Visiting Medical Student Elective Directory

2018-2019

Office of Student Affairs
1247 S. Cedar Crest Blvd., Suite 202
Allentown, PA 18103
Phone: 610-402-2554
Email: medicalstudents@lvhn.org
2018-2019 Academic Year

These block dates can be modified if they do not fit your school’s academic calendar. There are 2 stipulations:

1. First, you must contact the department (where you wish to rotate for that block) *AND* the department must approve the changes to the block dates
2. Rotations *must* start on a Monday

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<td>November 26 - December 7, 2018 - Block 7A</td>
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- Cardiology- Consultative--------
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- Gastroenterology-----------------
- Geriatric Medicine--------------
- Hematology/Oncology-------------
- Infectious Disease-------------
- Palliative Medicine and Hospice-
- Nephrology----------------------
- Critical Care Medicine---------
- Rheumatology--------------------
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### Pathology Department Elective(s)

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<th>Elective</th>
<th>Code</th>
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### Pediatrics Department Elective(s)

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<th>Elective</th>
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### Course: MEL 8347 AI in Emergency Medicine

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<th><strong>Course Instructor(s):</strong></th>
<th>Charles Worrilow, MD, FACEP</th>
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<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest and LVHN-Muhlenberg</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>None</td>
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**Description:**

This acting internship integrates clinical skills and evidence-based medicine through didactic lectures, performance of clinical procedures, hands-on clinical experiences, observation and direct interaction with faculty, individual patients, and families. Students will manage the patient using the "team approach," which involves EMTs, nurses, physicians, and students. Students are expected to evaluate patients, address their presenting complaints, initiate workups, and provide definitive therapies.

**Objectives:**

This rotation will enrich students' knowledge, help them develop history-taking ability, physical skill assessment, diagnostic and management skills, as well as help them develop a caring, compassionate and empathetic attitude in dealing with patients and their families.

**Rotation Activities:**

- Suture lab, splint lab, journal club, EBM lecture, ultrasound didactic and hands-on, trauma simulation, critical care simulation, grand rounds, EMS ride-along, autopsy, spend a day with a nurse (procedures) and toxicology lectures

**Evaluation:**

Students will be graded based on clinical evaluations from their preceptors. Additionally, students will be required to take a series of online open book quizzes.
**Course: POC 1810 Emergency Medicine Elective at *LVH-Pocono**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Marc Kolpon, DO</th>
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<tr>
<td><strong>Duration:</strong></td>
<td>2 or 4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVH-Pocono</td>
</tr>
<tr>
<td><strong>Contact:</strong></td>
<td>Nancy Schiesl, Phone 570-476-3653 or Email: <a href="mailto:Nancy.Schiesl@lvhn.org">Nancy.Schiesl@lvhn.org</a></td>
</tr>
</tbody>
</table>

**Description:**

This elective allows students to work as part of the team in a busy Emergency Department treating a wide variety of medical and trauma emergent conditions. Students will work alongside board certified physicians LVH-Pocono, a busy trauma center in the Pocono Mountains.

**Objectives:**

1. Evaluate and treat patients with a broad range of emergent conditions.
2. Actively participate in triaging and recognizing patients with life threatening conditions.
3. Obtain focused histories and physicals, as well as formulating a detailed care plan for patients in the Emergency Department.
4. Gain experience in emergency procedure including IV starts, suturing, CPR, central lines, lumbar punctures, intubation.
5. Work alongside trauma team during trauma resuscitations.
6. Understand the transfer process from community hospitals to tertiary care hospitals

**Rotation Activities:**

**Evaluation:**

Students will be evaluated by their preceptors based upon direct observation during their rotation.
**Course: MDE 8714 Intro to Medical Toxicology (EM)**

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Matthew Cook, DO</th>
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</thead>
<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>All LVHN campuses</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>None</td>
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**Description:**
Medical Toxicology is best described broadly as the field of medicine with expertise in the health effects caused by pharmaceuticals, occupational exposures and environmental agents. Toxicologists assist in the management of medication overdoses, addiction and withdrawal states, envenomations, hazardous materials exposures and workplace hazards. Toxicologists oversee the clinical operations of a Poison Center.

**Objectives:**
1. Become familiar with fundamental concepts underpinning the clinical management of Toxicological patients. Participation in the diagnosis and treatment of selected acute and chronic exposures in adults and children is expected. Elements of competency include reliable history-taking, physical examination aimed at the detection of toxidromes, formulation of differential diagnoses, implementation of treatment, and development of safe disposition plans.
2. Understand the principles, methods and controversies related to limiting toxic exposures by decontamination including gastric lavage, activated charcoal administration, renal replacement therapy, ion trapping, and hyperbaric oxygen.
3. Review knowledge of basic kinetic principles of drug absorption, redistribution, metabolism, and elimination.
4. Study poisoning epidemiology specifically within populations ‘at risk’ such as toddlers, the elderly, pregnant or nursing women, migrants and immigrants.
5. Complete case studies from approximately 20 classes of drugs and poisons commonly encountered in clinical practice. Emphasis will be placed on assessing severity and initiating timely, appropriate treatment.
6. Learn guiding principles of the management of acute intoxication in the Emergency Department. Commonly abused drugs for specific socioeconomic groups will be reviewed. Withdrawal states will also be discussed.
7. Become familiar with selected antidotes, their uses, doses, side effects and limitations.
8. Develop awareness for important agents of toxicology (naturally occurring toxins). These include plants and animals toxins, especially focusing on native venomous arthropods, reptiles and marine creatures.
9. Understand diagnostic toxicology laboratory techniques, limitations and costs of both qualitative and quantitative analyses.
10. Observe the clinical operation of a Poison Center. Understand the public health role of the Poison Centers in gathering and disseminating data including protected health information (PHI).

**Rotation Activities**
1. A mandatory orientation is to be attended by the student in the first few days of the rotation.
2. Observation and participation in telephone consultations at LVHN Poison Information is expected. Students will review cases referred for medical treatment and other cases of interest.
3. A series of standard cases accompanies independent reading assignments. Expect about 20-24 hours of small group discussion.
4. Attendance at a variety of teaching rounds and meetings will be required.
5. Participation in inpatient consultations is expected. Volumes of patients are variable month to month. Students should keep a record of all patients encountered.
6. Students will be expected to prepare two 10 minute presentations on a pre-approved topic of their choice to be shared with toxicology rotators and poison center staff. It should be of narrow scope and of sufficient quality to be included in the rotators teaching files for future students to use.
7. Guided tours of the toxicology laboratory and other field trips may be available.
8. The opportunity to conduct clinical or laboratory research, construct toxicology teaching materials, or to write a review paper for publication is encouraged and is available by arrangement in advance of the rotation.
**Evaluation:**

1. Case study preparation will be assessed during discussions with the medical toxicologist.
2. Attendance at conferences and assigned poison center shifts will be counted in the evaluation.
3. A written test is not administered at the end of the month.
4. For special arrangements involving research, writing or teaching, quality and completion of the project will contribute to the grade.
5. Input on professionalism and participation will be solicited from the Poison Center staff.
**Course: MEL 8255 Family Medicine Residency Elective**

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<th><strong>Course Instructor(s):</strong></th>
<th>Veronica Brohm, DO</th>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest and LVHN-17</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>Adult Medicine, Primary Care, and Maternal Newborn Pediatrics or Women’s Health Pediatrics courses</td>
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**Description:**
During this elective, students will spend each day seeing patients and working closely with the LVHN Family Medicine residency program faculty members and residents. The experience will take place in the office, hospital, and community and will demonstrate the meaning of a "community of healing." The skills and values of "Turtle Craft," the name of our relationship-centered approach to family medicine, will be taught. Come and see innovative education in action.

**Objectives:**
1. Introduce the student to the relationship of Family Medicine and the medical community
2. Demonstrate the relationship of ambulatory care to hospital care and the effective utilization of other specialty consultations
3. Improve the student's skills and clinical judgment by a defined and supervised patient care experience
4. Demonstrate the organizational structure of a family medicine residency including office management, medical records, patient education, and preventive medicine
5. Demonstrate the various responsibilities and activities of the Family Medicine Resident

**Rotation Activities:**
The student will have primary responsibility for care of assigned patients while in the clinic and in the hospital setting. In addition to patient encounters, the students will also participate in residency didactic sessions, journal club/Evidence Based Medicine sessions, behavioral medicine clinic, nursing home experiences, and residency reflective activities. There is no call or nightfloat for this rotation unless requested by the student.

**Evaluation:**
The Family Medicine faculty will prepare a formal evaluation based on the following:
- Fund of medical knowledge
- Quality of assessment and presentation
- Clinical judgment as indicated by the rationale of diagnostic and management plans
- Attitude and rapport with patients and families
- Subjective elements of interpersonal relationships, motivation, and ability
Course: MEL 7258 Elect in Rural Med or Underserved

**Course Instructor(s):** Veronica Brohm, DO

**Duration:** 2 or 4 weeks

**Location:** LVHN-Cedar Crest and LVHN-17

**Prerequisites:** Adult Medicine, Primary Care, Maternal Newborn Pediatrics or Women's Health Pediatrics, Psychiatry/Neurology, and Surgical Care courses. Any interested student must inform Dr. Brohm AT LEAST 3 MONTHS PRIOR TO THE START OF THE ELECTIVE to allow time to coordinate with ECPA AHEC in placing them with a rural/underserved physician. Students should consider whether they would prefer a rural or underserved urban practice prior to contacting Dr. Brohm.

**Description:**

This is a rural/underserved health elective in which a student will be matched with an attending physician in the Mahoning Valley, Carbon County, Lehigh County, or Northampton County area. Responsibilities will largely be assisting with out-patient clinical care in a rural primary care office, though students may be expected to participate in hospital rounds/ER call at a hospital local to the primary practice site (depending upon preceptor).

This clerkship WILL LIKELY INCLUDE A DAILY COMMUTE OF UP TO 60 minutes from LVHN- Cedar Crest. Housing within the local community will not be provided. Students should also note that "rural/underserved" is a relative term. Many areas within 60 minutes of LVHN-Cedar Crest fit the definition and are typical of rural Pennsylvania. However, these are not REMOTE rural communities, which have a different flavor and feel. Students interested in a remote experience should consider other options.

**Objectives:**

1. Compare and contrast the health needs and problems encountered in rural or underserved practice to those encountered in prior urban practice rotations
2. Identify the unique opportunities and challenges to medical practice and life in a rural or underserved community
3. Introduce/sensitize the student to cross-cultural issues in health care
4. Understand the mechanisms and indications for consultation and referral in rural or underserved practice settings
5. Evaluate the business management of rural or underserved practice, including availability of organized funding for patient care, managed care, etc.

**Rotation Activities:**

1. Arrangements for a specific time commitment will be made through the Department of Family Medicine.
2. The student will accompany the clinic physician Monday through Friday at the designated clinic site, will see patients, and will perform procedures assigned by the preceptor under his/her supervision.
3. At certain locations opportunities are available for additional practice activities within the hospital, emergency department, and in the community.

**Evaluation Methods:**

The assigned faculty preceptor will provide an individual evaluation addressing the student's adaptability and understanding as well as knowledge, judgment, and rapport.
**Course: MDE 8226 Cardiology- Acute Coronary Care**

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<th>Larry Jacobs, MD</th>
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<tr>
<td><strong>Prerequisites:</strong></td>
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**Description:**

The students will participate in the evaluation of patients and will assist with the integration of the general medical data base with data gathered by both noninvasive (electrocardiography, ambulatory electrocardiography, stress testing) and invasive hemodynamic techniques, where indicated. Students will participate in daily teaching rounds in the cardiac intensive care unit with intern, medical resident, cardiology fellow and teaching cardiologist.

Attendance at various other weekly Cardiology Department teaching conferences is required.

**Objectives:**

1. Demonstrate the knowledge and skills necessary to obtain a proper cardiac history. The student will pay special attention to and record medications, medication compliance, diet compliance, and risk factors for various cardiac diseases
2. Demonstrate proficiency in proper bedside physical examination
3. Be able to accurately assess the presence or absence of congestive heart failure, cardiac tamponade, basic murmurs of valvular heart disease such as mitral regurgitation, mitral stenosis, aortic stenosis, aortic regurgitation and tricuspid regurgitation, and the presence or absence of peripheral vascular disease and abdominal aortic aneurysms
4. Demonstrate basic electrocardiographic skills including an understanding of basic arrhythmias such as atrial fibrillation, atrial flutter, supraventricular tachycardia, multi-focal atrial tachycardia, ventricular tachycardia, and a basic diagnosis on the 12 lead ECG such as right and left bundle branch block, left ventricular hypertrophy, acute myocardial infarction, ischemia, WPW, and hyperkalemia
5. Infer heart size, presence of cephalization, infiltrate, pleural effusions, and pneumothorax by looking at a chest X-ray
6. Identify medical, interventional, and surgical therapies for basic cardiac syndromes such as myocardial infarction, unstable angina, chronic angina, congestive heart failure, valvular heart disease, hypertension, hyperlipidemia, and arrhythmia
7. Name and utilize a variety of clinical pathways and practice guidelines
8. Access and critically evaluate current medical information and scientific evidence
9. Use information technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education
10. Explain the principles of primary, secondary prevention and risk modification
11. Summarize the indications and diagnostic yield of various cardiac studies and therapeutics

**Rotation Activities**

The students will participate in the evaluation of patients and will assist with the integration of the general medical data base with data gathered by both noninvasive (electrocardiography, ambulatory electrocardiography, stress testing) and invasive hemodynamic techniques, where indicated. Students will participate in daily teaching rounds in the cardiac intensive care unit with intern, medical resident, cardiology fellow and teaching cardiologist.

Attendance at various other weekly Cardiology Department teaching conferences is required.

**Evaluation Methods:**

The attending physician will complete a written USF 4th year rotation evaluation.
**Course: MDE 8224 Consultative Cardiology**

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<th>Course Instructor(s):</th>
<th>Larry Jacobs, MD</th>
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<td>Duration:</td>
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<tr>
<td>Location:</td>
<td>LVHN-Cedar Crest</td>
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<tr>
<td>Prerequisites:</td>
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**Description:**
This elective offers an opportunity to develop skills in the evaluation of patients referred for cardiology teaching service including primary cardiology patients and cardiac consults on the cardiology step down unit.

**Objectives:**

1. Demonstrate the knowledge and skills necessary to obtain a proper cardiac history. The student will pay special attention to and record medications, medication compliance, diet compliance, and risk factors for various cardiac diseases.
2. Demonstrate proficiency in proper bedside physical examination.
3. Be able to accurately assess the presence or absence of congestive heart failure, cardiac tamponade, basic murmurs of valvular heart disease such as mitral regurgitation, mitral stenosis, aortic stenosis, aortic regurgitation and tricuspid regurgitation, and the presence or absence of peripheral vascular disease and abdominal aortic aneurysms.
4. Demonstrate basic electrocardiographic skills including an understanding of basic arrhythmias such as atrial fibrillation, atrial flutter, supraventricular tachycardia, multi-focal atrial tachycardia, ventricular tachycardia, and a basic diagnosis on the 12 lead ECG such as right and left bundle branch block, left ventricular hypertrophy, acute myocardial infarction, ischemia, WPW, and hyperkalemia.
5. Infer heart size, presence of cephalization, infiltrate, pleural effusions, and pneumothorax by looking at a chest X-ray.
6. Identify medical, interventional, and surgical therapies for basic cardiac syndromes such as myocardial infarction, unstable angina, chronic angina, congestive heart failure, valvular heart disease, hypertension, hyperlipidemia, and arrhythmia.
7. Name and utilize a variety of clinical pathways and practice guidelines.
8. Access and critically evaluate current medical information and scientific evidence.
9. Use information technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education.
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11. Summarize the indications and diagnostic yield of various cardiac studies and therapeutics.

**Rotation Activities:**

1. Students will participate in the evaluation of patients and will assist with the integration of the general medical database with data gathered by both noninvasive (electrocardiography, ambulatory electrocardiography, stress testing) and invasive hemodynamic techniques, where indicated.
2. Students will participate in daily teaching rounds with intern, medical resident, cardiology fellow and teaching cardiologist.
3. Attendance at various other weekly Cardiology Department teaching conferences is required.

**Evaluation Methods:**

Evaluation will be performed using the USF 4th year medical student evaluation form.
<table>
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<tr>
<th>Course: MEL 8315 Clinical Allergy/Immunology</th>
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<tbody>
<tr>
<td><strong>Course Instructor(s):</strong> Howard Israel, MD</td>
</tr>
<tr>
<td><strong>Duration:</strong> 2 or 4 weeks</td>
</tr>
<tr>
<td><strong>Location:</strong> All LVHN campuses</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong> Adult Medicine and Primary Care courses</td>
</tr>
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</table>

**Description:**

Allergic and immunologic problems affect up to 20% of adults and children in the United States, therefore, students rotating in Allergy and Immunology are exposed to a variety of common problems important to physicians regardless of their specialty interests. Both children and adults are seen in the clinics.

**Objectives:**

1. Evaluate an allergy patient with history and physical, formulate an appropriate laboratory and radiologic work up, and create a suitable treatment plan
2. Become familiar with the pathogenesis, diagnosis, and treatment of various allergic and immunologic diseases

**Rotation Activities:**

Students will primarily be involved in out-patient care in private doctor’s offices.

**Evaluation Methods:**

Evaluations will be completed by the faculty members who assess the level of clinical competence attained.
**Course:** MEL 8305 Clinical Endo & Metabolism

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Gretchen Perilli, MD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>2 or 4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

**Description:**

The rotation on the Endocrinology services involves exposure to inpatient consultations and the outpatient clinic with a senior resident and the attending endocrinology staff. The main emphasis is on clinical teaching of the pathophysiology of endocrine disorders including appropriate diagnostic tests and modes of therapy. This course will prepare students to use acquired knowledge gained in the rotation to evaluate and treat common endocrine disorders via evidenced based medicine. The student will learn how to interact with patients & their families, colleagues, and staff regarding patient care and treatment.

**Objectives:**

1. Evaluate an endocrine patient with history and physical, formulate an appropriate laboratory and radiologic work up, and create a suitable treatment plan
2. Demonstrate the ability to manage diabetes mellitus type 1 and 2
3. Demonstrate the ability to manage oral and insulin diabetes treatments as well as prevent and manage diabetic complications
4. Discuss, evaluate and treat routine endocrine conditions including thyroid, parathyroid, adrenal, pituitary, and gonadal disorders

**Rotation Activities:**

This course will include a rotation with the endocrine consult service with responsibility and activities in care of patients.

**Evaluation Methods:**

Students will be evaluated in the office/clinic by the faculty attending. In the hospital setting students will be evaluated by the rounding attending.

Students will be given assignments. For example: Students will be given an interesting case by the attending to review. The case will be presented and reviewed with the attending. Students will be asked to complete a clinic question based on a case they were involved in. They will answer the question with support from the medical literature.
Course: MEL 8306 Gastroenterology Elective

Course Instructor(s): Paola Blanco, MD
Duration: 2 or 4 weeks
Location: All LVHN campuses
Prerequisites: Adult Medicine course

Description:
This course will expose the medical student to a wide range of gastroenterology disease processes. The inpatient service will have a consultative aspect. The student will be exposed to both common and uncommon GI problems with emphasis on recognition, treatment and natural history of these disorders.

Objectives:
Upon successful completion of this elective, the student may expect to achieve an acceptable level of competence in the management of disorders of the gastrointestinal tract and liver. This will be achieved by the interpretation of symptoms and physical findings, utilization of appropriate laboratory and other diagnostic studies, knowledge of the basic therapeutic approaches, and interpretation of the gastrointestinal radiographs and other imaging techniques.

Rotation Activities:
There will be a combination of direct patient contact and personal instruction.
Observation of a variety of procedures including diagnostic and therapeutic upper GI panendoscopy, capsule endoscopy, (colonoscopy, polypectomy, diagnostic and therapeutic ERCP, flexible sigmoidoscopy, esophageal dilation and manometry studies will be afforded.
Hands-on experience in capsule endoscopy is available.
Attendance at ward and teaching rounds, outpatient clinics and teaching conferences will provide a further source of learning.
Emphasis will be placed on pathophysiology, clinical manifestations, diagnosis and therapy.
Emphasis will also be placed on the techniques of clinical nutrition.
Students can participate in a short research project during the rotation or may elect to begin participation in a long term research project.
Students will participate in a regularly scheduled conferences and clinics.

Evaluation Methods:
The faculty will base their performance evaluations upon clinical discussions and didactic presentations by the student.
Course: MDE 8140 Geriatric Medicine

Course Instructor(s): Neti Vora, MD

Duration: 2 or 4 weeks

Location: All LVHN campuses and surrounding long-term facilities

Prerequisites: Adult Medicine and Primary Care courses.

Description:
The geriatric rotation will offer experience to observe and manage elderly patients with a wide variety of medical conditions on an inpatient and outpatient basis. The student functions as a member of a team with a resident and attending physicians, offering care for patients in acute, ambulatory, community and long-term care settings, in order to understand the interaction of natural aging and disease as well as the techniques of assessment, therapy and chronic and acute disease management.

Objectives:
1. Understand the normal anatomical and physiologic changes associated with aging and the concepts of homeostenosis and frailty
2. Recognize the atypical presentations of illness in the geriatric patient
3. Evaluate and manage the common geriatric conditions including: delirium, dementia, depression, gait disorder and falls, syncope, unintentional weight loss, pain syndromes, urinary incontinence, and constipation
4. Assess for and prevent the hazards of hospitalization of the geriatric patient including: 'polypharmacy', delirium, deconditioning and functional decline, malnutrition and pain syndromes
5. Recognize the prevalence of complex and chronic disease in the elderly and its impact on functionality and quality of life
6. Understand and utilize the AGS Beer’s Criteria for potentially inappropriate medication use in the older adult
7. Administer and interpret the various standardized instruments used for assessment of cognitive function, psychological affect and physical function in the geriatric population
8. Understand the various post-acute rehabilitation and long-term care settings, including the duties of the interdisciplinary team members and Medicare/Medicaid and other insurance payment options

Rotation Activities:
Students will see patients on the hospital geriatric consultation service, the ambulatory primary care and out-patient consultation service and in several post-acute care rehabilitation and long-term care settings under the direct observation of the geriatric attendings with focus on addressing all the above listed objectives. They will participate in monthly geriatric journal club and geriatric trauma meetings. Students will be given hard copy reading booklets they are expected to review, and will be expected to informally present a geriatric journal article at the end of the rotation. Students will choose one acute hospital patient from the consultation service for continuity follow through to the post-acute rehabilitation setting and provide a written summary about the experience including: a summary of the patients course in hospital through rehabilitation, interviews and examinations done with the patient, transitions of care concerns, care plan formulations for post-rehab and their own recommendations for improvement of the system.

Evaluation:
The students will be evaluated based on the ACGME competencies. Students will receive a short pre-test and post-test of geriatric cases with multiple choice answers they are expected to complete at the beginning and again at the end of the rotation with expectation of a post-test score >/=80% correct. Grades are determined by: 50% clinical evaluation, 25% continuity patient summary write-up, 15% post-test score, 10% journal article presentation.
**Course: MDE 8280 Hematology and Oncology**

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>William Scialla, DO</th>
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<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest and LVHN-Muhlenberg</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>Adult Medicine course</td>
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</table>

**Description:**
This course will expose the medical student to a wide range of hematologic and oncologic disease processes. In the outpatient setting, an emphasis will be made on the proper screening, pathophysiology, staging, natural history and treatment of cancer. The inpatient service will both have a primary management role and consultative aspect. The student will be exposed to both common and uncommon hematologic problems with emphasis on recognition, treatment and natural history of these disorders. Students will also spend time in multidisciplinary clinics.

**Objectives:**
1. Identify key points in a patient's case and use them to make management decisions
2. Recall the important aspects of the history and physical in evaluating a patient with cancer or a hematologic disorder
3. Identify detailed aspects of the CBC, coagulation studies, and peripheral blood smear
4. Will demonstrate the ability to accurately interpret CT scans and MRI imaging of oncology patients
5. Strengthen skills to develop a differential diagnosis and be able to justify studies ordered and rational behind treatment recommendations
6. Be able to compare and contrast mechanism of action and side effects of traditional chemotherapy and new targeted therapy
7. Differentiate between palliative care and hospice care and decide when to transition patient to hospice
8. Appreciation for the importance of clinical trials and the process of screening patients
9. Appreciation for multidisciplinary care of oncology patients

**Rotation Activities:**
The student will be exposed to a broad variety of Hematologic and Oncologic cases. They will spend time on the oncology floor and with the consult service. They will follow patients and round with team members including attendings, APC, fellows and residents.

The students also spend time in the office setting with an attending. They accompany the attending during office visits and spend time discussing the case.

Attend tumor board, journal club, fellow lectures. Opportunity to spend time with hematopathology and blood bank

**Evaluation:**
1. Students will be evaluated in the office/clinic by the faculty hematology/oncology attending. In the hospital setting students will be evaluated by the rounding attending and APC (advanced practice clinician).
2. Students will be given a brief multiple choice test at the start of the rotation and again at the completion to gauge progress. Test will cover basic concepts in hematology/oncology.
3. Students will be given assignments. For example: Students will be given an interesting case by the attending to review. The case will be presented and reviewed with the attending. Students will be asked to complete a clinic question based on a case they were involved in. They will answer the question with support from the medical literature.
<table>
<thead>
<tr>
<th><strong>Course: MDE 8320 Infectious Disease</strong></th>
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<td><strong>Course Instructor(s):</strong></td>
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<td><strong>Duration:</strong></td>
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**Description:**

The primary focus of this rotation is the inpatient consultative service. Students will be expected to round collaboratively with a team including rotating residents, physician assistants, our ID pharmacist, as well as the attending physician. To complement this focus, the student will participate in ID journal club, case management series, and medical grand rounds. The student will also be exposed to other ID-related services, including microbiology and laboratory medicine, infection control, travel medicine, HIV, wound management, and antibiotic stewardship.

**Objectives:**

1. Apply the principles of comprehensive history taking and physical examination to generate a differential diagnosis and to select advanced testing modalities
2. Improve their assessment and management of disease processes using evidence-based literature and interdisciplinary communication
3. Apply principles of empiricism and stewardship to antibiotic selection and management
4. Improve familiarity with antimicrobial therapies, including antibiotic classes, adverse drug reactions and interactions
5. Understand various states of immunosuppression (hereditary, drug-induced, acquired, organ transplant-related) and infections related to these
6. Summarize Infection Control protocol to minimize spread of disease
7. Deduce the appropriate method for treating microbial infections
8. Identify the correct type of antibiotic to treat bacterial Infections

**Rotation Activities**

This course will include a rotation with the infectious disease consult service with responsibility and activities in care of patients.

**Evaluation:**

Students will be evaluated by the faculty attending.

Students will be given assignments. For example: Students will be given an interesting case by the attending to review. The case will be presented and reviewed with the attending. Students will be asked to complete a clinic question based on a case they were involved in. They will answer the question with support from the medical literature.
**Course: MDE 8150 Intro to Palliative Med and Hospice**

**Course Instructor(s):** Michael Chyu, MD  

**Duration:** 4 weeks  

**Location:** LVHN-Cedar Crest  

**Prerequisites:** Adult Medicine and Primary Care courses  

**Description:**
This elective is designed to introduce the basic philosophy of palliative care and how these principles are applied to patients with advanced complex diseases. A three-week OACIS inpatient rotation will consist of full participation on the inpatient consulting service, including daily rounds, weekly interdisciplinary team meetings (IDT), weekly staff meeting, and participation in regular interdisciplinary education sessions and case presentations. Students will assist with inpatient consultations with precepting and support from the full inpatient team as well as a designated supervising physician. Focus will be on assessment and treatment of pain and non-pain symptoms, fundamental skill development in patient and relationship centered care, and coordination of care including family meetings, goals of care discussions, conflict resolution, and withdrawal of life sustaining therapies. The fourth week will be focused on understanding the process of offering palliative care in the home setting and under the hospice medical benefit in the inpatient hospice unit (IPU). Students will participate in home visits with OACIS Nurse Practitioners, and also be in the IPU under the supervision of the hospice medical director, with guidance from the RN case manager, and other members of the hospice team. For home-based OACIS services, focus will be on assessment and treatment of pain and non-pain symptoms, fundamental skill development in patient and relationship centered care, and coordination of care with goals of care discussions. For the IPU, focus will be on recognition of the dying process, the pharmacokinetics and pharmacological effects of medication commonly used to treat symptoms in dying patients, and an introduction to the regulatory requirements for hospice.

**Objectives:**

1. Initiate palliative care consults on patients in the hospital to include a comprehensive medical history, physical examination and assessment of patient and family understanding of illness and prognosis. Gather a psychosocial, coping history, and spiritual and values history  

2. Provide a comprehensive assessment of patients with pain identifying physical, psychosocial and spiritual components of distress  

3. Explain the relevant basic science, pathophysiology, associated symptoms and signs, and diagnostic options useful in differentiating among different etiologies of pain and non-pain syndromes  

4. In patient encounters, identify and address common patient, family, health care provider, and health care system barriers to effective symptom treatment  

5. List indications, clinical pharmacology, alternate routes, equianalgesic conversions, appropriate titration, toxicities, and management of common side effects in opioid administration  

6. Initiate informed relationship-centered dialogues about care  

7. Demonstrate empathy  

8. Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds  

9. Communicate effectively with physicians, other health professionals, and health related agencies  

10. Define patient requirements to qualify for the hospice medical benefit and describe how these benefits are delivered in through an interdisciplinary team
### Rotation Activities:

During the entire month, students will attend palliative care journal club, and weekly hospice and palliative medicine fellow education sessions. Additionally, students will be required to read the UNIPAC series, landmark journal articles regarding key palliative care topics, and also to complete relevant CAPC modules.

### Evaluation Methods:

For the inpatient educational experience, the trainee will see patients at Lehigh Valley Hospital-Cedar Crest and on the consultation services of the OACIS/Palliative Care Consult Service. They will actively participate in daily team rounds and weekly Inter-Disciplinary Rounds (IDT). Trainees will be assigned patients by the supervising faculty and will be integrally involved in the assessment of the patient's medical history, physical exam, and evaluation of patient and family understanding of illness and prognosis. They will actively participate in family meetings regarding goals of care and treatment plans. In addition, students will complete daily journal entries using a standardized question template to process their emotional/spiritual reaction to the work that is being done. Communication skills will be taught through didactic sessions, role play scenarios, and direct observations.

For the hospice experience, the student will see patients primarily at the inpatient hospice unit at 17th and Chew St. Additionally, if desired, trainees will see patients who are enrolled in LVH Hospice Services at home with a member of the hospice team including pastoral care, social worker, nurse case manager, and medical director. They will participate in either one inpatient or home-based IDT during the week.

Knowledge will be assessed through a pre-post knowledge survey and exam, in addition to an oral presentation given at one of the IDT rounds on a palliative care topic of interest. Finally, an overall evaluation will be completed by each member of the IDT using a competency-based assessment tool.
<table>
<thead>
<tr>
<th><strong>Course:</strong> MEL 8313 Clinical Nephrology</th>
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<tbody>
<tr>
<td><strong>Course Instructor(s):</strong> Mohammad Saqib, MD</td>
</tr>
<tr>
<td><strong>Duration:</strong> 4 weeks</td>
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<tr>
<td><strong>Location:</strong> LVHN-Cedar Crest</td>
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<tr>
<td><strong>Prerequisites:</strong> Adult Medicine and Primary Care courses</td>
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</tbody>
</table>

**Description:**
The geriatric rotation will offer experience to observe and manage with a variety of renal conditions on an inpatient consult service. Students function as members of a team with a resident and attending physicians, in order to understand the techniques of assessment, therapy and chronic and acute disease management.

**Objectives:**
The objective of this elective is to expose medical students to the broad general principles of Clinical Nephrology. In essence, the student will be an acting intern who will, in collaboration with the renal house staff and clinical fellows, participate in the care of patients with a variety of renal and hypertensive problems. The student will be exposed to the practice of medicine on a broad interdisciplinary service that involves dietitians, social workers, clinical nurse specialists, as well as the attending staff.

**Rotation Activities**
Adequate exposure to renal patients is achieved through inpatient consultations in the affiliated institutions and outpatient consultations and follow-up in the renal clinics and dialysis centers. The performance of the history and physical examination, formulation of plans for diagnosis and management, and the writing of orders for care of the patient will be the responsibility of the student who will function under supervision of the Nephrology attendings and fellows.

**Evaluation:**
The faculty will base their performance evaluations upon clinical discussions and didactic presentations by the student.
**Course: MDC 8340 Critical Care Medicine**

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Daniel E. Schwed-Lustgarten, MD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Location:</td>
<td>LVHN-Cedar Crest &amp; LVHN-Muhlenberg</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>Adult Medicine course</td>
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**Description:**

This elective is designed to introduce students to the practice of medicine in an intensive care unit. Under the supervision of clinical faculty, students will have the opportunity to practice in a large medical - surgical ICU LVHN – CC (40 beds), LVHN – Muhl (20 beds). Upon completion of this elective, students should understand the principles of diagnosis and management of the critically ill patient with specific emphasis in shock and respiratory failure. The goals of this clerkship are to develop an approach to the care of patients with complex, critical illnesses; to understand the physiologic and pathologic abnormalities that occur in ICU patients; and to apply science principles basic to the practice of medicine in the clinical management of complex illness.

**Objectives:**

1. Obtain a clinical history and physical exam on a non-verbal, critically ill patient based on limited available information from pre-hospital medical personnel (i.e. EMS), ER physicians, available hospital records, and interviews with the patient’s family members
2. Compare and contrast the health needs of the critically ill patient to those encountered in the general medical ward and outpatient settings
3. Recognize critically ill patients with shock as well as trends in vital signs and key laboratory data that identify patients with a rapidly declining, life threatening condition or a worsening disease state that threatens a vital organ function
4. Recognize patients with acute respiratory failure based on clinical laboratory data (i.e blood gases) and become familiar with the basics of mechanical ventilation (invasive and non-invasive)
5. Analyze and become sensitized to end of life discussions with patients and/or family members
6. Identify and describe the proper administration and use of the intensive care unit as a scarce and limited health care resource

After being exposed to critical care patients in a variety of disciplines, the student will demonstrate specific knowledge, skills, and attitudes relevant to critical care practice. The student will have an understanding of critical care guidelines and practices so that the student will recognize patients with immediate life threatening conditions, institute appropriate initial therapy, and outline an initial course of management for patients with serious conditions requiring critical care.

**Rotation Activities:**

This course will include a rotation either through a Medical ICU, Pulmonary/Critical Care Consult ICU, Anesthesia Critical Care, Coronary Critical Care Unit, Surgical/Trauma ICU, NICU, or PICU at Lehigh Valley Cedar Crest Hospital. The rotation assignment will be made based upon the student’s chosen career path. Students will be evaluated by written, oral, and/or practical methods which include direct patient contact and simulation training. In addition, the students will evaluate electro-cardiograph (ECG) tracings through weekly quizzes to enhance interpretation skills.

**Evaluation:**

Students will be evaluated by written, oral, and/or practical methods which include direct patient contact and simulation training. In addition, the students will evaluate electro-cardiograph (ECG) tracings through weekly quizzes to enhance interpretation skills.
### Course: MEL 8399 Rheumatology Clinical Elective

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>James Ross, MD</th>
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<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>2 or 4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>None</td>
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</table>

#### Description:

The rheumatology rotation will offer experience to observe and manage patients with a wide variety of rheumatic conditions on an inpatient and outpatient basis. Students function as members of a team with a resident and attending physicians, offering care for patients in acute, ambulatory, and community care settings, in order to understand rheumatic disorders as well as the techniques of assessment, therapy and chronic and acute disease management.

#### Objectives:

At the successful completion of this course students will be able to:

1. Perform an appropriate history and physical examination on patients with common systemic rheumatologic disease and other musculoskeletal conditions.
2. Recognize the clinical, laboratory, and radiographic features of the more common rheumatologic and musculoskeletal diseases.
3. Understand the pathophysiology of the common rheumatologic, and musculoskeletal diagnoses.
4. Construct an appropriate differential diagnosis when evaluating patients with systemic rheumatic disease, and other musculoskeletal conditions
5. Apply the skills and medical knowledge learned during the didactic sessions to evaluate patients in rheumatology clinics and design an appropriate differential diagnosis, and diagnostic and therapeutic plans for the more common conditions.
6. Develop skills of professionalism, interpersonal communication, systems based practice, and practice-based improvement in the clinical setting.

#### Rotation Activities:

Students will see patients on the hospital geriatric consultation service, the ambulatory primary care and outpatient consultation service under the direct observation of the rheumatology attendings with focus on addressing all the above listed objectives. They will participate in monthly rheumatology journal club and clinical case reviews. Students will be given hard copy reading booklets they are expected to review, and will be expected to informally present, interviews and examinations done with the patient, transitions of care concerns, care plan and their own recommendations for improvement of the system.

#### Evaluation:

The students will be evaluated based on the ACGME competencies. Grades are determined by 75% clinical evaluation, 25% journal article presentation.
**Course: MEL 8671 Elect in Inpatient Gen Neuro**

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Jay Varrato, DO</th>
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<tr>
<td><strong>Duration:</strong></td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>Psychiatry/Neurology course. Prior approval of Dr. Varrato is required before scheduling this elective.</td>
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</tbody>
</table>

**Special Instructions:**

Prior approval of Dr. Varrato is required before scheduling this elective.

**Description:**

The elective is under the supervision of a Neurology attending. Students become an integral part of a team that cares for patients with various neurological diseases. There are opportunities for participating in research projects.

**Objectives:**

1. Master skills in obtaining neurological history and examination
2. Actively participate in discussing differential diagnosis
3. Learn to create a comprehensive management plan
4. Become familiar with Neurology beyond the core requirements
5. Gain more independence in dealing with neurological patients
6. Develop readiness for transition into residency
7. Learn to perform lumbar punctures
8. Learn basics of EEG and EMG/NCS

Upon completion of this elective, students should understand the principles of diagnosis and management of general neurological disorders.

**Rotation Activities:**

1. Students will perform consults and evaluations of inpatients under direct supervision of attending and residents.
2. Students will care for their own panel of patients under supervision of attending and residents.
3. Students will present at morning report and case conference.
4. Students will accompany their patients to different tests such as EEG and EMG.
5. Students will participate in daily rounds on inpatients.

**Evaluation:**

Students will be evaluated by the course director at the end of the course, based largely on clinical evaluations completed by all residents and faculty who work with them.
### Course: MEL 8677 Outpatient Neurology

<table>
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<tr>
<th>Course Instructor(s):</th>
<th>Jay Varrato, DO</th>
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<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>2 or 4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>All LVHN campuses</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>Psychiatry/Neurology course. Prior approval of Dr. Varrato required at least 3 months prior to rotation</td>
</tr>
</tbody>
</table>

#### Special Instructions:
Prior approval of Dr. Varrato is required 3 months prior to the rotation.

#### Description:
With the course director's assistance, the student will construct a calendar of outpatient experiences which can include any or all of the following Clinics: Alzheimer's Disease; neuro oncology; epilepsy; general neurology; headache; neuro-muscular; multiple sclerosis, Parkinson's Disease; and stroke. Selected reading will be advised. The course is designed to assist students who want a career in primary care or neurology as they prepare for outpatient delivery of care.

#### Objectives:
1. Master skills in obtaining neurological history and examination
2. Actively participate in discussing differential diagnosis
3. Learn to create a comprehensive management plan
4. Learn different pathology in outpatient neurology
5. Gain more independence in dealing with neurological patients
6. Develop readiness for transition into residency
7. Learn basics of EEG and EMG/NCS

Upon completion of this elective, students should understand the principles of diagnosis and management of general outpatient neurological disorders.

#### Rotation Activities:
1. Student will spend time in various outpatient settings under the direct supervision of attendings and residents.
2. Student will spend time evaluating patients on their own and presenting to attending.
3. Students will learn basics of EMG and EEG testing.
4. Students will perform neurologic exams and histories in presence of attendings.
5. Students will attend all necessary conferences.

#### Evaluation:
Students will be evaluated by the course director at the end of the course, based largely on clinical evaluations completed by all residents and faculty who work with them.
## Course: MEL 8678 Vascular Neurology

<table>
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<tr>
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<tr>
<td>Prerequisites:</td>
<td>Psychiatry/Neurology course.</td>
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### Special Instructions:

The student must meet with the faculty member with whom they plan to work and/or Dr. Varrato to plan the elective prior to scheduling.

### Description:

This elective is designed to give fourth-year students more extensive exposure to the practice of Vascular Neurology. Under the supervision of clinical faculty, students will have the opportunity to evaluate patients with known or suspected stroke syndromes in hospital and ambulatory clinical environments. Students will round with the Stroke Team in the hospital on the Vascular Neurology Service and see patients in the outpatient stroke clinics under the supervision of a Vascular Neurology Attending. The elective will provide students with a better understanding of the dimension of Stroke, which is a leading cause of disability and the third leading cause of death in the United States. Students will also get exposure to interventional neurology as it pertains to the management of ischemic stroke and subarachnoid hemorrhage and gain experience in critical care neurology as it pertains to the management of patients with ischemic stroke, intracerebral hemorrhage and subarachnoid hemorrhage.

### Objectives:

1. Recognize the heterogenous nature of stroke syndromes and be able to differentiate them from non-stroke mimics
2. Apply principles of evidence-based medicine to cerebrovascular diagnosis and management
3. Evaluate the proper use of laboratory and neuroimaging studies in cerebrovascular diagnosis
4. Appreciate the diagnostic and management algorithms in acute stroke intervention
5. Understand the principles of management of acute ischemic stroke
6. Understand the principles of management of acute hemorrhagic stroke
7. Identify risk factors and treatment strategies for primary and secondary prevention of stroke

Students will see patients at Cedar Crest hospital and Center for Advanced Health Care. Upon completion of this elective, students should understand the principles of diagnosis and management of patients who have vascular neurological disorders.

### Rotation Activities:

1. Students will spend time on stroke service evaluating acute stroke patients.
2. Students will perform evaluations of patients under direct supervision of residents and attendings.
3. Students will see patients in the outpatient stroke clinic with a attending
4. Students will spend time rotating in the NSICU covering ICH and SAH patients
5. Students will spend time in neuro IR evaluating acute stroke patients who undergo mechanical intervention.

### Evaluation:

Students will be evaluated by the course director at the end of the course, based largely on clinical evaluations completed by all residents and faculty who work with them.
<table>
<thead>
<tr>
<th>Course: MDE 8162 Gynecologic Oncology</th>
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<tr>
<td><strong>Course Instructor(s):</strong></td>
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**Description:**

Students will be expected to demonstrate a level of skill in patient care of both gynecologic oncology in-patients and outpatients comparable to an intern completing his/her first gynecologic oncology rotation. Student will demonstrate knowledge of responsibilities of an intern by completing all intern related administrative tasks under supervision of chief resident and assigned faculty mentor.

**Objectives:**

1. Will act as the primary provider (house officer): admit, develop management and diagnostic plan for the gynecologic oncology patient and have plan for initial orders for assigned patients
2. Will follow up on patient’s status and develops new management and diagnostic plans for assigned gynecologic oncology patient
3. Will be assistant surgeon for procedures as level of training allows
4. Will follow, round on, document upon, and present assigned patients on the gynecologic oncology service during daily rounds
5. Will manage a sufficient number of patients as a medical student to gain skills, attitudes, and knowledge necessary to function as the primary physician and demonstrate critical aspects of caring for oncologic patients
6. Will see patient in the ambulatory gynecologic office setting with faculty attendings when assigned
7. Will participate in and develop understanding for the principles of robotic surgery
8. Develop communication skills regarding the care of complex patients with morbidity and cancer
9. Will research, prepare, and present a 15 minute oral presentation relating to a chosen gynecologic oncologic topic during the rotation

**Rotation Activities:**

1. The student will work with the Gynecologic Oncology team caring for patients on the wards, in the OR, and in the ambulatory clinic. As skill level allows, the student will: Work in clinics evaluating and examining patients and will report to chief resident and/or faculty. Clinics include gynecologic oncology private clinics and colposcopy clinic in Center for Women’s Medicine (CWM). Attend all operations and procedures assigned to the team, acting as intern to evaluate and help manage patients. Participate as acting intern in all assigned pre-operative and post-operative care and procedures.
2. Participate in new consults and emergency room evaluations as acting intern and be responsible for examining and evaluating gynecologic oncology patients who are admitted or develop problems during his/her time on service. The student will check out to the OB/GYN resident assigned to ward call or faculty on call.
3. The student will attend all conferences and lectures that the Gynecologic team intern is required to attend.
4. The student will be responsible for writing clinic and/or inpatient notes as assigned by chief resident and/or faculty.

**Evaluation:**

Evaluation will be based on clinical performance in the role as acting intern to include assessment of charting skills, clinical diagnostic skills, ability to formulate differential diagnoses, oral presentation skills and oral presentation, and general work ethic. The student’s ability and willingness to work as an integral part of the team will be assessed and emphasized. It will include:

- Daily Inpatient Service clinical observation
- Daily Ambulatory service clinical observation
<table>
<thead>
<tr>
<th>Daily Surgical service clinical observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily oral feedback</td>
</tr>
<tr>
<td>End of period oral feedback</td>
</tr>
<tr>
<td>Written feedback</td>
</tr>
<tr>
<td>Written evaluation by the chief resident and Gynecology Oncology faculty assigned to the team</td>
</tr>
</tbody>
</table>
**Course: MDE 8165 Gynecology Elective**

**Course Instructor(s):** Stephanie-Marie Jones, MD

**Duration:** 4 weeks

**Location:** LVH-17

**Special Instructions:** Contact Dr. Jones at least one week in advance to set up the first day meeting to review expectations. Students are allowed to miss one day without having to make the shift up. Students must notify the gynecology rotation attending leader prior to any missed days.

**Prerequisites:** Maternal Newborn Pediatrics or Women's Health Pediatrics and Surgical Care courses

**Description:**
This elective is intended for those students who wish to obtain additional background in gynecology and gynecologic surgery. This course would be most beneficial to those considering training in obstetrics and gynecology. Requests for the elective may be preferentially granted to students who express a genuine interest in performing their ObGyn residency training at Lehigh Valley Health Network in the future. These students will learn to demonstrate a level of skill in-patient care of both gynecology in-patients and outpatients comparable to an intern completing his/her initial gynecologic rotation. Students will also demonstrate knowledge of responsibilities of an intern by completing all intern related administrative tasks under supervision of gynecology resident and assigned faculty mentor.

**Objectives:**
1. Will act as the primary provider (house officer): admit, develop management and diagnostic plan for the gynecology patient and have plan for initial orders for assigned patients
2. Will follow up on patient’s status and develops new management and diagnostic plans for assigned gynecology patients
3. Will be assistant surgeon and/or participate in procedures as level of training allows
4. Will follow, round on, document upon, and present assigned patients on the gynecology service during daily rounds
5. Will manage a sufficient number of patients as an acting intern to gain skills, attitudes, and knowledge necessary to function as the primary physician and demonstrate critical aspects of caring for gynecology patients
6. Will see patient in the ambulatory gynecology office setting with faculty attendings when assigned
7. Will participate in and develop and understanding for the principles of gynecologic surgery

**Rotation Activities:**
1. Oral presentation at end of rotation
2. Attend OR cases assigned to you by chief gynecology resident unless assigned to clinic that day
3. Gynecology Outpatient clinic four half days/ month
4. Each week, student will meet with an assigned clinical attending. During this time, can go over questions on assigned readings:
   - Week 1: Discuss expectations, Set up personal objectives for month
   - Week 2: H&P, Operative note, Postoperative Note, and Outpatient Note
   - Week 3: H&P, Operative note, Postoperative Note, and Outpatient note
   - Week 4: Oral Case presentation & Demonstrate One Handed and Two Handed Knots Final Evaluation
5. Complete Passport
6. Complete Log Sheet regarding surgeries

**Evaluation:**
Written evaluation by the chief resident and gynecology faculty assigned to the team. Evaluation will be based on clinical performance in the role as acting intern to include assessment of charting skills, clinical diagnostic skills, ability to formulate differential diagnoses, oral presentation skills and oral presentation, and general work ethic. The student's ability and willingness to work as an integral part of the team will be assessed and emphasized. Completion of rotational procedure log will be required.

50% Attending/ Resident Evaluations
30% Case Presentation
20% Notes & Completion of Passport and Log
Course: MDE 8180 Maternal-Fetal Medicine

Course Instructor(s): Kara Coassolo, MD

Duration: 4 weeks

Location: LVHN-Cedar Crest; outpatient Maternal Fetal Medicine office

Prerequisites: Maternal Newborn Pediatrics or Women's Health Pediatrics course

Description:
The purpose of this rotation is to advance your knowledge in the area of Maternal Fetal Medicine. Below is the general outline of the requirements of the rotation. Your elective can be tailored; if there is something else you would like to gain exposure to, please do not hesitate to discuss this with your preceptor.

Students will be expected to demonstrate a level of skill in patient care of both high risk obstetrical patients who are in-patients and outpatients comparable to an intern completing his/her MFM rotation. Student will demonstrate knowledge of responsibilities of an intern on MFM service by completing all related administrative tasks under supervision of assigned faculty mentor.

Objectives:
1. Gain exposure and develop a comfort level with inpatient management of MFM patients including antepartum patients in PNU with obstetrical and medical complications and complicated patients on labor and delivery
2. Develop an understanding of the management of patients in the high-risk obstetrical clinic including those requiring pre-conceptual counseling, genetic counseling, and antepartum consultations
3. Become familiar with principles of perinatal ultrasound and associated procedures including amniocentesis, chorionic villus sampling, and PUBs
4. Learn about both maternal and obstetrical complication during pregnancy

Rotation Activities:
1. Dr. Coassolo is the preceptor for the rotation, though it is expected that you will interact with the entire MFM staff. Students will meet with Dr. Coassolo at the starting, mid-point and completion of the rotation. YOU ARE RESPONSIBLE FOR SETTING ALL MEETINGS WITH DR. COASSOLO. She will contact you by email the week prior to the rotation with more specific instructions for the first day - Kara_m.coassolo@lvhn.org
2. Students are expected to function as a member of the MFM team. The team consists of the MFM personnel including faculty, residents on the obstetrical and MFM services, nurse practitioners, genetic counselors, and the sonographers. The more you interact with the team and the greater initiative and interest you show, the better the experience will be for you.
3. When in the office, Students are expected to:
   - Watch ultrasounds and all perinatal procedures
   - Participate in consults with the physicians, nurse practitioners, and genetic counselors
4. Students are expected to follow and participate in the care of designated antepartum patients. They will be assigned 1-3 patients to follow at any one time and are expected to assume “ownership” of those patients while they are inpatients. This includes rounding on these patients in conjunction with the appropriate resident and on-service attending, attending all counseling and ultrasound sessions, and contributing to management decisions of these patients.
5. Students will have the opportunity and be expected to see an appropriate distribution of patients (both inpatient and outpatient) that correlates with the attached list of common clinical situations that a perinatologist routinely encounters. Please document the patient’s name and medical record number for each patient type. YOU ARE RESPONSIBLE FOR MAKING SURE THAT YOU TAKE ADVANTAGE OF CARING FOR A DIVERSE SELECTION OF PATIENT PROBLEMS WHILE ON THE SERVICE. These patients occur with enough frequency that you should have no problem completing this list during your rotation. Failure to complete this list may result in an incomplete rotation. Students will be expected to present a 15-20 minute talk during the rotation. This presentation will occur either during ultrasound conference or morning report and can focus on a perinatal topic or an interesting patient seen during the rotation.
<table>
<thead>
<tr>
<th><strong>Evaluation:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Inpatient Service evaluation</td>
</tr>
<tr>
<td>Daily Ambulatory Service evaluation</td>
</tr>
<tr>
<td>Daily oral feedback</td>
</tr>
<tr>
<td>End of period feedback</td>
</tr>
<tr>
<td>Written feedback</td>
</tr>
<tr>
<td>Completed H&amp;P on Antepartum MFM patient and outpatient seen in High Risk Clinic or MFM office during rotation</td>
</tr>
<tr>
<td>Completed oral project (slide set)</td>
</tr>
<tr>
<td>Completed “antepartum” procedural passport</td>
</tr>
</tbody>
</table>
### Course: HAZ 1830 Clinical Obstetrics & Gynecology *at LVH-Hazleton*

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Scott Muir, DO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks, 30 hours</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>LVH-Hazleton</td>
</tr>
<tr>
<td><strong>Contact:</strong></td>
<td>Annie Walper at LVPG Obstetrics &amp; Gynecology – Hazleton 570-501-6413</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>Pelvic Anatomy</td>
</tr>
</tbody>
</table>

#### Description:
Participate in actively managing a busy Ob/Gyn practice from the standpoint of a primary provider of medical services. Experience the responsibilities requested of a practicing Ob/Gyn attending. Admit patients to the hospital and follow through with continuity of care. Exposure to office, hospital and surgical center.

#### Objectives:
1. Verbal presentations
2. Demonstrate proper examination techniques
3. Be available for possible after hours work
4. Scrub-in surgical cases

#### Rotation Activities:
Taking complete Gyn H&P's, learn technique of taking pap smear and performing pelvic exam. Observe colposcopy, endometrial biopsies and IUD insertion.

#### Evaluation Methods:
Evaluation by attending on a weekly basis.
Grade composition: 50% Clinical; 25% single topic research and write-up; 25% oral presentation
Course: MDE 8181 Obstetrics Elective

Course Instructor(s): Liany Diven, MD
Duration: 4 weeks
Location: All LVHN campuses

Prerequisites: Adult Medicine, Primary Care, Surgical Care, Maternal Newborn-Peds or Women’s Health-Peds and Psychiatry/Neurology courses. Preference will be given to those students who are pursuing residency training in obstetrics and gynecology and to USF students.

Description:
The purpose of this rotation is to advance your knowledge in the area of inpatient obstetrics. Below is the general outline of the requirements of the rotation. Your elective can be tailored, however, if there is something specific to which you would like to gain exposure. Please do not hesitate to discuss this with your preceptor.

Students will be expected to develop a level of skill in patient care of obstetrical patients comparable to an intern on his/her obstetrics rotation. Student will demonstrate knowledge of responsibilities of an intern on obstetrics service by completing all related clinical and administrative tasks under supervision of assigned faculty mentor.

Objectives:
1. Perform initial assessment of patients in the triage area by conducting history and supervised physical exams, participating in decisions regarding management, admitting patients as appropriate and counseling patients being discharged on necessary follow-up
2. In conjunction with residents and attending staff, perform ongoing assessment of intrapartum patients and manage their labor progress
3. Under supervision, perform vaginal deliveries and laceration repair
4. Participate in cesarean deliveries with level of participation at the discretion of the attending physician
5. Perform postpartum rounds with resident obstetrics team
6. May engage in antepartum teaching rounds

Rotation Activities:
1. Faculty will be responsible for the student’s orientation and completion of the evaluation although it is expected that you will interact with other members of the General Obstetrics/Gynecology and Maternal-Fetal Medicine staff. The student will be expected to meet with their preceptor at the start, mid-point and completion of the rotation. YOU ARE RESPONSIBLE FOR SETTING ALL MEETINGS WITH YOUR PRECEPTOR so please contact the preceptor at the start of the rotation.
2. Students are expected to function as a member of the obstetrics team. The team consists of the resident staff (typically 1-2 PGY1, 1-2 PGY2, PGY3, PGY4), general ob/gyn attending physicians, MFM specialist, ED resident, third year medical students, CNM, and nurses.
3. Students are expected to follow and participate in the care of designated patients. S/he will be assigned 1-3 patients to follow at any one time and are expected to assume responsibility of those patients while they are inpatients. This responsibility includes initial assessment/evaluation, intrapartum management, rounding on these patients in conjunction with the appropriate resident and on-service attending, and contributing to management decisions of these patients. To learn the computer system, take the online tutorials at http://lvhwebcontent.lvh.com/?id=2665&sid=1
4. Students will have the opportunity and be expected to see an appropriate distribution of patients that correlates with the attached list of common clinical situations that an obstetrician routinely encounters. Please attach a patient demographic sticker on the form by the type of patient encounter. YOU ARE RESPONSIBLE FOR MAKING SURE THAT YOU TAKE ADVANTAGE OF CARING FOR A DIVERSE SELECTION OF PATIENT PROBLEMS WHILE ON THE SERVICE. These patients occur with enough frequency that you should have no problem completing this list during your rotation. Failure to complete this list may result in an incomplete rotation.
5. Students will be expected to present a 15 minute talk during the last week of the rotation. This presentation will
be occur during morning report and can focus on a perinatal topic or an interesting patient seen during the rotation. The topic of the presentation should be determined by the midpoint in the rotation and approved by the preceptor.

Call Schedule:

This course is setup with two weeks of dayfloat from Monday through Friday and two weeks of nightfloat Sunday night through Thursday night. Students may also need to use weekend call shifts to make up time missed during the rotation.

Students will attend morning educational sessions, neonatal and *ultrasound conferences, grand rounds presentations, and possibly resident education series.*

**Evaluation:**

- Daily clinical observation from Inpatient Service
- Daily oral feedback
- End of period oral feedback
- Written feedback
- Resident assessment
- Faculty assessment
- Completed notes – may be completed in epic and then reviewed by name and MR# by course faculty: H&P on labor patient, intrapartum progress note, and postpartum note for SVD and C-S patients
- Completed oral project to be presented at morning report in second half of rotation
- Completed procedural passport
### Course: MDE 8168 Urogynecology

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Folusho Tugbiyele, MD</th>
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</thead>
<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>All LVHN campuses</td>
</tr>
<tr>
<td><strong>Special Instructions:</strong></td>
<td>Students are allowed to miss one day without having to make the shift up. Students must notify the urogynecology rotation attending leader prior to any missed days.</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>Maternal Newborn Pediatrics or Women's Health Pediatrics and Surgical Care courses</td>
</tr>
</tbody>
</table>

**Special Instructions:**
Students are allowed to miss one day without having to make the shift up. Students must notify the urogynecology rotation attending leader prior to any missed days.

**Description:**
This elective is intended for those students who wish to obtain additional background in urogynecology and urogynecologic surgery. This course would be most beneficial to those considering training in obstetrics and gynecology. Requests for the elective may be preferentially granted to students who express a genuine interest in performing their ObGyn residency training at Lehigh Valley Health Network in the future. These students will learn to demonstrate a level of skill in-patient care of both urogynecology in-patients and outpatients comparable to an intern completing his/her initial urogynecologic rotation. Students will also demonstrate knowledge of responsibilities of an intern by completing all intern related administrative tasks under supervision of urogynecology resident and assigned faculty mentor.

**Objectives:**
1. Act as the primary provider (house officer): admit, develop management and diagnostic plan for the urogynecology patient and have plan for initial orders for assigned patients
2. Follow up on patient’s status and develops new management and diagnostic plans for assigned urogynecology patients.
3. Be the assistant surgeon and/or participate in procedures as level of training allows.
4. Follow, round on, document upon, and present assigned patients on the urogynecology service during daily rounds.
5. Manage a sufficient number of patients as a sub-intern to gain skills, attitudes, and knowledge necessary to function as the primary physician and demonstrate critical aspects of caring for urogynecology patients.
6. See patient in the ambulatory urogynecology office setting with faculty attendings when assigned
7. Participate in and develop and understanding for the principles of pelvic reconstructive surgery and the use of robotics and synthetic adjuncts
8. Research, prepare, and present a 15 minute power point oral presentation relating to a chosen urogynecology topic during the rotation

**Rotation Activities:**
1. The student will work with the urogynecology team caring for patients on the wards, in the OR, and in the office. As skill level allows, the student will: Work in office evaluating and examining patients in conjunction with resident and faculty. Ambulatory experience will focus on urodynamics, cystoscopies, and conservative treatment of incontinence and pelvic floor dysfunction. Attend all operations and procedures assigned to the team, acting as intern to evaluate and help manage patients. Participate as acting intern in all assigned pre-operative and post-operative care and procedures.
2. The student will participate in new consults and emergency room evaluations as acting intern and be responsible for examining and evaluating urogynecology patients who are admitted or develop problems during his/her time on service. The student will work with and check out to the OB/GYN resident assigned to urogynecology service.
3. The student will attend all conferences and lectures that the urogynecology resident is required to attend.
4. The student will be responsible for writing clinic and/or inpatient notes as assigned by urogynecology resident and/or faculty.
**Evaluation:**

Written evaluation by the chief resident and urogynecology faculty assigned to the team. Evaluation will be based on clinical performance in the role as acting intern to include assessment of charting skills, clinical diagnostic skills, ability to formulate differential diagnoses, oral presentation skills and oral presentation, and general work ethic. The student’s ability and willingness to work as an integral part of the team will be assessed and emphasized. Completion of rotational procedure log will be required.
<table>
<thead>
<tr>
<th>Course: BMS 7663 Anatomic Pathology</th>
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<tbody>
<tr>
<td><strong>Course Instructor(s):</strong></td>
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<tr>
<td><strong>Duration:</strong></td>
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<tr>
<td><strong>Location:</strong></td>
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<tr>
<td><strong>Prerequisites:</strong></td>
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**Description:**

Students will observe and participate in the daily activities in Anatomic Pathology, including Forensic Pathology. Practical tissue dissection, frozen section diagnosis, immunocytochemistry and other special techniques will be illustrated in addition to routine histopathology. Participation in conferences will be encouraged. The role of the pathologist as consultant and educator will be demonstrated.

**Objectives:**

1. Describe the limitations and benefits of a frozen section
2. Analyze the role of the pathologist in different professional activities
3. Analyze important features, including pertinent molecular aspects of select cases encountered
4. Demonstrate appropriate handling and processing of a tissue specimen from its receipt in the Pathology gross room until its status as a finished product on a glass slide
5. Identify major histologic abnormalities in different organ systems

**Rotation Activities:**

Activities include observation of tissue processing in the grossing room; attendance of autopsies; and preparation and reporting of frozen sections.

**Evaluation Methods:**

Evaluation will be based on assessment of the above objectives by members of the Department of Pathology.
**Course: MEL 8583 Adolescent Medicine**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Rosa Gomez DeJesus</th>
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<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>401 N. 17th Street, Suite 203 (In ABC Pediatrics/Allentown Medical Center adjacent to LVHN-17 campus) and possibly at 1210 S. Cedar Crest Blvd., Suite 2700 (adjacent to Cedar Crest campus)</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>Maternal Newborn Pediatrics or Women's Health Pediatrics course</td>
</tr>
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</table>

**Description:**

This elective is designed to introduce senior medical students to the field of adolescent medicine. Students will be able to see and care for adolescents, ages 12 to 21 years, in a variety of outpatient settings. Adolescent clinics will afford students the opportunity to provide primary and specialty care to teenagers in a clinic setting, while students can also participate in adolescent health care in school-based clinics, at both high school and college settings.

**Objectives:**

1. Appreciate the unique medical and health needs of the adolescent population
2. Increase comfort level in communicating with teenagers, performing psychosocial risk interviews using the HEADDSS assessment, and providing preventive health anticipatory guidance for adolescents
3. Understand the normal sequence of physical growth and psychological development during puberty, and be able to accurately stage sexual development with Tanner staging
4. Perform a well adolescent physical and take on the role of primary care provider in working with specialists and multi-disciplinary health professionals in order to develop coordinated care plans. Know the elements of health supervision visits for different ages, including indicated screening tests and immunizations
5. Act as a subspecialist consultant for patients referred by outside primary care providers, and communicate the findings and plan of action back to the PCP
6. Know how to diagnose and treat common adolescent medical problems, such as acne, dysmenorrhea, menstrual disorders (DUB, amenorrhea, PCOS, etc), breast disorders (fibrocystic breast disease, gynecomastia, etc), scoliosis, male genital disorders (varicocele, hernia, etc), STDs (chlamydia, gonorrhea, etc), pregnancy, obesity, psychological problems (depression, suicidality, eating disorders, substance abuse, etc), and others
7. Recognize the common problem of poor adherence among adolescents, and encourage adolescents to become more active, responsible health care consumers
8. Improve communication with parents and families to help them understand normal adolescent development and confidentiality. Help parents facilitate their teens in taking a more active role in their health care
9. Learn about the importance of and how to assist with a successful transition from pediatric to adult health care for all adolescents and young adults, especially those with chronic medical conditions and special health care needs

**Rotation Activities:**

The experience will be supplemented with time spent with the dietician, learning about disordered eating patterns and weight management as well as with the gynecologist learning about the unique reproductive care needs of the adolescent.

**Evaluation:**

Student performance during the Adolescent rotation will be assessed using the following methods:

- Global assessment of the student performance completed by the supervising attending at the end of the rotation
- Direct and timely feedback by attending during the delivery of patient care
- Feedback on documentation by supervising attending
# Course: MDI 8400 Inpatient Pediatric Acting Internship

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Melissa Brannen, MD</th>
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<tbody>
<tr>
<td>Duration:</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Location:</td>
<td>LVHN-Cedar Crest</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>Maternal Newborn Pediatrics or Women's Health Pediatrics course</td>
</tr>
</tbody>
</table>

## Description:

The inpatient pediatric course is presented to give the student an experience in the management of children with problems requiring hospitalization. The student will be responsible for the evaluation and treatment of a limited number of pediatric cases. The student will care for these patients as an acting intern in consultation with a senior member of the pediatric house staff. The student one week of night call with a Pediatric resident during the four week rotation.

## Objectives:

1. The student should be able to conduct a history and physical examination in a concise and logical fashion and define the child's problems.
2. The student should be aware of the diagnostic and therapeutic tools available in pediatrics and be able to use them when appropriate to patient care.
3. The student should develop increasing clinical responsibility and judgment in dealing with hospitalized children and their families.
4. The student should gain familiarity in performing certain basic procedures including venipuncture, lumbar puncture, intravenous line placement, suprapubic puncture, arterial puncture, and bone marrow aspiration.
5. The student should be able to give the indications for admission to the hospital for children with various diagnostic and therapeutic problems.

## Rotation Activities:

1. Student will sign in, pre-round, round and sign-out each day with either the Lion team or the Zebra team. During the week of nights, student will take sign-out at 6:00 pm and will sign out to the day team at 6:00 am the following morning.
2. If student has full EPIC access, student will follow the Pediatric template and document in EPIC. Notes are then forwarded to attending to sign. If Read Only EPIC access, then notes can be written and emailed to the attending using MS Outlook or completed in a Word document and emailed to the attending on service.
3. Student should follow 3-5 patients depending upon complexity.
4. Student should become familiar with and use the IPASS method when signing out patients.
5. Student will be given access to the Hallway New Patient Presentation template and the Hallway Established Patient Presentation template and should become familiar with and use when presenting patients to attending and senior resident.
6. Student should attend Pediatrics Morning Report on Monday and Thursday mornings at 8:00 am with the inpatient team; as well as Pediatric Grand Rounds on Tuesday mornings with the inpatient team. Student is excused from these educational sessions when on the night shift week.
7. Student will be scheduled to present at Pediatrics Morning Report once during this rotation.

## Evaluation:

Student’s evaluation will be a combination of feedback from faculty as well as from Pediatric residents whom the student worked with during the 4 weeks. The evaluation form provided by the student will be completed by the rotation leader and submitted to the medical school.
**Course: MDE 8470 Child Neurology**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Muhammed Sheikh, MD</th>
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</thead>
<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>1210 S. Cedar Crest (LVHN-Cedar Crest campus; LVHN - Cedar Crest Pediatric Specialty Center)</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>Maternal Newborn Pediatrics or Women’s Health Pediatrics course</td>
</tr>
</tbody>
</table>

**Description:**

This course will expose the student to various neurological disorders in infants and children. The student will work in an outpatient setting and in inpatient consults to develop the skill in performing a neurological exam under the supervision of the attending physician. The student will follow the pediatric neurologist throughout all consultations and will get an opportunity to spend time in the neurophysiology lab as well as the pediatric sleep lab. The student will also be exposed to the pediatric wards, neonatal ICU and pediatric ICU patients and be responsible for participating in all follow-up care.

**Objectives:**

1. Demonstrate an approach for taking a proper history and neurological exam and be able to localize pathology in the nervous system
2. Justify the approach and use it to formulate an appropriate differential diagnosis
3. Identify the role laboratory data, neurophysiology, and neuroimaging have on the diagnosis and treatment of neurological conditions
4. Discuss and effectively communicate treatment or therapy options with patients, family members, and other members of the health care team

**Rotation Activities:**

1. Student will follow patients with one of three pediatric neurologists in the clinic setting each day.
2. Student will also join pediatric neurologists when consulting on the Inpatient Pediatric Unit.
3. Towards the end of the elective, student will present a case of interest to the pediatric neurologists.
4. Student should attend Pediatric Morning Report on Monday and Thursday mornings at 8:00 am at the Cedar Crest site and will be scheduled to present at Pediatric Morning Report before the end of the elective.
5. Student should attend Pediatric Grand Rounds on Tuesday mornings at 8:00 am at the Cedar Crest site.

**Evaluation:**

Performance during the rotation will be assessed by supervising faculty with input from members of the clinical team. You will be assessed based on the objectives listed above. Visiting students will be assessed according to evaluations provided by their home institution. There will not be a written exam but written work will be assessed as part of your clinical performance.
<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Debra Eserno-Jenssen, MD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Location:</td>
<td>CAC is located at 17th &amp; Chew; consults may take place at the Children's ER or inpatient units located at Cedar Crest.</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>None</td>
</tr>
</tbody>
</table>

**Description:**

This elective is designed to provide a basic structure of child abuse pediatrics as a specialty medical practice of pediatrics and is structured primarily around inpatient, ED and outpatient clinical evaluation of child maltreatment. Opportunities to observe interactions of Multidisciplinary Investigative Team meetings; Act 33 (fatality and near fatality reviews); Child Death Review Teams; Court Preparation with various Assistant District Attorneys; and observation of courtroom testimony as available. Students will accompany staff on inpatient and ED consultations and on outpatient evaluations at the Child Advocacy Center. The majority of time will be spent at the CAC at LVHN, 17th & Chew, 6th Floor (directly off the Green Elevators).

**Objectives:**

1. State the elements of a history and physical that are critical when non accidental trauma is suspected
2. Participate in the medical evaluation of alleged abuse in children and explain the role of the multidisciplinary team in the care of a child with suspected abuse
3. Recognize various conditions and injuries that require specialty child protection team evaluation
4. Recognize various conditions and injuries that initially appear to be related to abuse but either have a medical or reasonable accidental explanation
5. Outline when and how to report suspected child abuse
6. Discuss what the legal and child welfare systems need from pediatricians in the community in response to allegations of child abuse
7. Understand the other specialties such as radiology, ophthalmology, neurosurgery, trauma surgery, etc. that are involved in child protection evaluations
8. Describe community based partners such as CYS, Law Enforcement, District Attorney’s office and their respective roles in the investigation of Child Abuse and Neglect
9. Recognize the role of the Child Advocacy Center and Child Protection Team in the evaluation and investigation of child abuse and neglect

**Rotation Activities:**

Students will see patients at the medical center at LVHN, and, when available, different court cases. Students will have direct contact as well as observation of patient and family interactions to meet the objectives above. Students will be expected to give a presentation during the rotation. The topic will be selected by the student in discussion with the faculty preceptor.

**Evaluation:**

The evaluation will be completed by Dr. Eserno-Jenssen.
### Course: MEL7565 Neonatology Intensive Care

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Nachammai Chinnakaruppan, MD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest</td>
</tr>
<tr>
<td><strong>Requirements:</strong></td>
<td>NRP Certification Required</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>Maternal Newborn Pediatrics or Women's Health Pediatrics course; Neonatal Resuscitation certification (NRP) is required as well as two weeks of prior inpatient Pediatric experience.</td>
</tr>
</tbody>
</table>

**Description:**

Students will participate as members of the NICU clinical team consisting of faculty attendings, neonatal nurse practitioners, and pediatric residents. They will function as acting interns in the care and management of hospitalized neonates in 40 bed level IV NICU. In addition to the learning opportunities provided by hands-on patient care, the educational experience is supplemented by a didactic lecture series for medical students/residents, biweekly morning report case conference and weekly Pediatrics Grand Rounds.

**Objectives:**

Students will be able to:
1. Take a good history and exam of common NICU admissions
2. Understand pathophysiology of common neonatal problems
3. Attend deliveries with NICU team with graded supervision
4. Perform simple procedures under supervision
5. Respond to on call problems in the unit when on call

**Rotation Activities:**

Students will be expected to:
1. Manage patients assigned to them with resident /attending supervision
2. Attend deliveries with NICU team
3. Participate at rounds, patient and family centered care
4. Attend morning report, Xray rounds, pediatric didactic lectures, grand rounds
5. Assist and do procedures under supervision

**Evaluation:**

Students will be evaluated by the service attending based on
1. Completeness of history, exam, presentation and management
2. Communication skills, Ability to work in a team will be assessed
3. Reading assignments with presentations at rounds
4. Delivery room resuscitation , procedural skills
5. Feedback will be given informally and formally in the middle and end of rotation. Students are expected to ask for feedback to facilitate self-improvement and learning
<table>
<thead>
<tr>
<th><strong>Course: MEL7103 Pediatric Cardiology</strong></th>
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<tbody>
<tr>
<td><strong>Course Instructor(s):</strong></td>
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<td><strong>Duration:</strong></td>
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<tr>
<td><strong>Location:</strong></td>
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<tr>
<td><strong>Prerequisites:</strong></td>
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</tbody>
</table>

**Description:**
This elective is designed to introduce fourth year medical students to the field of pediatric cardiology. Students will be able to see and care for pediatric patients up to the age of 18 in the outpatient setting.

**Objectives:**
1. Student will accompany an attending pediatric cardiologist to learn the essential elements of the pediatric cardiologic examination, history taking, and modes of therapy for different pediatric cardiac illnesses.
2. Student will familiarize themselves with what constitutes an innocent versus a pathologic murmur.
3. Student will understand the grading system of heart murmurs and modal auscultation for both innocent and pathologic murmurs.
4. Student will learn the basic differences between the pediatric EKG and the adult EKG.
5. Student will learn basic concepts of both performance of echocardiography and reporting.
6. Student will become familiar with the most common pathologic entities of congenital heart disease and acquired heart disease in patients from a fetus until eighteen years of age.
7. Student will see patients in an outpatient setting and will participate in history taking and performance of physical examination. Student will be asked to come to an assessment based on the prior information obtained.

**Rotation Activities:**
Student will spend each day with one of three pediatric cardiologists in the office setting. Student may join one of the cardiologist on consults on the inpatient Pediatric unit, the PICU or the NICU at Lehigh Valley Children’s Hospital located on the Lehigh Valley Hospital campus. Student will be scheduled to present at Pediatrics Morning Report towards the end of the rotation.

**Evaluation Methods:**
Upon completion of this elective, student should understand the principles and diagnosis of most common congenital heart disease, common acquired pediatric cardiology issues as well as understand the difference between innocent and pathologic murmurs.
Students will be evaluated based on their level of participation and improvement over the course of the elective. Rotation leader, with input from other pediatric cardiologists and the clinical staff, will complete the student’s evaluation form and will return to the medical school.
Course: MDE 8430 Pediatric Endocrinology

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Laurissa Kashmer, MD</th>
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<tbody>
<tr>
<td>Duration:</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Location:</td>
<td>LVHN- 17th Street</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>Women’s Health and Pediatrics</td>
</tr>
</tbody>
</table>

**Description:**

This elective will provide medical students with an in-depth exposure to the diagnoses and management of acute and chronic illnesses of the endocrine system in infants, children and adolescents. Students will evaluate patients primarily in the outpatient setting and will occasionally join pediatric endocrinologists doing consults in the hospital. Students will also have the opportunity to work within a multidisciplinary team such as with diabetes educators, nutritionists, social workers and counselors.

**Objectives:**

1. Differentiate between normal and pathological states related to endocrinology
2. Evaluate and manage patients with presenting signs and symptoms that suggest an endocrine disease process
3. Demonstrate principles of growth and pubertal development important to the general pediatrician
4. Understand the role of the Endocrinologist and primary care provider in preventing and managing diseases of the endocrine system and in counseling and screening individuals at risk for these diseases
5. Collaborate and effectively communicate with both general and specialist Pediatricians in the management of patients with acute and chronic endocrine illnesses
6. Effectively communicate with patients and families about endocrine conditions, including management of acute and chronic conditions and interpretation of test results.

**Rotation Activities:**

Students will see patients in the specialty center. They will have direct contact as well as observation of patient and family interactions to meet the objectives above. Students will be expected to give a presentation during the elective. The topic will be selected by the student in discussion with the faculty preceptor. Student will also be scheduled to make a presentation at Pediatrics Morning Report towards the end of the rotation.

**Evaluation Methods:**

Direct and timely feedback will be given to students by Endocrinologists. The evaluation will be completed by Dr. Kashmer with input from Drs. Kuryan and Chacko and office clinical staff.
Course: MEL 8579 Gastroenterology/Nutrition

Course Instructor(s): Paul Adam, DO

Duration: 4 weeks

Location: 1210 S. Cedar Crest, Suite 2400 (LVHN-Cedar Crest campus)

Prerequisites: Maternal Newborn Pediatrics or Women's Health Pediatrics course

Description:

Objectives:

1. Identify and explain the anatomy, physiology and pathology of the digestive system
2. Utilize knowledge about the developmental stages of the digestive system to aid in disease diagnosis and treatment
3. Be able to accurately evaluate and manage a pediatric patient for common gastrointestinal problems
4. Explain the role genetics, biochemistry and molecular biology has on the digestive system
5. Justify the use of drugs to treat gastrointestinal conditions and be able to explain the pharmacological effects on the body
6. Summarize the principles of gastrointestinal surgery and be able to assess the risks and benefits of surgical procedures.

Rotation Activities:

The student will attend the Pediatric Gastroenterology clinic with one of the three attendings, discuss the findings of the history and exam of the patient, discuss differential diagnosis and develop appropriate plan for work up and treatment. The student will respond to the consults from the pediatric inpatient team and discuss the consult with the attending. Additionally, the student may observe gastrointestinal procedures (upper endoscopy and colonoscopy). These outpatient procedures are done in the Children's surgery Center located at 1210 S. Cedar Crest Blvd, 3rd floor on the Cedar Crest campus.

Evaluation:

Students will be evaluated on multiple aspects of patient care and clinical performance during the rotation. They will have direct observation and be precepted by pediatric faculty and pediatric residents where appropriate. Students will receive weekly feedback and a final evaluation with formative and summative comments based on clinical performance, knowledge and skills. Students will be expected to read about the diseases of their clinic and hospital patients. Grading for the course will be a reflection of the students' participation and daily activities.
**Course: MEL 8568 Pediatric Hematology/Oncology**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Bautista Otanez, Felipe</th>
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</thead>
<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>Pediatric Inpatient Unit at Cedar Crest campus</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>Maternal Newborn Pediatrics or Women's Health Pediatrics course</td>
</tr>
</tbody>
</table>

**Description:**

The student will be involved in the management of patients with pediatric hematology and oncology disorders, both in the inpatient and outpatient settings. For inpatient services, the student will participate in the AM rounds and assist with diagnostic procedures and therapy planning. Students are encouraged to study the basics of hematopoiesis and cancer chemotherapy. Written histories and physical examinations and plans for evaluation and treatment will be reviewed with the attending physician. In the outpatient setting, the student will actively participate in interviewing and examining newly referred and follow-up patients. The student will attend the weekly multidisciplinary patient care and teaching rounds. By the end of the period the student is expected to be able to know basics of work up and care for the pediatric hematology/oncology patients.

**Objectives:**

Introduce the student to the clinical aspects of hematologic and oncologic disease in children.

**Rotation Activities:**

Student will spend time each day rounding and doing procedures on the inpatient unit. In the afternoon student will report to the clinic to see patients. On Tuesday mornings, student will attend the team clinical management conference to discuss patients. Student will be scheduled to present at Pediatrics Morning Report towards the end of the rotation.

**Evaluation:**

The student will be evaluated on multiple aspects of patient care and clinical performance during the 4 week rotation. The student will have direct observation and be precepted by faculty attendings and senior pediatric residents. Rotation leader, with feedback from the team, will complete the evaluation provided by the student’s medical school at the end of the rotation.
**Course: MEL 8582 Pediatric Infectious Disease**

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Tibisay Villalobos-Fry, MD</th>
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</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>4 weeks</td>
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<tr>
<td>Location:</td>
<td>1210 S. Cedar Crest, Suite 2400 (LVHN-Cedar Crest campus)</td>
</tr>
</tbody>
</table>
| Special Instructions: | No night call is required.  
**Students who select a 2 week rotation may only have 1 day of absence excused.** |
| Prerequisites:        | Maternal Newborn Pediatrics or Women's Health Pediatrics course |

**Description:**

This elective in pediatric infectious disease is a clinical preceptorship with the Infectious Disease team. The majority of time is spent on inpatient consults. The student is exposed to all areas of the hospital since consults are answered in critical care areas, the general pediatric wards, and NICU. Microbiological laboratory utilization and antibiotic therapy are emphasized during the rotation. Informal teaching conferences are held frequently. The student is expected to participate in weekly journal club, presenting an article each week.

**Objectives:**

1. Learn to take a complete and thorough history pertaining to common infectious diseases problems  
2. Demonstrate appropriate physical examination skills and ability to perform adequate assessment and differential diagnosis between infectious and non-infectious illnesses  
3. Learn about laboratory diagnosis of common infections and the interpretation of current microbiologic, virologic, mycologic, parasitologic and serologic tests  
4. Learn how to correlate laboratory findings (such as antibiotic sensitivities) to the clinical evaluation at the patient bedside  
5. Learn about antimicrobials and the proper use in pediatrics  
6. Identify the immunizations administered during childhood and adolescence and evaluate the indications for specific vaccines  
7. Learn basic concepts of Hospital Epidemiology and Infection Prevention / Control and how to apply them to daily clinical practice  
8. Understand the principles of treatment for most common infectious diseases  
9. Identify infectious disease in the perinatal period that can cause congenital and neonatal infections  
10. Learn about travel medicine and global health: how infectious diseases spread around the world.

Learning Outcomes: This course will prepare the student to diagnose, treat and manage common infectious diseases in children caused by viruses, bacteria, parasites and fungi. The student will develop an appreciation for immunizations, advanced tests used to identify pathogens, and the appropriate use of antimicrobials to treat infections.

**Rotation Activities:**

Students will join pediatric rounds each day with the Pediatric Infectious Disease team, including Pediatric Pharmacology. Student will see patients with Dr. Villalobos in her clinic several days a week. Combined Pediatric and Adult ID microbiology rounds take place once during the rotation. Student will be scheduled to present at Pediatric Morning Report towards the end of the rotation.

**Evaluation Methods:**

Students will be evaluated on multiple aspects of patient care and clinical performance during the 4 week rotation. The student will have direct observation and be precepted by pediatric faculty and pediatric residents where appropriate. Student will receive weekly feedback and a final evaluation with formative and summative comments based on clinical performance, knowledge and skills.
**Course: MEL 8575 Pediatric Intensive Care**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Amy Lindmark, DO</th>
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<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>Maternal Newborn Pediatrics or Women's Health Pediatrics course; Two weeks prior inpatient Pediatrics experience is required.</td>
</tr>
</tbody>
</table>

**Description:**

The PICU is a multidisciplinary unit providing acute care for pediatric patients with a wide variety of medical and surgical problems. The goals and objectives for this elective are intentionally broad to allow for a learning experience in meeting the student’s individual needs. Students will learn to utilize a physiologic-based organ system derived approach to patient problems. Integration of multiple healthcare providers is emphasized. Students are given the responsibility for patient care under the direct supervision of the PICU resident or attending faculty. Educational goals will be met through discussions on teaching rounds, didactic presentations on aspects of pediatric critical care medicine, and self-directed study on individual patients.

**Objectives:**

1. The student will learn to utilize physical exam skills, laboratory data, and radiographic data to assess the physiologic stability and severity of illness in pediatric ICU patients.
2. The student will learn to incorporate accumulated data with critical thinking skills to both assess a patient’s condition and institute a treatment plan.
3. The student will learn to appreciate the utility and usefulness of both invasive and non-invasive physiologic monitoring and support.

**Rotation Activities:**

Student will round daily on the PICU (2 Jaindl) and the PICU Intermediate Unit (4 Pool). In addition to the learning opportunities provided by hands-on patient care, the educational experience is supplemented by a didactic lecture series for medical students, biweekly morning report case conference and weekly Pediatrics Grand Rounds. Student will be scheduled to present at Pediatrics Morning Report during this rotation. Medical students will be on call two to three times during the rotation.

**Evaluation:**

Final evaluations will be based on the guidelines presented on the evaluation form and the degree to which the student has met his/her stated objectives.
**Course: MDE 8361 Pediatric Pharmacology**

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Jenny Boucher, Pharm. D, BCPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>4 weeks</td>
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<tr>
<td>Location:</td>
<td>LVHN-Cedar Crest</td>
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</table>

**Special Instructions:** The student is encouraged to contact Dr. Kristin Held Wheatley via email at least one week prior to the start of the clinical rotation to discuss date and time as well as location to meet on the first day of the rotation.

**Prerequisites:** Maternal Newborn Pediatrics or Women's Health Pediatrics course. The student must obtain approval from Dr. Boucher prior to scheduling this elective. It would be helpful to have rounded with a medical team but not an absolute requirement.

**Description:**
This clinical rotation provides an overview of pharmacologic principles related to the management of pediatric patients with a focus on altered pharmacokinetics, pharmacodynamics, and developmental factors. Students will have the opportunity to relate these principles to the evaluation of medication regimens in pediatric patients. Students will also develop and strengthen scientific literature searching skills and formulation of written responses.

**Objectives:**
At the completion of this clinical rotation, students will be able to:
1. Identify relevant patient data from the medical record to evaluate appropriateness of medication therapy in pediatric patients.
2. Utilize pharmacokinetic principles and patient data to determine the most appropriate drug dosage regimen and formulation.
3. Identify appropriate evidence-based literature and summarize relevant information to respond to drug information requests.

**Rotation Activities:**
Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:
1. Students will identify and review pertinent patient information in the medical record with a focus placed on review and assessment of the patient’s medications including but not limited to indication of therapy, drug selection, drug dosing, formulation, monitoring parameters, potential for drug-drug interactions, therapeutic duplications, omissions, etc.
2. Students will be expected to attend rounds as assigned by the preceptor as well as other assigned educational opportunities.
3. Students will be assigned drug information requests during the clinical rotation. The student will be expected to identify and review credible sources, determine the relevant information required to respond to the drug information request and appropriately communicate an evidence-based response (either via written or verbal means) to the requester in a timely fashion.

**Evaluation:**
Students on this rotation will be evaluated through the following methods:
1. Adequate preparation for rounds through discussion of patient’s medication regimens with preceptor prior to rounding opportunities.
2. Completeness, accuracy of content, organization, and timeliness of drug information responses.
Learners will receive feedback on their performance through the following:
1. Feedback will be provided following observed interactions.
2. Feedback will also be provided at the midpoint and at the conclusion of the clinical rotation.
**Course: MEL 8574 Pediatric Pulmonary Disease**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Michael S. Schwartz, MD</th>
</tr>
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<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>1210 S. Cedar Crest, Suite 2700 (LVHN-Cedar Crest campus)</td>
</tr>
</tbody>
</table>

**Prerequisites:**
Maternal Newborn Pediatrics or Women's Health Pediatrics course; The student must get approval from Kate Adams who is the pediatric residency administrator. She will be able to coordinate elective rotation scheduling so that it does not conflict with pediatric residents rotating in their pulmonary elective.

**Description:**
This elective is designed to introduce medical students to the field of pediatric pulmonology. Students will see patients in the outpatient setting as well as join one of the three pediatric pulmonologists when consulting on the pediatric inpatient unit, the PICU and the NICU.

**Objectives:**
1. Obtain a history and physical examination as it relates to pulmonary disease in the infant, child, and adolescent
2. Understand and interpret basic imaging of the respiratory system and lung function testing
3. Establish a level of competence in diagnosing and managing asthma in children utilizing the principles presented by the NIH Asthma Guidelines
4. Possess an understanding of pulmonary physiology as it relates to common pediatric respiratory disorders
5. Have a familiarity with common respiratory therapeutic agents employed in pediatrics including airway clearance techniques and asthma pharmacotherapy

**Rotation Activities:**
This elective will involve working with a multidisciplinary team that will provide experience in the evaluation and management of acute and chronic pediatric respiratory diseases. Some of these disorders will include: cystic fibrosis, stridor, chronic lung disease of infancy, congenital malformations of the respiratory system, sleep-related disorders of breathing, upper airway problems, and management of the medically-complex child with chronic respiratory problems such as having a tracheostomy tube or requiring supplemental oxygen at home. Student will be scheduled to present an interesting case at Pediatric Morning Report towards the end of the rotation.

**Evaluation:**
Student will be evaluated on clinical performance during this 4 week rotation. The student will have direct observation and be precepted by Pediatric pulmonologists in the outpatient setting. Student will receive weekly feedback. Rotation leader, with input from the clinical team, will complete student’s evaluation form and will return to the medical school.
**Course: MDE 8511 Pediatric Sedation**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Samuel Umaru, MD &amp; John Lindmark, DO</th>
</tr>
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<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>2 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>Maternal Newborn Pediatrics or Women's Health Pediatrics course</td>
</tr>
</tbody>
</table>

**Description:**

This course allows students to learn in a pediatric inpatient setting the basic principles and practice of pediatric procedural sedation. Students will be able to assess, evaluate and participate in the monitoring of sedation. Emphasis is placed on the review of relevant pharmacologic principles and techniques of sedative drugs and pain management.

**Objectives:**

1. Demonstrate the ability to conduct a comprehensive pre-sedation evaluation that includes a focused history and physical exam
2. Explain indications and contraindications for each sedative drug classification
3. Acquire and review pertinent medical records, select appropriate sedative and/or analgesia and develop a plan to manage pain
4. Accurately calculate dosage and predict the effect the medication will have on patient
5. Demonstrate the ability to properly use equipment designed to monitor sedated child

**Rotation Activities:**

Will work closely with sedation doctor on Mondays, Wednesdays and Thursdays for scheduled outpatient procedures requiring sedation. Student will also join the sedation doctor for procedures taking place in the Children’s Cancer Center and Multipurpose Infusion Area. Student may also assist pediatric hospitalists with sedations in the afternoons. On Tuesdays and Fridays student will work with the PICU physicians though there may not be sedations scheduled on those days.

**Evaluation Methods:**

Student will be given feedback during the rotation from sedations doctors based on the above objectives. Rotation leader, with input from the sedation doctors and inpatient team, will complete student’s evaluation form and will forward to the medical school.
<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Joseph Stirparo, MD</th>
</tr>
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<tbody>
<tr>
<td>Duration:</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Location:</td>
<td>LVHN-Cedar Crest and associated sites</td>
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<tr>
<td>Prerequisites:</td>
<td>Surgical Care course</td>
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</tbody>
</table>

**Description:**

This is a clinical rotation that includes graded responsibility, as well as regular formal instruction in techniques of management of critical surgical illness. Students will be assigned primarily to the unit at LVHN-Cedar Crest with the possibility of occasional visits to other sites.

**Objectives:**

1. Describe common surgical complications, preoperative preparation of the complex surgical patient, and practical application of hemodynamic monitoring
2. Analyze the acute phase response patients undergo with respect to their disease processes and surgical procedures with an emphasis on fluid and electrolyte balance
3. Examine pulmonary artery catheterization, placement of central venous catheters, and modalities of parenteral and enteral nutrition

**Rotation Activities**

Inpatient rotation assisting a dedicated team provide surgical critical care to patients with critical illnesses. Focus on understanding the basic principles of critical care including sedation, pain control, ventilator management and management of shock states.

**Evaluation Methods:**

Students will be evaluated based on their clinical performance.
## Course: MDE 8632 Cardiothoracic Surgery

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Tim Misselbeck, MD</th>
</tr>
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<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest and associated sites</td>
</tr>
<tr>
<td><strong>Special Instructions:</strong></td>
<td>Students will discuss personal goals with chair prior to start of rotation</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>Surgical Care course</td>
</tr>
</tbody>
</table>

### Description:

Students will participate in the preoperative, intraoperative and postoperative care of this patient base. A basic introduction to cardiopulmonary bypass will be given. Please discuss with the chief of the division personal goals as this wide ranging field encompasses multiple complex surgeries and disease processes.

### Objectives:

1. Participate in pre-operative evaluation of the patient
2. Participate in the post-operative management of the patient
3. Assist with designated procedures in the operative suite

### Rotation Activities:

Students will participate in pre-operative evaluation, assist at surgery and procedures and be involved in post-operative management in a one-on-one relationship with an attending surgeon or a resident. Because of the size and complexity of this division, which includes open heart and thoracic activities, it is recommended that the student discuss personal goals with the chief of the division before starting the course.

### Evaluation Methods:

Students will be evaluated based on their ward performance.
### Course: MDE 8676 Colorectal Surgery

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Robert Sinnott, MD</th>
</tr>
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<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>2 or 4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest and associated sites</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>Surgical Care course</td>
</tr>
</tbody>
</table>

#### Description:

The student will participate in a busy service with colon-rectal surgery residents. This rotation addresses common disorders that the student may encounter whether he or she should choose to specialize in general surgery, internal medicine or family practice. Additionally, the rotation focuses on colon-rectal surgery and provides opportunities in sigmoidoscopy, fiberoptic colonoscopy and the evaluation and care of colon and rectal disorders arising from systemic disease.

#### Objectives:

1. Develop an understanding of the pathophysiology of common colorectal diseases
2. Create a differential diagnosis of colorectal disorders
3. Describe treatment and surgical options for colorectal disorders
4. Observe or participate in colorectal procedures and colonoscopies
5. Identify the relation of such disorders to systemic disease

#### Rotation Activities:

Students will participate in the outpatient, inpatient and surgical services provided by colorectal surgery. An emphasis will be placed on preoperative evaluation and operative decision making. Outpatient surgeries are performed at 17th street.

#### Evaluation:

Students will be evaluated based on their ward performance.
### Course: MEL 8811 General Surgery Acting Internship

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Joseph Stirparo, MD/Scott Beman, MD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Location:</td>
<td>LVHN-Cedar Crest and associated sites</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>Surgical Care course</td>
</tr>
</tbody>
</table>

**Description:**

Students may choose to participate on the several services. On these services, the student is expected to function as an intern. Responsibility will vary with the ability of each student. The elective will afford the students an in depth experience in total patient management so that these responsibilities may be assumed with confidence in the internship year.

**Objectives:**

1. Obtain a basic understanding of the pathophysiology and treatment of general surgery conditions including hernia, gallbladder and appendix
2. Refine basic technical skills including suturing and knot tying
3. Identify postoperative complications in common surgical procedures
4. Understand the pharmacology of basic medications for pain control

**Rotation Activities:**

Attendance will be required at Grand Rounds, Morbidity, and Mortality Conference, and various other conferences. The student will perform histories and physical examinations, write all progress notes, and write orders for diagnostic and therapeutic intervention with supervision from house staff. Students will be encouraged to perform procedures such as CVP placement, invasive monitoring line placement, chest tube placement, etc with appropriate supervision. Operating room experience will also be extensive.

**Evaluation:**

Students will be evaluated based on their ward performance.
### Description:

Students may work within specialized areas or a combination of areas: Orthopedic Trauma, Sports Medicine, Joint Implant/Reconstruction, Spine Surgery, Hand Surgery and the Foot and Ankle. Exposure to all specialty areas is available. The student will participate in operative procedures and in office orthopedics. There are combined weekly division meetings and daily specialty case presentations in formal and informal settings. An opportunity to participate in research projects in any of the specialized areas is available to interested students.

### Objectives:

1. Participate in orthopedic procedures
2. Participate in the office evaluation of patients.
3. Develop an understanding of orthopedic treatment options.
4. Identify areas of interest in orthopedics and discuss with course director

### Rotation Activities:

### Evaluation:

Students will be evaluated based on their ward performance.
**Course: Surg 1820 Otolaryngology**

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Paul Lemberg, MD</th>
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<tbody>
<tr>
<td><strong>Contact:</strong></td>
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<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVHN-Cedar Crest and associated sites</td>
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<tr>
<td><strong>Prerequisites:</strong></td>
<td>Surgical Care course</td>
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</table>

**Description:**
This clinical rotation is designed to provide experience in the practice of otolaryngology. Students will participate in the preoperative study of patients in private offices and will follow them upon their admission to the hospital. They will assist at the operative procedures on selected patients and will be expected to follow their postoperative course. Opportunity will also be afforded to carry out long-range observation of postoperative results in patients who have previously been treated for otolaryngological problems.

**Objectives:**
1. Demonstrate knowledge in the otolaryngological head and neck exam
2. Discuss a variety of ear, nose, and throat disorders such as acute respiratory obstruction, hearing loss, dizziness, sinusitis, external otitis, otitis media, modern diagnosis and management of head and neck cancer, maxillofacial trauma, epistaxis, hoarseness, and dysphasia.

**Rotation Activities:**

<table>
<thead>
<tr>
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</tbody>
</table>
### Course: MEL 7803 Plastic Surgery Acting Internship

<table>
<thead>
<tr>
<th>Course Instructor(s):</th>
<th>Joseph Stirparo, MD</th>
</tr>
</thead>
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<tr>
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</table>

### Description:

This elective provides the opportunity to participate in the active "hands-on" care of plastic surgery patients including critically ill burned patients. The student is under the direct supervision by the faculty in the intensive care unit, ward, Operating Room. Students also participate in the outpatient follow-up care of the patients. No night call is required.

### Objectives:

1. Develop an understanding of the varied areas of plastic surgery.
2. Participate in the evaluation of plastic surgery patients
3. Participate in the treatment of plastic surgery patients
4. Describe basic plastic surgery principles such as flaps, v-y advancement, etc.

### Rotation Activities:

Students will participate in the preoperative, intraoperative and postoperative care of patients with pathophysiology requiring plastic surgery intervention. Responsibilities will include outpatient surgery, clinic, inpatient rounds and surgeries. The student will be exposed to a large variety of surgical procedures and disease states. Additional experiences are available in the regional burn center.

### Evaluation Methods:

Evaluation will be completed by direct observation. There will be no examination.
## Course: MDE 8660 Plastic Surgery Elective

<table>
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### Description:

The service is oriented to trauma, facial, hand, cancer and cleft-palate surgery as well as reconstructive and cosmetic surgery. Exposure to the Regional Burn Center located at Lehigh Valley Health Network is also provided. The student will work with attending surgeons and plastic surgery residents.

### Objectives:

1. Develop an understanding of the varied areas of plastic surgery.
2. Participate in the evaluation of plastic surgery patients
3. Participate in the treatment of plastic surgery patients
4. Describe basic plastic surgery principles such as flaps, v-y advancement, etc.

### Rotation Activities:

Students will participate in the preoperative, intraoperative and postoperative care of patients with pathophysiology requiring plastic surgery intervention. Responsibilities will include outpatient surgery, clinic, inpatient rounds and surgeries. The student will be exposed to a large variety of surgical procedures and disease states. Additional experiences are available in the regional burn center.

### Evaluation:

Students will be evaluated based on their ward performance.
Course: Surg 1830 Retinal Surgery

Course Instructor(s): Masayuki Kazahaya, MD
Contact: Robert Thompson, Practice Manager
Duration: 2 or 4 weeks
Location: LVHN-Cedar Crest and associated sites
Prerequisites: Surgical Care course

Description:

Students will evaluate patients with diabetic retinopathy, hypertensive retinopathy, senile macular degeneration, retinal detachments, intraocular tumors, and uveitis at the USF Eye Institute using direct and indirect ophthalmoscopy and slit lamp examination of the fundus. Students will learn the interpretation of fundus fluorescein angiography and ultrasonography. They will participate in argon and krypton laser photocoagulation, intraocular injections, scleral buckles, vitrectomies, and radiation plaque therapy. For those interested in ophthalmology as a career, this course is an opportunity to learn the most advanced diagnostic and therapeutic techniques used in eye care today. Those interested in family practice, internal medicine, geriatrics, and endocrinology will see the retinal pathology most often encountered in their future specialty and learn the resources that are available for evaluation and treatment. In the last week of the rotation, the student is required to present and discuss a patient they have evaluated during the course at the departmental case conference.

Objectives:

1. Learn how medical conditions affect the retina
2. Identify and treat basic retina conditions
3. Perform a basic eye exam, including slit lamp exam, direct and indirect ophthalmoscopy
4. Learn basics of ophthalmic equipment including topography, biometry, and visual field testing
5. Learn how to triage retinal complaints and learn when to refer and when to treat in a primary care setting

Rotation Activities:

Outpatient care of patients with retinal pathophysiology

Patient Encounters:

Outpatient clinic

Evaluation:

Evaluation will be determined by daily performance observed during the 4-week elective period.
**Course: MEL 7819 Surgical Transplant Elective**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Michael Moritz, MD</th>
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**Description:**
This elective is designed to offer students active participation in organ procurement, the harvesting and preservation of kidneys and livers, and an understanding of the role of the organ sharing networks.

**Objectives:**
Students will receive an overview of all aspects involved in liver and renal transplantation, from donor identification through clinical transplantation and long term follow up.

**Rotation Activities:**
Students will work under the direct supervision of the Director of Transplant Surgery, LifeLink Transplantation Institute, Inc. They will gain insight and experience in the area of transplantation immunology tissue typing and the concepts of histocompatibility antigens.

**Patient Encounters:**
Students will be directly involved with the evaluation and work up of possible renal and liver transplant recipients, observe surgery, and play an active role in the postoperative management of transplant patients, which includes the identification, management and treatment of infections, and rejection complications.

**Evaluation Methods:**
Students will be evaluated based on their ward performance.
Course: MEL 7805 Trauma Surgery Acting Internship

Course Instructor(s): Joseph Stirparo, MD
Duration: 4 weeks
Location: LVHN-Cedar Crest and associated sites
Prerequisites: Surgical Care course

Description:
Students electing this course will work with the residents and faculty at LVHN Cedar Crest. Students will also see elective general surgery cases, attend clinic and participate in the urgent and emergent cases that are seen in consultation on the wards as well as in the ER. This includes patients with appendicitis, biliary disease, bowel obstruction GI bleeding. In addition students will participate in the care of patients that have blunt and penetrating trauma.

Objectives:
As a member of the trauma team, students will participate in all endeavors and become conversant in the initial assessment and resuscitation of the trauma patient as well as the critical care and post-operative aspects of the surgical patients. At least a 1-week rotation on nights will be required.

Rotation Activities:
As a member of the trauma team, students will participate in all endeavors and become conversant in the initial assessment and resuscitation of the trauma patient as well as the critical care and post-operative aspects of the surgical patients. At least a 1-week rotation on nights will be required.

Evaluation:
Students will be evaluated based on their clinical performance.
**Course: Surg 1850 Clinical Urology Acting Internship**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Angelo Baccala, MD</th>
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**Description:**
The Department of Urology provides comprehensive, urologic patient-oriented care with concern for quality of life and education. Physicians and staff provide state-of-the-art multidisciplinary patient care while striving to blend compassion, technology and advanced techniques. The elective is an introduction to basic urology with emphasis on clinical service designed to provide a background for students planning to practice in related specialties. The clinic rotations will be designed at a level of learning for medical students. During the rotation students will be supervised and instructed on a one-to-one basis by their preceptor(s), fellows, residents, and other qualified faculty responsible for teaching and evaluation.

**Objectives:**
The objectives of this rotation are to provide exposure to the field of Urology as a background for practice in other areas and to offer closer acquaintance with this field for those considering it for possible future specialization.

**Rotation Activities:**
Students will participate in the pre-operative work-up of urological patients. Students will learn from attending faculty and residents alike. Participation in cystoscopy and surgical procedures will form a significant part of the experience provided on this rotation. Students will follow patients to the operating room; assist in the procedures carried out, and will share in the responsibilities for post-operative care. Participation in the evaluation and treatment of common urological problems in the outpatient clinics will give the student an overall understanding of office urology. Students will attend and participate in all conferences and activities of the Urology Service and perform such activities assigned as a part of their added learning experience. Students will present a case to the weekly conference for urology residents and faculty during the last week of the rotation.

**Patient Encounters:**
Outpatient, Inpatient, Operative

**Evaluation:**
Students will be evaluated based on their ward performance and oral examination.
<table>
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<tr>
<th>Course: MEL 7828 Vascular Surgery Acting Internship</th>
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**Description:**

Students will participate in the preoperative, intraoperative and postoperative care of patients with vascular pathophysiology. An introduction to angiogram and ultrasound interpretation will be given. Focus will be on the preoperative assessment and decision for operative intervention.

**Objectives:**

This rotation should provide the student with a broad exposure to clinical presentation, diagnostic evaluation, and operative and non-operative therapy for a wide variety of arterial and venous diseases.

**Rotation Activities:**

Students will participate in clinical care involving the Vascular Surgery Service. The student will work closely with the vascular surgery resident and fellow in the preoperative, operative, and postoperative patient management of the vascular surgery patients. They will also attend outpatient clinics with full time faculty members. Students will also gain exposure to a variety of noninvasive vascular diagnosis in the Vascular Diagnostic Center. Interpretation of physiologic data relative to angiographic findings and clinical symptoms will be emphasized.

**Evaluation:**

Students will be evaluated based on their ward performance and oral examination.
**Course: HAZ 1840 General Surgery *at LVH-Hazleton**

<table>
<thead>
<tr>
<th><strong>Course Instructor(s):</strong></th>
<th>Martin S. Walko, MD, FACS</th>
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<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>4 weeks</td>
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<tr>
<td><strong>Location:</strong></td>
<td>LVH-Hazleton</td>
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<tr>
<td><strong>Contact:</strong></td>
<td><a href="mailto:Martin_S.Walko@lvhn.org">Martin_S.Walko@lvhn.org</a>; 570-501-6902</td>
</tr>
</tbody>
</table>

**Description:**
This is a surgical internship in general surgery at a community hospital that is affiliated with a tertiary care center. As such, it represents a typical community surgical experience that most surgeons would describe as “bread & butter” general surgery, orthopedics and ENT. The student can tailor this rotation to meet their clinic needs/goals and mix all available surgical disciplines, or focus in one particular area, if desired. The student will be expected to participate in inpatient hospital rounds and the outpatient/office evaluation & workup of surgical pathology, such as hernia, GI endoscopy, GERD, biliary disease, cutaneous disorders, bariatric, colorectal and intestinal disorders and malignancy. ENT includes head and neck infections, malignancy and anatomic/infectious pathology. The student will be exposed to various surgical techniques including open, laparoscopic and robotic operations, as well as gastrointestinal endoscopy and wound management. The patient can also tailor their rotation to include orthopedics. The student will also be exposed to emergency department evaluation, work-up and management of surgical patients and inpatient evaluation/consultation. Observation of office, outpatient and inpatient surgical & endoscopy procedures is expected; participation is commensurate with the surgeon’s assessment and supervision of the student. The student can direct their studies to their area of specific interest, if needed.

**Objectives:**

1) The student will be expected to obtain a history and physical exam, assess pertinent diagnostic studies (including appropriate diagnostic imaging, labs, etc) and present a differential diagnosis on patients.
2) Learn pertinent surgical anatomy and procedures.
3) Learn basic knot tying/suturing techniques.
4) Learn the related risks, benefits and alternatives to surgical procedures, such as appendectomy, cholecystectomy, herniorrhaphy, sleeve gastrectomy, gastric bypass, colectomy and various skin and deep tissue infections.
5) Learn the basic principles of wound care.
6) The student will perform a formal presentation of a surgical patient of their choosing addressing the above aspects of surgical care as part of their grade.

**Rotation Activities:**

Learning to suture, read x-rays, CT scans, wound care, ENT/head/neck exam, resuscitation of a surgical patient, orthopedic evaluation

**Evaluation:**

Ongoing narrative evaluation by staff & final patient presentation