ADVANCED BASIC SCIENCE		
JMD 101	**Foundations of Medicine I**	The Foundations of Medicine I course is an integrated, 21-month course that encompasses both basic and clinical sciences. Students will be introduced to core concepts in blocks organized by organ system. Each week features a case explored through active learning in small groups. The schedule incorporates a variety of learning modalities such as labs, clinical skills sessions, patient sessions, team- based learning activities and lectures to complement and enhance student learning. Foundations of Medicine expects from students rigorous independent study and critical thinking to prepare them for the clinical problems they will encounter. The blocks covered in this course are Introduction to the Study of Medicine, Host Defense and Blood, and Cardiology.
JMD 102	**Foundations of Medicine II**	A continuation of JMD 101, the Foundations of Medicine II course is an integrated course that encompasses both basic and clinical sciences. Students will be introduced to core concepts in blocks organized by organ system. Each week features a case explored through active learning in small groups. The schedule incorporates a variety of learning modalities such as labs, clinical skills sessions, patient sessions, team-based learning activities and lectures to complement and enhance student learning. Foundations of Medicine expects from students rigorous independent study and critical thinking to prepare them for the clinical problems they will encounter. The organ systems covered in this course are Pulmonary, Renal, and GI/ Liver.
JMD 150	**Scholarly Inquiry**	Scholarly Inquiry aims to provide students with a wide range of skills and experiences that they need to become critical consumers and producers of medical knowledge. Students select from seven tracks (Clinical and Translational Research, Design, Digital Health, Health Policy and Systems, Humanities, Medical Education, and Population Health Research), receive training in a wide range of research domains and topics, and complete self-directed scholarly projects under the supervision of faculty mentors. Educational modalities include lectures, small-group seminars, workshops, team-based and problem-based learning sessions, and online modules. In their first year, students prepare and present a proposal for an independent scholarly project, and start work on its implementation. Detailed descriptions of each track can be found on the Scholarly Inquiry Canvas course pages.
JMD 151	**Clinical Experience**	The Clinical Experience course provides students with an understanding of the broader context of health through interaction with patients, families, clinical staff and community-based service providers. Beginning November of the first year of medical school and extending through Phase 1, students will be assigned clinical sites to learn about healthcare delivery and inter-professional teamwork. Students will receive training and tools to act as health navigators. Under the supervision of a community health worker and in collaboration with clinic staff, students will learn to address the underlying social and environmental factors that impact health. The Clinical Experience schedule will alternate between shifts at a designated clinical site (or virtual outreach encounters) and sessions structured for reflection and ongoing education.
JMD 152 & JMD 153	**The Humanities Selectives**	Strengthen key skills of clinical care through engagement in the arts and humanities. These skills include close observation, listening, emotional awareness and empathy, self-care, comfort with ambiguity and making mistakes, team and interpersonal communication, under- standing the perspectives of patients and colleagues, and under-standing social contexts of health. The Humanities Selectives are immersive, arts-based experiences and participation-oriented seminars that promote support and bonding between classmates and offer creative respite within medical school. In many cases, these courses are developed by professional artists in collaboration with medical educators and reflect unique syntheses of medicine and the humanities. Students may complete JMD 152 for one or two credits. Students choosing to complete JMD 152 for one credit will be expected to complete JMD 252 for one credit the following year.

JMD 201	**Foundations of Medicine III**	A continuation of JMD 102, the Foundations of Medicine III course is an integrated course that encompasses both basic and clinical sciences. Students will be introduced to core concepts in blocks organized by organ system. Each week features a case explored through active learning in small groups. The schedule incorporates a variety of learning modalities such as labs, clinical skills sessions, patient sessions, team-based learning activities and lectures to complement and enhance student learning. Foundations of Medicine expects from students rigorous independent study and critical thinking to prepare them for the clinical problems they will encounter. The organ systems covered in this course are Urology, Endocrine, and Reproduction as well as Musculoskeletal/
JMD 202	**Foundations of Medicine IV**	A continuation of JMD 201, the Foundations of Medicine IV course is an integrated course that encompasses both basic and clinical sciences. Students will be introduced to core concepts in blocks organized by organ system. Each week features a case explored through active learning in small groups. The schedule incorporates a variety of learning modalities such as labs, clinical skills sessions, patient sessions, team-based learning activities and lectures to complement and enhance student learning. Foundations of Medicine expects from students rigorous independent study and critical thinking to prepare them for the clinical problems they will encounter. The blocks in this course are Neuroscience and Psychiatry, as well as Complex Cases.
JMD 250	**Scholarly Inquiry**	Scholarly Inquiry aims to provide students with a wide range of skills and experiences that they need to become critical consumers and producers of medical knowledge. Students select from seven tracks (Clinical and Translational Research, Design, Digital Health, Health Policy and Systems, Humanities, Medical Education, and Population Health Research), receive training in a wide range of research domains and topics, and complete self-directed scholarly projects under the supervision of faculty mentors. Educational modalities include lectures, small-group seminars, workshops, team-based and problem-based learning sessions, and online modules. In their second year, students complete their scholarly project and present their work (poster, oral presentation, and abstract). Detailed descriptions of each track can be found on the Scholarly Inquiry Canvas course pages.
JMD 251	**Clinical Experience**	The Clinical Experience course provides students with an understanding of the broader context of health through interaction with patients, families, clinical staff and community-based service providers. Students will be assigned clinical sites to continue to learn about healthcare delivery and inter-professional teamwork. Students will receive additional training and tools to act as health navigators. Under the supervision of a community health worker and in collaboration with clinic staff, students will address the underlying social and environmental factors that impact health. The Clinical Experience schedule will alternate between shifts at a designated clinical site (or virtual outreach encounters) and sessions structured for reflection and ongoing education.
JMD 252	**The Humanities Selectives**	Strengthen key skills of clinical care through engagement in the arts and humanities. These skills include close observation, listening, emotional awareness and empathy, self-care, comfort with ambiguity and making mistakes, team and interpersonal communication, understanding the perspectives of patients and colleagues, and understanding social contexts of health. The Humanities Selectives are immersive, arts-based experiences and participation-oriented seminars that promote support and bonding between classmates and offer creative respite within medical school. In many cases, these courses are developed by professional artists in collaboration with medical educators and reflect unique syntheses of medicine and the humanities. JMD 252 is a continuation of JMD 152 for students who need one additional credit and is not mandatory for students who have completed 2 credits in JMD 152.
JMD 300	**Transition to Clerkships**	This mandatory one-week course kicks off Phase 2 with essential skills training for students starting clinical clerkships. Sessions focus on expectations, success strategies, and other skills to help students get the most of their clinical learning experiences. Small group workshops focus on oral presentation and note writing, as well as basic procedures.

JMD 301	**Dimensions of Clinical Medicine**	The goal of this course is to expose students to various interdisciplinary topics in the context of clinical medicine and reflect on complexities and many influences that affect the practice of medicine. This course consists of 7 curricular sessions that run every 6 weeks during Phase 2, and includes small group reflection sessions and observed patient encounters. Students will also have sessions that focus on residency selection and application process. End-of-Phase 2 OSCE is the final assessment for this course.
JMD 350	**Scholarly Inquiry**	During this mandatory phase-long course, students will continue to develop their scholarly inquiry projects. Under guidance of their mentors, students will assemble a portfolio of their scholarly work, and begin planning for a capstone scholarly project.
JMD 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director. Students who wish to complete research outside of a traditional clinical department or to continue Scholarly Inquiry work from previous years may do so by registering for JMD 425.
JMD 441	**The Medical Memoir: Crafting Compelling, Ethical Stories from a Life in Medicine**	This is a humanities course for fourth-year medical students. This is an opportunity for learners to reflect on their lives in medicine so far and on the situations and people that have touched them within the profession, and to craft these reflections into compelling stories. These stories may be intended for a medical audience or a general audience, but will offer insights into the experience of caring for patients and/or the experience of being a patient. This course is delivered through online learning.
JMD 442	**Problems in the History of Healthcare and Medicine: Disease and Society**	This course seeks to examine the roots of some of today's problems in healthcare and the complex factors that shape our healthcare system. Learning about healthcare's past will help us contextualize healthcare today and posit its future. This course is delivered through online learning.
JMD 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director. Students who wish to complete research outside of a traditional clinical department or to continue Scholarly Inquiry work may do so by registering for JMD 425.
JMD 441	**he Medical Memoir: Crafting Compelling, Ethical Stories from a Life in Medicine**	This is a humanities course for fourth-year medical students. This is an opportunity for learners to reflect on their lives in medicine so far and on the situations and people that have touched them within the profession, and to craft these reflections into compelling stories. These stories may be intended for a medical audience or a general audience, but will offer insights into the experience of caring for patients and/or the experience of being a patient.
JMD 442	**Problems in the History of Healthcare and Medicine: Disease and Society**	This course seeks to examine the roots of some of today's problems in healthcare and the complex factors that shape our healthcare system. Learning about healthcare's past will help us contextualize healthcare today and posit its future.
JMD 460	**Biochemistry and Evidenced Based Medicine**	The goal of this course is to provide students with further and unique training in biochemistry, genetics, biostatistics, and evidence-based medicine. Course work will focus on analyzing clinical cases, ordering &interpreting diagnostics, and judging relevant clinical trials.
JMD 461	**Advanced Concepts in Microbiology**	The goal of this course is to further develop students' knowledge of clinically relevant bacteria, mycobacteria, and fungi, including how these organisms are identified in the laboratory and how the results inform patient care. This elective includes both an online component and a practical microbiology lab experience.

JMD 462	**Advanced Study of Transfusion Medicine**	This course is structured around multiple learning experiences, including multiple short virtual lectures, case-based asynchronous online learning dedicated to transfusion medicine, and includes a tour of the blood bank.
JMD 463	**Advanced Study of Musculoskeletal Disease and Disorders**	This online course will cover the pathophysiology underlying a mechanism-based approach to diagnosis and treatments for common musculoskeletal (MSK) disorders and diseases using case-based learning. Advanced cases incorporate multiple stages of the disease/disorder spanning periods of childhood, adolescence, early and late adulthood. Treatment categories include pharmacological, surgical, therapeutic, and lifestyle modifications.
JMD 464	**Advanced Study of Neurological Diseases and Disorders**	This online course will cover the pathophysiology underlying a mechanism-based approach to diagnosis and treatments for common neurological disorders using case-based learning. Advanced cases are tailored to incorporate multiple stages of one or more diseases/disorders spanning periods of childhood, adolescence, early and late adulthood. Treatment categories include pharmacological, surgical, therapeutic, and lifestyle modifications.
JMD 465	**Clinically Actionable Molecular Pathology (CAMP)**	This course is a mixed-format course on molecular pathology with a focus on clinically actionable molecular targets. This course is structured around multiple learning aetiologies, including multiple “mini” online lectures, case based learning, as well as attendance to at least one molecular focused tumour board.
JMD 466	**Integrated Medicine**	This course is designed to highlight evidence based approaches used in integrative medicine that can benefit patient care, regardless of the specialty (i.e. patients do not have to be seen at an integrative medicine practice in order to utilize these approaches). This course is delivered through online learning.
JMD 467	**Clinical Pharmacology**	This course introduces the discipline of clinical pharmacology. Content is based on a previously taught ABS course Clinical Pharmacology. Although clinicians can become board-certified in Clinical Pharmacology, the concepts can be applied by clinicians in any specialty
JMD 468	**Approaches to Pain and Addiction**	This course highlights the use of opioids and other analgesics in multimodal targeted analgesia and the role of medication in addiction medicine. Opportunities will be available to participate in “live” and online sessions.
JMD 469	**Blood**	This online course focuses on blood disorders, including leukemias, pro-thrombotic disorders, bleeding disorders, and heritable anemias. This course is structured around multiple learning experiences, including multiple short virtual lectures, case-based learning, and online small group presentation.
JMD 470	**Advanced Concepts in Immunology**	This online course focuses on the understanding of the components of the innate and adaptive immune system and how these systems are regulated, the ways in which the immune system contributes to the appropriate response to pathogens and to the inappropriate development of autoimmune responses. Students will learn to apply this knowledge to the management of clinical scenarios and explore new and evolving knowledge and research in basic and clinical immunology
JMD 474	**Advanced Diagnostics**	An online case-based course on diagnostic medicine including aspects of pathology, radiology, and laboratory medicine. This course is structured around doing one literature review and four cases using online discussion boards and survey tools. Besides the diagnostic component, each case will also have an overarching “theme”, including principles of testing, critical evaluation of literature, barriers to diagnosis, and financial cost of diagnosis. This course is created as a collaboration between the Pathology and Radiology departments.

JMD 480	**Anatomy and Pathology Musculoskeletal Elective**	This is a focused course designed to supplement select critical knowledge areas and competencies in the anatomical sciences (dissection, imaging, embryology, histology), pathology and pathogenic mechanisms for components of the nervous system. This course will rely heavily on active learning via laboratory dissection/presentations, team-based learning sessions and journal club presentations on current literature.
JMD 481	**Anatomy and Pathology Neurosciences Elective**	This is a focused course designed to supplement select critical knowledge areas and competencies in the anatomical sciences (dissection, imaging, embryology, histology), pathology and pathogenic mechanisms for components of the nervous system. This course will rely heavily on active learning via laboratory dissection/presentations, team-based learning sessions and journal club presentations on current literature.
JMD 482	**Anatomy and Pathology Head and Neck Elective**	This is a focused course designed to supplement select critical knowledge areas and competencies in the anatomical sciences (dissection, imaging, embryology, histology), pathology and pathogenic mechanisms for the structures of the head and neck. This course will rely heavily on active learning via laboratory dissection/presentations, team-based learning sessions and journal club presentations on current literature.
JMD 483	**Anatomy and Pathology Thorax Elective**	This is a focused course designed to supplement select critical knowledge areas and competencies in the anatomical sciences (dissection, imaging, embryology, histology), pathology and pathogenic mechanisms for the structures of the thorax. This course will rely heavily on active learning via laboratory dissection/presentations, team-based learning sessions and journal club presentations on current literature.
JMD 484	**Anatomy and Pathology Abdomen Elective**	This is a focused course designed to supplement select critical knowledge areas and competencies in the anatomical sciences (dissection, imaging, embryology, histology), pathology and pathogenic mechanisms for the structures of the abdomen. This course will rely heavily on active learning via laboratory dissection/presentations, team-based learning sessions and journal club presentations on current literature.
JMD 485	**Anatomy and Pathology Pelvis/Perineum Elective**	This is a focused course designed to supplement select critical knowledge areas and competencies in the anatomical sciences (dissection, imaging, embryology, histology), pathology and pathogenic mechanisms for the structures of the pelvis and perineum. This course will rely heavily on active learning via laboratory dissection/presentations, team-based learning sessions and journal club presentations on current literature.
JMD 486	**Anatomy and Pathology Trunk Elective**	This is a focused course designed to supplement select critical knowledge areas and competencies in the anatomical sciences (dissection, imaging, embryology, histology), pathology and pathogenic mechanisms for the structures of the trunk: thorax, abdomen and pelvis. This course will rely heavily on active learning via laboratory dissection/presentations, team-based learning sessions and journal club presentations on current literature.
JMD 494 & JMD 495	**Gateway to Internship A & B**	necessary to make the transition from medical school to internship and residency, regardless of their future specialty. During these four courses, students will be exposed to didactic sessions covering core management topics and then use this information in simulated patient settings and small group evidence-based medicine discussions. They will learn the art of sign-out and cross-covering while managing the stresses of multitasking as an intern. They will demonstrate their newly acquired skills with simulation and standardized patient encounters. Students will also acquire skills on health literacy, transitions of care and end-of-life/death issues. Additionally, sessions and activities on how to manage stress/anger, maintaining personal health and nutrition,
ANESTHESIA		
ANES 352	**Anesthesia Selective**	Students will learn aspects of anesthesiology that should be understood by all practicing physicians. Preoperative evaluation, choice of appropriate anesthetic techniques, and postanesthetic problems that may develop are covered. Operating room experience demonstrates mask ventilation, the use of airway adjuncts, and endotracheal intubation.

ANES 401	**General Anesthesia Subinternship**	This comprehensive course introduces the medical student to preoperative evaluation, intraoperative, and postoperative anesthesia management of surgical patients. Emphasis is placed on the principles of anesthesia (general and regional), physiology of various organ systems, anesthetic pharmacology and hemodynamic monitoring. The medical student works as a member of the anesthesia care team, interacting with staff anesthesiologists and residents. Hands on technical experience of establishing intravenous access, noninvasive/invasive hemodynamic monitoring, various airway management and regional anesthesia techniques are taught under close staff supervision. The operating room teaching is supplemented by twice weekly lectures. During this course, students do not have any overnight call obligations. The last week of course can bespent in the subspecialty of the student's choice, i.e. cardiac, neurosurgery, obstetrics anesthesia or acute pain management.
ANES 402	**Regional Anesthesia**	This course introduces medical students to the different applications of regional anesthesia techniques for intraoperative and postoperative patient management. Students work as a member of the anesthesia care team with staff anesthesiologists, fellows and residents. They get exposure to a variety of regional techniques and their surgical applications. Basics of ultrasound are taught. Hands-on experience with performing nerve blocks on phantom models are provided. Students are expected to make a 10-15 minute oral presentation on a relevant topic during their last week of the course.
ANES 403	**Acute Pain Management**	Students in this course are a member of the pain management team and apply the principles of evaluation of patients with acute and chronic pain syndromes. Time will be spent in the postoperative acute pain service. Teaching stresses the need for a complex, multidisciplinary approach to pain problems. The course is useful for students planning a career in anesthesia as well as those who will encounter patients with chronic pain syndromes in family medicine, internal medicine, and surgical practices.
ANES 405	**Chronic Pain Management**	This course allows students training in comprehensive evaluation, diagnosis and treatment of a wide variety of chronic pain conditions in an outpatient setting. The student is a member of the Chronic Pain Management Team in the Jefferson Pain Center located at the Navy Yard. The course is useful for students planning a career in anesthesia as well as those who will encounter patients with chronic pain syndromes in family medicine, internal medicine, and surgical practices.
ANES 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research advisor/PI, and approved by the departmental research course director.
		DERMATOLOGY
DERM 401	**Dermatology Subinternship**	This course includes examination and treatment of patients in the outpatient department, PowerPoint presentations of common skin diseases, conferences on dermatologic literature, and consultation service on inpatients. A formal presentation at the end of the course will be required. A modified version of this course is also offered as a 2-week course (DERM 481).
DERM 402	**Basic Derma-topathology**	This course will provide the student with in-depth knowledge of dermatopathology. The student will have the opportunity to engage in all facets of the activities in a dermatopathology laboratory, including, but not limited to, processing of the skin specimens, daily sign outs at the microscope, and research activities. The student will have the opportunity work with pathology and dermatology residents, fellows, and faculty members. Oral presentation at the end of the course is a requirement. **Prerequisite: DERM 401.**
DERM 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.

DERM 482	**Advanced Topics in Dermatology**	Students will analyze literature on a variety of topics in Dermatology and apply the information from medical literature to answer clinical questions. Students will demonstrate a commitment to ethical principles pertaining to provision of withholding of care, confidentiality, informed consent, and conflicts of interest. They will construct an effective teaching presentation on a topic of choice.
	EMERGENCY MEDICINE	
EMGR 350	**Emergency Medicine Clerkship**	Emergency Medicine is a three-week clerkship during which students will work closely with faculty and residents in the Emergency Department, focusing on diagnosis and management of patients who present with a variety of acute conditions. Didactic lectures, clinical skill laboratories, and patient simulations supplement clinical learning. Students will also get the opportunity participate in the resident conferences.
EMRG 355	**Emergency Medicine Clerkship**	During Emergency Medicine students will work closely with Emergency Medicine attendings and residents in the diagnosis and management of patients who present to the Emergency Department. They will work in the Emergency Department as well as attend didactic lectures, clinical skill laboratories, and patient simulations during the clerkship. Students will also have the opportunity participate in the resident conferences. Students will attend Orientation and teaching/testing days at Morristown. Prerequisite: Must be enrolled in the Longitudinal Integrated Clerkships (LIC) track.
EMERG 401	**Emergency Medicine Subinternship**	Building on the knowledge learned in EMRG 350, students will continue to demonstrate appropriate initial evaluation and assessment of patients presenting to the Emergency Department with urgent and emergent medical and traumatic conditions. A modified version of this course is also offered as a 2-week course (EMRG. 481).
EMERG 405	**Point-of-Care Ultrasound**	Students should gain an understanding of the appropriate indications for Point-of-Care (POC) ultrasound in the care of patients in the Emergency Department. Additionally, students will gain exposure to the technical and interpretive skills involved in performing POC ultrasound. Training will be supervised by Emergency Medicine faculty who are fellowship trained in POC ultrasound. Students will also attend weekly ultrasound didactic/review sessions. In addition to these scheduled activities, students will be responsible for giving journal article presentations and completing assigned reading and web-based didactic lectures. Students will be evaluated based on their ability to perform and interpret basic POC ultrasounds, completion of the journal article presentation and overall professionalism/work ethic.
EMRG 406	**Wilderness & Environmental Medicine**	BreckWild is a four week educational course designed for senior medical students with a goal of providing a comprehensive introduction to the field of wilderness and environmental medicine while gaining hands-on experience and exposure to skills required for expedition planning, rescue and wilderness survival. Participants will have the opportunity to work towards their Fellowships in the Academy of Wilderness Medicine (FAWM). No prior experience is necessary to enroll in this course. More information about this course can be found at https://breckwild.org.
EMRG 424	**Medical Toxicology**	This is a poison control center-based course offered through Children's Hospital of Pennsylvania (CHOP) where students will spend 50% of their time experiencing medical toxicology by way of telemedicine. This will incorporate traditional telephonic consultation with the lay public as well as hospital-based consult requests. This will feature working one on one with a Certified Specialist in Poison Information (RN & PharmD). The learner will also work directly with an attending toxicologist to provide formal video-based and bedside toxicology consultations. The remaining time will be integrated with weekly didactic sessions on core toxicology concepts as well as scholarly project time.
EMRG 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.

EMRG 427	**Telehealth Elective**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty advisor/PI, and approved by the departmental research course director. For this approval, the student must submit in writing to the departmental research course director a description of the proposed project, a list of goals for the month, and the name of the faculty mentor prior to scheduling this course.
EMRG 481	**Emergency Medicine Elective**	This course in Emergency Medicine is intended for those pursuing specialties other than Emergency Medicine. Building on the knowledge learned in EMRG. 350, students will continue to demonstrate appropriate initial evaluation and assessment of patients presenting to the Emergency Department with urgent and emergent medical and traumatic conditions. A modified version of this course is also offered as a 4-week course (EMGR. 401).
	FAMILY MEDICINE and PSYHIATRY	
FMED 350	**Family Medicine Clerkship**	Family Medicine is a six-week clerkship during which students will focus on the diagnosis and management of acute and chronic problems in the outpatient setting; health maintenance, preventive medicine, psychosocial and life stage contexts, time management, and cost-effective delivery of care.
FMED 355	**Family Medicine Clerkship**	During Family Medicine students will focus on the diagnosis and management of acute and chronic problems in the outpatient setting, health maintenance, preventive medicine, psychosocial and life stage contexts, time management, and cost-effective delivery of care. **Prerequisite: Must be enrolled in the Longitudinal Integrated Clerkships (LIC) track.**
FMED 401	**Outpatient Subinternship**	Students are given progressive responsibility, with supervision, for outpatient care. For the senior taking this course early in the academic year, emphasis is on developing skills in formulating an assessment and plan. For the advanced senior student, further teaching emphasis is on patient management and acute care. Students will enhance interpersonal skills in interview technique, understanding of the dynamics of the physician-patient relationship, and the reaction towards illness of physicians, patients, and the family. Students will develop primary care diagnostic and psychosocial skills, promoting a positive transition to the intern year. Students will self-identify specific educational objectives for the course. Examples include honing physical exam skills, improving interview skills, improving time management skills, learning about practice planning, and financial management.
FMED 402	**Inpatient Subinternship**	Students encounter the diverse range of medical conditions and complex multiple diagnoses typical of hospitalized patients and learn comprehensive patient management for hospitalized patients. The inpatient subinternship student in Family Medicine assumes a high level of responsibility for patient management. The student pre-rounds on their patients in the morning, checks labs, and writes orders. The student presents succinctly to the attending and resident team the diagnosis, assessment, and treatment plan, and is the primary point of care for the patient throughout their hospitalization. Medical, social, economic and psychological factors are addressed. Students participate in family meetings, including end-of-life and other complex decision-making processes. The student communicates with the patients' ambulatory physician, interacts with consultants, and arranges all necessary follow-up and aftercare.
FMED 405	**Palliative Care**	The student functions as a full-member of the Palliative Care team and rounds with the team on a daily basis. Responsibilities include seeing and evaluating patients, writing consultative notes, presenting to the Palliative Care team and communicating with the primary team about palliative care recommendations. Students will participate and attend weekly didactic and Inter-Disciplinary Team (IDT) meetings with faculty, staff, palliative care fellows and residents. Students will present a difficult case during weekly conference. Additionally, students will have an opportunity to participate in ongoing research projects or start their own research project.

FMED 406	**Geriatric Subinternship**	Students are given responsibility for care of geriatric patients in a variety of settings including academic and community-based primary care geriatric practices, home visits, palliative care and geriatric consultation, geriatric assessment, and rehabilitation and long-term care settings. Students participate in weekly didactic and case-based geriatric conferences and clinical team meetings. Students develop primary care/geriatric diagnostic, and psychosocial skills, promoting a positive transition to the intern year. Students self-identify specific educational objectives for the course such as balancing priorities for patients with multiple chronic conditions, and providing patient- and family-centered care for older adults. A modified version of this course is also offered as a 2-week course (FMED. 486).
FMED 407	**Community Engagement Experience**	Students spend time attending and participating in community-based health education programs (including diabetes self-management, weight management, asthma, nutrition, and breast health), screenings (including stroke, diabetes, blood pressure, and cholesterol) and meetings with the Center for Urban Health staff. Programs include the Healthy Corner Store Initiative, the STARS Advocacy Café at Nemours Pediatrics, diabetes group visit classes, diabetes prevention telehealth visits, Jeff Hope clinic, and school health fairs and sports physicals. The student functions as a full member of the Center for Urban Health staff. By the end of the course, students are expected to write a paper on a topic of their choice. This is an opportunity to explore an issue that they would like to learn more about, or follow-up on an experience they may have had in the clinic or in the community.
FMED 409	**Homeless Care Continuum**	This is a unique course where students will have the rare opportunity to work and observe the integrated medical, behavioral, and addiction care and social support provided in partnership with two nationally recognized non-profit agencies dedicated to ending and preventing homelessness: Pathways to Housing PA (www.pathwaystohousingpa.org) and Project HOME (http://www.projecthome.org). Students participate in individual patient care at the Pathways to Housing PA Integrated Care Clinic, weekly medication assisted treatment groups for people with opioid use disorder at various Project HOME clinical sites, and spend time each week with the Project HOME Outreach Team. In addition, students may have the opportunity to: attend community and coalition meetings related to homeless care, addiction treatment, prevention and public policy; and aid homeless patients in transitions from TJUH ED and hospital-based care to community settings in an effort to end homelessness, improve population health, and support community integration.
FMED 413	**Maternal-Child Health (MCH) in Family Medicine**	This is a rigorous subinternship geared towards the student who plans to pursue a career in Family Medicine or Obstetrics. The student participates in outpatient and inpatient obstetrics in Family Medicine, gynecologic clinics and outpatient surgeries, as well as outpatient and inpatient newborn care. Requirements include daily early morning rounds (postpartum and newborn patients), weekly overnight call, weekly labor and delivery coverage, outpatient office hours, and attendance at all morning reports and grand rounds. In the last week of the rotation, the student prepares an oral presentation for the MCH team.
FMED 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty advisor/PI, and approved by the departmental research course director.
FMED 427	**Community Practice Experience**	Students work with an experienced family physician in a community setting and participate in the daily life of the practice. The community practice experience will provide opportunities to appreciate population health in the contexts of prevention, treatment, family and community. Students are encouraged to engage the doctor and members of the practice team as they use individual, team, and systems-based approaches to patient care. Students may see patients in a variety of care settings and are encouraged to work on assessment and treatment planning skills. In addition, students should focus on the following aspects of the clinicians' practice: scope of practice, relationships with colleagues in procedural specialties, hospitalists, home care, long-term care, and school-based settings.

FMED 486	**Geriatrics Elective**	Students are given responsibility for care of geriatric patients in a variety of settings including academic and community-based primary care geriatric practices, home visits, palliative care and geriatric consultation, geriatric assessment, and rehabilitation and long-term care settings. Students develop primary care/geriatric diagnostic, and psychosocial skills, identify specific educational objectives for the course such as balancing priorities for patients with multiple chronic conditions, and providing patient- and family-centered care for older adults. A modified version of this course is also offered as a 4-week course (FMED 406).
		INTEGRATIVE MEDICINE & NUTRITIONAL SCIENCE
IDPT 401	**Musculoskeletal Outpatient Sub-internship**	This course will provide students the opportunity to care for a broad spectrum of patients with musculoskeletal problems in the outpatient set. Ting. Each student will work with the same provider on each day of the week for four weeks, to allow for continuity with faculty, increased responsibility and skill building. Students will refine and enhance their skills in musculoskeletal medicine from four different perspectives: the orthopedic surgeon, physiatrist, podiatrist, and sports medicine specialists.
IDPT 495	**Integrative Medicine**	The integrative medicine course offers students a unique clinical experience at the Marcus Institute of Integrative Health. This course familiarizes students with the latest clinical practices and research advances in the field. The clinical practice sees a variety of patients seeking care for a wide range of conditions such as chronic fatigue, chronic pain, irritable bowel syndrome and other gut dysfunction, fibromyalgia, cancer survivorship, traumatic stress, chronic head injuries, headache, gut health, menopausal care, and other hormonal problems. The curriculum includes specific integrative approaches related to diet, nutrition, supplements, stress management, micronutrient therapies, and others. Because of the nature of this practice, students will generally accompany the physician or therapist during a patient encounter, rather than performing independent evaluations of patients. Students will also have the opportunity to review interesting cases from the Institute's unique PET-MRI imaging technology. Students will rotate at Jefferson and Villanova during their rotation.
		MEDICAL PHYSICS
MEDP 600	**Radiation Physics**	Radiation Physics introduces the fundamental concepts underlying radiological physics and radiation dosimetry. It covers interactions of photons and charged particles with matter, photon and neutron attenuation, radiation and charged particle equilibrium, and radiotherapy dosimetry. This course teaches basic atomic and nuclear structure, quantities and units relating to radiation, interactions with matter, radioactive decay, and radiation measurement.
MEDP 603	**Medical Imaging Physics**	Imaging Physics will give the student experience in physical principles used in fluoroscopy, computed tomography, ultrasound, magnetic resonance imaging, radioisotope production, gamma cameras, SPECT systems, PET systems, diagnostic/nuclear medicine facilities, and their regulations. These courses will also introduce basic principles of mathematical analysis, the Fourier transform, interpolation and approximation of functions, sampling theory, digital filtering, and noise analysis.
MEDP 610	**Radiation Protection**	Radiation Physics introduces the fundamental concepts underlying radiological physics and radiation dosimetry. It covers interactions of photons and charged particles with matter, photon and neutron attenuation, radiation and charged particle equilibrium, and radiotherapy dosimetry. This course teaches basic atomic and nuclear structure, quantities and units relating to radiation, interactions with matter, radioactive decay, and radiation measurement.
MEDP 612	**Radiation Therapy Physics Clinical Practicum**	The student will undergo clinical observation and training working alongside clinical diagnostic, therapeutic, and resident physicists at Thomas Jefferson University Hospital or affiliate organizations. These courses are designed to the student practical experience of daily tasks for medical physicists at different types of clinical environments.

MEDP 613	**Applied Radiation Therapy Physics Laboratory I**	This course will introduce students to modern laboratory instrumentation and techniques through experiments designed to reinforce clinical policies. Experiments will give students experience with handling various radionuclides, calibration methods, source exchanges, pre and post operation planning, planning with various modern treatment algorithms and software.
MEDP 614	**Applied Radiation Therapy Physics Laboratory II**	The student will gain experience in quality assurance techniques for linear accelerators, CT simulators, simulator CT, dose verification, and film analysis. Also, the student will develop shielding designs for radiation protection purposes for equipment found within a hospital setting which will include but not limited to linear accelerators, computed tomography units, and HDR suites. The student will also be expected to perform and develop survey reports suitable of state and federal inspections.
MEDP 635	**Radiation Therapy Physics I**	This course is designed to establish a basic knowledge of physics pertinent to developing an understanding of radiation used in the clinical environment. Fundamental physics units, measurements, principles, anatomic structure and types of radiation are emphasized. Also presented are the fundamentals of x-ray generating equipment, x-ray production and its interaction with matter.
MEDP 636	**Radiation Therapy Physics II**	This course is designed to expand concepts and theories in radiation physics. The first part of this course is concentrated on the basic photon and electron dosimetry and MU calculation. The second part is concentrated on some special topics in the area of radiation therapy as well as the quality assurance (QA) program used in radiation oncology facilities. A QA program is essential to maintain the quality of patient care. Topics will include: the need for QA checks, the types of evaluation and test performed in radiation therapy equipment such as simulators, treatment planning systems, and linacs, the role of the radiation therapist in the quality management process, legal and regulatory implications for maintaining appropriate QA guidelines.
MEDP 640	**Introduction to Radiology**	This course will present concepts, theories, and principles of modern radiation biology. The physical properties of radiation and how radiation interacts with biological matter will be discussed. The effects of radiation on DNA, cells, and individuals, as well as the concepts and practice of clinical radiation therapy will be examined in detail. Specific topics will include human cellular biology; molecular and cellular radiobiology, including early and late effects, cellular survival curves, and factors affecting cellular radiosensitivity; establishing risk estimates; and regulations pertaining to current radiation protection practices.
MEDP 645	**Diagnostic Imaging Physics**	This course is designed to give the student a comprehensive overview of the physics requirements and responsibilities involved in radioisotope production and radioactivity, diagnostic/nuclear medicine facilities, gamma cameras, SPECT systems, PET systems, ultrasound, magnetic resonance imaging, and the associated radiation safety regulations. Students will review and discuss clinical case studies associated with each imaging modality. The pertinent AAPM Reports and Task Group reports for these topics will be analyzed and discussed.
MEDP 650	**Capstone I**	A student's capstone project is a research project conducted over a year under the supervision of a faculty member in Radiation Oncology or related field. The student has the freedom to establish a faculty member outside of the department of Radiation Oncology as their primary advisor with a Radiation Oncology faculty member as their secondary advisor.
MEDP 651	**Capstone II**	A student's capstone project is a research project conducted over a year under the supervision of a faculty member in Radiation Oncology or related field. The student has the freedom to establish a faculty member outside of the department of Radiation Oncology as their primary advisor with a Radiation Oncology faculty member as their secondary advisor.

MEDP 670	**Medical Physics Seminar I**	As part of the medical physics program students are required to participate in medical physics seminar courses. Students will be expected to meet regularly to discuss current topics in medical physics. On the first day of class, students will be assigned topics for the remainder of the year in which they will be expected to lead the discussion for that lecture. This is also the forum for an introduction into current faculty research and for students to present their capstone projects to the radiation oncology department.
MEDP 671	**Medical Physics Seminar II**	As part of the medical physics program, students are required to participate in medical physics seminar courses. Students will be expected to meet regularly to discuss current topics in medical physics. On the first day of class, students will be assigned topics for the remainder of the year in which they will be expected to lead the discussion for that lecture. This is also the forum for an introduction into current faculty research and for students to present their capstone projects to the radiation oncology department.
MEDP 672	**Medical Physics Seminar III**	As part of the medical physics program, students are required to participate in medical physics seminar courses. Students will be expected to meet regularly to discuss current topics in medical physics. On the first day of class, students will be assigned topics for the remainder of the year in which they will be expected to lead the discussion for that lecture. This is also the forum for an introduction into current faculty research and for students to present their capstone projects to the radiation oncology department.
MEDP 673	**Medical Physics Seminar IV**	As part of the medical physics program, students are required to participate in medical physics seminar courses. Students will be expected to meet regularly to discuss current topics in medical physics. On the first day of class, students will be assigned topics for the remainder of the year in which they will be expected to lead the discussion for that lecture. This is also the forum for an introduction into current faculty research and for students to present their capstone projects to the radiation oncology department.
		MEDICINE
MED 350	**Internal Medicine Clerkship**	During Internal Medicine clerkship, students will acquire knowledge and skills required to care for adult patients in the hospital environment. This is an eight-week experience; students spend four weeks at the Thomas Jefferson University Hospital, and four weeks at one of our academic affiliates, allowing for exposure to a diverse group of patients. Clinical experiences and didactics focus on pathophysiology, diagnosis, and management of disease processes commonly seen in internal medicine and requiring hospitalization. Additional projects will help hone procedural skills, focus on evidence-based and cost-conscious care, and apply literature review to patient care. Students partake in team-based care of patients and learn the roles and responsibilities of various healthcare professionals.
MED 355	**Internal Medicine Clerkship**	During the Internal Medicine clerkship, students will acquire knowledge and skills required to care for a diverse group of adult patients in the hospital and outpatient environments. Clinical experiences and didactics focus on pathophysiology, diagnosis, and management of disease processes commonly seen in internal medicine and requiring hospitalization. Additional projects will help hone procedural skills, focus on evidence-based and cost-conscious care, and apply literature review to patient care. Students partake in team-based care of patients and will learn the roles and responsibilities of various healthcare professionals. Prerequisite: Must be enrolled in the Longitudinal Integrated Clerkships (LIC) track.
MED 401	**Inpatient Subinternship**	The medicine subinternship inpatient experience seeks to build on patient evaluation, presentation, and documentation skills learned in Phase 2. Students will be challenged to build complex differential diagnoses, prioritize problems, and propose management plans for their patients. High-level functioning as a member of an internal medicine team is expected, with special focus given to topics such as building a task list, requesting consultation, transitioning care via handoff and discharge, sensitive and difficult patient communication, and interdisciplinary collaboration.
MED 402	**Outpatient Subinternship**	Students function as a first-year house officer, assisting in the diagnosis and management of problems presenting to the outpatient general medical services. The student will receive special instructions in sharpening skills of history taking and physical diagnosis as well as interpretation of x-ray and laboratory data. Emphasis is directed toward comprehensive patient care in the Internal Medicine outpatient setting.

MED 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty advisor/PI, and approved by the departmental research course director.
MED 431	**Hematology**	In this course, students work closely with the attending hematologist, fellows, and residents in the diagnosis and management of patients with hematologic diseases. Students make daily rounds, attend one morphology conference, and hematology grand rounds each week. Students may elect to spend time in the outpatient office. In addition, students are exposed to clinical laboratory techniques through the Cardeza Foundation Special Hematology and Hemostasis Laboratories.
MED 433	**Hematology/ Oncology**	In this course, students work closely with the attending hematologist/medical oncologists at sites other than the Center City Philadelphia TJUH campus. The experience varies from site to site depending on the patient population served. However, in all cases, this is primarily an outpatient experience wherein students gain exposure to general hematology/medical oncology practice including a wide variety of malignancies and general hematology issues. In most cases, there is an opportunity to participate in multidisciplinary clinics dedicated to specific cancer types. Students wishing a similar experience at the TJUH Center City Philadelphia campus or other Jefferson Medical Oncology practice sites should register for MED 495.
MED 434	**Hematologic Malignancies/Bone Marrow Transplant**	Medical students will be exposed to topics in the related fields of hematopoietic progenitor cell transplant and hematologic malignancies. In most cases, the rotation will be divided in half with two weeks in the Blood and Marrow Transplant Unit (BMTU) and two weeks with the Hematologic Malignancy Service (HMS) on the regular hospital floor. In the BMTU, students will follow inpatients with residents and attending physicians. These will include patients with a wide variety of hematologic malignancies and focus primarily on those undergoing autologous or allogeneic transplants. Discussions on rounds will be based primarily on patient encounters. Students will be expected to read the appropriate literature in reference to BMT and hematologic malignancies and to contribute to discussions on rounds. On the HMS, students will work with the hematology/oncology fellow and the attending. They will see consults, care for patients admitted for elective chemotherapy and interact with the Blue Medicine team. For students who have already spent a month rounding on the Blue Medicine team as part of the third or fourth year, there is an option to spend all four weeks in the BMTU. Students are welcome to see patients in the outpatient BMT practice as well, and to observe new patient consultations. Students are invited to attend weekly management conferences attended by the BMT team including physicians, nursing staff, social work and pharmacy.
MED 441	**Nephrology**	In this course, students work with patients with diseases of the kidney, including hypertension, and gain experience in diagnostic techniques, dialysis and renal transplantation through rounds, conferences, and seminars primarily in the inpatient setting.
MED 450	**Nephrology Outpatient Clerkship**	Students enrolled in this course will participate in the ambulatory care of patients in the Jefferson Renal Associates outpatient clinic. They will see a variety of patients including those with chronic kidney disease, patients on dialysis, and renal transplant patients.
MED 452	**Cardiology Outpatient Clerkship**	Students enrolled in this course will participate in the ambulatory care of patients in the Jefferson Renal Associates outpatient clinic. They will see a variety of patients including those with chronic kidney disease, patients on dialysis, and renal transplant patients.

MED 457	**Cardiology**	This course is designed to acquaint the student with the basics of diagnosis and management of a wide variety of cardiovascular problems. The student is expected to work up all new admissions and follow them through the hospital course. The student is expected to make daily rounds and present new work-ups at this time and review the progress of those patients already on the service. The student is expected to review catheterization films with appropriate faculty and fellows. The student attends daily conferences in the section. It is possible that the student may be assigned, as well, to the patients of other members of the division, depending upon the case load and whether medical house officers also are electing this course.
MED 458	**Cardiac Critical Care**	In addition to introducing students to core concepts in adult critical care medicine, this course will have a focus on cardiac disease, including the recognition and management of decompensated heart failure, myocardial infarction, valvular disease, and other life-threatening cardiac events. There will be an emphasis on ECG interpretation, the use of echocardiography, and cardiac catheterization techniques. Students will be expected to actively participate in all aspects of care including diagnostic evaluations, presentations of patients on rounds, and selected procedures.
MED 459	**Outpatient Pulmonary Elective**	This is an outpatient medicine-based elective that will provide students exposure to pulmonary medicine in the ambulatory setting. Students will have the opportunity to evaluate common and more complex pulmonary disease states. Students will gain proficiency in interpretation of common outpatient pulmonary testing and learn to collaborate with additional specialties. Students will have the opportunity to attend regularly scheduled case conferences, pulmonary didactics, and multidisciplinary management conferences.
MED 467	**Pulmonary**	This course provides clinical experience with patients with pulmonary diseases, including tests of pulmonary function and other diagnostic techniques through rounds, conferences, and seminars.
MED 469	**Medical Critical Care**	In the Medical Intensive Care Unit, students will be exposed to a wide variety of life-threatening illness, but there will be a focus on the recognition and management of respiratory failure, acute liver failure, sepsis, and complications of oncologic disease. There will be an emphasis on the principles of mechanical ventilation and resuscitation, the management of shock states, and end-of-life care. Of note, the intensive care units at Methodist, Lankenau and Abington are “mixed” ICUs and will manage both medical and surgical patients. Students will be expected to actively participate in all aspects of care including diagnostic evaluations, presentations on rounds, and selected procedures.
MED 473	**Infectious Disease**	This course is designed to provide the student with experience in the consultative practice of Infectious Diseases. This includes the diagnosis and management of a variety of clinical problems, correlation with the medical literature, appropriate use and interpretation of microbiologic and other diagnostic studies, and antibiotic prescribing. Daily rounds with the Infectious Diseases fellow and attending consist of presentation and discussion of new cases, follow-up of service patients, and bedside teaching. The student is expected to attend weekly conferences within the division. In addition, students are provided with special teaching sessions conducted by fellows and attendings in which core material in Infectious Diseases is reviewed.

MED 474	**Advanced Physical Diagnosis**	Physical examination is a powerful but underutilized set of tools to assist primary care physicians in giving quality and efficient patient-centered health care. Advanced Physical Diagnosis is a month-long course which consists of a set of sessions designed to teach the basic and advanced techniques, outcomes and interpretation used in physical examination. Topics include: HEENT, musculoskeletal, eye, skin, abdomen, cardiovascular, pulmonary, male and female genitourinary and neurological examinations will be covered in depth. The topics will be discussed in a symptom- or problem-based format with emphasis on what basic and advanced physical examination techniques may be performed to most effectively and efficiently evaluate these specific complaints and assist the clinician in diagnosis. There will be ample opportunity to utilize and refine these psychomotor skills by practicing on standardized patients and patient-equivalents and via physical diagnosis finding rounds. A critical review of literature and concepts of predictive values in using these techniques will be discussed.
MED 475	**Clinical Skills Elective**	Students must attend a mandatory classroom session at the beginning of the course where the fundamentals of teaching clinical skills will be discussed and demonstrated. Students will then be required to select 10 clinical skills sessions to participate in and will provide hands-on clinical skills teaching. This course is by placement only.
MED 478	**Hepatology**	Students are involved in the care of patients with a wide variety of liver disorders including viral hepatitis, alcoholic liver disease, cholestatic liver diseases and metabolic liver diseases. By participating in daily hospital rounds on the busy hepatology service, students will be exposed to the diagnosis and management of chronic liver disease and liver transplantation. Students will also attend outpatient clinics and conferences dealing with transplantation evaluation and listing, immunosuppression, interpretation of liver biopsies and management of non-transplantation aspects of hepatology.
MED 479	**Gastroenterology**	This course provides clinical experience with patients with diseases of the gastrointestinal tract and liver, including indications for endoscopic and other diagnostic procedures and observer participation in these procedures. Students will participate in rounds, conferences, and seminars.
MED 482	**Heart Failure Elective**	The Heart Failure elective is designed for students who are interested in exposure to the care of patients with heart failure with reduced and preserved ejection fraction. Students will participate in the care of hospitalized patients, including patients who have undergone heart transplantation or left ventricular assist device (LVAD) implantation. They will take part in daily rounds and have an opportunity to see patients on both the telemetry and intensive care units. There will also be opportunities, per student interest, in assisting in the catheterization lab and in the ambulatory setting. There may also be opportunities to observe in the operating room and participate in daily teaching sessions related to current patient issues.
MED 485	**Nutrition**	Students will participate in the inpatient care of patients at Thomas Jefferson University Hospital. Students will be assigned to work directly with a clinical dietitian in the hospital setting.
MED 489	**Rheumatology**	This course provides clinical, laboratory, and radiologic study of patients under the guidance of rheumatology fellows and attending staff. Literature reviews and seminars complement the clinical program.
MED 490	**Women's Health**	The Women’s Health course allows the student to experience providing health care for women from a multi-disciplinary approach. The student spends time with surgery and radiation oncology reviewing breast cancer; obstetrics and gynecology learning the basics of the pelvic exam, infertility and contraception issues; maternal fetal medicine reviewing medical disorders during pregnancy; rheumatology reviewing osteoporosis; internal medicine to review primary care and preventative health care issues in women; and visit an inpatient facility for patients with eating disorders. There is a weekly journal club session to review current women’s health care topics in the current literature.

MED 491	**Endocrinology**	This course includes patient work-up and daily rounds with fellows, residents, and staff. This course is designed to acquaint the student with basic clinical focus on diabetes, endocrinology, and metabolism. The majority of time is spent in the outpatient setting with additional material covered in weekly clinical and didactic conferences.
MED 492	**Perioperative and Consultative Medicine**	Students will participate in the inpatient care of patients with the Farber Hospitalist group at both TJUH and JHN; one student will be assigned to each location. They will see patients with the Farber Hospitalist group five days per week for two weeks. They will work closely with the Gibbon Farber Consult attending and the JHN Farber attendings to see a variety of surgical patients and provide consultative/perioperative care. Students will learn and become familiar with performing preoperative assessments including cardiac risk stratification prior to surgical procedures, optimizing medical comorbidities preoperatively, appropriately modifying a patient's medication regimen perioperatively, and managing postoperative complications, including but not limited to, postoperative fever, anemia, pain, electrolyte disorders, hypotension, venous thromboembolism, ileus, encephalopathy etc.
MED 495	**Oncology**	The goal of this course is to introduce the student to the outpatient evaluation of ambulatory cancer patients. Examples of tumors that the student will have an opportunity to evaluate include melanoma, lymphoma, colorectal cancers, and breast cancer. Selected reading will be recommended based on the clinical material.
		NEUROLOGY
NEUR 350	**Neurology Clerkship**	Neurology is a four-week clerkship which provides a foundational experience in the field of Adult Neurology. Student will learn about various neurologic conditions, including pathophysiology, clinical presentation, diagnosis, and treatment. Learning will specifically focus on ability to gather a detailed neurological history performing a neurological examination.
NEUR 355	**Neurology Clerkship**	Neurology provides a foundational experience in the field of Adult Neurology. Students will learn about various neurologic conditions, including pathophysiology, clinical presentation, diagnosis, and treatment. Learning will specifically focus on ability to gather a detailed neurological history performing a neurological examination. Prerequisite: Must be enrolled in the Longitudinal Integrated Clerkships (LIC) track.
NEUR 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty advisor/PI, and approved by the departmental research course director.
NEUR 431	**Advanced Neurology**	The Advanced Neurology Course is an elective course for students to explore a wide-range of advanced topics as a baseline framework for a potential future career in Neurology. The student will build their schedule by selecting from six course options: Multispecialty Outpatient Clinics, Epilepsy Monitoring Unit, Neurocritical Care at the Jefferson Hospital for Neuroscience (JHN), Night-float at Gibbon or JHN (rotating with the consult resident), Jefferson Northeast Consult Service (staffed by Neurology Department Faculty), or Inpatient Headache Service at Methodist (staffed by Neurology Department Faculty).
NEUR 481	**Neurology Elective**	This course will be significantly tailored to the student's specific interests in the field of Neurology. A modified version of this course is also offered as a 4-week course (NEUR. 401).
		NEUROLOGICAL SURGERY
NSRG 352	**Neurosurgery Selective**	This selective introduces the student to the field of Neurological surgery and the scope of neurological diseases, with emphasis is on cerebrovascular, neuro-oncologic and spinal diseases, and the principles underlying their management. Students will have exposure to outpatients, inpatients and operating room experience, and will also have the opportunity to participate in the department's conference and lecture series.

NSRG 401	**Neurosurgery Subinternship**	Students participate in the inpatient service activities as well as outpatient sessions. They are responsible for history taking and physical examinations. Special emphasis is placed upon the neurological examination. The student participates in diagnostic studies and their interpretation, as well as rounds, conferences, and operative procedures. Individual students may elect to attain specific knowledge goals within this field, and a faculty member is assigned in consultation. The student will have scheduled meetings with the clerkship director reviewing the basics of the neurological examination as it pertains to the field of Neurological Surgery. Upon topic review with Dr. Tjoumakaris, students will review a topic and write a brief presentation following evidence based data research. Students will attend office hours once or twice a week, with attendings from the different Neurosurgery divisions.
NSRG 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.
NSRG 464	**Outpatient Neurosurgery**	This course is designed to provide students with the opportunity to evaluate, diagnose, and manage patients with various neurosurgical conditions such as cerebral aneurysm, cerebral arteriovenous malformation, carotid stenosis, degenerative spine, brain tumor, and epilepsy in the outpatient setting.
		OBSTETRIC AND GYNECOLOGY
OBGY 350	**Obstetrics and Gynecology Clerkship**	On Labor and Delivery, students will follow patients through their labor courses and deliveries. While being supervised, they will assist with assessing the patients and assisting with their care. On the Gynecology rotation, the students will assist in the operating room, perform consultations and follow patients post-operatively. In the outpatient clinic, students will learn about primary care of women as well as prenatal care. Students will learn to care for patients during adolescence, child bearing, and menopause. They will become comfortable counseling patients on contraception options and pregnancy options.
OBGY 355	**Obstetrics and Gynecology Clerkship**	This is a required clerkship for all medical students. It is a clerkship that covers inpatient and outpatient care for patients. On Labor and Delivery students will follow patients through their labor courses and deliveries. While being supervised appropriately they will assist with assessing the patients and assisting with their care. In the inpatient setting students will assist in the operating room, assist with consultations and follow patients post-operatively. In the outpatient clinic students will learn about primary care and prenatal care. Students will learn to care for patients during adolescence, child bearing, and menopause. They will be comfortable counseling patients on contraception options and pregnancy options. Prerequisite: Must be enrolled in the Longitudinal Integrated Clerkships (LIC) track.
OBGY 401	**Inpatient Subinternship**	The student acts as an intern, being assigned inpatients and supervised by the house staff and attending physicians. On Labor and Delivery students will follow patients through their labor courses and deliveries. While being supervised to further develop skills in assessing the patients and managing their care. On the Gynecology rotation, students will assist in the operating room, assist with consultations and follow patients post-operatively. In the outpatient clinic, students will learn about primary care and prenatal care. Students will learn to care for patients during adolescence, child bearing, and menopause. They will be comfortable counseling patients on contraception options and pregnancy options.

OBGY 402	**Outpatient Subinternship**	The purpose of this course is to further develop skills in diagnosis and management of common gynecologic and obstetric complaints. At the end of the course, students should feel comfortable performing a concise history and physical exam for both problem and routine visits. The physical exam should include both a breast and pelvic exam. Students will be capable of collecting specimens, performing office tests and interpreting the results. Lastly, students will create a management plan and document all findings in the medical record.
OBGY 408	**Gynecologic Oncology**	The purpose of this course is to further develop skills in diagnosis and management of gynecologic cancers. At the end of the course, students should feel comfortable participating in the operating room and managing both the normal and complicated post-op course. Students will be able to create a management plan and document all findings in the medical record.
OBGY 409	**Maternal Fetal Medicine**	The purpose of this course is to further develop skills in diagnosis and management of common and uncommon obstetric complications. At the end of the course, students should feel comfortable addressing common issues such as preterm labor, preeclampsia, diabetes in pregnancy and illicit drug use in pregnancy. Students will also be asked to present a specific patient and/or topic to the MFM team and to become expert on that topic. Students will work as an integral member of the MFM team including the attending, the fellow, the chief resident and the second year resident. Students will be evaluated by each of the team members.
OBGY 411	**Maternal Fetal Outpatient**	The student will spend a great amount of one-on-one time with an attending, which is unique among courses. Students will directly observe and participate in high risk counseling, fetal diagnosis, advanced ultrasound, critical care, and genetics. Information and knowledge will be built sequentially. The purpose of this course is to further develop skills in diagnosis and management of common and uncommon obstetric complications. At the end of the course, students should feel comfortable addressing common issues such as preterm labor, preeclampsia, diabetes in pregnancy and illicit drug use in pregnancy. Students will be asked to present a specific patient and/or topic to the MFM team and to become expert on that topic.
OBGY 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.
OBGY 480	**Vulvovaginal Clinic Elective**	This course focuses on vulvar and vaginal disease. Students will work with acute and chronic infections with an internationally renowned team including physicians and NP's. Students will manage complex patients with inflammatory diseases and dermatologic complaints.
OBGY 481	**Reproductive Endocrinology**	This course will allow students to develop skills in diagnosis and management of reproductive endocrine disorders and infertility. Students will have exposure to both inpatient and outpatient management for common REI complaints.
OBGY 482	**Postpartum Care**	This course is designed with both inpatient and outpatient components focused on the maternal postpartum transition. Focused study of lactation, peripartum hypertensive disorders, contraception and mood disorders.
		OPTHALMOLOGY
OPHT 352	**Ophthalmology Selective**	Students rotate through general ophthalmology clinic, emergency department, as well as subspecialty clinics and operating rooms to get exposure to a broad spectrum of ophthalmologic conditions. Didactics cover basic ophthalmologic exam, slit lamp use, and a variety of other topics in ophthalmology with an emphasis on ocular abnormalities associated with systemic diseases.

OPHT 401	**Ophthalmology Senior Elective**	This course is clinically oriented with emphasis placed upon examination techniques and the diagnosis and treatment of common eye problems. The student participates in all activities of the Department of Ophthalmology, including conferences, the emergency room, the operating room, and outpatient care services. A multiple choice test is given at the conclusion of the clerkship. A modified version of this course is also offered as a 2-week course (OPTH 481).
OPHT 407	**Basic Ocular Pathology**	This course is designed to familiarize the student with ocular structure, microscopic anatomy, and the basic principles of ocular disease. The student will participate in the daily activity of the ocular pathology laboratory as well as study from a slide set of common ocular conditions. The course is limited to those interested in Ophthalmology. A written test is given at the conclusion of the course.
OPHT 408	**Ocular Genetics**	The ocular genetics program at Wills cares for children and adults with genetic eye disease or genetic systemic disease with ocular involvement. Students will attend clinics, genetic counseling sessions, clinics of medical geneticists, didactic sessions and case conferences. There is an opportunity to write a case report for publication. The student will be actively involved in patient care including management of our ocular genetics database.
OPHT 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty advisor/PI, and approved by the departmental research course director.
OPHT 481	**Ophthalmologic Elective**	The course in ophthalmology is clinically oriented and intended for those pursuing specialties other than ophthalmology. Emphasis is placed upon examination techniques and the diagnosis and treatment of common eye problems. The student participates in all activities of the Department of Ophthalmology. Students spend the majority of their time in the Wills Eye Emergency Room and on in-patient consults. Students are also exposed to the various subspecialties. A modified version of this course is also offered as a 4-week course (OPTH 401).
OPHT 482	**Pediatric Ophthalmology**	This is a comprehensive course in pediatric ophthalmology and strabismus including direct patient care in the clinic setting and surgical observation. Students will be exposed to all aspects of the specialty, attend didactic sessions and case conferences, and have the opportunity to write case report for publication is desired.
		ORAL & MAXILLOFACIAL SURGERY CLERKSHIP
OMFS 401	**Oral & Maxillofacial Surgery Clerkship**	Students will develop knowledge of the normal structure and function of the oral and maxillofacial structures including head and neck anatomy, facial and temporomandibular joint anatomy, and anatomy of the oral cavity including dental occlusion. Students will have the ability perform both a complete and focused physical examination, both extra-oral and intra-oral. They will also have the ability to skillfully assist in minor and major oral and maxillofacial surgical procedures in the clinic and in the operating room.
		ORTHOPEDICS
ORTH 352	**Ophthalmology Selective**	This course introduces the students to the scope of problems affecting the musculoskeletal system and the principles underlying their management. Students will work under the direction of Orthopedic surgeons who will guide them through a series of inpatient, operative, and outpatient experiences reflective of the musculoskeletal problems seen and managed by orthopedists.

ORTH 401	**\Orthopaedic Surgery Subinternship**	This course is designed for medical students interested in pursuing a career in orthopaedic surgery. It is an intensive subinternship style experience. The student will spend two weeks on one of the primary inpatient services (either spine service or total joint service), as well as two weeks on one of the other orthopaedic services (foot and ankle, hand, sports, shoulder or pediatrics). Students will be assigned to a chief resident "mentor" who will be responsible for following the students during the two week sub-course. Under the direction of the chief resident, the student will rotate through the operating room and office hours with various attendings. They will also be given the opportunity to participate and help manage patients and general inpatient work with the junior residents.
ORTH 403	**Musculoskeletal Outpatient Subinternship**	This course is an interdepartmental course between Departments of Orthopaedics, Family Medicine, and Rehabilitation. This course will provide students the opportunity to care for a broad spectrum of patients with musculoskeletal problems in the outpatient setting. Each student will work with the same provider on each day of the week for four weeks, to allow for continuity with faculty, increased responsibility, and skill building. Students will refine and enhance their skills in musculoskeletal medicine from four different perspectives: the orthopedic surgeon, physiatrist, podiatrist, and sports medicine specialists.
ORTH 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty advisor/PI, and approved by the departmental research course director.
		OTOLARYNGOLOGY, HEAD and NECK SURGERY
OTOL 352	**Otolaryngology Selective**	Clinical experiences in otolaryngology are provided in the office, hospital and operating room. Students will work with residents and faculty and participate in care of patients and morning rounds, rotating with attendings during their office hours, and spend time observing and participating in surgical cases. A didactic series will cover the important aspects of otolaryngology relevant to all facets of medicine.
OTOL 401	**Otolaryngology Subinternship**	Students are assigned to the Otolaryngology Service at Thomas Jefferson University Hospital. They have an opportunity to work with each of the attendings, attend surgery, work in the outpatient clinics, make rounds on a daily basis, participate in Grand Rounds and go to teaching conferences which are held on a regular basis on Wednesdays. Students attend a series of clinical conferences on the various aspects of otolaryngology and outpatient clinics where they are instructed in history taking, physical examination, differential diagnosis and a course of management. They write progress notes and orders which are reviewed and signed by resident faculty. Students are treated as though they are junior interns.
OTOL 425	**Research**	This course will provide students with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty advisor/PI, and approved by the departmental research course director.
OTOL 440	**Advanced Otolaryngology Elective**	The Advanced Otolaryngology Elective is for students interested in the specialty and functions to further education on proper techniques of routine outpatient procedures and fundamentals of patient care. Students will partake in both online and in-person lectures along with office, wards, and OR centric patient care. They will attend didactics, tumor board, research meetings with residents and fellows.
		PATHOLOGY, ANATOMY and CELL BIOLOGY

PATH 401	**General Pathology**	This course consists of theoretical and practical applications of specific areas in Pathology. The student will rotate through Surgical Pathology and Autopsy, and two chosen laboratory areas. The laboratory areas that are available include Neuropathology, Cytopathology, Hematopathology, Microbiology, Transfusions Medicine and Molecular. At the end of this course, the student will present an interesting case in a 10 minute PowerPoint presentation. The residents will assist with photos for the presentation. A modified version of this course is also offered as a 2-week course
PATH 402	**Hematopathology**	This course is geared towards students interested in a future career in pathology or hematology/ oncology. This course satisfies the advanced basic science elective in the fourth-year curriculum. This four-week course allows students to participate in the daily activities of the Hematopathology section of the department. Students develop a better under. Standing of pathophysiology, morphology, and clinical features of hematologic disorders. A number of departmental and interdepartmental teaching and patient conferences are available for student attendance. Evaluation is based on student attendance and participation, as well as an end of course clinical case presentation.
PATH 404	**Postmortem Pathology**	Students in this course will observe and assist in at least one full adult autopsy, develop an appreciation for the correlation of clinical and pathologic findings, improve ability to interpret radiologic and laboratory data in light of pathologic findings, and review general anatomy. Students will attend and participate in the activities of the autopsy service, assist the resident(s) during autopsy, assist the resident(s) with data collection and research, attend microscopic sign-out of all cases reviewed during the week, and use free time to review basic anatomy and histology, using books and slide sets available from the Chief Resident. At the end of this course, students will present an interesting autopsy as a 10 minute PowerPoint presentation.
PATH 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty advisor/PI, and approved by the departmental research course director.
PATH 481	**General Pathology Elective**	This online course consists of theoretical and practical applications of specific areas in Pathology. The student will do virtual modules in surgical pathology and laboratory medicine, including haematopathology, microbiology, transfusion medicine, and clinical chemistry. By the end of this course, students will submit a six-minute voice-thread presentation as well as a literature review. Students are also expected to remotely attend tumour board, noon lectures, and transfusion medicine rounds. There is the option to observe and assist on autopsy in person. A modified in-person/virtual hybrid version of this course is also offered as a 4-week course (PATH. 401).
		PEDIATRICS
PED 350	**Pediatrics Clerkship**	Students will learn and practice how to approach patients of different ages from birth through adolescence. They are exposed to common clinical problems in the inpatient, outpatient and newborn nursery settings, which ensures that every student sees a balanced patient mix. Physical examination skills are reinforced using Pediatric Standardized Patients at orientation. Additional projects focus on practice innovation. Personal wellness plans are supported.
PED 355	**Pediatrics Clerkship**	Students will learn and practice how to approach patients of different ages from birth to age nineteen. They are exposed to common clinical problems in the inpatient, outpatient and newborn nursery settings which ensures that every student sees a balanced patient mix. Physical examination skills are developed through graduated, progressive practice under supervision. Additional projects focus on practice innovation. Personal wellness plans are supported. Prerequisite: Must be enrolled in the Longitudinal Integrated Clerkships (LIC) track.

PED 401	**Outpatient Subinternship**	The student will work with the housestaff and attending physicians in caring for outpatients and managing these patients commensurate with their skills and experience. The student will participate in developmental screenings, well child physicals, and evaluating sick children in the office setting.
PED 402	**Inpatient Subinternship**	The student acts as an intern, being assigned pediatric inpatients and supervised by the housestaff and attending physicians. This experience includes history taking, physical examination and formulation of a diagnosis and plan of therapy, as well as continued management, care coordination when appropriate, and supervised performance of diagnostic procedures.
PED 403	**Neonatal Intensive Care Nursery (NICU)**	This course will expose students to the principles of evaluation and management of critical illness in premature and newborn infants. Specific areas of focus include the management of respiratory failure in neonates, hyperbilirubinemia, hypoglycemia, and neonatal surgical emergencies. Students will be expected to actively participate in all aspects of care including diagnostic evaluations, presentations on rounds, and selected procedures.
PED 404	**Neurodevelopmental Pediatrics**	Students will participate in a variety of clinics including developmental and behavioral medicine, psychiatry, psychology, and other therapy services to gain a better understanding of the evaluation, identification and management of children with developmental disabilities and behavioral disorders.
PED 410	**Adolescent /Pediatric Gastroenterology**	The student works in a preceptorial relationship, helping in the evaluation and management of children and adolescents with a variety of gastrointestinal disorders such as inflammatory bowel disease, eating disorders, chronic constipation, gastroesophageal reflux, and motility disorders. The course encompasses both ambulatory and inpatient experiences. A modified version of this course is also offered as a 2-week course (PED 484).
PED 411	**Pediatric Allergy**	This course introduces the student to such procedures as skin testing and hyposensitization in the mostly the outpatient, and occasionally, inpatient setting. Current concepts of immunology and pulmonary physiology are reviewed. Experience in managing status asthmaticus and chronic respiratory disease is also offered
PED 413	**Pediatric Cardiology**	This course offers experience in the diagnosis and management of cardiac disease in infants and children. Didactic emphasis involves: (1) perinatal cardiac physiology, (2) congenital cardiac disease, (3) basic pediatric electrocardiography, and (4) echocardiography and cardiac catheterization. Time is predominately spent in the Pediatric Cardiology Clinic with some hospital rounding on cardiac patients.
PED 415	**Pediatric Neurology**	This course offers the student the opportunity to participate in the evaluation and management of both common and unusual pediatric neurological disorders. The student should learn to perform a thorough pediatric neurological examination on patients seen in the outpatient department and on admission to the hospital.
PED 417	**Pediatric Nephrology**	This courses exposes the student to acute renal emergencies as well as chronic disease care. The vast majority of exposure will be through the outpatient setting. Course objectives emphasize pathophysiology, evaluation, and treatment.
PED 418	**Pediatric Rheumatology**	This course provides the student with the opportunity to develop skills in history taking, physical assessments, evaluation of laboratory parameters, and management of pediatric patients with juvenile arthritis and selected forms of other rheumatic diseases.
PED 419	**Pediatric Hematology/ Oncology**	This course is designed to provide exposure to a wide range of pediatric hematology/oncology patients. Students are expected to participate in the evaluation of new consults. They are involved with weekly psychological conference, weekly Tumor Board, and the monthly hematology/oncology teaching conference. They are also required to give a 20 to 30 minute talk on a pediatric hematology/ oncology subject.

PED 421	**Pediatric Endocrinology**	This course allows the student to evaluate all new patients in the clinic with some consultations in the inpatient setting. Daily tutorials as well as a combined pediatric/internal medicine endocrine conference are provided. Abnormal growth, diabetes, puberty, and sexual differentiation cases are evaluated.
PED 422	**Pediatric Otolaryngology**	Students will gain exposure to both the basic and advanced conditions encountered in Pediatric Otolaryngology. Students will participate in morning inpatient rounds, gain exposure to inpatient consultations, and spend time both in the outpatient office setting and in the operating room. The experience could be tailored to favor the office or operating room based on the student's future career plans.
PED 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.
PED 427	**Adolescent Medicine**	This course takes place is in an outpatient adolescent medicine with clinical experience in a primary/subspecialty care adolescent outpatient clinic and on an adolescent consult and eating disorder inpatient medical service. Students will become skilled in taking a history, including a sexual history, in a confidential and developmentally appropriate manner from an adolescent and young adult; examining adolescents, including the pubertal staging exam using a developmentally appropriate approach; and understand the basic goals and content of prevention and health promotion in adolescents. Students will become skilled at providing anticipatory guidance about expected growth, development, teen behaviors, contraception, parent interactions, avoidance of health risk behaviors and their consequences, nutrition and exercise, and understand the pathophysiology, mental health aspects and management of eating disorders.
PED 428	**Clinical Genetics**	During this course, the student will construct 3-generation pedigree using appropriate symbols, document genetics history using the intake template provided and increase awareness of genetic terminology for described physical features (Dysmorphology). The student will understand indications for various genetic testing modalities and learn basic interpretation of genetic test results as well as how to obtain consent for genetic testing (required by law in the state of Delaware). The student will be assigned a case presentation related to an interesting topic or patient.
PED 429	**Ped Palliative Care**	This course will introduce students to the philosophy, goals and interdisciplinary practice of palliative care in the pediatric setting for children and families facing serious illness. The focus will be on inpatient palliative care consultations including communication of prognosis, negotiation of goals of care and symptom assessment and management. There may be opportunities to participate in palliative care encounters in the outpatient and home setting. Students will develop an appreciation of ethical challenges faced by seriously ill children, their families and/or the medical team. Students will need to be able to travel by car for this rotation.
PED 430	**Advocacy and Community Partners**	This course will allow students to receive intensive training in community health and advocacy. Students will spend 50% of their time with a community partner organization, 30% of their time in clinical practice at a participating site, most often Nemours Pediatrics or Jefferson OB/GYN, and 20% of their time in didactic education. One day will be dedicated to legislative advocacy through meetings with legislators.
PED 433	**Pediatric Rehabilitation Medicine**	The focus of this course is on multidisciplinary care of chronically ill and physically handicapped children. The student admits and follows patients with a variety of diagnoses on the inpatient service, observes outpatient therapy services, and participates in physical medicine rounds in the Division of Rehabilitation Medicine.

PED 471	**Advanced Topics in Pediatrics**	This online course is geared towards fourth-year medical students planning to apply to pediatric residencies. It is meant as a pre-course and supplement to a fourth-year subintern elective. The goal of the course is to bridge knowledge gained in third-year pediatric rotations with skills and knowledge needed to start as an intern in a pediatric residency. The course is meant to fill knowledge gaps in high-yield pediatric topics and discuss the medical approach to situations encountered on the wards, about which future pediatric residents might be anxious. The course will be based on 12 core topics, and include a combination of presentation and learning styles, such as podcasts, videos, case presentations, articles, and discussion groups. There will also be a component of developing literature review skills, and using those skills to create a teaching presentation to share with the group.
PED 472	**Pediatric Nutrition**	Pediatric Nutrition is an integrative course providing medical students with the opportunity to apply nutritional sciences to clinical care. Under direct supervision of a registered dietitian, students will have the opportunity to observe both the acute and ambulatory setting. Expectations will include the assessment of infant/pediatric growth, normal versus atypical feeding practices, breast/formula feeding recommendations and troubleshooting, formula selections for infants and pediatrics, formula mixing and displacement, management of tube feeds, assessment and diagnosis of malnutrition, and diet education for specific disease states.
PED 473	**Pediatric Infectious Disease**	This course is designed to give the student a wide exposure to the many pediatric infectious disease problems including HIV, Lyme, and FUO, as well as experience in evaluation, diagnosis, and treatment of seriously ill inpatients. This course is primarily inpatient oriented. Weekly conferences in infectious disease are provided.
PED 480	**Pediatric Critical Care (PICU)**	This course will give students a broad exposure to critical illness as it occurs in pediatric patients. Students will participate in the evaluation and management of both common and uncommon illnesses including acute respiratory failure, shock, endocrine emergencies, and complications of oncologic disease. Students will be expected to actively participate in all aspects of care including diagnostic evaluations, presentations on rounds, and selected procedures.
PED 481	**Pediatric Pulmonary Medicine**	Students work up and follow children hospitalized on the cystic fibrosis and general pulmonary services and examine youngsters in the outpatient pulmonary, cystic fibrosis, tuberculosis, muscle respiratory, and technology-dependent clinics. Patients encountered while on course include those with CF, bronchopulmonary dysplasia, asthma, acute and chronic respiratory failure from diverse etiologies, obstructive/sleep apnea, and empyema. Students have the opportunity to view bronchoscopies and learn pulmonary function testing. Contact with the attending pulmonologists is daily, and teaching is one-on-one.
PED 482	**Pediatric Ophthalmology**	This course is designed to familiarize the student with ocular structure, microscopic anatomy, and the basic principles of ocular disease in children.
PED 483	**Pediatric Radiology**	Students will be exposed to pediatric disorders through radiography, fluoroscopy, ultrasound, CT, and MRI. They will enhance their knowledge of pediatric specific anatomy, physiology and pathology through imaging. Students will participate in read outs with the pediatric radiology faculty, attend conferences and review materials for self-study
PED 484	**Ped Gastroenterology Elective**	The student works in a preceptorial relationship, helping in the evaluation and management of children and adolescents with a variety of gastrointestinal disorders such as inflammatory bowel disease, eating disorders, chronic constipation, gastroesophageal reflux, and motility disorders. The course encompasses both ambulatory and inpatient experiences. A modified version of this course is also offered as a 4-week course (PED 410).

PED 486	**Pediatric Urology**	This course is designed to provide students an exposure to surgical and nonsurgical genitourinary problems faced by Pediatric Urologists. Clinical entities may range from those including newborns (such as ambiguous genitalia, congenital malformations, recurrent urinary tract infections, etc) to adolescents (such as neurogenic bladder, testicular torsion, etc). Time will be spent in both the outpatient setting as well as the operating room.
PED 487	**Pediatric Orthopedics**	This course is designed to give students exposure to all aspects of Pediatric Orthopedic problems both surgical and nonsurgical. Clinical entities may range from those including newborns (congenital problems such as hip dysplasia, clubfoot, etc) to adolescents (such as musculoskeletal infections, fractures, scoliosis, etc). Time will be spent both in the outpatient setting and operating room.
		PSYCHIATRY
PSYCH 350	**Psychiatry Clerkship**	This core clinical experience prepares future physicians to accurately assess, recognize, and plan treatment for a variety psychiatric disorders. Additionally, students will gain confidence and comfortability in treating patients with mental illness. Students are considered an integral part of the treatment team and will evaluate and follow patients under faculty supervision, observing and participating in all aspects of patient care. Through exposure and guidance, students will learn skills in developing therapeutic relationships with patients while establishing appropriate treatment boundaries. Site placements include possible experiences in consultation liaison psychiatry, adult & geriatric inpatient psychiatry, addiction psychiatry, and child & adolescent psychiatry.
PSYH 355	**Psychiatry Clerkship**	This core clinical experience prepares future physicians to accurately assess, recognize, and plan treatment for a variety of psychiatric disorders. Additionally, students will gain confidence and comfortability in treating patients with mental illness. The clerkship incorporates exposure to psychiatric care in a variety of settings. Students are considered an integral part of the treatment team and will evaluate and follow patients under faculty supervision, observing and participating in all aspects of patient care. Through exposure and guidance, students will learn skills in developing therapeutic relationships with patients while establishing appropriate treatment boundaries. Case based learning and didactic seminars are attended by all students. Prerequisite: Must be enrolled in the Longitudinal Integrated Clerkships (LIC) track.
PSYCH 401	**Adult Inpatient Psychiatry Subinternship**	The student is assigned to an adult inpatient unit to function as a sub-intern in this course. Broad exposure to serious psychiatric disorders is provided. The inpatient service also has beds dedicated to medical/surgical patients with prominent psychiatric co-morbidity. The sub-intern will be afforded the opportunity to function as a house officer and will have primary responsibility for his or her patients. The unit embraces the entire bio-psychosocial model as well as the multidisciplinary treatment team approach. Students participate in a weekly faculty-led patient interview and case conference. Students will thereby enhance their diagnostic and treatment skills as well as their abilities to assume a leadership role. Students are supervised by attending psychiatrists, residents, and treatment team members through direct observation of interactions with patients and families, assessment of sophistication of chart entries, and competence obtaining and presenting patient histories, formulating cases, and carrying out basic treatment planning.
PSYCH 405	**Outpatient Sleep Disorders Medicine Senior Elective**	Students engage in all aspects of clinical work in the Sleep Disorders Center, an outpatient program for the evaluation and management of sleep disorders. The program encompasses an outpatient clinic and a sleep laboratory. Students are expected to observe the evaluation and management of patients and, after training, to gather an initial database, formulate a differential diagnosis, and develop recommendations for further workup and management. Students are directly supervised by attending physicians most of the time, and, to a lesser degree, housestaff including residents in psychiatry, fellows in pulmonary and critical care medicine, and fellows in sleep medicine. Students observe polysomnographic studies and become familiar with sleep monitoring and scoring techniques. They are involved in performing consultations for inpatients.

PSYCH 408	**Outpatient Addictions Psychiatry**	This course is primarily based at the outpatient addictions clinic, but the training focus includes substance use disorders and the broad range of ambulatory psychiatric disorders affecting this population, including mood, anxiety, and personality disorders. During this course, students develop their skills in the following areas: interviewing a patient and presenting a comprehensive history and mental status exam; developing a differential diagnosis; and planning treatment. In recognition of the ubiquitous nature of substance use disorders, students will be expected to develop an understanding of the signs and symptoms of intoxication and withdrawal from various substances of abuse and the full spectrum available in pharmacologic, behavioral, and psychotherapeutic treatment options. This course provides the unique opportunity for students to gain experience in the management of outpatients in a psychiatric clinic. Students are encouraged to follow patients, as frequently as once a week, throughout the course.
PSYH 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.
PSYCH 431	**Consultation and Liaison Psychiatry**	During this course the student: (1) develops skill in the evaluation and treatment of psychiatric illness in the medical setting; (2) develops an appreciation for the interface between psychological/social factors and medical illness; and (3) learns about the variety of consultation services provided by a psychiatrist in the general hospital. The student functions as an integral clinical member of the Consultation-Liaison Service (C-L). The student is responsible for performing initial consultations and follow-up as indicated. Because the C-L service receives requests for consults from virtually all clinical services at Thomas Jefferson University Hospital, a student has the opportunity to gain experience with the management of a wide range of clinical issues. The student is supervised by the attendings and resident(s) assigned to the service and fellow(s) in psychosomatic medicine. Students participate in daily teaching rounds. There is a formal didactic meeting each week and weekly grand rounds.
		RADIATION,ONCOLOGY & NUCLEAR MEDICINE
RONM 401	**Subinternship in Radiation Oncology**	The goal of this four-week course is for students to learn the fundamentals of radiation oncology. Students can use this rotation as an opportunity to explore the specialty as a possible career choice. Students interested in gaining a deeper understanding of oncology care but not planning to pursue radiation oncology will find this course useful to understand radiation oncology as a specialty and therefore better be able to coordinate and deliver optimal multi-disciplinary care and counsel future patients. Students are assigned to one faculty member each day with whom they will see patients. During the course, students will be expected to work-up patients, perform physical exams, and present cases to faculty. Students will be exposed to treatment planning, simulations, and treatment deliveries throughout the course.
RONM 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.
RONM 431	**Radiobiology of Human Cancer**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty advisor/PI, and approved by the departmental research course director prior to scheduling.
		RADIOLOGY

RAD 401	**Diagnostic Radiology**	Students attend didactic lectures that include a radiology core curriculum and subspecialty introductory lectures in chest, cardiac, abdominal, musculoskeletal, computed tomography, ultrasound, MRI, interventional radiology, neuroradiology, mammography, nuclear medicine, physics, and pediatric radiology. Students participate in a variety of exercises with partners, in groups or teams to reinforce learning. This includes a hands-on Ultrasound Workshop, where students scan each other. Students also participate in image interpretation sessions with attending radiologists, residents and fellows during clinical rotations in Musculoskeletal, Fluoroscopy, Body CT, Ultrasound, Interventional Radiology, Mammography, and Nuclear Medicine. Students learn appropriateness criteria for ordering diagnostic imaging studies and have various case discussions concerning optimal imaging utilization. There is a midterm quiz and a final examination, both of which include image interpretation. The final grade is based on test scores, assignments, and class participation.
RAD 403	**Neuroradiology**	Students are exposed to the entire gamut of neuroradiological procedures, including angiograms, myelograms, computed tomography, and magnetic resonance imaging. They participate in the interpretation of extra-cranial head and neck imaging studies and are given the opportunity to attend and participate in all neuroradiological and otolaryngological radiology conferences. A teaching file of outstanding cases is available.
RAD 406	**Cross Sectional Imaging**	During this course, each medical student rotates for an interval of two weeks in ultrasound, one week in CT, and one week in MRI. The students participate in the ongoing daily morning conferences and combined US/CT/MRI conference from 8:00 to 8:30 a.m., which is held three times a week. Use also is made of the extensive video library on cross sectional imaging. Selected videotapes are assembled, and a special viewing carrel is set aside for student use. In addition, the students rotate within the various areas of CT and MRI. During this time, the students observe many different procedures being performed by the technologist and review cases with the physicians. Students in this course are expected to come away with a basic understanding of the usefulness of ultrasound, computed tomography, and MRI and acknowledge of how these procedures are performed. Radiology 401 is a prerequisite course. A modified version of this course is also offered as a 2-week course (RAD 486).
RAD 407	**Cardiovascular/ Interventional Radiology**	This course in Interventional Radiology is designed to expose students to the wide range of minimally invasive procedures performed by interventional radiologists. Students will actively participate in procedures as well as be involved in the pre and post procedure management of patients. By the end of the course, students will have gained an understanding of the indications, contraindications, risks and benefits of procedures as well as the role of interventional radiologists in the management of both critically ill and non-critically ill patients. Students will be integrated into the interventional radiology team by participating in morning rounds, procedures and clinics. At the end of the course, each student will give a short case presentation on one patient with a disease topic of interest. By the end of the course, students will have a better understanding of both the diagnostic and therapeutic capabilities of the Interventional Radiology division. A modified version of this course is also offered as a 2-week course (RAD 487).
RAD 408	**Musculoskeletal Radiology**	During this course, students will be exposed to musculoskeletal disorders through radiography, CT, MRI, and image guided MSK interventional procedures. They will enhance their knowledge of the musculoskeletal anatomy, physiology and pathology through imaging. Students will participate in read outs with the MSK faculty, attend conferences and review materials for selfstudy. Students will be expected to present a case at the end of the course. A modified version of this course is also offered as a 2-week course (RAD 488).
RAD 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.

RAD 483	**Pediatric Radiology**	Students will be exposed to pediatric disorders through radiography, fluoroscopy, ultrasound, CT, and MRI. They will enhance their knowledge of pediatric specific anatomy, physiology and pathology through imaging. Students will participate in read outs with the pediatric radiology faculty, attend conferences and review materials for self-study. Students will be expected to present a case at the end of the course.
RAD 486	**Cross-Sectional Imaging Elective**	During this course, students will spend one week in CT, one week in ultrasound. The students participate in the ongoing daily morning conferences and combined US/CT/MRI conference from 8:00 to 8:30 a.m., which is held three times a week. Use also is made of the extensive video library on cross sectional imaging. Selected videotapes are assembled, and a special viewing carrel is set aside for student use. During this time, the students observe many different procedures being performed by the technologists and review cases with the physicians. Students going through this course are expected to come away with a basic understanding of the usefulness of ultrasound, computed tomography, and MRI and acknowledge of how these procedures are performed. A modified version of this course is also offered as a 4-week course (RAD 406).
RAD 487	**Cardiovascular Radiology Elective**	This course in Interventional Radiology is designed to expose students to the wide range of minimally invasive procedures performed by interventional radiologists. Students will observe procedures and be involved in both the pre and post procedure management of patients. Students will gain an understanding of the indications, contraindications, risks and benefits of procedures as well as the role of interventional radiologists in the of both critically ill and non-critically ill patients. Students will be integrated into the interventional radiology team by participating in morning rounds, observing procedures and clinics. At the end of the course, each student will give a short case presentation on one patient with a disease topic of interest. By the end of the course, students will have a better understanding of both the diagnostic and therapeutic capabilities of the Interventional Radiology division. A modified version of this course is also offered as a 4-week course (RAD 407).
RAD 488	**Musculoskeletal Radiology Elective**	During this course, students will be exposed to musculoskeletal disorders through radiography, CT, MRI, and image guided MSK interventional procedures. They will enhance their knowledge of the musculoskeletal anatomy, physiology and pathology through imaging. Students will participate in read outs with the MSK faculty, attend conferences and review materials for selfstudy. Students will be expected to present a case at the end of the course. A modified version of this course is also offered as a 4-week course (RAD 408).
		REHABILITATION MEDICINE
RHAB 401	**Senior Elective in Rehabilitation Medicine**	This course focuses on the evaluation, diagnosis, and management of people with physical disability, including those with complicated medical problems. The goal of this course is enabling those who complete the elective to describe the scope of the practice of Physical Medicine and Rehabilitation (PM&R) through providing a wide exposure to PM&R. Coequal is the goal of full utilization of all the health team members needed to accomplish the functional goals of the patient. In addition, the student will learn to effectively interact with people with severe disability in a hope-engendering manner and understand the wide ranging effects of life altering functional disability. Under the direct supervision of the attending staff and house staff within the Department of Rehabilitation Medicine, the student actively participates in daily work rounds and teaching rounds, as well as all departmental teaching conferences. A modified version of this course is also offered as a 2-week course (RHAB 481).

RHAM 405	**Neurorehabilitation and Continuum of Care**	This course is an interdepartmental course between Departments of Neurology and Rehabilitation. It provides students with the opportunity to experience what comes next for a patient after hospitalization and how patients work to achieve their functional goals. The course offers the opportunity to experience the full breadth of treating the disease process in the areas of Neurocritical Care, Stroke, and Neuromuscular Disease given the significant role that Neurorehabilitation plays in their disease processes. This course, designed for the student with an interest in neurology and/or rehabilitation, will focus on the population of patients suffering from disabling neurological dysfunction. In addition, this course will be useful for those going into primary care who would like to learn more about the continuum of neurorehabilitation care.
RHAB 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.
RHAB 481	**Rehabilitation Medicine Elective**	This course which will give students a full-time practical experience in evaluation, diagnosis, and management of people with physical disability, including those with complicated medical problems. In addition, the student will learn to effectively interact with people with severe disability in a hope-engendering manner and understand the wide ranging effects of life altering functional disability. Under the direct supervision of the attending staff and house staff within the Department of Rehabilitation Medicine, the student actively participates in daily work rounds and teaching rounds, as well as all departmental teaching conferences. A modified version of this course is also offered as a 4-week course (RHAB 401).
RHAB 482	**Care of People with Disability**	This course is an interdepartmental course between Family and Community Medicine and Rehabilitation Medicine. During this 2 week elective, students will see outpatients in the Rehabilitation Medicine and Jefferson Continuing Care Clinic. Through this experience, students will begin to develop the knowledge, skills, and attitudes (including need for lifelong learning) to adequately care for people with physical, intellectual and developmental disability. This course will be outpatient, and it will include encounters with people with disability in primary care and rehabilitative care. It will also include care for adults with intellectual and developmental disability.
		SURGERY
SURG 350	**Surgery Clerkship**	During the Surgery Clerkship, students will assimilate the knowledge, skills, and attitudes concerning surgery that are expected of every physician. Students assume responsibility of the preoperative evaluation of surgical patients and their postoperative care, and participate in the surgical procedures.
SURG 355	**Surgery Clerkship and Surgical Selectives**	During the Surgery Clerkship, students will assimilate the knowledge, skills, and attitudes concerning surgery that are expected of every physician. Students assume responsibility of the preoperative evaluation of surgical patients and their postoperative care and participate in the surgical procedures. As part of their Surgery Clerkship, LIC students will also be required to participate in the care of patients in surgical subspecialties. This requirement will expose the LIC students to additional clinical experiences and education within the broader surgical community and may include experiences within the following specialties: Anesthesia, Neurosurgery, Ophthalmology, Otolaryngology, Orthopedics, and Urology. Students will be exposed to the aspects of the specialties that should be understood by all practicing physicians which may include preoperative evaluation, exposure to inpatients, outpatients, and operating room experience. Prerequisite: Must be enrolled in the Longitudinal Integrated Clerkships (LIC) track.
SURG 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.

SURG 449	**Gross General Surgery**	During the course, students participate in preoperative and postoperative care of surgical patients, as well as participating in the operative procedures themselves. The students are considered an integral part of the surgical team at a more advanced level than the core surgical clerks (SURG. 350). Clinical x-ray and pathology conferences, ward rounds, and teaching seminars form the basis for surgical instruction outside the operating room. Assumption of graduated individual responsibility is encouraged. As subinterns, students are responsible to their resident team as well as attendings.
SURG 451	**Outpatient Plastic Surgery**	This is an outpatient clinical course where students will be exposed to treatment of skin cancer, complex surgical wounds, breast reconstruction, cosmetic and outpatient procedures.
SURG 452	**General Surgery Elective**	During the course, students participate in preoperative and postoperative care of surgical patients, as well as participating in the operative procedures themselves. The students are considered an integral part of the surgical team at a more advanced level than the core surgical clerks (Surgery 350). Clinical x-ray and pathology conferences, ward rounds, and teaching seminars form the basis for surgical instruction outside the operating room. Assumption of graduated individual responsibility is encouraged. As sub-interns, students are responsible to their resident team as well as attendings.
SURG 453	**Thoracic Surgery**	On the Thoracic Service students will work with two attendings who are interactive teachers. Students will be exposed to a variety of lung and esophageal pathology. Additionally, students will be exposed to bronchoscopies, chest tube management, acute lung consults in the ED, and pre-op/post-op care.
SURG 454	**Experience in Clinical Transplant**	The student participates as a member of the surgical transplantation team in a program of clinical renal, pancreatic and hepatic transplantation at Thomas Jefferson University Hospital. The student studies transplantation immunology utilizing clinical laboratory and library projects. Chronic renal failure and the rolesof transplantation and dialysis are explored. Chronic liver failure and liver transplantation are examined in detail. Donor and recipient procedures are integral to the learning experience. Students work closely with the Surgical Faculty.
SURG 455	**Plastic Surgery Clerkship**	During this course, students participate in preoperative and postoperative care of surgical patients, as well as participating in the operative procedures themselves. The students are considered an integral part of the surgical team at a more advanced level than the core surgical clerks (Surgery 350). Clinical x-ray and pathology conferences, ward rounds, and teaching seminars form the basis for surgical instruction outside the operating room. Assumption of graduated individual responsibility is encouraged. As sub-interns, students are responsible to their resident team aswell as attendings.
SURG 456	**Cardiac Surgery**	The Division of Cardiothoracic Surgery is dedicated to the assessment, diagnosis and treatment of cardiovascular disease. As a student you will partake in both the inpatient and outpatient arenas as well as being involved in the operating room. The major cardiovascular disorders include: Coronary Disease, Valvular Disease, Heart Failure and Transplant.
SURG 458	**Diseases of the Breast**	This course is conducted as a preceptorship, allowing the student an experience in inpatient and outpatient care of problems related surgery oncology and to the breast. Incredibly focused service with a majority of cases centering on the management of breast diseases, though there is exposure to other areas such as melanoma, sarcoma, and thyroid/parathyroid disease.
SURG 459	**Colon & Rectal Surgery**	Students are exposed to the general surgical subspecialty of colon and rectal surgery. This includes both office- and hospitalbased practice, from minor complaints to major and complicated surgical procedures: e.g., carcinoma of the colon and rectum, radiation enteritis, ulcerative colitis, regional enteritis, and prolapse. The office-based portion of this course is especially helpful for students heading for careers in family medicine and primary care, in addition to those students anticipating surgical training or medical subspecialty training in gastroenterology.

SURG 461	**Outpatient Bariatrics Elective**	This course provides students exposure to the medical and surgical treatment of obesity through a multidisciplinary approach.
SURG 462	**Outpatient Vascular Medicine**	This course provides students exposure to peripheral vascular disease, deep vein thrombosis (DVT), pulmonary embolus (PE), venous insufficiency, lymphedema and vascular wounds.
SURG 475	**Pediatric Surgery**	The goal of this course is to gain familiarity in dealing with infants and children having surgical problems, both as inpatients and outpatients, in and out of the operating room. Students will become knowledgeable about the more common pediatric surgical disease entities and learn to deal with sick children and their families. The student will become an integral member of the team, working with a senior surgical resident, a mid-level Thomas Jefferson University pediatrics resident, and, at times, junior surgical residents from other institutions. The service is very closely supervised by the attending pediatric surgeons. There are attending rounds daily as well as participation in the Surgical Morbidity and Mortality Conference, Surgery/GI/Radiology Conference, Tumor Board, Surgical Pathology Conference, and Journal Club. This course is ideal for students who are interested in surgery and desire further exposure to diseases in children, for those interested in pediatrics, and even those interested in obstetrics/gynecology.
SURG 480	**Trauma Surgery**	Students enrolled in this course are expected to play an active role on the trauma service. This includes full participation in the initial resuscitation of trauma patients, operative management, care of patients through the critical care unit, discharge and office follow-up. All aspects of trauma and critical care of these patients are emphasized. Individual responsibility for patient care is encouraged. Participation in all weekly and monthly trauma and critical care conferences is required.
SURG 481	**Preadmission Testing**	This course focuses on Pre-admission testing where students will be exposed to preoperative evaluation of patients undergoing elective surgery.
SURG 485	**Surgical Intensive Care**	In addition to introducing the student to core concepts in adult critical care medicine, this course will have a focus on specific conditions common to the surgical intensive care, including the management of trauma, massive hemorrhage, transplantation, sepsis and life-threatening complications of surgery. Students will be expected to actively participate in all aspects of care including diagnostic evaluations, presentations on rounds, and selected procedures.
SURG 486	**Cardiothoracic Surgery Intensive Care**	In addition to introducing the student to core concepts in adult critical care medicine, this course will have a focus on the postoperative care of patients undergoing cardiac surgeries such as coronary artery bypass, heart valve replacement, and cardiac transplantation. Additionally, students may care for patients receiving extracorporeal membrane oxygenation (ECMO). Students will be expected to actively participate in all aspect of care including diagnostic evaluations, presentations of patients onrounds, and selected procedures.
SURG 490	**Peripheral Vascular Surgery**	This course is designed to provide an in-depth exposure to the evaluation and management of peripheral vascular disease. During the course, the student functions at a sub-intern level. The student evaluates patients in the office and participates in management decisions. If the patient is admitted to the hospital, the student performs the admitting history and physical examination and participates in the operative and postoperative care. This course is designed to cover all areas of peripheral vascular surgery, including cerebral vascular disorders, aneurysmal and occlusive disease of the aorta and its major tributaries, as well as lower extremity revascularization. In addition, venous hemodynamics and the pathophysiology of venous insufficiency are covered. The student has the advantage of working closely with vascular surgery attendings as well as the appropriate house staff.
		UROLOGY

UROL 352	**Urology Selective**	This selective introduces students to the diagnosis and treatment of urologic diseases. Responsibilities include inpatient and outpatient evaluation of patients, conferences, and operating room participation. A didactic series will provide an excellent introductory exposure to modern urology.
UROL 401	**Senior Elective in Urology**	Students receive an in-depth exposure to principles of urologic diagnosis and actively function as a house officer in the operating room, clinical office hours, and with inpatients. Both surgical and nonsurgical approaches to urologic disease are emphasized with a presentation of underlying mechanisms of urologic disease. In this rotation, students are welcome to attend all conferences, journal club, and resident didactic sessions. They are encouraged to participate in case presentations during urology grand rounds. During this course, students are offered a broad range of practical and didactic opportunities. An oral presentation is required at the end of the course in a Grand Rounds setting.
UROL 405	**Urologic Oncology**	This course is geared towards students who are pursuing urology. The focus of the course is on urologic oncology, and students will receive an immersive exposure to this subspecialty. Students spend time with members (attending physicians, nurse practitioners, residents, and fellows) of our urologic oncology team. They will participate in the outpatient clinic, on the inpatient wards, and in the operating room, acting as a junior house officer in their responsibilities. They will be expected to learn the concepts underlying the various genitourinary cancers, including screening, diagnosis, staging, and treatment. They will also be exposed to a variety of urologic oncology surgeries, including minimally invasive options. Additionally, they are expected to participate in the weekly multidisciplinary genitourinary oncology conferences and clinic. An oral presentation on a topic in urologic oncology is required at the end of the course in a Grand Rounds setting
UROL 406	**Endourology**	This course is geared towards students who are pursuing urology. The focus of the course is on endourology and students will receive an immersive exposure to this subspecialty. Students are expected to spend time with members (attending physicians, residents, and fellows) of our endourology team. They will participate in the outpatient clinic, on the inpatient wards, and in the operating room, acting as a junior house officer in their responsibilities. They will become familiar with metabolic evaluation and medical treatment of patients with nephrolithiasis. They will also be exposed to endoscopic management of nephrolithiasis, urinary obstruction, stricture disease, and upper tract urothelial carcinoma. An oral presentation on a topic in endourology is required at the end of the course in a Grand Rounds setting.
UROL 407	**Genitourinary Reconstruction**	This course is geared towards students who are pursuing Urology. The focus of the course is on voiding dysfunction, female urology, neurourology, and genitourinary reconstruction, and students will receive an immersive exposure to this subspecialty. Students are expected to spend time with attending physicians, nurse practitioners, residents, and fellows. They will participate in the outpatient clinic, on the inpatient wards, and in the operating room, acting as a junior house officer in their responsibilities. They will be exposed to the evaluation and management of voiding dysfunction, including behavioral therapy, pharmacotherapy, and office-based procedures, including the administration and interpretation of urodynamic studies. They will also participate in surgeries focusing on correction of the various etiologies of voiding dysfunction as well as male and female pelvic reconstruction procedures. An oral presentation on a topic in voiding dysfunction, neurourology, female urology, or genitourinary reconstruction is required at the end of the course in a Grand Rounds setting.
UROL 425	**Research**	This course will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director.

UROL 430	**Advanced Topics in Urology**	Students will be exposed to general and specialty-specific urologic conditions along with evaluation, diagnosis, and treatment. All learning will be done virtually through lecture and case reports. Recorded surgical videos that are specific to the learning modules will be supplied. The curriculum will be available through Canvas. Assessment will be via discussion board prompts, forwhich a grading rubric will be supplied, and multiple choice questions specific to each module. Students will be asked to participate in virtual conferences within the Urology Department, including weekly Pathology Tumor Board and Grand Rounds. Weekly lectures over a Zoom platform will be given by Urology faculty.
UROL 452	**Outpatient Urology**	This course will expose students to general and specialty-specific urologic conditions including presentation, evaluation, diagnosis, and treatment. Students will also be exposed to office-based urologic procedures, such as cystoscopy, prostate biopsy, urodynamic studies, and vasectomy.
		OTHER
INT 495	**Integrative Medicine**	The Integrative Medicine course offers students a unique clinical experience at the Marcus Institute of Integrative Health. This course familiarizes students with the latest clinical practices and research advances in the field. The clinical practice sees a variety of patients seeking care for a wide range of conditions such as chronic fatigue, chronic pain, irritable bowel syndrome and other gut dysfunction, fibromyalgia, cancer survivorship, traumatic stress, chronic head injuries, headache, gut health, menopausal care, and other hormonal problems. The curriculum includes specific integrative approaches related to diet, nutrition, supplements, stress management, micronutrient therapies, and others. Because of the nature of this practice, students will generally accompany the physician or therapist during a patient encounter, rather than performing independent evaluations of patients. Students will also have the opportunity to review interesting cases from the Institute's unique PET-MRI imaging technology. Students will rotate at Jefferson and Villanova during their rotation.

Credit Hours: 6.000

Credit Hours: 17.000 **Schedule Types: Lecture**
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Credit Hours: 2.000 **Schedule Types: On-Line**
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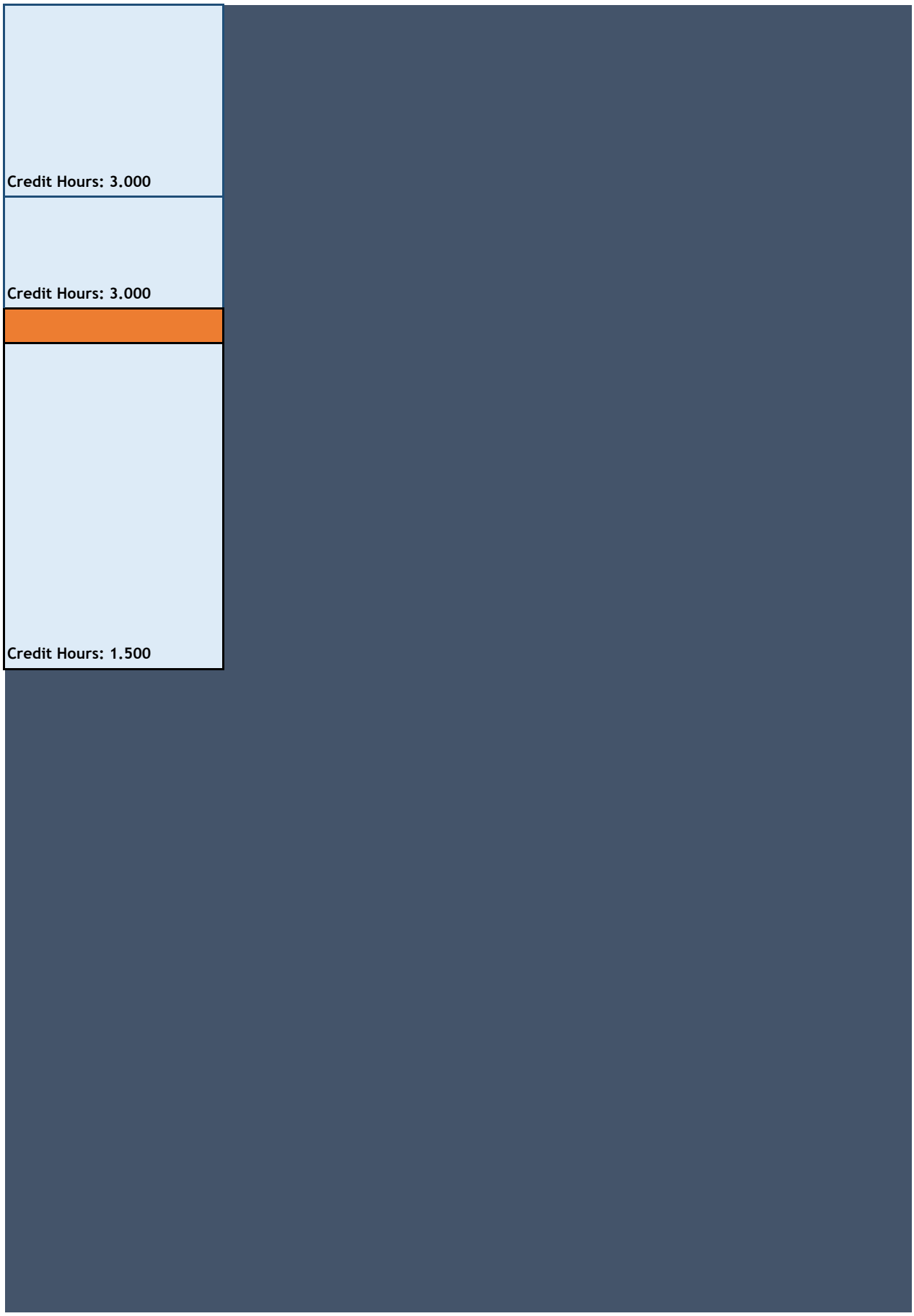
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