interest in this course. Advanced areas of interest include cardiovascular and thoracic anesthesia, intensive care and acute and chronic pain treatment. Some of these advanced areas of interest take the anesthesiologist out of the operating room.

Applied Clinical Anesthesiology. ANES0808
4 Credits  Crouse Hospital
ELECTIVE DIRECTOR:  Dr. James Mostrom
CONTACT:  DanielleBarnum@crouse.org
PREREQUISITES:  Surgery
MAXIMUM NUMBER OF STUDENTS:  2
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION:  The student will have the opportunity to observe how patients are assessed and prepared for surgery, and will also understand why particular anesthetic techniques are chosen in clinical practice. The elective will give the student the opportunity to participate in patient care on a one to one basis with an attending anesthesiologist. From a point of view of motor skills, the student will be expected to be able to maintain an airway, to intubate and to fully understand what is involved in the care of the unconscious patient. For two weeks students may rotate to main operating room, surgical outpatient centers, or childbirth center, depending on interest.

Pain Medicine......................... ANES0810
4 Credits
ELECTIVE DIRECTOR:  Dr. Parakulam Thomas
CONTACT:  sellink@upstate.edu
PREREQUISITES:  None
MAXIMUM NUMBER OF STUDENTS:  2
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION:  Pain medicine is fast becoming a field of its own. This is due to the complexities of the pain syndromes and the subsequent management of all aspects of pain. During their rotation, medical students will be introduced to the different fields of pain medicine including acute pain, chronic pain, cancer pain, pain psychiatry and addiction psychiatry. Students will gain clinical experience in diagnosis of pain syndromes and appropriate techniques involved in treating these syndromes. Students will learn anatomy related to pain medicine. They will develop basic skills in the use of fluoroscopy, CT guidance and ultrasound for therapeutic pain interventions. Students will also be introduced to a multimodal and multidisciplinary approach to the treatment of pain. Weekly activities will include lectures, observation and participation in intervention pain techniques. Note: After registering, and at least one month prior to the rotation, contact Dr. PS Thomas to make arrangements.

CENTER for BIOETHICS & HUMANITIES
Intro to Medical Creative Writing CBHX2404
1 Credits
ELECTIVE DIRECTOR:  Dr. Deirdre Neilen
CONTACT:  szczechk@upstate.edu
PREREQUISITES:  None
MAXIMUM NUMBER OF STUDENTS:  8
PERIODS OFFERED:  011
ELECTIVE DESCRIPTION:  Introduction to Medical Creative Writing is a one week intensive writing workshop. Students will read other physician writers’ works and then begin an extended piece of their own. Patient narratives, narrative competence, and medical humanities are all terms increasingly used when talking about ways to improve physician-patient interactions and satisfaction. In this introductory course, we will explore how and why writing can illuminate medicine and increase a physician’s observations, making him/her more aware of the patient’s needs.

Individual Study in Bioethics .... CBHX2405
2 TO 6 Credits
ELECTIVE DIRECTOR:  Dr. James Dwyer, Dr. Kathy Faber-Langendoen, Dr. Robert Olick
CONTACT:  dwyerja@upstate.edu
PREREQUISITES:  None
MAXIMUM NUMBER OF STUDENTS:  4
PERIODS OFFERED:  007, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION:  The purpose of this elective is to provide students the opportunity to explore, in a careful and supervised way, important issues in bioethics. Students will work with their preceptor to develop an individualized plan of study. This plan will usually involve extensive reading, attendance at some lectures and seminars, frequent discussions with the preceptor, attendance at meetings of the ethics committee, and a written paper. Students may explore a particular topic or area (for example, issues in one specialty of medicine), design a small study (for example, a chart of review of advance directives), or learn more about the work of clinical consultation (by discussing cases with consultants and attending meetings of the ethics committee). This elective may be taken full-time or Concurrently with other courses.

Physicians and Social Responsibility I
.............................................. CBHX2408
1 Credits  Concurrent Elective
ELECTIVE DIRECTOR:  Dr. James Dwyer
CONTACT:  dwyerja@upstate.edu
PREREQUISITES:  None
MAXIMUM NUMBER OF STUDENTS:  16
PERIODS OFFERED:  Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION:  This is the first of a two-elective sequence that establishes a critical, analytic component in conjunction with selected health-related service activities, to provide a robust, service-learning experience for medical students to develop their understanding of and commitment to physician’s
social responsibility. This first elective, Physicians and Social Responsibility I (PSRI) is an 8 session, 16 hour seminar elective addressing fundamental knowledge and advocacy skills physicians need to fulfill their social responsibility, both individually and collectively. Course content addresses a variety of topics, such as fundamentals of health systems and financing; impacts of socioeconomic disparities in health and illness; cultural diversity in clinical practice; health outcomes; advocacy skills; structure and effectiveness of the safety net; global health inequities; environmental issues in health. Exact topics are modified from year to year. Open to MSI, MSII, and MSIV students.

Physicians and Social Responsibility II

CBHX2410 2 Credits Concurrent Elective

ELECTIVE DIRECTOR: Dr. James Dwyer
CONTACT: dwyerja@upstate.edu
PREREQUISITES: CBHX2408
MAXIMUM NUMBER OF STUDENTS: 16
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: Physicians and Social Responsibility II is the second part of a two-elective sequence that establishes a critical, analytic component in conjunction with selected health-related service activities to provide a robust, service-learning experience for medical students to develop their understanding of and commitment to physicians' social responsibility. This elective has two components: Service component: 40 hours of service in a pre-approved setting addressing one of the following: 1) providing healthcare for the underserved; 2) providing health care overseas; 3) advocating for changes in health policy. Optional additional 40 hours for additional credit. Seminar Component: an 8-session, 16-hour seminar addressing critical analytic and advocacy skills physicians need to fulfill their social responsibility, both individually and collectively. Students will critically analyze their service experiences in light of the fundamental concepts discussed in PSRI and ELSIM. Some content related to student experiences will be presented in a more advanced way than in PSRI (e.g. fundamentals of health systems/financing, impacts of socioeconomic disparities in health and illness; advocacy skills, structure and effectiveness of the safety net; global health inequities). A substantial portion of the seminar time will be spent with students presenting their critical analyses of issues arising in their service sites. Open to MSII and MSIV students. Needs instructor approval.

EMERGENCY MEDICINE

Acting Internship in Emergency Medicine

EMED1302 4 Credits Acting Internship Selective

ELECTIVE DIRECTOR: Dr. Matthew Sarsfield
CONTACT: welchka@upstate.edu
PREREQUISITES: Internal Medicine & Surgery
MAXIMUM NUMBER OF STUDENTS: 6

PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: The student will function as an acting intern in the Emergency Department working under the direct supervision of Emergency Department attending physician or third year emergency medicine resident. The student will have the opportunity to make the initial patient contact and formulate a diagnostic and therapeutic plan which will then be discussed with and reviewed by the attending physician. During the elective the student will be exposed to the entire range of Adult Emergency Department problems. This experience will give the student an understanding of what the practice of Emergency Medicine entails and provide exposure to a wide range of patient population.

Emergency Medicine in a Community Hospital

EMED1307 4 Credits Preceptor's Site

ELECTIVE DIRECTOR: Dr. David Wirtz
CONTACT: dwirtz@usacs.com
PREREQUISITES: All third year clerkships
MAXIMUM NUMBER OF STUDENTS: 1

PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This rotation is an introduction to emergency medicine in a community hospital setting. Cortland Regional Medical Center is a 166 bed hospital with approximately 35,000 ED visits per year. There is a diverse mix of pathology seen in the ED and all patients are seen by the ED medical staff. The medical student will always be supervised by a board certified residency trained emergency medicine specialist. They will examine, diagnose and treat pathology in all major disciplines of medicine. There will also be informal lectures to supplement the clinical experience. If there are any particular interests or needs of a student, every effort will be made to meet them. There will be approximately 36 hours per week clinical responsibility and varying amounts of supplemental teaching (lectures, rounds etc.). Self study with a standard emergency text is encouraged, and reference materials are available in the department.

Emergency Medicine Research

EMED1308 4 Credits

ELECTIVE DIRECTOR: Dr. William Grant
CONTACT: grantw@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 2

PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: Goals of the elective include provision of experience in direct participation in ongoing projects of the Department, development of an understanding of the use of evidence tools and methodologies. The focus is on the formulation of researchable clinical questions. A student relevant research project will be designed and completed.
Acting Internship in Pediatric Emergency Medicine............................................ EMED1309
4 Credits  Acting Internship Selective
ELECTIVE DIRECTOR:  Dr. Richard Cantor
CONTACT:  welchka@upstate.edu
PREREQUISITES:  Pediatrics, Internal Medicine & Surgery
MAXIMUM NUMBER OF STUDENTS:  4
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION:  The student will function as an acting intern within the Pediatric Emergency Room working under the direct supervision of a Pediatric Emergency Specialist. The student will provide patient contact and devise a management plan in concert with attending supervision. The overall experience will offer the student an understanding of the practice of Pediatric Emergency Medicine.

Western & Traditional Chinese Medicine in the People's Republic of China ........................................... EMED1320
4 Credits
ELECTIVE DIRECTOR:  Dr. William Grant
CONTACT:  grantw@upstate.edu
PREREQUISITES:  All third year clerkships
MAXIMUM NUMBER OF STUDENTS:  6
PERIODS OFFERED:  008, 009, 010, 011
ELECTIVE DESCRIPTION:  The China elective is a collaborative agreement between ZAST (Zhejiang Association for Science and Technology); its hospital partners, and the Upstate Medical University. The elective is designed to allow Upstate Medical University students to experience medical care, both traditional Chinese and western style provided at two general hospital in the Zhejiang province. The elective takes place at Xiaoshan No. 1 People’s Hospital and the Zhejiang Hospital. Both hospitals are located in Hangzhou, a large metropolitan city which is about a two hour drive from Shanghai. Depending upon students’ interests, they may spend the entire elective at one hospital or split their time between the two hospitals. At each hospital they will have the opportunity to see and participate in both western style medical care, and traditional Chinese medical care. Students will be precepted by identified physicians in both institutions throughout their elective time. The elective is offered as a four-week rotation and is generally offered from January 1st through June 30th in each year. Exact dates of the rotation are flexible and can be arranged through Dr. William Grant, the course coordinator. NOTE:  Students will be required to provide their own travel to and from Shanghai. Travel requires a tourist visa (see www.travisia.com for details).  ZAST and the hospital affiliates will provide accommodations for students during the elective. Accommodations are in Hangzhou. The hospitals will provide means for transportation between the apartment and the hospitals. Transportation is by public bus service and bicycle. Costs of transportation will be provided by the participating hospitals.

Clinical Toxicology........................................... EMED1321
4 Credits  Basic Science Selective, Pass/Fail Grading
ELECTIVE DIRECTOR:  Dr. Christine Stork-Medicis
CONTACT:  storkc@upstate.edu
PREREQUISITES:  Internal Medicine, Pediatrics, & Emergency Medicine
MAXIMUM NUMBER OF STUDENTS:  3
PERIODS OFFERED:  001, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION:  At the end of this rotation the student should have a comprehensive approach to the poisoned patient as defined by:  1) The ability to manage exposures when the specific toxin cannot be identified or when inadequate information is known regarding a specific toxin;  2) The ability to appropriately evaluate and initiate therapy for a number of commonly presenting toxins;  3) The ability to appropriately include toxins in the differential diagnosis of any patient. Students will round on inpatient toxicology cases at local hospitals and provide telephone follow-up consultation on hospitals in the Upstate New York Poison Centers service area. Daily case discussion, high fidelity patient simulations and weekly structured conferences will occur. The student will provide both an oral and written project commensurate with their learning experience.

Undersea and Hyperbaric Medicine ........................................... EMED1323
4 Credits  Pass/Fail Grading
ELECTIVE DIRECTOR:  Dr. Marvin Heyboer
CONTACT:  welchka@upstate.edu
PREREQUISITES:  Internal Medicine & Surgery
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION:  The medical student will rotate for 2-4 weeks.  The student will rotate in the Hyperbaric Medicine and Wound Care Center at SUNY Upstate University Hospital. Clinic hours are Monday-Friday, 8 am - 4 pm.  The medical student will gain basic exposure to dive medicine, clinical hyperbaric medicine and problem wound management. They will be overseen by an attending physician and fellow in UHM (undersea and hyperbaric medicine).  The student will participate in hyperbaric medicine consultations, wound care consultations, and ongoing wound care revisits.  The student will oversee the daily hyperbaric oxygen treatments including assessment of any patient complications.  The student will also have the option to take some home call for emergencies in hyperbaric medicine. Finally, the student will be expected to attend Wednesday morning teaching rounds and UHM fellowship lectures from 8am-10am.  The Director of Hyperbaric Medicine and Wound Care will oversee the elective.
Emergency Ultrasound .............. EMED1324
4 Credits  Pass/Fail Grading
ELECTIVE DIRECTOR:  Dr. Elizabeth Nicholas
CONTACT:  welchka@upstate.edu
PREREQUISITES:  Internal Medicine
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION:  This elective is intended to provide the student with a clinical experience in an active emergency room. The student will be working with and directly reporting to an attending physician, covering the ER. In addition, the student will be working with a first or second year ED resident. This rotation allows the student to learn emergency medical care in a setting that is committed to teaching. It is located in a fully integrated academic institution and directed by physicians with full academic appointments. The student can expect exposure to a wide variety of medical and surgical cases. Previous students have appreciated most the primary care experience involving dermatology, ophthalmology, ENT, GU and ambulatory internal medicine problems. Additionally, this rotation affords the student the initial evaluation of acutely ill patients before they are treated, stabilized and admitted to an inpatient service.

FAMILY MEDICINE

Acting Internship in Family Medicine - Residency Based Family Medicine ........................................................................ FAMP1612
4 Credits  Acting Internship Selective
ELECTIVE DIRECTOR:  Dr. James Tucker
CONTACT:  anne.louise@sjhsyr.org
PREREQUISITES:  Internal Medicine & Pediatrics
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION:  This elective is intended to achieve several goals: 1) provide an in-depth exposure to both in-patient and out-patient family medicine, 2) increase basic medical interviewing skills and medical facts, 3) allow the students to work closely with family medicine residents at all levels of training, and 4) give students who are interested in this residency an opportunity to demonstrate their interest and skills to our faculty. Mornings will encompass Morning Report, bedside rounds with the PGY3 and PGY1, attending rounds with the faculty member of the month and didactic conferences as provided by the PGY3 or attending. Noon-times are devoted to various didactic conferences. Afternoons are divided between floor coverage and Model Office. In any four-day block, each student should spend two afternoons in the Model Offices, one afternoon covering the floors and one afternoon post-call. Night call every four-six nights. The student will see the breadth of inpatient and outpatient family medicine. Students will be permitted to leave post-call after morning responsibilities are completed. Four weeks prior to the elective, the student must contact the Medical Education Department at 315-448-5547 for instructions.
Family Medicine Preceptorship... FAMP1615
4 Credits Preceptor's Site
ELECTIVE DIRECTOR: Dr. John Epling
CONTACT: eplingj@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This course may be completed at urban, suburban, and rural sites throughout New York State with approved voluntary faculty. A number are within commuting distance of Syracuse and include managed care settings, community health centers, and private practices. Preceptorships in other states may be arranged, but require significant advance planning. Students will understand the role of family physicians; will develop skills in the diagnosis and management of common medical problems; and will understand the nature of consultation with other medical specialists. Students progress from observation to initial patient contact with preceptor review. Rate of progression and participation, assignment of short literature reviews of patient problems, and night call are at the discretion of the individual preceptors. Contact John Epling, MD at 315-464-7026 for number, location, and description of sites available for a given period.

Integrative Medicine ................. FAMP1635
4 Credits
ELECTIVE DIRECTOR: Dr. Kaushal Nanavati
CONTACT: nanavatk@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This elective will examine health issues in primary care, using the perspectives afforded by literature, film and theater. Hands-on literature and drama experiences will be part of the elective with attendance expected at live theater performances and at a local author lecture series. Topics to be included are: professionalism, resource allocation, physician-patient communication, quality of life, cultural diversity and research ethics. Class participation and discussion are the basis for assessment. The class meets late August to early December on Wednesday evenings, 6-9 pm, with occasional events on other weekday evenings. Cost for performances: $35.00.

Exercising Issues in Primary Care .......... FAMP1642
2 Credits Concurrent Elective
ELECTIVE DIRECTOR: Dr. Ruth Hart
CONTACT: hartrh@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 40
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This elective will offer students the opportunity to examine issues in primary care through the reading and discussion of literary selections that focus on relevant topics such as professionalism, aging, resource allocation, and cultural diversity. Attendance at activities and performances that make a connection with the community at large such as Syracuse Stage theater performances, author lectures and readings, films based on literary adaptations and other performances in the arts will be included (choices depend on what is offered at that time). The emphasis of the course is on group participation and discussion. Cost of course: $35.00
Introduction to Rural Health ................................................. FAMP1646
1.5 Credits Concurrent Elective, Preceptor’s Site
ELECTIVE DIRECTOR: Dr. Cinthia Elkins
CONTACT: elkinsc@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 60
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This elective is required for all medical students admitted to SUNY Upstate College of Medicine through the Rural Medical Scholars Program and runs concurrently over the MS1 and MS2 preclinical years. Other first and second year medical students outside of the RMSP may enroll with the prior permission of the Course Director. The course meets once a month over the course of the first two preclinical years of medical school. The course will follow a lecture, seminar format with a guest speaker who has expertise in a particular field of rural medicine. Since the course follows an evidence-based medicine philosophy, there will be an assigned homework article from the academic literature before each seminar for participants to prepare for the discussion. There will be a skills workshop with hands-on learning in relevant topics for rural practitioners. Students will complete a final project at the end of each year of participation.

Public Health and Biopsychosocial Primary Care ................................................. FAMP1649
1 Credits Concurrent Elective
ELECTIVE DIRECTOR: Dr. Christopher Morley
CONTACT: morleycp@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 10
PERIODS OFFERED: 008, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: Students will perform a validated, communications-intensive standardized patient encounter at the beginning of the course. The standardized patient case will include a number of complicating issues, including comorbid chronic physical illness and mental health symptoms, along with social challenges that impact self-care and adherence. The initial formative SP encounter will allow the student to watch and rate their own performance. Students will then be exposed to literature and instruction on social determinants of health, and receive didactic training in the application of chronic care models, patient-centeredness, cultural competency, motivational interviewing, and condition-specific topics.

Rural Medical Education Program ................................................. FAMP1650
4 Credits
ELECTIVE DIRECTOR: Dr. Carrie Roseamelia, Dr. James Greenwald
CONTACT: roseamec@upstate.edu
PREREQUISITES: Internal Medicine
MAXIMUM NUMBER OF STUDENTS: 15
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: Students train in small town communities across NYS with local, board certified, clinical preceptors. An emphasis is placed on the continuous and comprehensive care of patients. Students develop skills in the diagnosis and management of a wide range of common ambulatory and secondary hospital problems of patients across the age spectrum. Students participate in daily office hours with small town, community-based preceptors, conduct inpatient rounds, laboratory work, night call, and case presentations. RMED for MS3 students begins Period G through the end of Period J. RMED for MS4 students is offered Period 1 through end of Period 6. MS4 students may elect 1-3 blocks depending on interest.

GERIATRICS
Geriatric Medicine................................. GERI1801
4 Credits
ELECTIVE DIRECTOR: Dr. Sharon Brangman
CONTACT: frankk@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This elective is flexible in terms of both content and length to allow the student to design an educational experience consistent with their interests and career goals. The student may participate in any or all of the clinical activities of the Division of Geriatrics including: 1. Ambulatory practice at University Geriatricians which is also the clinical site of the Center of Excellence. 2. Acute Care of the Elderly (ACE) Team at University Hospital. 3. Geriatric consultations, palliative and hospice services at the VA Medical Center. At the end of this elective, the student will have new skills in the assessment and management of medical conditions frequently encountered in older adults, across a variety of care settings. Students considering a career in any adult medical or surgical discipline will find this elective to be very helpful.

INTERDEPARTMENTAL
USMLE Preparation................................. INTD900
0 Credits
ELECTIVE DIRECTOR: Mary Ann Grandinetta
CONTACT: grandinm@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 99
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This elective is open to students who are in the basic science years and are preparing for their USMLE Step Exam. It is an independent study using Kaplan.
USMLE Preparation ........................ INTD1000
0 Credits
ELECTIVE DIRECTOR: Mary Ann Grandinetta
CONTACT: grandinm@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 99
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: This elective is open to students who have not passed the USMLE Step I by the end of their first semester of the third year. It is an independent study using Kaplan.

Medical Science Education Transition ................................................. INTD1200
3 Credits
ELECTIVE DIRECTOR: Mary Ann Grandinetta, Dr. Margaret Maimone
CONTACT: grandinm@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 24
PERIODS OFFERED: Summer
ELECTIVE DESCRIPTION: This four-week course is designed to provide an academic introduction to medical school. Divided into subject blocks, students engage in a primer for basic science courses scheduled in the first year. In addition, students participate in academic support activities including: time and stress management; study strategies; and the successful transition to medical school.

Teaching Assistant for Practice of Medicine Course.......................... INTD9423
1 TO 4 Credits Concurrent Elective
ELECTIVE DIRECTOR: Dr. Alison McCrone
CONTACT: ummelm@upstate.edu
PREREQUISITES: Internal Medicine & Surgery
MAXIMUM NUMBER OF STUDENTS: 28
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: Students will review materials in the physical diagnosis techniques, medical interviews, and communication skills. Student assistants will work one-to-one with faculty to teach MSIs and MSIIs. Students will participate in course evaluation and in methods of evaluating the skills taught in the course and act as a teaching assistant in the POM 1 and POM 2 courses. Activities might include: evaluating student performance on CCEs, helping in small group sessions, grading student write-ups, and developing educational materials.

Hospice Volunteering ................ INTD9425
1 TO 6 Credits Concurrent Elective, Preceptor's Site
ELECTIVE DIRECTOR: Dr. Judith Setla
CONTACT: sconover@hospicecny.org
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 15
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: Hospice volunteers are trained to help patients/families cope with issues at the end of life. Volunteers will learn how to assist with the physical, emotional, and spiritual struggles of this unique time. Once trained, volunteers will be matched with families based on interests, experience, and availability. Typical activities would be: visit, watch TV, read to patients, grocery shopping, mowing lawns, childcare, sitting with patients’ so family can run errands, driving patients or families to appointments or to visit loved ones. This is a rich opportunity to assist those in your community who are living with dying, and to learn about the psychosocial-spiritual aspects of the journey towards the end of life.

Hospice and Palliative Medicine/Spirituality ................. INTD9426
4 Credits Preceptor’s Site
ELECTIVE DIRECTOR: Dr. Barbara Krenzer
CONTACT: krenzerb@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: The medical student will learn the basics of both inpatient and outpatient palliative care for patients nearing the end of life. In addition to control of pain and other physical symptoms, special attention will be paid to spiritual and emotional needs of patients and families. Patients will have cancer and non-cancer diagnoses. Students will be asked to keep a journal of their experiences.

Peer Tutoring in Basic Science...INTD9427
4 Credits Basic Science Selective, Concurrent Elective, Pass/Fail Grading
ELECTIVE DIRECTOR: Mary Ann Grandinetta
CONTACT: grandinm@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 20
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: Students in this elective will serve as peer tutors to students in basic science courses. Students and tutees will meet to review course material, study skills, test taking and time management strategies. Tutor training may be required. Third and fourth year medical students conduct group and one-on-one tutoring sessions for first and second year medical students in basic science coursework. Review of relevant basic science course material, tutoring methods, and topics in study strategies and time management are covered in the tutoring sessions.
Endocrinology ...................... INTD9431
4 Credits  Preceptor's Site  
ELECTIVE DIRECTOR: Dr. Marisa Desimone  
CONTACT: haightm@upstate.edu  
PREREQUISITES: Internal Medicine & Pediatrics  
MAXIMUM NUMBER OF STUDENTS: 1  
PERIODS OFFERED: 001, 004, 005, 006, 007, 008, 009, 010, 011, 012  
ELECTIVE DESCRIPTION: The goal of this elective is for the student to demonstrate competency in applying the principles of evaluation and management of youth and adults with general endocrine disorders and diabetes mellitus. The curriculum for pediatrics will span abnormalities of growth and puberty, development, diabetes, congenital hypothyroidism, disorders of sexual differentiation, and neonatal hypoglycemia and hypocalcemia. The curriculum content for adults will include diabetes, thyroid disorders including nodules and cancer, hypopituitarism and pituitary tumors, parathyroid disorders, osteoporosis and lipid disorders.  

Fundamentals in Quality Improvement and Patient Safety through IHI Open School ........................................... INTD9434
1 Credits  Concurrent Elective  
ELECTIVE DIRECTOR: Dr. Lynn Cleary  
CONTACT: clearyl@upstate.edu  
PREREQUISITES: None  
MAXIMUM NUMBER OF STUDENTS: 99  
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.  
ELECTIVE DESCRIPTION: ELECTIVE DESCRIPTION: This elective uses the online courses from the Institute for Healthcare Improvement (IHI) Open School to provide students with fundamental knowledge and skills in quality improvement, patient safety, and related content. The elective is self-paced and asynchronous. By the end of the course, students will qualify for an IHI Open School Basic Certificate of completion. The estimated time of completion of the online modules is 20 hours. In addition, students are required to submit two case analyses, one based on the analysis of an opportunity to improve a process/outcome and the other on an analysis of a near miss or error, based on cases they have seen, and discuss the elective experience with the instructor. The knowledge and skills from this course will distinguish the individual who takes it as uniquely prepared for entering residency with advanced competency in Systems-based Practice, a required competency in all residencies.  

Pathophysiology of Disease ...... INTD9437
2 Credits  Basic Science Selective, Concurrent Elective  
ELECTIVE DIRECTOR: Dr. Margaret Maimone  
CONTACT: maimonem@upstate.edu  
PREREQUISITES: None  
MAXIMUM NUMBER OF STUDENTS: 30  
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.  
ELECTIVE DESCRIPTION: In this course, students will choose a disease of interest and conduct a thorough literature review of the pathophysiological mechanisms underlying the disease. Students will then create a learning module based on this research that reviews the current state of knowledge of the pathophysiology of this disease. The learning module will then be presented to a group of students, residents or faculty as appropriate for the topic chosen. The learning module may consist of a powerpoint, video, case study or other educational modality. Although the course is concurrent, presentation dates must be arranged with the course director well in advance of the desired date, and dates/times will be subject to the availability of an appropriate audience. After registering, but no later than 3 weeks prior to the desired start date of this concurrent elective, students must contact the course director to set up a meeting to discuss course expectations, disease topic, and timeline for completion of the elective.  

TA in Basic Science ..................INTD9438
1 TO 4 Credits  Basic Science Selective, Concurrent Elective  
ELECTIVE DIRECTOR: Dr. Thomas Poole  
CONTACT: poolet@upstate.edu  
PREREQUISITES: None  
MAXIMUM NUMBER OF STUDENTS: 30  
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.  
ELECTIVE DESCRIPTION: Teaching assistants will assist course directors of one or more of the required basic science courses in MS1 or MS2. Teaching assistants will prepare review materials and conduct regular review sessions as well as hold regular office hours to assist students with course material. They will interact regularly with the course directors to discuss review materials and topic areas with which students are struggling. Teaching assistants will be required to provide a log of their preparation hours and contact time to the course director. At the conclusion of the elective, teaching assistants will write a short reflection on their teaching experience. Students may sign up to assist with more than one course as their schedule permits.  

INTERNAL MEDICINE

Clinical Nephrology..............MDCN2002
4 Credits  
ELECTIVE DIRECTOR: Dr. Sriram Narsipur, Dr. Sarah Lappin  
CONTACT: westml@upstate.edu  
PREREQUISITES: Internal Medicine  
MAXIMUM NUMBER OF STUDENTS: 1  
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012  
ELECTIVE DESCRIPTION: Teaching is oriented around detailed discussion of the pathophysiology and management of renal disease. The consult team includes an attending, fellow, residents, and medical students. Consultations cover chronic kidney disease, fluid and electrolyte disorders, and end stage renal disease to include dialysis and transportation.
Inpatients are seen on observation status, inpatient beds, and in several ICUs at UH and the VA. There are three weekly scheduled conferences and three weekly renal clinics at which students are encouraged to participate. Basic textbook reading and an attempt at evidence based medicine and critical assessment of the literature is required. The student should gain knowledge related to the pathophysiology and treatment of a variety of renal diseases such as glomerulonephritis, kidney stones, fluid and electrolyte disorders, and acute and chronic renal failure. A basic understanding of urinalysis and dialysis will be taught. This rotation provides a true clinical opportunity to integrate physiology, pharmacology, pathology, and molecular biology in disease ranging from chronic outpatient states to critically ill patients in the surgical and medical ICUs. The elective is based at University Hospital with consultations at the VA Hospital and Crousel Hospital. An outpatient transplant clinic and nearby dialysis unit offer optional exposure to chronic management of ESRD.

**Clinical Pulmonary Disease ...... MDCN2004 4 Credits**

**ELECTIVE DIRECTOR:** Dr. James Sexton, Dr. Sarah Lappin  
**CONTACT:** hadcoka@upstate.edu  
**PREREQUISITES:** Internal Medicine  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012  
**ELECTIVE DESCRIPTION:** The major emphasis of the elective is on the diagnosis and management of pulmonary disease and on applied pulmonary physiology. The student will participate in the care of patients on the Pulmonary Service and will see, with the attending physician, all pulmonary consults requested by other services. The student can anticipate seeing problems such as solitary pulmonary nodules, difficult pneumonias, pulmonary infiltrates in immuno-compromised patients, pleural effusions, post-operative pulmonary complications, and pre-operative pulmonary evaluations, chronic obstructive lung disease and asthma. The student will learn the indications for special diagnostic procedures such as CT scans, pleural biopsy, needle aspiration and biopsy, and fiberoptic bronchoscopy. The student will have the opportunity to observe in fiberoptic bronchoscopy. The student will learn to interpret the results of pulmonary function tests and arterial blood gas analysis.

**Clinical Endocrinology, Diabetes & Metabolism ...................... MDCN2005 4 Credits**  
**Preceptor’s Site**  
**ELECTIVE DIRECTOR:** Dr. Marisa Desimone, Dr. Sarah Lappin  
**CONTACT:** haightm@upstate.edu  
**PREREQUISITES:** Internal Medicine  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 004, 005, 006, 007, 008, 009, 010, 011, 012  
**ELECTIVE DESCRIPTION:** The goal of this elective is for the student to demonstrate competency in applying the principles of evaluation and management of adults with general endocrine disorders and diabetes mellitus. Objectives include: 1) Teaching specialized history taking and physical examination, clinical procedures and laboratory testing of patients with endocrine and metabolic abnormalities of all categories; 2) Demonstration of testing procedures and their applications to the known physiology of each endocrine system in an evaluation of that system; 3) Teach the evaluation and management of adults with diabetes mellitus, working with the multidisciplinary Joslin Center team of endocrinologists, educators, nutritionists, exercise specialist, podiatrists and other consultants for diabetes-related complications; 4) Demonstrate how endocrine malfunction can be diagnosed and treated both in specific endocrinopathies of the pituitary, thyroid, parathyroid, pancreas, adrenal cortex and gonads and in other endocrine and metabolic disorders (e.g., lipid disorders, metabolic bone disease, growth disorders, water and electrolyte abnormalities). Ambulatory patient care sessions will be at the Joslin Center for Diabetes, University Endocrinologists and Osteoporosis Center of the SUNY Upstate Medial University and at the Diabetes and Endocrine clinics at the VA Medical Center.

**Clinical Infectious Disease....... MDCN2014 4 Credits**

**ELECTIVE DIRECTOR:** Dr. Stephen Thomas, Dr. Sarah Lappin  
**CONTACT:** scottmic@upstate.edu  
**PREREQUISITES:** Internal Medicine  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012  
**ELECTIVE DESCRIPTION:** An advanced undergraduate course in diagnosis and management of patients with Infectious Diseases. The student, working closely with a Resident or Fellow, will do the initial evaluation of patients referred to our service for consultation, will present his/her patients to the Attending Physician on daily ward rounds and will subsequently be responsible for following his/her patients through their hospital course. He/she will be asked periodically to review certain subjects and to make brief presentations at daily rounds, the weekly Infectious Diseases Conference or the weekly Clinical Case Conference. The student is expected to take advantage of the opportunity to explore clinical microbiology.

**Gastroenterology..................... MDCN2017 4 Credits**

**ELECTIVE DIRECTOR:** Dr. Sekou Rawlins, Dr. Sarah Lappin  
**CONTACT:** krauseb@upstate.edu  
**PREREQUISITES:** Internal Medicine & Surgery  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.  
**ELECTIVE DESCRIPTION:** During this experience, the student will function as the acting intern for patients admitted to the Gastroenterology and Hepatology
services, will learn to provide consultative services in Gastroenterology and will participate in three outpatient sessions weekly. The student will join other members of the section in case-management, journal club, pathology, radiology and clinical conferences. As learning objectives, the student will interpret and integrate data from the clinical record, laboratory, radiology, endoscopic, histopathologic and manometric studies to develop clinical management strategies.

**Hematology/Oncology .......... MDCN2040 4 Credits**

**ELECTIVE DIRECTOR:** Dr. Stephen Graziano, Dr. Sarah Lappin  
**CONTACT:** simmonca@upstate.edu  
**PREREQUISITES:** Internal Medicine  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012  
**ELECTIVE DESCRIPTION:** This experience will be designed to provide an exposure to the problems encountered in diagnosis and treatment of ambulatory patients with a broad variety of solid tumors and hematologic disorders. Training is provided in blood cell identification and the diagnosis and treatment of hematologic disorders. Knowledge of the mechanisms of action, pharmacology, toxicities and the therapeutic indication for various classes of anti-tumor compounds will be obtained. The relationships between the principles derived from experimental tumor systems and human cancer will be emphasized. Additionally, the interdisciplinary nature of oncology practice will be stressed. Emphasis will also be placed upon the various phases of clinical investigation, and experimental design which relates to the development of properly conceived and executed clinical trials. Nine interdisciplinary Clinic sessions will be attended weekly. The student will be expected to accept primary patient responsibility and become intimately involved not only in the medical but also the psychosocial implications of malignant/ hematologic disease.

**Clinical Cardiology ............... MDCN2044 4 Credits**

**ELECTIVE DIRECTOR:** Dr. Timothy Ford, Dr. Sarah Lappin  
**CONTACT:** oliverl@upstate.edu  
**PREREQUISITES:** Internal Medicine  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012  
**ELECTIVE DESCRIPTION:** This course is designed to prove a basic background in clinical cardiology. Students should improve their skills in the physical examination of the heart and gain experiences with pathophysiology, diagnosis, and management of angina pectoris, myocardial infarction and congestive heart failure, hypertension, and valvular heart disease, among other cardiovascular diseases. They will also become familiar with the value of information obtained and the techniques involved in electrocardiographic stress testing, nuclear cardiology and echocardiography. There will be a one hour didactic electrocardiography session per week with supplemental self-assessed learning/computer assisted learning (American College of Cardiology ECG-SAP). Students should be able to understand the data generated from cardiac catheterization and percutaneous coronary interventions including PCTA and Stents. They will also be introduced to the morbidity, mortality and benefits of cardiac surgery. These improvements in clinical skills should lead to the ability to approach a patient with heart disease, along with its diagnosis, evaluation of its severity, and its treatment.

**Critical Care ......................... MDCN2058 4 Credits**

**ELECTIVE DIRECTOR:** Dr. James Sexton, Dr. Sarah Lappin  
**CONTACT:** hadcoka@upstate.edu  
**PREREQUISITES:** Internal Medicine & Surgery  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**ELECTIVE DESCRIPTION:** The students will be taught the theory and techniques used in the management of critically ill patients. After completion of the course a student will be able to understand the management of a patient with multiple system organ failure as well as be comfortable with advanced ventilatory and hemodynamic management. Students receive practical instruction in the performance of invasive procedures including but not limited to central lines, pulmonary artery catheters and arterial lines.

**Clinical Internal Medicine & Infectious Diseases ......................... MDCN2059 4 Credits  Acting Internship Selective, Community General Hospital**

**ELECTIVE DIRECTOR:** Dr. Mitchell Brodey  
**CONTACT:** oliverl@upstate.edu  
**PREREQUISITES:** Internal Medicine & Surgery  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**ELECTIVE DESCRIPTION:** Observation and participation in clinical infectious diseases will include inpatient care at Community General Hospital as well as outpatient experience. Emphasis on diagnosis and treatment of common problems in unusual infectious disease problems and travel medicine. Emphasis is also placed on care of patients with HIV disease both in the outpatient and inpatient setting. After completing the course, the student should have good ability to diagnose and treat inpatient and outpatient medical problems as well as a thorough understanding of the principles and practice of antibiotic use, HIV therapy and travel medicine.
Clinical Dermatology ............... MDCN2066
2 Credits
ELECTIVE DIRECTOR: Dr. Ramsay Farah
CONTACT: oliverl@upstate.edu
PREREQUISITES: Internal Medicine
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: Dermatology will be the focus. Students will see patients on an outpatient basis. Basic dermatologic conditions and procedures will be emphasized. Students will learn skin examination techniques. Emphasis will be placed on recognizing skin lesion morphology and distribution leading to differential diagnosis. Students are expected to be on time and attend all clinics. Case reports and write ups are encouraged.

Clinical Rheumatology ............... MDCN2075
4 Credits
ELECTIVE DIRECTOR: Dr. Andras Perl, Dr. Sarah Lappin
CONTACT: sukerte@upstate.edu
PREREQUISITES: Internal Medicine
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: This is a clinical care experience elective that focuses on the diagnosis, treatment, and management of rheumatological disorders utilizing direct patient contact and case-based teaching. Elective participants will be exposed to rare and common rheumatological conditions through our inpatient consultations and outpatient Adult clinic. Under the supervision of the attending student will develop skills in musculoskeletal examination and clinical evaluation, interpretation of laboratory tests (including joint fluid examination and x-ray and MRI imaging studies) and the management of rheumatic diseases commonly seen by generalists. Participation in regularly scheduled rounds, clinic and other conferences are expected as they provide a more formal training for the students. The course will culminate in the student's presentation at our Friday didactic session. For those interested in clinical or basic science research, please contact the department prior to the start of the elective for arrangements.

The Scientific Basis of Critical Care ............................................ MDCN2214
2 Credits Basic Science Selective
ELECTIVE DIRECTOR: Dr. Dana Savici
CONTACT: dorm@upstate.edu
PREREQUISITES: All third year clerkships
MAXIMUM NUMBER OF STUDENTS: 3
PERIODS OFFERED: 02B, 04A, 06A, 07A, 08A, 08B, 09A, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: The intensive care unit is the setting for dramatic manifestations of organ failure (lung, heart, kidney, liver, etc) and systemic derangements of normal physiology. The basic sciences of physiology, pharmacology, microbiology, anatomy and pathology are utilized on a daily basis to learn and understand each of our critically ill patients. Students will be imbedded in the Medical Intensive Care Unit for a 2 week elective. Students will participate in daily rounds, participate in the care of selected patients, and meet with the course instructor daily for 1 hour (4-5 days per week). The focus of these meetings will be to review the basic science aspects of assigned patients.

The Clinical Experience ............... MDCN2215
6 Credits Pass/Fail Grading
ELECTIVE DIRECTOR: Dr. Sarah Lappin
CONTACT: oliverl@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 12
PERIODS OFFERED: 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: You have come to medical school to become a doctor but doctoring is scant during your MSI year. While you have Practice of Medicine (POM), it only allows you glimpses of the real world of medicine. A 6-week Internal Medicine experience will be much different as you will have an extended stay in the clinical world working with members of the Internal Medicine team. You will gain insight and skills that will serve you well during the remaining three years of medical school. Students will participate in three 2-week blocks in which they will work with faculty, house staff, and, perhaps, clerkship students, in a variety of venues including the following: Outpatient Clinics (General Medicine and Subspecialty) (1.) Intensive Care Unit (2.) Coronary Care Unit (3.) General Medicine Inpatient (4.) Hematology/Oncology Inpatient. Additionally, the student will participate in a weekly small-group session with a member of the faculty to tackle a variety of topics such as clinical case review or physical exam skills.

Acting Internship in Internal Medicine - UH/CGH General Medicine .......... MDCN2217
4 Credits Acting Internship Selective
ELECTIVE DIRECTOR: Dr. Sarah Lappin, Dr. Vincent Frechette
CONTACT: oliverl@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 5
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: This experience allows a medical student, who must have successfully completed the Internal Medicine clerkship, to further develop along the RIME (Reporter, Interpreter, Manager, Educator) pathway. Whereas a clerkship student should have demonstrated proficiency as a Reporter, and hopefully, shown promise as an Interpreter, the Acting Intern is expected to master the Reporter function, demonstrate level-appropriate Interpreter function, and display abilities as Manager and Educator. In this four week rotation, you will function just as an intern would (short of authority to sign orders) on an inpatient service and be supervised by an attending and/or senior resident.
Acting Internship in Internal Medicine - UH
Hematology/Oncology ............... MDCN2219
4 Credits Acting Internship Selective
ELECTIVE DIRECTOR: Dr. Sarah Lappin, Dr. Stephen Graziano
CONTACT: oliverl@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: This experience allows a medical student, who must have successfully completed the Internal Medicine clerkship, to further develop along the RIME (Reporter, Interpreter, Manager, Educator) pathway. Whereas a clerkship student should have demonstrated proficiency as a Reporter, and hopefully, shown promise as an Interpreter, the Acting Intern is expected to master the Reporter function, demonstrate level-appropriate Interpreter function, and display abilities as Manager and Educator. In this four week rotation, you will function just as an intern would (short of authority to sign orders) on an inpatient service and be supervised by an attending and/or senior resident.

Acting Internship in Internal Medicine - VA
General Medicine ..................... MDCN2220
4 Credits Acting Internship Selective, Veteran's Administration Hosp
ELECTIVE DIRECTOR: Dr. Sarah Lappin, Dr. Joan Mitchell
CONTACT: oliverl@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 4
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: This experience allows a medical student, who must have successfully completed the Internal Medicine clerkship, to further develop along the RIME (Reporter, Interpreter, Manager, Educator) pathway. Whereas a clerkship student should have demonstrated proficiency as a Reporter, and hopefully, shown promise as an Interpreter, the Acting Intern is expected to master the Reporter function, demonstrate level-appropriate Interpreter function, and display abilities as Manager and Educator. In this four week rotation, you will function just as an intern would (short of authority to sign orders) on an inpatient service and be supervised by an attending and/or senior resident.

MD/PhD Grand Rounds ............... MDPH602
0 TO 2 Credits Concurrent Elective
ELECTIVE DIRECTOR: Dr. Andras Perl, Dr. Leszek Kotula
CONTACT: sukerte@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 35
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: This course is a required course for students in the MD/PhD program. Interested parties are welcome to attend the bi-weekly seminar component of the course. Student participation varies depending on the stage of training: MSI and MSII students attend Grand Rounds, read assigned papers, and participate in discussion. Students in the PhD years will spend eight clinical hours per month. From each month's clinical experience the student will write up, in detail, a clinical case, reviewing the clinical scenarios, pathophysiology, pharmacology, etc. and also summarize recent advances or gaps in our knowledge with respect to clinical and translation research related to the specific disease and case report. The clinical mentor will review each month’s write-up. Once per year, each student will present one of their clinical cases and discuss the chosen case within the context of the basic, clinical and translational research issues discussed in the relevant case report. The student presenter is also responsible for assigning relevant background papers of the Grand Rounds seminar and facilitating discussion. Students will be required to arrange a clinical mentor for each semester of their PhD training. To ensure a breadth of exposure, students will be required to select a minimum of two different clinical areas of experience during the course of their PhD training. MSI and MSIV student participation is the same as students in the PhD years. Cases will be chosen from their clerkships. Course grading and credit hours depending on the stage of training for the student.

NEUROSCIENCE & PHYSIOLOGY
Current Research in Obesity and Regulation of Appetite .......... NEUP6201
0.5 Credits Concurrent Elective
ELECTIVE DIRECTOR: Dr. Mary Lou Vallano
CONTACT: vallanom@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 4
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: The purpose of this seminar-based course is to develop the student's knowledge of current research strategies and discoveries in a focused and clinically-relevant area of medical research. The centerpiece of the course, aimed at academically-minded students, will be four videotaped lectures by NIH-funded, international experts in the field of autism and neurodevelopmental diseases. The format includes four primary activities: (1) student pre-seminars; (2) videotaped lectures obtained from the NIH archives; (3) critical discussion periods involving students and 2-3 expert faculty members; (4) a short paper. To enhance their organizational, communication, and critical-thinking skills, each student will develop a pre-lecture power point presentation as an introduction to the videotaped NIH lecture. It will be ~50 min in length to allow some time for questioning and the presenter will assign 2 papers for all participants to read in advance. Students will be required to view the lecture video in advance of preparing their pre-seminar so as to tailor the presentation for maximal audience benefit and minimal overlap with the lecture. Following this, the NIH lecture will be viewed (~1hr). Afterwards, students and faculty will participate in a critical
discussion of the topic, including clinical considerations and future therapeutic relevance. Following all four pre-seminars, lectures, and discussions, students will submit a short written paper summarizing the current status of the field, including future goals and experimental strategies (~5 pages). Students will have opportunities to consult with participating faculty as they prepare their presentations and papers. Students will receive written formative feedback based on their presentations, paper, and participation.

Current Research in Autism and Neurodevelopmental Diseases...NEUP6202
0.5 Credits Concurrent Elective
ELECTIVE DIRECTOR: Dr. Mary Lou Vallano
CONTACT: vallanom@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 4
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: The purpose of this seminar-based course is to develop the student's knowledge of current research strategies and discoveries in a focused and clinically-relevant area of medical research. The centerpiece of the course, aimed at academically-minded students, will be four videotaped lectures by NIH-funded, international experts in the field of autism and neurodevelopmental diseases. The format includes four primary activities: (1) student pre-seminars; (2) videotaped lectures obtained from the NIH archives; (3) critical discussion periods involving students and 2-3 expert faculty members; (4) a short paper. To enhance their organizational, communication, and critical-thinking skills, each student will develop a pre-lecture power point presentation as an introduction to the videotaped NIH lecture. It will be ~50 min in length to allow some time for questioning and the presenter will assign 2 papers for all participants to read in advance. Students will be required to view the lecture video in advance of preparing their pre-seminar so as to tailor the presentation for maximal audience benefit and minimal overlap with the lecture. Following this, the NIH lecture will be viewed (~1hr). Afterwards, students and faculty will participate in a critical discussion of the topic, including clinical considerations and future therapeutic relevance. Following all four pre-seminars, lectures, and discussions, students will submit a short written paper summarizing the current status of the field, including future goals and experimental strategies (~5 pages). Students will have opportunities to consult with participating faculty as they prepare their presentations and papers. Students will receive written formative feedback based on their presentations, paper, and participation.

NEUROLOGY
Acting Internship in Adult Clinical Neurology .........................NEUR2801
4 Credits Acting Internship Selective
ELECTIVE DIRECTOR: Dr. Michael Vertino
CONTACT: vertinom@upstate.edu
PREREQUISITES: All third year clerkships
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: The Adult Neurology Acting Internship will help students broaden their knowledge of neurology, enhance their clinical acumen, localization and examination skills, and competence. Each AI will serve as an integral part of the team, either on the inpatient service or the consultation service. The AI will be responsible, under the supervision of housestaff and attending physicians, for the evaluation of and management of patients assigned to them. Students will take night calls and make work rounds with their supervising resident. Acting interns will participate in all scheduled conferences for the housestaff, including morning report, EEG/EMG conference, neuro-Ophthalmology and the resident review course sessions. Outpatient experiences may be arranged depending on the time schedule and availability of faculty members. Evaluation of students is based on their oral presentations, written documentation, interactions with housestaff and attendings and other educational assignments.

Clinical Pediatric Neurology ...... NEUR2804
2 TO 4 Credits
ELECTIVE DIRECTOR: Dr. Ai Sakonju, Dr. Klaus Werner
CONTACT: sakonjua@upstate.edu
PREREQUISITES: Pediatrics & Neuroscience
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This elective will give students the opportunities to participate in the care and consultations of acute inpatient and outpatient pediatric neurology. They will gain familiarity with the essentials of the pediatric neurologic examination at various developmental stages. The student may further elect to concentrate on specific areas of interest with the help of faculty and resident physicians.

Elective with Practicing Neurologist
.................................................. NEUR2808
4 Credits
ELECTIVE DIRECTOR: Dr. Michael Vertino
CONTACT: vertinom@upstate.edu
PREREQUISITES: Neuroscience
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This elective will provide an outpatient experience for students interested in neurology. Students help arrange their own schedule over the 4-week period to include working with neurologist from the following specialities: Neuromuscular disease/EMG, epilepsy/EEG/evoked potentials, neuroophthalmology/headache, Cerebrovascular disease, General neurology, Pediatric neurology, Movement disorders, Cognitive neurology,
Multiple sclerosis. The month will be scheduled according to the student’s interests and the availability of attending physicians. Students will have the opportunity to participate in patient care within the above areas. Students should contact the attending physicians with their areas of interests to determine availability and then contact Lisa Kelly for assistance with scheduling.

**Neuro-Ophthalmology** .......... NEUR2814

4 Credits

**ELECTIVE DIRECTOR:** Dr. Luis Mejico  
**CONTACT:** mejicol@upstate.edu

**PREREQUISITES:** Neuroscience  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** Neuro-ophthalmology interfaces Neurology, Ophthalmology, Neurosurgery, and Medicine to evaluate patients who have non-ophthalmic problems of the visual system. Students will learn to use the basic principles of the neurological history and examination, coupled with techniques of the ophthalmological examination to investigate various neuro-ophthalmic problems. Majors areas of emphasis include optic nerve disorders, visual field defects, ocular motility problems, neuroophthalmic manifestations of systemic diseases, familiarity with various neurodiagnostic tests, and therapeutics. Some experience in evaluation of neurological patients is included. Students will participate in weekly Neuro-ophthalmology conference and will be assigned responsibility for the preparation of one session during their rotation. Most of the experience will be with outpatients, and some inpatient consultations.

**NEUROSURGERY**

**Neurosurgery Acting Internship** ... NSUG3201

4 Credits  
**ELECTIVE DIRECTOR:** Dr. Lawrence Chin  
**CONTACT:** kellyl@upstate.edu

**PREREQUISITES:** Neuroscience  
**MAXIMUM NUMBER OF STUDENTS:** 2  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** The goal of the Neurosurgery Acting Internship will be to increase the ability of the student to carry out a thorough evaluation of a patient with neurologic disease. The Acting Internship will provide the student with direct responsibility for patient care under supervision of the neurological attending and house staff. Emphasis will be placed on the evaluation of neurological problems by history and neurologic examinations. In addition, the student will be instructed in the interpretation of standard x-ray procedures used in neurologic diagnosis. Full participation in the conferences, seminars, and clinics of the Neurosurgery Service will be part of this program. At the end of this course we would expect that the student would be able to evaluate a patient with a neurological problem, make a reasonable differential diagnosis, and be able to outline a course of laboratory studies and diagnostic procedures designed to provide a firm diagnosis. Further, we would expect the student to be able to carry out basic pre- and post-operative care of neurosurgical patients.

**OBSTETRICS & GYNECOLOGY**

**High Risk Obstetrics Acting Internship**  
............... OBGY3604

4 Credits  
**ELECTIVE DIRECTOR:** Dr. Robert Silverman  
**CONTACT:** falcones@upstate.edu

**PREREQUISITES:** Ob/Gyn  
**MAXIMUM NUMBER OF STUDENTS:** 2  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This represents an intensive experience with the clinical management of High Risk Obstetrical patients being seen in the obstetrical unit of Crouse hospital and in the outpatient area of the Regional Perinatal Center. Special attention is given to identification of high risk patients, intensified perinatal care, experience with tests of fetal well being (amniocentesis, NST, BPP, ultrasound) during the prenatal period as well as intrapartum period (fetal heart rate monitoring, scalp PH, etc.). The student will gain an insight into maternal-fetal medicine at the clinical level. Specific goals are: 1) Clear knowledge of and an ability to apply the high risk scoring system; 2) Ability to interpret tests of fetal welfare. A review and presentation of a topic in high risk obstetrics will be required to be completed within the elective period.

**General OB/GYN Acting Internship**  
............... OBGY3605

4 Credits  
**ELECTIVE DIRECTOR:** Dr. Maureen Burke  
**CONTACT:** rydelek@upstate.edu

**PREREQUISITES:** Ob/Gyn  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** Elective Description: This elective is designed to expose students interested in obstetrics and gynecology to a multitude of situations involved with inpatient and outpatient care management. Time will be spent primarily in the outpatient office and colposcopy clinic as a sample of the breadth of generalist OB basic practice. The student will spend time on labor and delivery as well as in the OR and will take call with the instructor. A chosen topic will be prepared and presented formally at the departmental Practice Based Learning and Improvement Conference by the completion of the elective. Based on student interest, there will be opportunity for involvement in Quality Improvement Research which is ongoing with the rotation mentor and our residents.
Reproductive Endocrinology and Infertility .................................................. OBGY3608
4 Credits
ELECTIVE DIRECTOR: Dr. Shawky Badawy
CONTACT: badawys@upstate.edu
PREREQUISITES: Ob/Gyn
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: The goal of this course is to familiarize medical students with specific women's health care issues, including sexuality, pregnancy, contraception, abortion, preventive health matters, also including peri-menopausal issues, domestic violence and STD prevention. Students will be responsible to produce a research paper on a related area of their choice, with preceptor's concurrence. They will participate in a variety of outpatient facilities, as well as operating room sessions. Patient counseling issues will be strongly emphasized. Reading assignments will be tailored to the student's particular area of interest.

AI in Reproductive Health ........ OBGY3619
4 Credits Acting Internship Selective
ELECTIVE DIRECTOR: Dr. Renee Mestad, Zevidah Vickery
CONTACT: mestadr@upstate.edu
PREREQUISITES: Ob/Gyn
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: The goal of this course is to familiarize medical students with specific women's health care issues, including sexuality, pregnancy, contraception, abortion, preventive health matters, also including peri-menopausal issues, domestic violence and STD prevention. Students will be responsible to produce a research paper on a related area of their choice, with preceptor's concurrence. They will participate in a variety of outpatient facilities, as well as operating room sessions. Patient counseling issues will be strongly emphasized. Reading assignments will be tailored to the student's particular area of interest.

Miracle Continuity ......................... OBGY3622
2 Credits Concurrent Elective
ELECTIVE DIRECTOR: Dr. Diane Folk, Dr. Jodi Wallis
CONTACT: folkd@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 20
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: The MIRACLE Continuity Elective is a fifteen-month elective opportunity providing both academic and field experiences for first year medical students who desire to gain information, insights and experiences regarding 1) The continuity of care in woman and child health; 2) The psychosocial dimension of care; 3) The pre- and perinatal primary parenting factors involved in optimum maternal and child health care and 4) The nature of pregnancy, birth and breastfeeding and their impact on maternal/child health and the emerging family. Each student is paired with a family receiving pregnancy care within the SUNY Maternal Child Health Center component of the University Health Care Center and local OB/GYN practices. Pairing will occur during the mid second trimester following family consent. Students will remain involved with the family throughout the pregnancy, at birth and through newborn child care until the child’s first birthday. The objectives are 1) To provide an opportunity for medical student-family interaction during the period from pregnancy through the child’s first birthday in a co-learning partnership between student and the family; 2) To incorporate wellness into everyday lives of the family and the student; 3) To inform both medical students and parent of the basic tenets of parenting during pregnancy, birthing, breast feeding; 4) To provide an opportunity for women and their families to influence the health care system of the future; 5) To gain valuable insights into the relationship of basic science course work to clinical practice of medicine.

An Approach to Critical Analysis of the Literature of Patient Management .................................. OBGY3625
2 Credits
ELECTIVE DIRECTOR: Dr. Raja Abdul-Karim
CONTACT: abdulr@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 03A, 03B, 04A, 04B, 05A, 05B, 06A, 06B, 08A, 08B, 09A, 09B, 10A, 10B, 11A, 11B
ELECTIVE DESCRIPTION: The focus of this two week elective is to help students develop and sharpen their skills in evaluating the literature and their analysis of a patient’s history, physical examination findings and management. Students will be required to review and critique published articles, review or perform history and physical examinations, and identify and discuss any deficiencies. They will outline a management plan and justify each recommendation, including laboratory tests. This one-to-one approach will enhance a student’s analytical skills in the relatively short span of two weeks.

**Office-Based Obstetrics and Gynecology**

**ELECTIVE DIRECTOR:** Dr. George Stanley

**CONTACT:** GLS1@schnyc.com

**4 Credits**

**ELECTIVE DESCRIPTION:** This very busy office-based practice will expose the students to a full spectrum of obstetric and gynecologic disease processes. In addition to their responsibilities with patient care in the office, students will assist in surgeries, attend deliveries, and take 4 night calls with the attending physician. Students will function on a level commensurate with their abilities under the direction of the attending staff.

**Breast Disease**

**ELECTIVE DIRECTOR:** Dr. Jayne Charlamb

**CONTACT:** rydelekc@upstate.edu

**4 Credits**

**ELECTIVE DESCRIPTION:** The goal of the course is to gain in-depth exposure in the diagnosis and treatment of benign and malignant breast disease from a multidisciplinary perspective. Primary focus is on participation in evaluation and treatment of outpatients at the Breast Care and Surgical Center at 90 Presidential Plaza (UHCC). History taking with the attending, physical exams with the attending and office procedures with the attending will be emphasized to provide an understanding of the approach to various medical problems of the breast. Participation in the OR is also encouraged with review of the specimens in pathology to provide a more comprehensive view of the diagnostic process. Experience in the mammography, ultrasound, needle localization and radiation therapy is available in the radiology department, if the student is interested. The student is encouraged to participate in the Multidisciplinary Breast Cancer Program held at the Regional Oncology each Friday afternoon. Teaching will occur on a one-to-one basis with attending; independent reading and learning is imperative.

**OPHTHALMOLOGY**

**Ophthalmology**

**ELECTIVE DIRECTOR:** Dr. Robert Fechtner

**CONTACT:** charltoe@upstate.edu

**PREREQUISITES:** Internal Medicine & Surgery

**MAXIMUM NUMBER OF STUDENTS:** 2

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** In this course, an attempt is made to give the student an understanding of the eye, its function, abnormalities and diseases, and its relation to the body as a whole. Students are taught history taking and techniques of examination. They are expected to intelligently approach a patient with eye problems, ask the proper questions to obtain a valuable history, and examine a patient to adequately understand pathology if it exists. No attempt is made to teach students to refract in the short time allowed; however, they should be able to do a reasonable visual field. Although students attend surgery and learn surgical techniques as part of the curriculum, most of the elective time is spent in the Eye Clinic working up patients as the student’s ability develops. To be able to recognize the more serious problems that threaten vision and require treatment, and to have a basic understanding of therapy are main focuses of the elective. As students develop a working knowledge of the ophthalmoscope, they become familiar with eye changes in systemic disease, including fundus changes in systemic disease as well as local disease. Students make rounds with the residents and attendings, and take part in morning conferences each day. Students are encouraged to participate in case presentations and literature reviews, attending all Visiting Professor Days, lectures, seminars, Journal Clubs, and special programs on the Departmental schedule. DVD teaching sets, as well as a departmental library, provide a background for clinical exposure and patient care. A 20-minute presentation by students taking the elective for at least 4 credits is part of the Course curriculum.

**Eye Pathology**

**ELECTIVE DIRECTOR:** Dr. Ann Barker-Griffith

**CONTACT:** barkerga@upstate.edu

**PREREQUISITES:** None

**MAXIMUM NUMBER OF STUDENTS:** 0

**PERIODS OFFERED:** 001, 004, 006, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** By study of current and teaching set pathologic specimens, the students will learn how ocular structure and function are affected by the major ocular diseases. Clinical-pathologic correlation and therapy will be emphasized. The students will learn how to examine ocular specimens using both the dissecting and the light microscope, and will participate in the complete work-up of these pathologic cases. It is expected that they will have a functional vocabulary of ophthalmic terms, a working knowledge of ocular anatomy, and a rational approach to eye disease at the completion of this course.
Ophthalmology.......................... OPTH4003
4 Credits
ELECTIVE DIRECTOR: Dr. Robert Fechtner
CONTACT: charltoe@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: Student will spend majority of his/her time in the private office of a practicing ophthalmologist, learning the routine of office practice. The student will also observe in the operating room when the attending physician is operating, and spend time in the clinics on the attending's clinic days. Students are expected to attend departmental lectures, seminars, etc. A 20-minute presentation in the Department at the end of the elective is part of the Course curriculum for all students taking the elective for at least 4 credits.

Clinical Elective in Ophthalmology & Otolaryngology ......................... OPTH4004
4 Credits
ELECTIVE DIRECTOR: Dr. Robert Fechtner
CONTACT: charltoe@upstate.edu
PREREQUISITES: Surgery
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: This elective is offered as a combined learning experience by the Departments of Otolaryngology and Ophthalmology. The primary objective of the elective is to provide a broad exposure to the "medical" aspects of the specialties as they would be encountered by the primary care physician. The greatest proportion of the student's time will be directed towards the outpatient evaluation and care of common problems of the eyes, ears, nose and throat with minimal emphasis on the surgical and more complicated problems relating to the specialty.

ORTHOPEDIC SURGERY
Orthopedic Acting Internship - Upstate Medical University...................... ORTH4401
4 Credits Acting Internship Selective
ELECTIVE DIRECTOR: Dr. Brian Kistler
CONTACT: bordeauj@upstate.edu
PREREQUISITES: Surgery
MAXIMUM NUMBER OF STUDENTS: 4
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: This Acting Internship is designed for the student interested in an orthopedic surgery residency program. The acting internship is an attempt to allow the student to put into practice those skills and concepts gained in the third year clerkship. Students are expected to participate throughout the range of activities within the department on both an inpatient and outpatient basis, from ER to the OR. The student will assume as much responsibility for the management and care of his patients as his skill and interest allow. Whether one is making a decision about Orthopedic Surgery as a career, or using the opportunity as enrichment for another discipline, this should allow the "fleshing out" of those objectives defined and distributed in the third year.

Pediatrics Orthopedics.................. ORTH4405
4 Credits
ELECTIVE DIRECTOR: Dr. Danielle Katz
CONTACT: bordeauj@upstate.edu
PREREQUISITES: Surgery & Pediatrics
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: A wide variety of children's musculoskeletal problems will be presented to the student utilizing clinics, the Emergency Department, and elective and emergent surgery. Approaches to evaluating and treating both common and more complex problems will be carried out under the supervision of the resident and attending staffs. The student will be encouraged to become actively involved with care of the patients; responsibility in each area will be increased as the student's skills develop and will depend upon his/her availability and initiative. At the conclusion of the elective, the student should be more at ease with pediatric patients and their parents and more adept at appropriately recognizing and dealing with common pediatric orthopedic problems.

Orthopedic Acting Internship in Sports Medicine ......................... ORTH4406
4 Credits
ELECTIVE DIRECTOR: Dr. John Cannizzaro
CONTACT: bordeauj@upstate.edu
PREREQUISITES: Surgery
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: The student will be part of the Sports Medicine team, managing athletic injuries with the three members of the faculty and Sports Orthopedic Resident. The student will be expected to assist in the Operating Room and the surgical care of injured athletes. A mini-research project can be developed with the faculty. At the completion of this acting internship, the student should have a general knowledge of musculoskeletal athletic injury and an exposure to some of the responsibilities of a team physician. The non-operative approach to most athletic injuries should be appreciated as well as the thought process involved in surgical care.
PERIODS OFFERED:   001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
MAXIMUM NUMBER OF STUDENTS:  1
ELECTIVE DESCRIPTION:  Students will become proficient in the diagnosis, pathophysiology, and non-operative and operative treatments for common hand, elbow, and shoulder disorders. Students will gain a fundamental knowledge and understanding of anatomy about the upper extremity. Students will actively participate in clinic outpatient care and actively assist in the operating room during surgical cases. Experience will be gained in general orthopedic and soft tissue surgical techniques, including tendon repair, neurovascular repairs, and bony orthopedic procedures. A close association exists between the repair, neurovascular repairs, and bony orthopedic and soft tissue surgical techniques, including tendon repair. Experience will be gained in general orthopedic and soft tissue surgical techniques, including tendon repair, neurovascular repairs, and bony orthopedic procedures. A close association exists between the repair, neurovascular repairs, and bony orthopedic and soft tissue surgical techniques, including tendon repair.

Hand, Shoulder, Elbow Surgery. ORTH4412
4 Credits
ELECTIVE DIRECTOR: Dr. Kevin Setter
CONTACT: bordeauj@upstate.edu
PREREQUISITES: Surgery
Maximun number of students: 1
Periods offered: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: The rotation is 4 weeks in duration. Each student will choose from a list of the following subspecialties which have specific time frames and include: Hematopathology/Bone Marrows, Blood Bank/Transfusion Medicine, Microbiology/Virology, Cytogenetics, Molecular Diagnostics, Special Hematology/Special Chemistry, Immunology, Flow Cytometry, and Andrology. Each requires permission of the respective lab director in order to fit lab schedules. The student will participate in the laboratory training program along with the resident(s) on service, review study sets, assist in the evaluation of cases, and participate in sign-outs with attendings or in the clinical evaluations appropriate to the service. They may, by prior arrangement in some services, receive instruction in laboratory techniques. Intensity of technical instruction will vary with interest, level of student effort and length of stay. These rotations will expose the student to the function of a Clinical Laboratory and the role of a Pathologist. Prior arrangement and approval is necessary, for the best experience and coordination, contact Linda Underwood (underwol@upstate.edu) early in the academic year.

Clinical Pathology ………………….PATH5214
4 Credits  Basic Science Selective
ELECTIVE DIRECTOR: Dr. Robert Hutchison
CONTACT: underwol@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 001, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

Andrology …………………..PATH5222
1 Credits
ELECTIVE DIRECTOR: Dr. Kazim Chohan
CONTACT: chohank@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 01A, 01B, 02A, 02B, 03A, 03B, 04A, 04B, 05A, 05B, 06A, 06B, 08A, 08B, 09A, 09B, 10A, 10B, 11A, 11B, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: Through this elective students will gain knowledge about male reproductive physiology, male factor infertility, semen analysis and application of results, sperm function tests, sperm preparations for assisted reproduction and become familiar with the latest techniques in evaluating male infertility. Students will also learn clinical laboratory management. This course is highly recommended for students interested in Pathology, Urology, Endocrinology, Obstetrics and Gynecology, Internal
and Family Medicine specialties. The Course is open all year and offered to one student per one week rotation.

**Forensic Pathology**

*PATH5223*  
4 Credits  
Basic Science Selective

**ELECTIVE DIRECTOR:** Dr. Nika Aljinovic  
**CONTACT:** CatherineUnger@ongov.net  
**PREREQUISITES:** None

**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** Students will gain exposure to medicolegal death investigation and forensic pathology through observation and participation in autopsies conducted by forensic pathologists at the Onondaga County Medical Examiner’s Office (MEO), attendance at death scenes with medicolegal death investigators, observation of court testimony (when opportunities available), and attendance at forensically-relevant journal club, Pathology resident didactics, and Grand Rounds occurring during the rotation month. Daily rotation activities will include attendance at MEO morning briefing, autopsies, and death scenes, as well as assisting Medical Examiners with review of medical records on cases.

**Virtopsy: An Introduction to Advanced Imaging in Radiology and Pathology**

*PATH5224*  
2 Credits  
Concurrent Elective

**ELECTIVE DIRECTOR:** Dr. Paul Shanley  
**CONTACT:** kellykc@upstate.edu  
**PREREQUISITES:** None

**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** Concurrent, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** Virtopsy integrates imaging (radiology) and pathologic examination. Students will follow the analysis of an Upstate University Hospital death through the process of gathering the patient history, evaluation by whole body CT imaging and autopsy examination over a span of two weeks. Students will come to appreciate the power of the multidisciplinary approach already being utilized in forensic medicine and the possible future of minimally invasive post-mortem study of disease.

**PEDIATRICS**

**Pediatric Acting Internship**

*PEDS5601*  
4 Credits  
Acting Internship Selective

**ELECTIVE DIRECTOR:** Dr. John Andrake  
**CONTACT:** andrakej@upstate.edu  
**PREREQUISITES:** Pediatrics

**MAXIMUM NUMBER OF STUDENTS:** 2  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This elective is designed to provide the student with the opportunity to evaluate and manage ill children on the Pediatric Inpatient Service. The Acting Intern will gain experience with independently assessing and developing diagnostic and management plans for the inpatients. They will address both common and complex problems necessitating admission. Through rounds and patient care discussions, they will increase their fund of knowledge of pediatric medicine. The acting intern will refine clinical assessment skills and learn to set priorities, carry out management plans, perform necessary diagnostic and therapeutic procedures, and develop their communication skills with patients and families. The student will function as part of the Pediatric Medical Team, working with nursing, case management, and social workers in order to provide comprehensive care. They will communicate with the faculty, consultants, community attendings and referring physicians to obtain clinical information and arrange follow-up care. The students' responsibilities will be comparable to the level of a pediatric intern.

**Delivery of Outpatient Care in Pediatrics**

*PEDS5603*  
4 Credits

**ELECTIVE DIRECTOR:** Dr. Winter Berry  
**CONTACT:** berryw@upstate.edu  
**PREREQUISITES:** Pediatrics

**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** Instructional objectives: Students will be able to: 1) Perform complete examinations on children of all age groups in the Pediatric clinic; 2) Appraise the various reasons for seeking medical care; 3) Discriminate between "sick" and "well" children; 4) Interpret sequential growth charts; 5) Develop immunization schedules for children; 6) Organize an approach to the management of patient problems; 7) Develop an awareness of psychological reactions of the child to his illness, family, and environment.

**Pediatric Hematology-Oncology Acting Internship**

*PEDS5604*  
4 Credits  
Acting Internship Selective

**ELECTIVE DIRECTOR:** Dr. Andrea Dvorak  
**CONTACT:** dvoraka@upstate.edu  
**PREREQUISITES:** Pediatrics

**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This course is designed to cover the entire area of Pediatric Hematology Oncology in depth by exposure to a wide variety of clinical disorders and by participation in all existing conferences. Students will be expected to participate in patient care and will have the opportunity to perform procedures (IV's, bone marrows, spinal taps). Disorders of red cells, white cells, platelets, basic coagulation abnormalities, malignancies and principles of use of chemotherapeutic agents will be learned from both theoretical and practical viewpoints. Students will also be exposed to research that the faculty are presently pursuing. No required night call.
**Pediatric Infectious Disease**...... PEDS5606
4 Credits
ELECTIVE DIRECTOR: Dr. Leonard Weiner
CONTACT: weinerl@upstate.edu
PREREQUISITES: Internal Medicine & Pediatrics
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: Clinical experience is provided in both the prevention, control, diagnosis and management of infectious diseases on the outpatient and inpatient services. The student is expected to be actively involved in the consultative role of the pediatric infectious disease division. The student may also participate in epidemiologic investigations or pursue special interests in the area of pediatric infectious diseases.

**Pediatric Cardiology** .............. PEDS5607
4 Credits  Preceptor’s Site
ELECTIVE DIRECTOR: Dr. Frank Smith
CONTACT: smithf@pcacny.com
PREREQUISITES: Internal Medicine & Pediatrics
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: Our elective introduces students to a wide variety of cardiac diagnoses in the fetus, infant, child, and adolescent, as well as the adult with congenital heart disease. Students learn to evaluate children with known or suspected heart disease in a busy outpatient setting. Emphasis is placed upon learning to perform a thorough, focussed cardiac history and physical examination. During the elective students review many electrocardiograms and echocardiograms with attendings in clinic and they are also invited to attend at least one invasive procedure (e.g. cardiac catheterization, catheter-based intervention, electrophysiological study with or without radiofrequency ablation, or a cardiac operation). Students should attend all conferences of the Division and each student is also expected to make a final presentation to the members of the Division at the end of the elective. After completion of our elective, students should have a clearer overview of heart disease in children and a greater ability to differentiate murmurs, chest pain, syncope and palpitations that are benign from those that are caused by significant cardiac disease.

**Pediatric Pulmonology** .......... PEDS5617
4 Credits
ELECTIVE DIRECTOR: Dr. Zafer Soultan, Dr. Christopher Fortner
CONTACT: soutlanz@upstate.edu
PREREQUISITES: Pediatrics
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: The student will learn about and participate in the management of pediatric patients with pulmonary disorders. Specific emphasis will be placed on asthma, bronchopulmonary dysplasia, cystic fibrosis, hypnotherapy and patients with tracheostomies or requiring ventilatory support. The student will be expected to present a specific topic at a Divisional seminar. Opportunities exist for participation in Divisional research activities.

**Continuity of Pediatric Ambulatory Care**

**Pediatrics**

**Continuity of Pediatric Ambulatory Care**
PEDS5627
2 TO 6 Credits  Concurrent Elective
ELECTIVE DIRECTOR: Dr. Winter Berry
CONTACT: berryw@upstate.edu
PREREQUISITES: Pediatrics, Family Medicine & Ob/Gyn
MAXIMUM NUMBER OF STUDENTS: 5
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: This is a year long elective from August to April. Students will have the opportunity to care for the needs of children in a weekly continuity clinic in the Outpatient Department of Pediatrics (OPD). Each student will attend one clinic session (afternoon) per week as part of a continuity program organized for residents. Students will be assigned a number of families of young children who will be followed throughout the year. Students will have the opportunity to observe the growth and development of well infants as well as participate in the management of a variety of patient problems which face the practicing pediatrician.

**Adolescent Medicine** .......... PEDS5628
4 Credits  Concurrent Elective
ELECTIVE DIRECTOR: Dr. Karen Teelin
CONTACT: teelin@upstate.edu
PREREQUISITES: Pediatrics
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 005, 006, 007, 008, 010, 011, 012, CCR
ELECTIVE DESCRIPTION: The goal of the adolescent medicine rotation for medical students is to help them become competent, confident, and comfortable performing comprehensive medical evaluations on adolescent patients. During this rotation it is planned that the medical student be exposed to the following areas of adolescent health care: orthopedic problems, gynecology and contraceptive counseling, drug and alcohol related problems, psychiatric disorders, adolescent pregnancies, endocrine problems, and venereal disease. The medical student will also be exposed to the general health care of adolescent patients in both inpatient and ambulatory settings.

**Pediatric Gastroenterology & Nutrition**

**Pediatric Gastroenterology & Nutrition**
PEDS5638
4 Credits
ELECTIVE DIRECTOR: Dr. Mirza Beg
CONTACT: begm@uspstate.edu
PREREQUISITES: All third year clerkships
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: The purpose of this elective is to introduce the fourth year medical student to the
Pediatric Gastroenterology and Nutrition in a primarily out patient setting with no night call or weekend duties. Students will observe our approach in evaluation and treatment of patients with gastrointestinal diseases and nutritional deficiencies. They will actively participate in patient assessment and treatment recommendations. The student will first assess the patient through history, physical exam and discussion with the parents/patient regarding current symptoms. The student then will present the patient to the GI provider who goes over laboratory tests, procedures or treatment. Student will also participate in operating room to observe endoscopy, colonoscopy, polypectomy, esophageal dilatation, pH probe, impedance study, Bravo pH analysis and endoscopic placement of gastrostomy tube. There will also be daily teaching and discussion. Each student should present one power point topic during this elective. The reading materials will be given and suggested to student.

**Genetics............................... PEDS5640**

*4 Credits Basic Science Selective*

**ELECTIVE DIRECTOR:** Dr. Robert Lebel

**CONTACT:** lebelr@upstate.edu

**PREREQUISITES:** None

**MAXIMUM NUMBER OF STUDENTS:** 1

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This selective has been developed to reinforce the principles of genetics presented in the first year of medical school and to show medical students that an understanding of genetics is a critical skill in medicine today. The selective will take the student from a clinical evaluation, through the thought process of establishing a diagnosis including literature review and interpretation of test results. In addition, the students will spend time in the Cytogenetics and Molecular Diagnostics Laboratories to gain a better appreciation of how laboratory tests are developed, implemented, and utilized to aid in diagnostics.

**Pediatric Nephrology .................. PEDS5641**

*4 Credits*

**ELECTIVE DIRECTOR:** Dr. Scott Schurman

**CONTACT:** schurmas@upstate.edu

**PREREQUISITES:** Internal Medicine & Pediatrics

**MAXIMUM NUMBER OF STUDENTS:** 1

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** The student will be trained in basic renal physiology in newborns through adulthood. There will also be exposure to common renal diseases of children as well as more unusual conditions by participation in out patient and in patient care. By completion of the course there should be a basic understanding of how renal diseases affect the well-being of children.

**Developmental Pediatrics .......... PEDS5644**

*4 Credits*

**ELECTIVE DIRECTOR:** Dr. Louis Pellegrino, Dr. Nienke Dosa

**CONTACT:** mconner@upstate.edu

**PREREQUISITES:** Pediatrics

**MAXIMUM NUMBER OF STUDENTS:** 6

**PERIODS OFFERED:** 001, 003, 004, 005, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** The student will learn about normal development through reading and participate in the diagnosis and management of pediatric patients with developmental disorders in several different clinics and programs. They will attend the following clinics and programs: Autism Spectrum Program, Child Development Program, Developmental Evaluation Center, Physical Disabilities Program and Spina Bifida Clinic. Specific emphasis will be placed on the diagnosis, management, and services available for children with ADHD, autism, cerebral palsy, Down syndrome, speech and language disorders, and spina bifida. They will write a short review on a topic in child development at the end of the elective.

**Peds International Health Clinic PEDS5645**

*4 Credits Concurrent Elective*

**ELECTIVE DIRECTOR:** Dr. Bradley Olson

**CONTACT:** olsonb@upstate.edu

**PREREQUISITES:** Pediatrics

**MAXIMUM NUMBER OF STUDENTS:** 2

**PERIODS OFFERED:** Concurrent, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** This is a year long elective from August to April. The Pediatric Internation Health Clinic is a refugee clinic that serves primarily African (Sudan, Somalia & Liberia), South East Asian (Thailand and Burma) and Middle Eastern refugees. These patients present a unique spectrum of tropical diseases including; active tuberculosis, malaria, schistosomiasis, giardiasis and helminthiasis. Students will attend one clinic session (morning) per week where they will care for newly arrived refugee children during their first year in the United States. They will have the unique opportunity to work one on one with a pediatric faculty member dedicated to serving this unique population.

**Wilderness and Environmental Medicine.............................PEDS5646**

*3 Credits Preceptor’s Site*

**ELECTIVE DIRECTOR:** Dr. Thomas Welch

**CONTACT:** DelaneyB@upstate.edu

**PREREQUISITES:** None

**MAXIMUM NUMBER OF STUDENTS:** 6

**PERIODS OFFERED:** 001, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** This is a unique elective, which combines a formal curriculum in backcountry skills with training and experience in wilderness medicine and hygiene. The course follows the national curriculum of the Wilderness Education Association’s Wilderness Steward Program (www.weainfo.org). This curriculum incorporates a number of specific cognitive and physical competencies requisite for safe travel in the backcountry, including those such as judgment and leadership, nutrition, land navigation, etc. Basic skills in technical areas such as rock climbing and
snow travel are also incorporated. Beyond this basic curriculum, additional material on backcountry safety, hygiene, and first aid will be included. The content for this portion of the course will be derived from the American Red Cross’s Wilderness First Aid course, and participants will receive this certification. The level of detail for these portions of the course will be appropriate for a medical student with a year or more of preclinical training, and will exceed that typically required by the WFA program. The course will be taught in Denali State Park, Alaska. After one day of orientation at the Denali Education Center base camp, participants will move into the backcountry for about two weeks. All of the formal teaching in the course will take place on the trail, at campsites, and will often utilize “teachable moments”. Pre- and post-trek readings will be assigned. The only formal prerequisite for participation is current CPR certification, since this is a prerequisite for ARC Wilderness First Aid. On the other hand, participants should have a level of physical and emotional fitness appropriate for an extended backcountry expedition, and have sufficient previous experience in backpacking and camping to feel comfortable in such settings. Personal camping gear will be the responsibility of individual participants, and will be reviewed in advance by the instructors. Participants will be responsible for their own travel arrangements to Alaska. Travel costs, as well as course fees to the Denali Education Center and Wilderness Education Association, will be approximately $2,000. Grading for MSI and MSII will be pass/fail.

**PICU Acting Internship ..........** PEDS5647

**4 Credits**  Acting Internship Selective

**ELECTIVE DIRECTOR:** Dr. Neal Seidberg, Dr. William Hannan, Dr. Kevin Ragosta, Dr. Robert Kanter, Dr. Jennifer Zuccaro

**CONTACT:** seidbern@upstate.edu

**PREREQUISITES:** All third year clerkships

**MAXIMUM NUMBER OF STUDENTS:** 1

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** The PICU is a 14 bed medical/surgical ICU providing comprehensive care to critically ill patients. Under the direction of the critical care faculty and with the support of the pediatric residents, the student will work collaboratively with our pediatric subspecialty and surgical colleagues. As the major tertiary pediatric critical care referral center for Upstate and Central New York, the PICU manages the full spectrum of pediatric critical care illness including respiratory failure, cardiovascular failure, neurologic disorders, hematology/oncology disease, and major orthopedic, neurosurgical, pediatric, trauma, cardiovascular and ENT surgery.

**Pediatric Hematology-Oncology Ambulatory Rotation..............** PEDS5648

**4 Credits**  Basic Science Selective

**ELECTIVE DIRECTOR:** Dr. Andrea Dvorak

**CONTACT:** dvoraka@upstate.edu

**PREREQUISITES:** None

**MAXIMUM NUMBER OF STUDENTS:** 1

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This rotation provides the opportunity for the student to see the management of both pediatric hematologic and pediatric oncologic disorders. The students will have the chance to interact with multiple pediatric providers in the care of these patients. The outpatient rotation allows the student to see both the chronic long term patients as well as the acute consultations that present in the clinic.

**PHARMACOLOGY**

**Cardiac Arrhythmias (Mechanisms, Diagnostics, Treatment) ..........** PHAR6005

**2 Credits**  Basic Science Selective

**ELECTIVE DIRECTOR:** Dr. Arkadii Perzov

**CONTACT:** pertsova@upstate.edu

**PREREQUISITES:** None

**MAXIMUM NUMBER OF STUDENTS:** 12

**PERIODS OFFERED:** 009, 05A

**ELECTIVE DESCRIPTION:** This 2 credits course is intended for students considering a career in cardiology and interventional electrophysiology. Upon successful completion of the course the students will enhance their understanding of basic mechanisms of cardiac arrhythmias, their diagnostics and treatment. The course will run in a small discussion group format. The group will meet daily to discuss a set of 4-5 topics formulated by the moderator. The students are expected to study the material independently and be prepared to give a short presentation on any of the topics to the class as well as discuss it with other members of the group.

**PUBLIC HEALTH & PREVENTIVE MEDICINE**

**Public Health .........................** PRVM6420

**4 Credits**  Basic Science Selective, Preceptor’s Site

**ELECTIVE DIRECTOR:** Dr. Travis Hobart

**CONTACT:** lewissa@upstate.edu

**PREREQUISITES:** None

**MAXIMUM NUMBER OF STUDENTS:** 2

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This elective will allow the student to explore the implementation of public health and population-oriented prevention activities in actual community settings. The requirements for this elective can be met either at the Onondaga County Health Department or as a pre-arranged independent research project. Onondaga County Health Department Track: Students will be introduced to the activities of the Onondaga County Health Department and its efforts to improve the health of our community under the supervision of County Health Department Commissioner. In addition, students will be responsible for completing a specific project based on their interests and current public health activities. In this project, the students will work with health department responses related to the issue. Examples of student projects include: disease outbreak investigations, vaccine shortage management,
bior terrorism, infant mortality, and chronic disease prevention. A project summary report is required at the end of the elective to gain credit for the course.

**Public Health Experience..........PRVM6421**  
4 Credits  Basic Science Selective  
ELECTIVE DIRECTOR: Dr. Travis Hobart, Dr. Martha Wojtowycz  
CONTACT: lewissa@upstate.edu  
PREREQUISITES: None  
MAXIMUM NUMBER OF STUDENTS: 2  
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012  
ELECTIVE DESCRIPTION: An independent study, community-based project, or international public health experience aimed at improving students understanding public health, determinants of health and possible interventions to prevent the public health issue the student is studying. Students enrolling in this elective generally have chosen a venue, focus of interest (research interest), and site supervisor (if off campus) prior to enrolling in the elective. Students will be assessed, if possible, by their site supervisor based upon expectations of the project, active participation, and attendance. In addition, student must write a scholarly paper and give a presentation on their research project to an agreed upon audience in order to receive credit for the elective.

**Service Learning and Community Health .............................................PRVM6423**  
2 Credits  Concurrent Elective  
ELECTIVE DIRECTOR: Simone Seward  
CONTACT: swards@upstate.edu  
PREREQUISITES: None  
MAXIMUM NUMBER OF STUDENTS: 50  
PERIODS OFFERED: Concurrent, this course is not available in the elective lottery.  
ELECTIVE DESCRIPTION: This 2-credit service learning elective course integrates meaningful community service with instruction on basic principles of public health to improve the health status of the community. This course allows second year medical students to serve as Service Learning Leaders at specific service learning sites and develop skills in community engagement while affording community partners an avenue to address significant needs within their organization or programs. The course utilizes a reflective process to enrich the students' learning experience and explore civic responsibilities. The course meets once a month for 2 hours and runs from August through March.  

**Global Health Elective - Enlace Program .............................................PRVM6424**  
2 TO 4 Credits  
ELECTIVE DIRECTOR: Simone Seward  
CONTACT: swards@upstate.edu  
PREREQUISITES: None  
MAXIMUM NUMBER OF STUDENTS: 10  
PERIODS OFFERED: 002, this course is not available in the elective lottery.  
ELECTIVE DESCRIPTION: The Enlace program focuses on rural health and cultural immersion in Nicaragua. While at Upstate, students will participate in pre-departure travel training which will include modules on cultural competency, safety and logistics, ethical decision making, social determinants of health, and issues in global health. Once in country, students will be placed with host families, attend an orientation, and then will travel to different community sites each day to work with local healthcare providers. These community sites are located in El Sauce, Ocotal, and Leon. Each work day will be 9 hours (typically from 7am to 3 pm) spent with local doctors and nurses in different communities. Translators are provided by Enlace. Under the supervision of the local physician, students will assist with procedures ranging from taking vital signs, maternal and child health visits, cancer screenings, chronic disease management, and other clinical tasks. Evening and weekends will consist of cultural immersion trips and cultural classes. Students will also have the opportunity to participate in teaching English classes on Tuesday and Thursday afternoons. Upon return to the US, students will be expected to complete a reflective final project.

**Global Health - AMOS Health and Hope Program .............................................PRVM6425**  
2 TO 4 Credits  
ELECTIVE DIRECTOR: Simone Seward  
CONTACT: sewards@upstate.edu  
PREREQUISITES: None  
MAXIMUM NUMBER OF STUDENTS: 2  
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012  
ELECTIVE DESCRIPTION: The AMOS program focuses on rural health and cultural immersion in Nicaragua. AMOS Health and Hope seeks to take action to help address the problems of poverty, disease and preventable deaths by improving the health and well being. Programs are based on community-identified needs and build upon community strengths. The goal of this elective is to improve the health of impoverished communities by working alongside them in health, education, and development. While at Upstate, students will participate in pre-departure travel training and cultural competency training. Preparation includes submitting a detailed written explanation of the proposed project including a realistic time table and any special parameters unique to the international site. Once in country students will be placed with host families, attend an orientation, and then will travel to different community sites each day to work with local health care providers. Each word day will be 8 hours spent with local physicians, nurses, or public health workers in different communities. Under the supervision of the local physician, students will assist with procedures ranging from taking vital signs, maternal and child health visits, cancer screenings, chronic disease management, and other clinical tasks. They will also have the opportunity to be involved in public health initiatives such as building clean water systems and providing health education. Participants will join the AMOS supervision team physicians, public health workers and nurses to travel to hard to reach areas to
Ecuador Centers for InterAmerican Studies Medical Spanish Immersion …..PRVM6426
2 Credits
ELECTIVE DIRECTOR: Christina Lupone, Dr. Anna Stewart
CONTACT: luponec@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 10
PERIODS OFFERED: 001, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: The Ecuador Centers for InterAmerican Studies Medical-Spanish Immersion program aims to promote language and cultural competence, and to enhance the skills of health service professionals and consequently improve overall health care. The program focuses on Medical Spanish, cultural, and public health system immersion training. While at Upstate students will participate in pre-departure training and cultural competency training. Once in country, students are based in the city of Cuenca, Ecuador for two weeks of intensive medical Spanish language training and are placed with a local Ecuadorian homestay. In classroom training consists of 20 hours of grammar and 20 hours of conversational Spanish. Students are exposed to the public health and medical system in Ecuador through visits to local hospitals, medical schools, rural health programs, and traditional healers. Each work day will be 8 hours (4 hours in classroom and 4 hours spent with local doctors, nurses, or public health professionals in the community). Weekend trips will consist of cultural immersion trips (one trip per weekend). Upon return students will be expected to complete a reflective final project.
Ecuador Centers for InterAmerican Studies Medical Spanish Immersion and Infectious Disease Research ……………PRVM6427
4 Credits
Basic Science Selective
ELECTIVE DIRECTOR: Christina Lupone, Dr. Anna Stewart
CONTACT: luponec@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 10
PERIODS OFFERED: 001, 003, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: The Ecuador Centers for InterAmerican Studies Medical-Spanish Immersion and Infectious Disease Research program aims to promote language, cultural competence, and infectious disease research skills of public health and medical professionals. The program focuses on Medical Spanish, cultural, and public health system immersion training. While at Upstate students will participate in pre-departure training and cultural competency training. The program begins with a two week Medical Spanish Immersion program through the Centers for InterAmerican Studies based in Cuenca, Ecuador, where students are placed in a homestay and participate in formal classroom medical Spanish (grammar and conversation) training and are exposed to the public health and medical system in Ecuador through visits to local hospitals, medical schools, rural health programs, and traditional healers. Each work day will be 8 hours (4 hours in classroom and 4 hours spent with local doctors, nurses, or public health professionals in the community). Once the two week Medical Spanish immersion program is completed, students will travel to Machala, Ecuador where they will integrate in to a team of investigators conducting research on infectious diseases in the southern coastal city of Machala, Ecuador. Student projects will depend on the individual’s skills and prior professional experience. Students will spend anywhere from 4 weeks to one year in the field. Upon return students will be expected to complete a reflective final project and work with the Center of Global Health and Translational Science faculty to disseminate research results from field work.
Ecuador Infectious Disease Research ……………………………PRVM6428
6 TO 8 Credits Basic Science Selective
ELECTIVE DIRECTOR: Christina Lupone
CONTACT: luponec@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 10
PERIODS OFFERED: 002, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: Students will travel to Machala, Ecuador where they will integrate into a team of investigators conducting research on infectious disease, climate, and health through Upstate’s Center for Global Health and Translational Science. Student projects will depend on the individual’s skills and prior professional experience. Students will spend any where from four weeks to one year in the field. Upon return students will be expected to complete a reflective final project and work with the Center for Global Health and Translational Science faculty to disseminate research results from field work. Students must have moderate to advanced Spanish speaking skills and have pre-approval of research proposal from the instructor
Psychiatry
Psychiatry Acting Internship …. PYCH6801
4 Credits Acting Internship Selective
ELECTIVE DIRECTOR: Dr. Katherine Walla
CONTACT: stuenzik@upstate.edu
PREREQUISITES: Psychiatry
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: This is an individualized elective designed for students interested in obtaining specialized intensive experiences in psychiatry. The student is directly involved in planning the experience. Generally speaking, electives will include patient care, case conferences, grand rounds and attendance at seminars. Students may also acquire
experience in community psychiatry programs. Electives can be built around the following areas: Addiction Psychiatry; Child and Adolescent Psychiatry; Consultation Liaison; Forensic Psychiatry; Inpatient Psychiatry; Outpatient Psychiatry

**Introduction to Medical Spanish** PYCH6828 2 Credits Concurrent Elective

**ELECTIVE DIRECTOR:** Dr. MariaLourdes Fallace  
**CONTACT:** mlfallace@yahoo.com  
**PREREQUISITES:** None  
**MAXIMUM NUMBER OF STUDENTS:** 20  
**PERIODS OFFERED:** Concurrent, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** The Introduction to Medical Spanish course builds on the strong foundation of the Basic Spanish level to continue learning medical Spanish terminology, sentence construction, role play with classmates imitating situations at a doctor's office, hospital or emergency rooms. Students learn communication at a higher level with patients and the public in general. They are able to have dialogues asking more relevant questions related to the patient's complaint in grammatically correct sentences using regular and irregular verbs in the present and past tense.

**Intermediate Medical Spanish...** PYCH6829 2 Credits Concurrent Elective

**ELECTIVE DIRECTOR:** Dr. MariaLourdes Fallace  
**CONTACT:** mlfallace@yahoo.com  
**PREREQUISITES:** PYCH6828  
**MAXIMUM NUMBER OF STUDENTS:** 20  
**PERIODS OFFERED:** Concurrent, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** Intermediate Medical Spanish prepares medical students to communicate effectively with patients with limited English proficiency. Students at this level speak only Spanish in class and are able to volunteer at a local clinic, shadow a health care provider and assist him/her in communicating to the patient the condition, necessary tests and results, as well as treatment and prognosis.

**Advanced Medical Spanish ...........** PYCH6830 3 Credits Concurrent Elective

**ELECTIVE DIRECTOR:** Dr. MariaLourdes Fallace  
**CONTACT:** mlfallace@yahoo.com  
**PREREQUISITES:** PYCH6829  
**MAXIMUM NUMBER OF STUDENTS:** 20  
**PERIODS OFFERED:** Concurrent, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** Advanced Medical Spanish is service learning elective that prepares medical students to communicate effectively with patients with limited English proficiency. Students at this level are able to shadow a health care provider and assist him/her in obtaining accurate history of the patient, performing a physical examination and communicating to the patient the condition, necessary tests and results, as well as treatment and prognosis.

**Basic Spanish .......................** PYCH6832 2 Credits Concurrent Elective

**ELECTIVE DIRECTOR:** Dr. MariaLourdes Fallace  
**CONTACT:** mlfallace@yahoo.com  
**PREREQUISITES:** None  
**MAXIMUM NUMBER OF STUDENTS:** 30  
**PERIODS OFFERED:** Concurrent, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** Basic Spanish is a foundation course that gives students a strong base to be able to learn Medical Spanish terminology. Students learn basic communication with patients and the public in general. They are able to have a basic dialog and develop sentences grammatically correct using regular and irregular verbs in conjunction with other parts of a sentence in concordance with gender and number.

**Psychiatry Elective .................** PYCH6835 4 Credits

**ELECTIVE DIRECTOR:** Dr. Katherine Walla  
**CONTACT:** stuenzik@upstate.edu  
**PREREQUISITES:** Psychiatry  
**MAXIMUM NUMBER OF STUDENTS:** 2  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** The Psychiatry elective is offered to fourth year students who meet with the Psychiatry Department Education Director/Coordinator. Depending on availability the elective may be clinical, research, or academic in nature.

**RADIOLOGY**

**Diagnostic Radiology ...............** RADL7201 4 Credits

**ELECTIVE DIRECTOR:** Dr. Hal Cohen  
**CONTACT:** nearym@upstate.edu  
**PREREQUISITES:** Internal Medicine & Surgery  
**MAXIMUM NUMBER OF STUDENTS:** 11  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This elective is designed to expand the student's knowledge of the fundamentals of diagnostic radiology and the use of radiology in clinical diagnosis. Building upon the foundation of the junior clerkship, the student will observe the daily performance and interpretation of radiographic procedures. The student may select rotations to various areas of the department according to his or her individual interests. Rotations are offered in addition to chest, gastrointestinal, genitourinary, and bone imaging. Audiovisual teaching materials are available. Students are required to prepare a one page summary and a ten minute oral presentation of an interesting case at the end of the elective.
Neuroradiology ................ RADL7206
4 Credits
ELECTIVE DIRECTOR: Dr. Kirk Craig
CONTACT: nearym@upstate.edu
PREREQUISITES: Neuroscience
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: This elective offers the student an in-depth experience in all aspects of Neuroradiology. Emphasis is placed on the interpretation of computed tomography (CT) and magnetic resonance (MR) imaging of the head and spine, cerebral angiograms, and myelograms. The role of imaging studies in the diagnostic evaluation of the patients with suspected neurological or otolaryngological disease is emphasized. The student attends and participates in all neuroradiology teaching sessions and conferences. He/she is encouraged to undertake a special project during the elective, including research on and presentation of a topic of neuroradiologic interest.

Interventional Radiology ........ RADL7210
4 Credits
ELECTIVE DIRECTOR: Dr. Mitchell Karmel
CONTACT: nearym@upstate.edu
PREREQUISITES: Internal Medicine & Surgery
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: Interventional Radiologists (IR’s) are Radiologists who use their expertise in medical imaging to guide small instruments such as catheters, and/or needles to diagnose and treat diseases percutaneously. The elective will familiarize the student with the dynamic practice of Interventional Radiology (IR) through hands on participation with the Attending Staff and Residents of the Division of Interventional Radiology. Activities include participation in pre-procedure patient work-up and planning, performance of procedures, and patient follow-up. Objectives: 1) Recognize patients that may benefit from diagnostic and/or therapeutic services offered by IR. 2) Evaluate and request appropriate procedures. 3) Be aware of necessary pre-procedural workup and post-procedural care. There is a 3) Be aware of necessary pre-procedural workup and post-procedural care. There is a participation in a weekly Multidisciplinary GI Oncology conference in which the student will learn about the exciting developing field of Interventional Oncology. The small faculty-to-student ratio maximizes the opportunity for one to one teaching.

Nuclear Medicine.................. RADL7217
4 Credits
ELECTIVE DIRECTOR: Dr. David Feiglin
CONTACT: nearym@upstate.edu
PREREQUISITES: Internal Medicine & Surgery
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: Expose student to Nuclear Medicine by correlation of clinical problems and diagnostic and therapeutic techniques. Methods include planar and tomographic imaging, computer image processing and quantitation, in vitro testing and radioiodine therapy of hyperthyroidism and thyroid cancer. Integration of various imaging modalities (nuclear, angiographic, CT, MR and ultrasound) with patient problem is stressed.

PHYSICAL MEDICINE & REHABILITATION
Physical Medicine & Rehabilitation ................................................. RMED7605
4 Credits
ELECTIVE DIRECTOR: Dr. Margaret Turk
CONTACT: hayesmi@upstate.edu
PREREQUISITES: Internal Medicine, Pediatrics, & Surgery
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: Students will have the opportunity to experience the broad field of PM&R encompassing musculoskeletal medicine (neuromuscular evaluation and treatment) and medical/physical/cognitive rehabilitation (diagnosis, interventions, and outcomes). Electrodagnosis (EMG), ultrasound, and injections will be discussed and observed. Besides typical medical diagnosis and treatment, the PM&R elective provides experiences with comprehensive evaluation of functional abilities, transitions of care, multidisciplinary team functioning, management of long-term disability, and quality of life issues. Typical patients encountered include those with stroke, spinal cord injury, concussion, brain injury, cerebral palsy, pain, arthritis, amputation, multiple trauma and other neuro-musculoskeletal disorders. The rotation is organized by weekly focused experiences within our Inpatient Rehabilitation Facility, various outpatient programs, and the VA inpatient and outpatient programs. The teaching is contemporaneous with clinical encounters and through lectures and student directed learning. Students are expected to develop a 15 minute presentation at the end of rotation, based on an interesting observed case or concept.

RADIATION ONCOLOGY
Radiation Oncology....................... RONC7401
4 Credits
ELECTIVE DIRECTOR: Dr. Paul Aridgides, Dr. Jeffrey Bogart
CONTACT: keenesys@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: An intensive program in Oncology with emphasis on total patient care is offered through the mechanism of independent patient evaluation followed by discussion on a one-to-one student-faculty basis. The life history of neoplasia is illustrated by seeing patients at the time of diagnosis, during treatment and in the long-term...
follow-up situation. Disease oriented diagnostic evaluation and multidisciplinary treatment are taught. At the conclusion of this elective, the student will be familiar with most of the common neoplastic diseases and the considerations that go into making rational decisions regarding appropriate care for patients with cancer.

**SURGERY**

**General Surgery Acting Internship**

**SURG8001**
4 Credits Acting Internship Selective

**ELECTIVE DIRECTOR:** Dr. Scott Albert
**CONTACT:** bellinir@upstate.edu

**PREREQUISITES:** All third year clerkships

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This AI offers a choice of one of the three General Services: 1) Surg. Oncology 1 (Pancreas, Liver-Hepatobiliary), 2) Surg. Oncology 2 (Breast, Endocrine, Colorectal), 3) Advanced Laparoscopy. The course is designed for the student to learn in greater depth the management of surgical patients. Emphasis is placed on the understanding of the pathophysiology of surgical problems and the principles required for excellence in the care of acutely ill patients. The students will also gain first-hand knowledge of surgical diagnosis, fluid and electrolyte, cardiovascular, renal and respiratory management of surgical patients and will participate in the operating room. The course is designed both for students interested in choosing surgery as a career as well as those students interested in fields other than surgery. Students will be expected to prepare a presentation on some aspect of surgical disease using medical literature to provide insight into the basic science or pathophysiology of the topic.

**Burns**

**SURG8008**
4 Credits

**ELECTIVE DIRECTOR:** Dr. Joan Dolinak
**CONTACT:** bellinir@upstate.edu

**MAXIMUM NUMBER OF STUDENTS:** 1

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** An introduction to critical care of thermal, electrical, chemical and environmental exposure injury; as well as requisites of therapy for complex wound closure and surgical management of burns including skin grafts, skin substitutes and exposure to exfoliative skin disorders such as TEN and SJS. Student will resuscitate individuals with burns and other injuries, establish priorities of treatment, organize therapeutic regimens. Exposure to techniques for controlling infection, maintaining nutritional balance and closing the burn wound will be provided. Although the emphasis will be on the pathophysiology of major trauma and the requirements for survival, facts pertaining to the epidemiology of burns, the prevention of thermal injury, the psychic adaptation to major stress and the multifaceted nature of rehabilitation will be presented.

The student will be expected to assist in operating room and during wound therapy procedures.

**General Surgery Acting Internship - Crouse**

**SURG8013**
4 Credits Acting Internship Selective, Crouse Hospital

**ELECTIVE DIRECTOR:** Dr. Brian Anderson
**CONTACT:** mstachurski@cnsurgical.com

**PREREQUISITES:** Surgery

**MAXIMUM NUMBER OF STUDENTS:** 1

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** The primary opportunity of this period would be exposure to the community hospital types of surgical problems, including early diagnosis, pre-operative evaluations and preparations, and operative and post-operative management of normal and complicated patients. This program should be helpful to any student seeking additional experience in general surgical problems in terms of a possible career choice or even as a “last” exposure for future non-surgeons.

**Pediatric Surgery**

**SURG8014**
4 Credits

**ELECTIVE DIRECTOR:** Dr. Kim Wallenstein
**CONTACT:** cliftodl@upstate.edu

**PREREQUISITES:** Surgery

**MAXIMUM NUMBER OF STUDENTS:** 1

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** The emphasis in the course is placed on the diagnosis, pre-operative preparation and post-operative management of children from the newborn period to adolescence. Additional emphasis will be placed on: a) diagnosis and pre-operative preparation of the patient with neonatal congenital anomalies; b) diagnosis of common pediatric surgical problems; c) assessment and management of pediatric trauma; d) assessment and management of fluid and electrolytes in pediatric surgery patients; e) nutritional management of patients with acute and chronic surgical diseases; f) techniques for outpatient and inpatient minor surgical procedures, including the surgical placement of intravenous catheters. The student will participate in in-house patient and outpatient care as a member of the Pediatric Surgery service. Participation in Pediatric Surgery includes attendance at formal teaching rounds, clinical rounds, inpatient surgical procedures, Pediatric Surgical Clinic, and selected programs from the Department of Surgery and the section of Pediatric Surgery.
Plastic Surgery ......................... SURG8015
4 Credits

ELECTIVE DIRECTOR:  Dr. Prashant Upadhyaya
CONTACT:  bellinir@upstate.edu
PREREQUISITES:  All third year clerkships
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: COURSE DESCRIPTION The student will rotate with the Plastic Surgeon per the surgeon’s schedule. The scope of rotation includes clinics at 550 Harrison Street and Surgery at Upstate downtown and Community campuses and Crouse Hospital. The student will essentially function as an intern and participate in all aspects of patient care, both inpatient and outpatient. The objective of this rotation is to introduce to the student the scope and philosophy of Plastic Surgery. The student will be expected to educate self prior to the start of the rotation with basics of Plastic surgery and gain on that foundation by experience in a clinical setting. *Please contact Dr. Upadhyaya, via email at upadhyap@upstate.edu, prior to rotation start.

Disease of the Colon, Rectum, and Anus ................................................. SURG8028
4 Credits

ELECTIVE DIRECTOR:  Dr. John Nicholson
CONTACT:  ducktorjdn@msn.com
PREREQUISITES:  All third year clerkships
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: This course is designed for the student to learn in greater depth the management of surgical patients. Emphasis is placed on the understanding of the pathophysiology of surgical problems and the principles required for excellence in the care of acutely ill patients. The students will also gain first-hand knowledge of surgical diagnosis, fluid and electrolyte, cardiovascular renal and respiratory management of surgical patients and will participate in the O.R. The course is designed for both students interested in choosing surgery as a career as well as those students interested in fields other than surgery. Students will be expected to present a seminar on some aspect of surgical disease using medical literature to provide insight to the basic science or pathophysiology of the topic.

Vascular Surgery and Surgical Interventional Radiology .......... SURG8048
4 Credits

ELECTIVE DIRECTOR:  Dr. Kwame Amankwah
CONTACT:  bellinir@upstate.edu
PREREQUISITES:  Surgery
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: The course is designed for the student who has an interest in Vascular Surgery and Interventional Procedures. The individual who completes this elective will have: 1) A better understanding of what Vascular and Endovascular Surgery entails; 2) A better understanding of the components that make up Interventional Radiology; 3) The ability to gain an understanding of imaging modalities utilized by each specialty; 4) Be actively involved in the assessment, planning and execution of patient’s treatment; 5) An understanding of vascular disease as it pertains to Vascular and Endovascular Surgery; 6) An understanding of general interventions as it pertains to General Surgery; 7) Be able to perform central venous access; 9) Be able to interpret an angiogram and propose treatment plan. Students will participate in the outpatient clinic, inpatient care, Operating Theater and the Interventional Radiology Suite at University Hospital and the Veterans Administration Hospital. A two to three page report or presentation on a topic related to Vascular Surgery
will be required. Each student will be assigned a preceptor for the rotation.

**Acute Care Surgery Acting Internship**

**SURG8051**

**4 Credits Acting Internship Selective**

**ELECTIVE DIRECTOR:** Dr. Richard King

**CONTACT:** kingri@upstate.edu

**PREREQUISITES:** Internal Medicine & Surgery

**MAXIMUM NUMBER OF STUDENTS:** 1

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This Acting Internship centers around the fast paced and varied discipline of the Acute Care Service. This course is designed to expose students to the wide variety of emergency surgical patients and procedures. Students will actively participate in the initial evaluation of acutely ill surgical patients, as well as in their pre, peri, and post operative care. During this acting internship, students will be expected to do one week of night float Monday-Friday, covering both trauma and general surgery. Additionally, students will be expected to perform one presentation using medical literature in order to provide insight into the basic science of the topic, based on their patient experiences. The purpose of this course is to start the process of developing knowledge in a wide variety of surgical diseases, problems, and pathologies, across multiple organ systems.

**UROLOGY**

**Urology Acting Internship**

**UROL8401**

**4 Credits Acting Internship Selective**

**ELECTIVE DIRECTOR:** Dr. Matthew Mason

**CONTACT:** schulzes@upstate.edu

**PREREQUISITES:** All third year clerkships

**MAXIMUM NUMBER OF STUDENTS:** 1

**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** The acting internship is designed for clinical work. During this elective, the student will perform all the duties of a house officer in Urology and will be part of a team consisting of two Urology residents plus a small number of fourth year students. At frequent intervals, the student will be expected to meet with individual members and discuss assigned reading and problems. The purpose of this elective is to give the student in depth experience in the field of Urology.
ANESTHESIOLOGY
Introduction to Anesthesiology. ANES0803
2 Credits Preceptor's Site
ELECTIVE DIRECTOR: Dr. Robert Patterson, Dr. Paul Uppal, Dr. William Monteith
CONTACT: ccstuaff@upstate.edu
PREREQUISITES: Internal Medicine & Surgery
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 01B, 02B, 04B, 06A, 06B, 08A, 10A, 11B, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: The two-week elective course is designed to further explain aspects of anesthesiology which have relevance to all medical practice; to include physiology and pharmacological interaction of drugs with emphasis on basic technical maneuvers. At the conclusion of the two weeks, the student is expected to demonstrate basic anesthesia technical skills and knowledge of perioperative patient care. Weekly activities include inpatient contacts. Preceptors' Site: Dr. Uppal-Our Lady of Lourdes Memorial or Dr. Patterson-Wilson Memorial Hospital

EMERGENCY MEDICINE
Clinical Elective in Emergency Medicine ................................................. EMED1315
4 Credits Wilson Memorial Hospital
ELECTIVE DIRECTOR: Dr. Stephen Gomez
CONTACT: ccstuaff@upstate.edu
PREREQUISITES: Surgery
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 003, 007, 010, 011, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: Exposure to the complete Emergency Department practice. Students will be scheduled for a variety of shifts including weekends. Several preceptors participate with each student, so various styles of practice are presented. Scheduling is flexible, but 40 hours per week is typical. Emphasis is placed on the evaluation of the acute patient and minor surgical procedures such as suturing skills. Weekly activities include patient contact (inpatient & outpatient).

FAMILY MEDICINE
Doctoring ............................................ FAMP1607
4 Credits Preceptor's Site
ELECTIVE DIRECTOR: Dr. John Wacendak
CONTACT: ccstuaff@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION: Providing health care seems to be the catch phrase of the times. But many patients prefer the word doctoring, as in "We've been doctoring with so-and-so for fifteen years". This brief phrase encapsulates the complex nature of the deep and lasting relationship between a family and their caring and committed physician. Doctoring will be the focus of this elective, which will provide an introduction to Family Medicine as a comprehensive system of care. For those who have had significant previous experience in Family Medicine, higher level skills in interviewing, clinical reasoning and family assessment will be emphasized. Specific goals include: 1) Further development of interview and examination skills that can be used for the initial evaluation of any patient, irrespective of age, sex or presenting complaint; 2) Learning the efficient and effective work-up of the most common chief complaints in Primary Care; 3) Learning the therapeutic options for a selection of common Primary Care diagnosis; 4) Learning family systems theory and how family dynamics affect illness; 5) Trying, under supervision, a variety of procedural skills; 6) Learning to communicate effectively with other medical personnel. Weekly activities include interviewing, examining and writing notes on outpatients and inpatients, home visits, school visits, family counseling, some minor surgery and suturing, didactic sessions, reading. Having a car during this rotation is advantageous, although not required. Preceptor's Site: Family Care Center, 40 Arch Street, Johnson City

Palliative Care ......................... FAMP1647
2 Credits Our Lady of Lourdes Memorial
ELECTIVE DIRECTOR: Dr. Francine Rainone
CONTACT: ccstuaff@upstate.edu
PREREQUISITES: None
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 01A, 01B, 02A, 02B, 04A, 04B, 05A, 05B, 06A, 06B, 08A, 08B, 09A, 09B, 10A, 10B, 11A, 11B, 12A, 12B, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: Students will participate in all team activities, including Journal Club, for which they will present a journal article or book chapter, team meetings, multidisciplinary rounds, and tumor board. They will perform inpatient consults and see patients in the outpatient clinic. Palliative Medicine is the multidisciplinary care of people with chronic, advanced disease that provides relief of suffering in the physical, psychological, spiritual and social dimensions of human existence. Objectives include: 1) learning basic pharmacologic and nonpharmacologic management of pain and other common symptoms, such as dyspnea, nausea and constipation; 2) improving communication skills, conducting family meetings, and learning consultation etiquette in the context of multidisciplinary care. The team includes a Physician, Nurse Practitioner, Nurse Manager, Chaplain, Massage Therapist, and Social Worker. The consultation team cares for inpatients, outpatients and, on occasion, nursing home patients.
Performance Evaluation based on: Knowledge: formulate a daily plan of care and justify it based on pathophysiology, pharmacology, psychology, or other principles relevant to the patient’s condition. Attitudes: compassion and respect, exemplified by demeanor, word choice, body language. Skills: explain treatment options in plain language and elicit goals of care nonjudgmentally. Performance is discussed with student both during and at the end of the course.

Healing Art of Medicine ............. FAMP1648
4 Credits Preceptor’s Site
ELECTIVE DIRECTOR: Dr. Lazarus Gehring
CONTACT: ccstuaff@upstate.edu
PREREQUISITES: All third year clerkships
MAXIMUM NUMBER OF STUDENTS: 1
PERIODS OFFERED: 004, 007, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION: A combination of outpatient, inpatient, and home care, along with weekly didactic sessions focusing on patient oriented healing techniques using wisdom from physicians past and present.

INTERNAL MEDICINE
Hospitalist Practice ................. MDCN2123
4 Credits Wilson Memorial Hospital
ELECTIVE DIRECTOR: Dr. Nazif Chowdhury
CONTACT: ccstuaff@upstate.edu
PREREQUISITES: Internal Medicine & Surgery
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 009, 010, 011, 012
ELECTIVE DESCRIPTION: During this rotation the student will have the ability to participate in medicine’s newest specialty, Inpatient Medicine, otherwise known as a Hospitalist. Time will be spent exclusively caring for patients in Wilson Memorial Regional Medical Center or Binghamton General Hospital with direct supervision by a full-time inpatient physician. The clinical material will include the supervision of care for medical inpatients on the ward and in the Intensive Care Unit as well as medical consultation on surgical patients, observational care and exposure to Utilization Management. A health services related project will be designed and completed during the month which will explore a topic chosen by the student. These may include the development of screening criteria for a particular diagnosis, cost effectiveness analysis or the development of a simple clinical guideline.

Acting Internship - Medical ...... MDCN2124
4 Credits Acting Internship Selective, Wilson Memorial Hospital
ELECTIVE DIRECTOR: Dr. Nazif Chowdhury
CONTACT: ccstuaff@upstate.edu
PREREQUISITES: Internal Medicine
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 009, 010, 011, 012
ELECTIVE DESCRIPTION: The "Acting" medical internship is designed to allow the student to participate in the evaluation and care of patients on "teaching floors" in a community setting. Duties will be the same as the medical intern with whom the student works. The supervision provided by the junior and senior residents, "rounding" physicians, and full time staff should afford the student an opportunity to be exposed to a group of teachers with possibly differing ideas of patient management. The student will have the responsibility for management of 3-6 patients. The AI will participate in daily tutorials with the 3rd-year students, and residents. The AI will participate in GI and Cardiology Rounds on alternate weeks and weekly Grand Rounds, as well as daily Resident seminars. Such exercises are intended to enhance diagnostic and organizational skills in a supportive, constructive manner.

Clinical Cardiology .................... MDCN2126
4 Credits Preceptor’s Site
ELECTIVE DIRECTOR: Dr. John Dimenna
CONTACT: ccstuaff@upstate.edu
PREREQUISITES: Internal Medicine
MAXIMUM NUMBER OF STUDENTS: 2
PERIODS OFFERED: 003, 004, 005, 007, 008, 009, 010
ELECTIVE DESCRIPTION: The student’s time would be divided between clinical consultative cardiology as well as experience in the catheterization and electrophysiology labs. This would involve EKG reading, echocardiography, angioplasties and other interventions. Electrophysiological studies and arrhythmia management are also covered. There would be participation in daily rounds, EKG and echocardiogram reading. There will be occasional organized conferences and informal teaching at the bedside and on rounds. Textbooks include Harrison’s or Kelley’s textbooks of internal medicine. An introductory textbook of EKG reading should also be used (Dubin, Thaler or Chou). The clinical service would include patients with myocardial infarction, angina, congestive heart failure, atrial and ventricular arrhythmias and hyperlipidemia. Reading also includes NEJM reviews and ECGs. Criteria for evaluation of performance consists of oral examinations (informal), patient work-ups, research papers (optional), seminar and conference presentations (optional). ECG interpretation. Preceptor’s site: 161 Riverside Dr., Suite 205, Binghamton, NY 13905; AND 30 Harrison St., Suite 250, Johnson City, NY 13790.
General Dermatology ................ MDCN2130
1 Credits  Concurrent Elective, Preceptor's Site
ELECTIVE DIRECTOR:  Dr. Genadij Sienkiewicz
CONTACT:  ccstuaff@upstate.edu
PREREQUISITES:  All third year clerkships
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION:  Concurrent elective offered part-time Tuesday and Wednesday afternoons 1-5 pm and Thursday mornings 8:30-12n. Experience in general medical/surgical dermatology including diagnosis and management of skin diseases and skin cancer. The student will be seeing and discussing patients with the instructor. He/She will be introduced to online dermatology resources which will be integrated into the teaching plan, and also used for self-study and reference.

Clinical Endocrinology and Hospital Medicine......................... MDCN2131
4 Credits  Our Lady of Lourdes Memorial
ELECTIVE DIRECTOR:  Dr. Timothy Howland
CONTACT:  ccstuaff@upstate.edu
PREREQUISITES:  Internal Medicine
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  003, 004, 005, 007, 009, 011, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION:  1) Out-patient care in a general endocrine practice will emphasize history and physical examination skills as well as use of laboratory testing appropriate to the spectrum of a general adult endocrinology consultative practice; 2) Out-patient testing procedures include hormonal stimulation testing and fine needle aspiration biopsy of thyroid nodules; 3) Out-patient diabetes care will include instruction in the use of insulin pump therapy and continuous glucose monitoring. 4) In-patient consultations will include evaluation and management of general endocrinologic conditions; 5) In-patient diabetes consultations focus on the need for aggressive metabolic control in the hospitalized patient, with instruction and experience in the use of intravenous insulin infusions; 6) Opportunities will be provided to observe out-patient diabetes education and diet instruction sessions. Selected reading will be recommended. Performance evaluation based on patient evaluations, assessment during rounds and informal discussions, presentation.

Critical Care ......................... MDCN2132
2 Credits  Wilson Memorial Hospital
ELECTIVE DIRECTOR:  Dr. Regina Frants
CONTACT:  ccstuaff@upstate.edu
PREREQUISITES:  All third year clerkships
MAXIMUM NUMBER OF STUDENTS:  2
PERIODS OFFERED:  01A, 01B, 02A, 02B, 03A, 03B, 04A, 04B, 05A, 05B, 06A, 06B, 07A, 07B, 08A, 08B, 09A, 09B, 10A, 10B, 11A, 11B, 12A, 12B, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION:  Familiarity with the care of the medically critically ill patient including some surgical patients in consultation. Special emphasis on pulmonary critical care – ventilator management and procedures. Direct working relationship with the medical residents including night call 4-5 nights. Attend morning report, grand rounds and all noon lectures in general medicine.

Clinical Dermatology................. MDCN2150
2 Credits  Preceptor's Site
ELECTIVE DIRECTOR:  Dr. Joseph Newmark
CONTACT:  ccstuaff@upstate.edu
PREREQUISITES:  Internal Medicine
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  01A, 01B, 02A, 02B, 03A, 03B, 04A, 04B, 05A, 05B, 06A, 06B, 07A, 07B, 08A, 08B, 09A, 09B, 10A, 10B, 11A, 11B, 12A, 12B, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION:  The goals of this course are: 1) To learn to take an insightful Dermatology history; 2) To learn to examine the skin properly; 3) To learn how to evaluate skin diseases and tumors with the aim of making the correct diagnosis; 4) To learn management of common dermatoses; 5) To learn the basics of cutaneous surgery, cosmetic dermatology and laser surgery. Preceptor's Site: Vestal Exec. Park, 4104 Old Vestal Rd., Ste 203, Vestal, NY.

Primary Care Internal Medicine MDCN2152
4 Credits  Wilson Memorial Hospital
ELECTIVE DIRECTOR:  Dr. Linda Fort
CONTACT:  ccstuaff@upstate.edu
PREREQUISITES:  None
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 003, 004, 005, 006, 007, 008, 009
ELECTIVE DESCRIPTION:  The elective will involve the student in Primary Care Internal Medicine in an outpatient setting. Emphasis will be on acquisition of skills basic to office medicine through hands-on patient contact. Continuity of care and in-hospital experience will be provided via daily rounds. Insofar as student interests and needs vary, opportunities will be available in medical subspecialties as they apply to primary care. It is expected that the student will acquire a good understanding of basic concepts and skills in Primary Care Medicine including longitudinal responsibility for the patient; integration of physical and psycho-social aspects of health and disease; data gathering; record keeping, diagnostic and therapeutic procedures; and coordination of consultative and community services. There is a strong emphasis on a
whole food, plant-based diet as a primary mechanism for disease prevention and health promotion.

**A G.I. Experience ..................... MDCN2166**
**4 Credits** Preceptor’s Site

ELECTIVE DIRECTOR: Dr. Leslie Bank

CONTACT: ccstuaff@upstate.edu

PREREQUISITES: All third year clerkships

MAXIMUM NUMBER OF STUDENTS: 1

PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: To expose 3rd and 4th year students to the intricacies of an Inpatient/Outpatient Gastroenterology Practice. To show and teach the students about all the modern technology available as related to G.I. Preceptor’s Site: Binghamton Gastroenterology Assoc., 40 Mitchell Ave., Binghamton, NY.

**Office Based Internal Medicine MDCN2171**
**4 Credits**

ELECTIVE DIRECTOR: Dr. John Brereton

CONTACT: ccstuaff@upstate.edu

PREREQUISITES: All third year clerkships

MAXIMUM NUMBER OF STUDENTS: 1

PERIODS OFFERED: 008, 010, 011

ELECTIVE DESCRIPTION: Preceptor's site: Chenango Memorial Hospital, Norwich, N.Y. 13815; 607-337-4215 The goals of this course: 1) Expose student to outpatient cardiology care, inpatient cardiology consultations, and care of general medical problems that are common in cardiovascular disorders. 2) Increase student's clinical acumen/decision-making ability. 3) Allow student increasing responsibility for supervised evaluation of outpatients and inpatients, formulation of probable diagnoses, formulation of care plans. 4) Exposure to common testing procedures. Weekly activities: Individual discussion/conference with the appropriate staff member; Patient contacts, mainly outpatient, selective night call with attending, self study. Reading: Standard texts of medicine and cardiology, applicable journals. Performance evaluation based on patient workups, case presentations/discussions. Performance is discussed with students as needed.

**Cardiology......................... MDCN2179**
**4 Credits** Wilson Memorial Hospital

ELECTIVE DIRECTOR: Dr. Owais Ahmed

CONTACT: ccstuaff@upstate.edu

PREREQUISITES: Internal Medicine

MAXIMUM NUMBER OF STUDENTS: 1

PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: This elective is intended to provide the student with an understanding of the basics of general cardiology, the diagnosis and treatment options available, indications for various diagnostic cardiac procedures and the reading and interpretation of EKGs. Wilson Memorial Hospital.

**Geriatrics Elective.....................MDCN2182**
**4 Credits** Preceptor’s Site

ELECTIVE DIRECTOR: Dr. Rana Ahmad

CONTACT: ccstuaff@upstate.edu

PREREQUISITES: Internal Medicine

MAXIMUM NUMBER OF STUDENTS: 4

PERIODS OFFERED: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

ELECTIVE DESCRIPTION: The Geriatric Medicine/Gerontology Program provides a two- or four-week elective addressing the causes, management and prevention of the diseases of later life. The Clinical Campus program emphasizes training in the care of older adults in community, home, and institutional settings. Students learn about the physical, social, psychological, and economic stresses experienced by older adults and the major characteristics of the health care system which provides services to meet their needs. The promotion of positive attitudes towards the care of older people, the examination of available support systems, as well as clinical work at community and institutional sites, combine to give an integrated approach to the health care of older individuals.

**NEUROLOGY**

**Neuroscience for the Primary Care Physician ......................... NEUR2815**
**4 Credits** Wilson Memorial Hospital

ELECTIVE DIRECTOR: Dr. Saeed Bajwa

CONTACT: ccstuaff@upstate.edu

PREREQUISITES: Neuroscience

MAXIMUM NUMBER OF STUDENTS: 2

PERIODS OFFERED: 004, 005, 006, 007, 008, 009, 010, 011, 012

ELECTIVE DESCRIPTION: This four-week course will offer an intensive experience in both Neurology and Neurosurgery to students intent on pursuing careers in primary care. The student will work closely with each of four neurosurgeons and three neurologists in an office, hospital and operating room setting. Goals of the rotation are: to improve assessment and clinical decision making of the primary care physician with regard to diseases of the nervous system; to gain familiarity with various neuro-imaging modalities and their applications; and to build a knowledge base which can incorporate newer technologies certain to impact this field. Operating room experience will be designed to enhance clinical rather than surgical skills. Participation in an on-call schedule will be strongly recommended. Two to three detailed patient
work-ups per week will be required. Reading material will be provided.

**NEUROSURGERY**

*Acting Internship in Neurosurgery*

4 Credits  Acting Internship Selective, Wilson Memorial Hospital

**ELECTIVE DIRECTOR:** Dr. Saeed Bajwa  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** Neuroscience  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 004, 005, 006, 008, 009, 010, 011, 012  
**ELECTIVE DESCRIPTION:** Students will be assigned to a major Neurosurgery service, average 10-15 inpatients, 15-20 major neurosurgery cases a week, and work as an Acting Intern. The student will be required to work up some neurosurgery patients admitted to the neurosurgery service and selected consult patients. The student will be given responsibility for the day-to-day ward work, including pre-operative and post-operative neurosurgical care and neurodiagnostic studies. Operating room experience will be provided with the student being able to scrub on all major neurosurgical cases. Out-patient experience will also be provided with approximately 250 out-patient visits a week. Student will be expected to participate in some night call, and the student's attendance will be required at lectures, seminars and conferences as they relate to the neurosciences. Goals: To develop basic knowledge and skills required to carry out and understand the neurological history and examination. The student should also develop an understanding of the diagnostic and therapeutic approaches used for common neurological and neurosurgical diseases. This elective is designed to complement and amplify the third year clinical experience in neuroscience. There are a number of ongoing clinical research projects at the Binghamton neurosurgical site which a student may choose to become involved with. These projects tend to entail participation lasting more than the elective itself and may be an important part of a student's preparation for choosing a career in neurosurgery.

**OBSTETRICS & GYNECOLOGY**

*Gynecology/Infertility* ................................................. **OBGY3618**  
**4 Credits**  
**Our Lady of Lourdes Memorial**

**ELECTIVE DIRECTOR:** Dr. James Kondrup  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** Ob/Gyn  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** Students will have a focus on gynecology and infertility, which will include both office and operating room participation. Preceptor's Site: Lourdes Hospital, 161 Riverside Dr., Binghamton, NY.

**OPHTHALMOLOGY**

*Ophthalmology and Ambulatory Surgery* ................................................. **OPTH4008**  
**2 Credits**

**ELECTIVE DIRECTOR:** Drs. Charles Rubin, Daniel Sambursky, John Meehan, Richard Simon, Michael Herceg, Lloyd Suter  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** All third year clerkships  
**MAXIMUM NUMBER OF STUDENTS:** 2  
**PERIODS OFFERED:** 01A, 01B, 02A, 02B, 03A, 03B, 04A, 04B, 05A, 05B, 06A, 06B, 07A, 07B, 08A, 08B, 09A, 09B, 10A, 10B, 11A, 11B, 12A, 12B, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** This elective will provide the student exposure in office problems and management in ophthalmology. Students will develop diagnostic and therapeutic skills and learn to recognize and manage acute medical and surgical emergencies.

**ORTHOPEDIC SURGERY**

*Orthopedics-Office & Surgery* ................................................. **ORTH4411**  
**4 Credits**  
**Preceptor's Site**

**ELECTIVE DIRECTOR:** Dr. Eric Seybold  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** Surgery  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012  
**ELECTIVE DESCRIPTION:** To give 3rd and 4th year students exposure to orthopedic problems, both office based and hospital/surgical based. The student may choose to concentrate on one area, i.e. hand, spine, sports medicine, joint replacement or choose to rotate between the subspecialities.

**PATHOLOGY**

*Community Hospital Pathology* ................................................. **PATH5203**  
**4 Credits**  
**Basic Science Selective, Our Lady of Lourdes Memorial**

**ELECTIVE DIRECTOR:** Dr. James Terzian  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** Internal Medicine & Surgery  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012  
**ELECTIVE DESCRIPTION:** Through this elective, the student will gain a complete understanding of routine anatomic pathology-clinical disease correlation. The
student will review basic anatomy at autopsies, will learn appropriate use of the clinical laboratory, will review and gain added appreciation for the ability of histology and histopathology to define disease, and will learn to correlate routine Gyn and non-Gyn cytology with clinical data and anatomic/histologic specimens. Preceptor’s Site: 169 Riverside Dr., Binghamton, NY.

**Pathology Survey & Update** ......... **PATH5211**
4 Credits Wilson Memorial Hospital

**ELECTIVE DIRECTOR:** Dr. Jagmohan Sidhu  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** None  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 011, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** The purpose of this elective is to provide the student with a basis for understanding general pathology or its subspecialty. The program, although with a general structure, can be adjusted individually to a particular student. The students will benefit most from direct instruction with the pathology staff. This is a great opportunity to develop a basis for a future study of medicine.

**Pathology for your Chosen Specialty** ................................................. **PATH5216**
2 Credits Basic Science Selective, Our Lady of Lourdes Memorial

**ELECTIVE DIRECTOR:** Dr. James Terzian  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** Internal Medicine & Surgery  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 01A, 01B, 02A, 02B, 03A, 03B, 04A, 04B, 05A, 05B, 06A, 06B, 07A, 07B, 08A, 08B, 09A, 09B, 10A, 10B, 11A, 11B, 12A, 12B

**ELECTIVE DESCRIPTION:** Through this elective the student will gain first-hand appreciation of the correlation between clinical disease and anatomic-pathologic findings. The proper use of clinical lab studies will be related to the student’s specialty of interest. Both normal and abnormal histology for the organ system will be reviewed as it pertains to specific cases of interest to the selected specialty.

**General and Special Pathology** , **PATH5219**
4 Credits Basic Science Selective, Wilson Memorial Hospital

**ELECTIVE DIRECTOR:** Dr. Jagmohan Sidhu  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** None  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 011, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** This elective offers six options to students: dermatopathology, hematology, cytopathology, microbiology, transfusion services, or neuropathology. All options will include experiences in general pathology where students will rotate through all of the sections of pathology and laboratory medicine. Students will also attend autopsies and be involved in all steps of signing and diagnosis. During the special pathology or laboratory medicine rotation, the student will either follow the biopsy or the specimen from the patient to the pathology/lab medicine department or follow the result of the biopsy or special specimen from the pathology/laboratory medicine department to the patient.

**Forensic Pathology** .................**PATH5225**
4 Credits Basic Science Selective

**ELECTIVE DIRECTOR:** Dr. James Terzian, Dr. Dianne Vertes  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** None  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

**ELECTIVE DESCRIPTION:** This two week course is designed to introduce medical students to the subspecialty of pathology, which involves forensics, specifically death investigation. By spending time in the morgue, in histology, in the clinical laboratory, at scenes of death, and in the courtroom, the student will gain an appreciation for the determination of causes, mechanisms and manners of death. In the process, subjects such as anatomy, physiology, histology and pharmacology (toxicology) will be reviewed.

**PEDIATRICS**

**Neonatal-Perinatal Acting Internship** .................................................. **PEDS5610**
4 Credits Acting Internship Selective, Wilson Memorial Hospital

**ELECTIVE DIRECTOR:** Dr. Paula Farrell  
**CONTACT:** ccstuaff@upstate.edu  
**PREREQUISITES:** All third year clerkships  
**MAXIMUM NUMBER OF STUDENTS:** 1  
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008

**ELECTIVE DESCRIPTION:** To understand physiology and pathophysiology of newborn, term and pre-term infants. Understand resuscitation physiology and pathophysiology of asphyxia. Monitor and correlate perinatal period with outcome. Identify, manage and counsel for congenital anomalies/syndromes. Weekly activities: Conferences, Inpatient Contacts, with night call. Textbook required: “Care of High-Risk Newborn”, by Klaus and Fararnoff. Performance evaluation based
on patient workups, conference presentations and daily rounds presentation.

**Pediatric GI**............................... PEDS5618
4 Credits Preceptor's Site

**ELECTIVE DIRECTOR:** Dr. Gregory Scagnelli
**CONTACT:** ccstuaff@upstate.edu
**PREREQUISITES:** Pediatrics

**MAXIMUM NUMBER OF STUDENTS:** 1
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 011, 012

**ELECTIVE DESCRIPTION:** All aspects of Pediatrics GI. Inpatient and outpatient.

**PSYCHIATRY**

**Preceptorship in Adult Inpatient Psychiatry** ................................................. PYCH6812
4 Credits Preceptor's Site

**ELECTIVE DIRECTOR:** Dr. Leslie Major
**CONTACT:** ccstuaff@upstate.edu
**PREREQUISITES:** Psychiatry

**MAXIMUM NUMBER OF STUDENTS:** 1
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008

**ELECTIVE DESCRIPTION:** In general, student responsibility would involve initial work-up and care for patients admitted with acute psychiatric disturbances. The student would be expected to learn the appropriate use of the various illnesses, as well as to learn the appropriate use of the various therapeutic modalities. The student would also do a limited amount of consultation and outpatient work under the direction of his/her supervisor. Preceptor's Site: General Hospital Psychiatric Unit

**Acting Internship in Psychiatry.** PYCH6822
4 Credits Acting Internship Selective, Preceptor's Site

**ELECTIVE DIRECTOR:** Dr. Leslie Major
**CONTACT:** ccstuaff@upstate.edu
**PREREQUISITES:** All third year clerkships

**MAXIMUM NUMBER OF STUDENTS:** 0
**PERIODS OFFERED:** 002, 003, 004, 005, 006, 007, 008

**ELECTIVE DESCRIPTION:** Student would have primary responsibility for a group of psychiatric inpatients whom the student would work up and follow throughout their hospital course. The student would be expected to learn the clinical manifestations of the various major mental illnesses as well as to learn the appropriate use of therapeutic modalities. The student would also do a limited amount of consultation, liaison and outpatient work under the direction of his/her supervisor.

**RADIOLOGY**

**Diagnostic Radiology** .................RADL7214
2 Credits Wilson Memorial Hospital

**ELECTIVE DIRECTOR:** Dr. Thomas Gudas
**CONTACT:** ccstuaff@upstate.edu
**PREREQUISITES:** Internal Medicine & Surgery

**MAXIMUM NUMBER OF STUDENTS:** 1
**PERIODS OFFERED:** 01A, 01B, 02A, 02B, 03A, 03B, 04A, 04B, 05A, 05B, 06A, 06B, 07A, 07B, 08A, 08B, 09A, 09B, 10A, 10B, 11A, 11B, 12A, 12B

**ELECTIVE DESCRIPTION:** A joint program at the two hospitals: Wilson and Binghamton General. The student will participate in daily interpretation of imaging studies in association with staff radiologists. He/She will be assigned on a half-day rotation basis to various subspecialties in Radiology. He/She will be expected to attend all radiological interdisciplinary conferences at the various hospitals when feasible. There will be 3-4 late night sessions with Dr. Gudas, with the following morning free.

**PHYSICAL MEDICINE & REHABILITATION**

**Manual Neuromuscular Medicine** RMED7608
4 Credits Preceptor's Site

**ELECTIVE DIRECTOR:** Dr. Marita Powell
**CONTACT:** ccstuaff@upstate.edu
**PREREQUISITES:** All third year clerkships

**MAXIMUM NUMBER OF STUDENTS:** 0
**PERIODS OFFERED:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.

**ELECTIVE DESCRIPTION:** Hands-on medical treatment based on understanding the musculoskeletal, circulatory, lymphatic and nervous systems of the body. In-depth review of anatomy with emphasis on developing the student's palpatory skills to diagnose tissue texture changes, asymmetry, and restrictions of motion of musculoskeletal structures in the body that cause disease. The student will be taught specific techniques targeted to anatomically manipulate fascia, muscle and bone to improve circulation, joint mobility, restore normal range of motion and/or decrease pain caused by various musculoskeletal strain patterns and disease entities with an emphasis on neurology, orthopedics, and sports medicine.
SURGERY

Plastic Surgery ....................... SURG8032
4 Credits  Preceptor's Site
ELECTIVE DIRECTOR:  Dr. Mark Walker
CONTACT:  ccstuaff@upstate.edu
PREREQUISITES:  None
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION:  Elective to cover the full range of general plastic surgery practice including cosmetic, reconstructive breast and facial surgery, skin cancer, technical suturing, and various other surgeries.

Orthopedic Surgery .................. SURG8033
4 Credits  Preceptor's Site
ELECTIVE DIRECTOR:  Dr. Thomas Van Gorder
CONTACT:  ccstuaff@upstate.edu
PREREQUISITES:  Surgery
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, this course is not available in the elective lottery.
ELECTIVE DESCRIPTION:  This elective will allow the student to show what he/she has learned from the third year. Students will participate in a wide variety of activities both inpatient and outpatient, from E.R. To O.R.

Advanced Surgical Techniques  .. SURG8052
4 Credits  Preceptor's Site
ELECTIVE DIRECTOR:  Dr. Nirupama Anne, Dr. Ratnakishore Pallapothu
CONTACT:  ccstuaff@upstate.edu
PREREQUISITES:  None
MAXIMUM NUMBER OF STUDENTS:  1
PERIODS OFFERED:  001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012
ELECTIVE DESCRIPTION:  The objective of advanced surgical techniques is to provide a comprehensive educational exposure to surgical oncology techniques in breast surgery as well as advanced laparoscopy and head and neck surgery. It is for medical students who are interested in learning about the diverse range of surgical techniques and are interested in pursuing a career in general surgery or surgical specialties.