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1.7 Proctored End of Rotation Exams

Students must complete a proctored COMAT exam near the end of each Core required rotation (excluding IM 1) in the third year. The COMAT exam is an objective assessment of the student’s medical knowledge. The Standard Score (as defined by the National Board of Osteopathic Examiners NBOME) will be used to determine whether or not the student passed or failed the examination. All students will be required to pass the end of rotation exam (COMAT) with a standard score of 80 or greater, which is 2 deviations below the national mean of 100. Standard scores will be converted to a percentage with standard scores greater than 122 being recorded as 100%. The standard score of 79 and below will be listed as 67% and therefore a failure of the COMAT exam. As this is a national standardized exam, failing scores are ineligible for appeal.

In the first week of the core rotations Family Medicine, Internal Medicine II, Pediatrics, Surgery, OB/GYN, Emergency Medicine and Psychiatry, all students are encouraged to take the online sample COMAT Rotation exam.

This is a 15 question exam located at

https://www.nbome.org/exams-assessments/comat/clinical-subjects/

The pretest is strongly recommended, but the score will not be included in the course grade.

For the disciplines of Family Medicine, Internal Medicine II, Pediatrics, Surgery, OB/GYN, Emergency Medicine and Psychiatry, it is necessary to pass the COMAT with a standard score of 80 to pass the rotation, regardless of the preceptor grade.

A single retest of the COMAT will be permitted. If the student passes the retest of the COMAT, a final rotation grade of 70 will be recorded and the rotation will be successfully completed. Retesting is only permitted for a single COMAT failure. This excludes the OPP COMAT as that score is not included in any rotation course grade. Specific guidelines for the OPP COMAT are in Section 1.7.1

If a standard score of at least 80 is not achieved on the repeat COMAT or if a student fails a second COMAT, a failure grade will be recorded and students will have their record remanded to the Student Promotions Committee for review. After review, the committee will make a recommendation to the Associate Dean for Predoctoral Clinical Education (See Institutional Policy E-17).

All COMAT exams, including retests, will be scheduled as to date and time by Statewide Campus personnel. The following important information should be kept in mind when taking the COMAT exam.

- No cell phones or electronic devices are permitted in the exam area during testing.
- Students are expected to be on time for the exam. If a student is late, no additional time will be allowed to take the exam.
• Students with an **unexcused absence** from the end of rotation COMAT exam **will have failed the COMAT exam.** If the student is eligible for a retest, the date will be determined by their Regional Dean and/or Director. Exceptions for taking the COMAT end of rotation examination can only be made in the case of dire circumstance or illness at the discretion of the Statewide Campus Regional Dean.

• The COMAT will be 35% of the calculated final rotation grade for the disciplines of Family Medicine, Internal Medicine II, Pediatrics, Surgery, OB/GYN, Emergency Medicine and Psychiatry.

• Professional dress is required at the time of the examination.

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1.7.1 Pretest/Posttest OPP

At the end of hospital orientation, a COMAT on OPP will be administered.

All students are encouraged to take the online sample COMAT OPP exam. This is a 15 question exam located at [https://www.nbome.org/exams-assessments/comat/clinical-subjects/comat-principles/](https://www.nbome.org/exams-assessments/comat/clinical-subjects/comat-principles/).

The pretest is strongly recommended, but the score will not be included in the OPP COMAT grade.

The OPP COMAT exam will cover the material outlined in the NBOME objectives and consist of 125 questions that need to be completed within a two and ½ hour time limit. The OPP COMAT exam will be proctored in a Statewide Campus region and will not count as part of any rotation grade nor against eligibility for the retest. (See section 1.17). The date, time, and place for the OPP COMAT will be assigned by the student’s Statewide Campus office.

If a student does not receive a passing score on the OPP COMAT exam equal to or greater than a standard (NBOME) score of 80, the student will be required to take a repeat COMAT OPP exam at the end of the Stookey rotation during year three.

If this is not feasible or if the Stookey rotation has already occurred, the repeat COMAT exam will follow a two-week OPP rotation (must meet the minimal Stookey requirements for manipulation), either on Main Campus in Lewisburg or in the SWC region as available.

This rotation will occur either during the Elective month or during the Dean’s Selective, as determined by the SWC Regional Dean and Director.

The repeat OPP COMAT will *not count* against the single retest of the core rotation COMAT examinations.

Students that fail more than one OPP COMAT exam will have his/her record remanded to the Student Promotions Committee for review per Clinical Education Manual Section 1.7 Proctored End of Rotation Exams. After review, the committee will make a recommendation to the Associate Dean for Predoctoral Clinical Education.
A remediation plan will follow, consisting of at least:

- Four weeks will be made in cooperation with the Department Chair of OPP, including, but not limited, additional readings and ComBank questions.
- The student is required to update his/her Regional Assistant Dean on a weekly basis during the remediation to report progress on studying all materials outlined in the syllabus as well as any additional work assigned and completed to strengthen the student’s knowledge in OPP.
- The student will retake the COMAT OPP end of rotation exam per the Clinical Education Manual Section 1.7 and the approval of both the Associate Dean for OPP and his/her Regional Assistant Dean.
- The student will not be allowed to move from third year to fourth year status without passage of the COMAT OPP exam.
1.13 Student Research and Scholarly Activity and Research (Elective) Rotations during 3rd and 4th year

Students are encouraged to participate in research or other types of scholarly activity either as an elective rotation or while completing regular rotations. The federal Common Rule defines research as "a systematic investigation including research development, testing and evaluation designed to develop or contribute to generalizable knowledge". (Source: Code of Federal Regulations 45CFR46.102). Other types of scholarly activity include Quality Assurance/Quality Improvement (QA/QI) projects, case reports and literature reviews. Students should consult with their Regional Assistant Dean to determine which types of scholarly activity may qualify as an elective rotation. Regulatory and approval processes will differ depending on the type of project as described below.

Students involved in research projects or other scholarly activity must work with a WVSOM employee who will help guide the student through the approval process and ensure that required permissions are in place prior to starting the work, even if the project is not being done as part of an elective rotation. This employee may or may not be the Principal Investigator (PI). For example, if a student works with a PI at a remote clinical facility, the PI at that facility is entirely responsible for the proper conduct of the study. In consultation with the PI, the WVSOM Regional Assistant Dean or other Dean-designated employee will assist the student in obtaining required institutional permissions and will monitor the educational aspects if the project is being done as an elective rotation. Research/Scholarly electives may only be taken in the second six months of the third year during an elective or during the fourth year. All requirements outlined in this document apply to both third and fourth year students who are on-campus or off-campus. No more than a total of eight (8) weeks of elective rotations and/or vacation time may be utilized for a research elective. (Refer to Policy E-16)

Approval Process Overview

The approval process for scholarly activity depends on the nature of the project (summarized in the diagram below). The first step is to determine if the project meets the regulator definition of research. Guidance on determining if a project is research or other, non-research scholarly activity such as case reports or QA/QI can be found at the end of this section and on the ORSP web page. The IRB may be consulted for assistance in making this determination. Steps that must be taken for approval of research projects and other scholarly activity are described below.

Student Scholarly Activity Flow Chart

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[Diagram showing flow chart for approval process]

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Research Project\(^1\)

Yes

No
Case reports involving 3 or fewer cases and literature reviews are not considered to be research for regulatory purposes. Refer to the guidance document available on the ORSP web page (https://www.wvsom.edu/Research/) for additional information on the differences between QA/QI and research.

These forms are available on the ORSP web pages at https://www.wvsom.edu/Research/orsp-forms
Contact the WVSOM IRB at irb@osteo.wvsom.edu if assistance in making this determination is needed or to request an official non-human subjects research determination letter.

Timely preparation of all required materials should begin well in advance of project initiation to ensure review and approval by the appropriate Regional Assistant Dean, the PI or supervisor and other administrative departments as needed based on the nature of the project. It is recommended that you begin the approval process at least 60 days prior to the expected start date.

**Approval Process for Research Projects**

1. A project initiation request form (ORSP-1) must be submitted to the ORSP (ORSP@osteo.wvsom.edu) for all research projects. For projects on which the PI is a WVSOM employee and ORSP approval is already in place, the PI can simply request to the ORSP that the student be added to the study team. For projects on which the PI is not a WVSOM employee, submit the Project Initiation Request-form (ORSP-1) to ORSP@osteo.wvsom.edu, including all requested details. The form must be approved and signed by the Principal Investigator and the WVSOM liaison (typically the Regional Assistant Dean). WVSOM students may not serve as the Principle Investigator.

2. Following review by the ORSP, students are notified of next steps, including referral for IRB approval and CITI training (which must be completed prior to IRB approval of the project). IRB approval may require a reliance agreement with a remotely located IRB as explained below. Projects that do not involve human subjects may require other approvals such as HIPAA authorization, Animal Care and Use Committee approval or Biosafety Committee approval. Guidance regarding necessary approvals will be provided by the ORSP. Once a student has completed all the required trainings/approvals, an email stating such will be provided to the student and the WVSOM mentor or PI.

3. If the research is being done as an elective rotation, a Research Plan must then be reviewed and approved by the Regional Assistant Dean. The completed Research Plan must be submitted to your Regional Statewide Campus a minimum of 30 days prior to initiation of the project.

   The Research Plan must include:
   
   a. The name of the Principal Investigator with contact address, phone and e-mail;
   b. A copy of the ORSP-1 form and ORSP approval;
   c. A copy of IRB or other approval letters or exempt determination letter;
   d. A detailed description of the student’s role in the project; and
   e. Written acceptance of the student into the project by the PI.

   All research involving human subjects must be reviewed by the WVSOM IRB, which will make a determination regarding approval and assess whether an IRB agreement is needed with any local IRB. Such an agreement may be needed if a student plans to work under the supervision of a PI who has received IRB approval from a local IRB. If this is the case, then a reliance agreement must be in place between WVSOM’s IRB and the local IRB. Note: Any such agreement must be in place before the student may begin working on the study.
QA/QI Projects and other Scholarly Activity

A Non-Research Scholarly Activity form must be submitted to the Regional Assistant Dean who will confirm, in consultation with the ORSP or IRB as needed, that the project is not classified as research. The student will be notified in writing of this assessment. An official non-human subjects research determination letter may be requested of the IRB by checking the correct box on this form. These letters are required by some journals for publication and must be written prior to initiation of the study. If the project is determined to be research, the student must follow the procedures described in the above section. If the project is not classified as research, the student must still consult with the Privacy Officer of the facility where the project is being done to obtain any necessary authorizations or waivers regarding use of private health information data.

For scholarly activity being done as an elective rotation, a project plan must then be reviewed and approved by the Regional Assistant Dean. This plan must be submitted a minimum of 30 days prior to initiation of the project and must include

a. a copy of the Non-Research Scholarly Activity Form
b. A detailed description of the project and the student’s role in the project
c. For projects involving use of patient data, a copy of any necessary agreements, authorizations, waivers and/or a letter from the facility Privacy Officer approving use of data for the project.
d. Written agreement from the supervisor/mentor to oversee the student project.

As this is an elective portion of the WVSOM program, the following must be understood and agreed to:

- All expenses associated with a special elective or other scholarly activity are borne by the student, i.e., travel, meals, board, and required or optional materials.
- Proof of active health insurance is required.
- Scheduled rotations will not be revised to accommodate a special elective.
- Elective rotations must be overseen by a DO or MD for grading.
- For elective rotations, the final data, article or report must be submitted to the Regional Assistant Dean and the Associate Dean for Predoctoral Clinical Education within 6 weeks of completion of the rotation. For research projects, a copy must also be sent to the Associate Dean for Research and Sponsored Programs who must approve it in order for the student to receive credit for the rotation.
- The term “research” should not be used in any presentations or publications regarding QA/QI projects, case studies or other non-research scholarly activity.
- Students can consult with the Principal Investigator or Associate Dean for Research and Sponsored Programs to inquire about potential funding or travel expenses to present scholarly activity. Potential funding through WVSOM is available only if the ORSP has approved the project in advance of it being undertaken, all permissions for travel are in place, and your SWC Dean has signed off on the project and travel.
Summary Checklist for Research or Scholarly Activity Elective Rotations

Submit the following documentation to the Regional Assistant Dean:

A. Copy of the ORSP-1 or Student Non-Research Scholarly Activity form and letters of approval
B. Copy of any additional necessary approvals (IRB approval, HIPAA authorization, etc.)
C. Verification/evidence that the PI has approved student participation in the research project and added the student to the IRB protocol when relevant. For other types of scholarly activity, verification that a supervisor/mentor has agreed to oversee the project
D. Copy of the research protocol or project plan
E. A one-page summary of the educational benefit of the rotation and a signed Elective/Selective Rotation (ESR) Form approving the scholarly activity with the evaluation form.

For elective rotations, a final article or report must be submitted to the Regional Statewide Campus Office upon completion in order to receive academic credit. For research projects, a copy of the report must also be forwarded to the Associate Dean for Research and Sponsored Programs in order to receive credit.
1. PURPOSE
The purpose of this guidance is to assist faculty, students and other personnel on the definition of Research versus Quality Assurance/Quality Improvement (QA/QI). In addition, the guidance provides resources to support the development of QA/QI projects. Whenever there is uncertainty as to whether a project is considered to be research or QI, the project leader should request guidance from the WVSOM Institutional Review Board (IRB). The IRB cannot retroactively approve research.

It is the responsibility of the project leader who initiates a project to determine if it is research or QA/QI. Research projects must comply with specific policies and regulations designed to protect human subjects and privacy rights. However, it may be difficult for a project leader to determine if his or her project is research or QA/QI. Since this determination may have a significant impact on the project design, procedures, and regulatory compliance, the project leader should not hesitate to ask the IRB for guidance. There are serious consequences for not following WVSOM research policies and procedures and federal regulations when conducting research.

2. APPLICABILITY
This guidance applies to all quality assurance/quality improvement projects undertaken by staff, faculty or students at WVSOM.

3. HOW TO USE THIS GUIDE
The first section provides definitions for Research and Quality Improvement. The second section provides certain characteristics typically associated with research and QI projects. Once you review the definitions and characteristics, you should be able to determine the appropriate category for your project. If you determine that the project is similar to both definitions, the project is research.

Section 1. Definitions

What is research? The federal Common Rule defines research as “a systematic investigation including research development, testing and evaluation designed to develop or contribute to generalizable knowledge”. (Source: Code of Federal Regulations 45CFR46.102).
What is Quality Improvement (QI)? Quality improvement is defined as “a systematic pattern of actions that is constantly optimizing productivity, communication, and value within an organization in order to achieve the aim of measuring the attributes, properties, and characteristics of a product/service in the context of the expectations and needs of customers and users of that product. The Institute of Medicine (IOM) defines quality in health care as a direct correlation between the level of improved health services and the desired health outcomes of individuals and populations. Source: Institute of Medicine

Section 2: Characteristics of Research Projects and Quality Improvement Projects

<table>
<thead>
<tr>
<th>Research</th>
<th>Quality Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research projects must meet IRB requirements for protection of human subjects. Researchers conducting research must also meet HIPAA and FERPA requirements regarding authorization to use or disclose protected health information.</td>
<td>Quality Improvement projects are not covered by IRB requirements. Members of the workforce are allowed by HIPAA to use protected health information for Quality Improvement projects without patient authorization.</td>
</tr>
<tr>
<td>Characteristics of Research:</td>
<td>Characteristics of Quality Improvement:</td>
</tr>
<tr>
<td>• One of the main goals of the project is to advance general knowledge in the academic, scientific, or professional community.</td>
<td>• The project identifies specific services, protocols, clinical or educational practices, or clinical processes or outcomes within a department, clinical program or facility for improvement.</td>
</tr>
<tr>
<td>• The project will have a specific hypothesis or research question.</td>
<td>• The project team may review available literature and comparative data, or clinical programs, practices or protocols at other institutions in order to design improvement plan, but do not plan a full comprehensive literature review.</td>
</tr>
<tr>
<td>• The project involves a comprehensive review of relevant literature.</td>
<td>• The project design uses established quality improvement methods (such as DMAIC, PDSA cycle) aimed at producing change within a health center, hospital and/or community setting.</td>
</tr>
<tr>
<td>• The project will be conducted using a research design that will lead to scientifically valid findings. Elements of a research design include: control groups; random selection of subjects, statistical tests, sample design, etc.</td>
<td>• The project design does not include sufficient research design elements to support a scientifically valid finding.</td>
</tr>
<tr>
<td>• Most of the patients/subjects are not expected to derive a personal benefit from the knowledge gained.</td>
<td>• Most of the patients who participate in the project are expected to benefit from the knowledge gained.</td>
</tr>
<tr>
<td>• One goal of the project is to generate, evaluate or confirm an expository theory or conclusion and invite critical appraisal of that conclusion by peers through presentation and debate in public forums.</td>
<td>• The project does not impose any risk or burden to individuals.</td>
</tr>
<tr>
<td></td>
<td>• The main goal of the project is to improve patient care, clinical care or services, and/or educational processes.</td>
</tr>
</tbody>
</table>
4. WORKING ON QUALITY IMPROVEMENT PROJECTS WITH CLINICS, HOSPITALS AND OTHER COMMUNITY ORGANIZATIONS

Contacting a clinical mentor or faculty member and also the health care provider (clinic, hospital, social-service agency administrator) where you will be completing a QA/QI project is a good starting point. Health care providers must all meet Health Information and Patient Protection Act (HIPAA) guidelines and may have specific policy and procedure about accessing health care information at their site. They also will discuss HIPAA training requirements if applicable.

5. OTHER QUALITY IMPROVEMENT RESOURCES

http://www.carnegiefoundation.org/resources/publications/continuous-improvement-education/


http://www.squire-statement.org


*Guidance developed by WVSOM Ad Hoc Statewide Campus Research Committee in July 2016; revisions at August 2016 Committee meeting; Committee revised document in December 2016.*
1.17 Stookey Rotations OLM

Students are required to complete a minimum of one “James R. Stookey” OMT rotation in each of their 3rd and 4th years. This requirement will be met using six OPP modules from the A.T. Still University series and two presentations that you can access on eMedley. The modules and presentations represent an osteopathic approach for common diagnoses that you may encounter in Family Medicine or Internal Medicine. Step by Step instructions to access the modules and presentations on eMedley are below:

1. Go to Applications
2. Go to Educate
3. Go to Sections
4. Type/Select 005-1: Statewide Campus Information CO 2020 & CO 2021
5. Select OLM—Stookey Rotation (each presentation and module are listed)

In the 4th year, the Stookey requirement must be completed and submitted for grading no later than the end of April.

Electronic Health Record (EHR) Stookey OMT SOAP Note:

As a mandatory requirement for successful completion of your OMT Stookey Rotations you will be required to submit 1 SOAP note during your Year 3 Stookey rotation and 1 SOAP note during your Year 4 Stookey rotation on a patient encounter included on eMedley (see below for accessing). The Stookey note must be documented in the WVSOM Greenway PrimeSuites’ EHR.

Step by Step instructions for completion of the assignment can be found on eMedley:

1. Go to educate
2. Go to Sections
3. Type/Select 005-1: Statewide Campus Information CO 2020 & CO 2021
4. Select OLM—Stookey Rotation
5. Open the first pdf file in the post (EHR_StookeyCase_Instructions_2020)
Family Medicine I

Course Number: 806 OLM

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

Family medicine provides first contact, ongoing, and preventive care to all patients from Pediatric to Geriatric age groups regardless of gender, culture, care setting or type of problem. The osteopathic family physician must also take into account the four tenets of osteopathic medicine, prevention and screening, coordination of health care, continuity of service, and family and community dynamics.

The principles of Family Medicine are exemplified by these key components:

1. Biopsychosocial aspects of care
2. Comprehensive care
3. Continuity of care
4. Contextual care
5. Coordination and integration of care
6. Population health; patient safety

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   a. By the end of this rotation the student is expected to possess the knowledge, attitudes and skills to:
      • Assess and manage acute illnesses commonly seen in the office setting.
      • Determine the health risks of patients/populations and make recommendations for screening and health promotion (wellness visits).
      • Discuss a complete history and physical in all age groups, from pediatric to geriatric, which includes an osteopathic structural examination.
      • Be able to develop an appropriate assessment and treatment based on the information gathered.
• Incorporate appropriate preventive medicine at each visit.
• Understand focused evaluations of geriatric patients.

b. By the end of the rotation the student should be able to:
• Differentiate between common etiologies based on presenting signs and symptoms.
• Recognize dangerous/emergency conditions that may present with that symptom and know when emergent referral is needed.
• Describe a focused age appropriate history and physical examination.
• Make recommendations as to labs/imaging/tests to obtain to narrow the differential.
• Appreciate the importance of a cost-effective approach to the diagnostic work-up.
• Describe the initial management of common and dangerous diagnoses that present with that symptom.

c. For each core chronic disease, the student should be able to:
• Find and apply diagnostic criteria and surveillance strategies for that problem.
• Elicit a focused age-specific history, including information on compliance, self-management, and barriers to care.
• Detail a focused age specific physical examination that includes identification of complications.
• Locate and evaluate clinical practice guidelines associated with each of the core chronic diseases.
• Describe major treatment modalities for those problems.

d. Adult Health Maintenance:
• Define wellness as a concept that is more than “not being sick”.
• Define primary, secondary, and tertiary prevention.
• Identify risks for specific illnesses that affect screening and management strategies.
• Find and apply current guidelines for immunizations.

e. Well child and adolescent visits:
• Describe the core components of child preventive care—health history, physical examination, immunizations, screenings/diagnostic tests, and anticipatory guidance.
• Find and apply the current guidelines for immunizations and be able to order them as indicated, including protocols for “catch-up” if immunizations are delayed/incomplete.
• Identify developmental stages and detect deviations from anticipated growth and developmental levels.
• Recognize normal and abnormal physical findings in the various age groups.
• Summarize recommended age-appropriate screenings.

2. **Patient Care**
a. Detail a focused history and physical examination that includes identification of complications for chronic conditions.
b. Detail a chronic follow-up visit for patients with common chronic diseases.
   • Propose an evidence-based management plan that includes pharmacologic and non-pharmacologic treatments, and appropriate surveillance and tertiary prevention.
c. Develop an evidence-based health promotion/disease prevention plan for a patient of any age or gender.
d. For women: detail a full menstrual, gynecological, and obstetric history.
e. For men: identify issues and risks related to sexual function and prostate health.
f. Detail a physical examination on an infant, child, adolescent, and adult.
g. Summarize skills required for advanced history-taking, communication, physical examination and critical thinking.
h. Incorporate OP&P into the practice of family medicine.

3. Interpersonal and Communication Skills
a. Detail skills to effectively communicate with patients from the pediatric patient to the geriatric patient, communicate/identify with caregivers, and establish effective relationships with patients and families.
b. Discuss how to communicate appropriately with other healthcare professionals (e.g. other physicians, physical therapists, occupational therapists, nurses, counselors, etc.).
c. Be able to document an acute and chronic care visit appropriately.
d. Discuss how to communicate respectfully with patients to encourage lifestyle changes to support wellness (e.g. weight loss, smoking cessation, safe sexual practices, exercise/activity/nutrition/diet).
e. Detail how to respectfully educate a patient about an aspect of his/her disease using language that most patients understand.
f. Describe how to provide counseling related to health promotion and disease prevention.
g. Regarding well child visits, be able to identify health risks, including accidental and non-accidental injuries and abuse or neglect.

4. Professionalism
a. Summarize needed aspects of professional relationships with patients and staff.
b. Describe empathy and cultural competency.
c. Describe responsibility, reliability and dependability.
d. Explain patient confidentiality/HIPAA regulations.
e. Detail components of respect for peers and all members of the health care team.

5. Practice-Based Learning and Improvement
a. Apply fundamental epidemiologic concepts to practice improvement.
b. Understand how medical informatics/EBM/research can be used to enhance
patient care and understand their limitations in the practice of medicine.
c. Demonstrate ability to identify personal knowledge deficits.
d. Demonstrate ability to locate educational resources and strengthen personal
medical knowledge.
e. Display commitment to continuous quality improvement.
f. Discuss an evidence-based, step-wise approach to counseling for lifestyle
modifications in a patient scenario.
g. Practice life-long learning skills, including application of scientific evidence in
clinical care.

6. System Based Practice
   a. Recognize how patient care and professional practice affect other health care
      professionals, health care organizations, and the larger society.
   b. Use patient-centered, equitable systems of care that recognize the need to
      reduce medical errors and improve patient safety.
   c. Be able to apply quality improvement concepts, including problem
      identification, barriers to optimal patient care and design improvement
      interventions.
   d. Be able to describe the nature and scope of family practice and how it
      interacts with other health professionals.
      • Discuss the value of family physicians within any health care system.
      • Discuss the principles of osteopathic family medicine care.
   e. Be able to identify community resources available to enhance patient care.
   f. Appreciate the importance of a cost-effective approach to the diagnostic
      work-up.
   g. Have a basic understanding of Medicare, Medicaid, Third Party, and HMO
      services.

7. Osteopathic Philosophy and Osteopathic Manipulative Medicine
   a. Understand and integrate Osteopathic Practices and Principles into all clinical
      scenarios.
   b. Develop an appreciation for the need to treat the entire patient including mind,
      body and spirit across all ages.
   c. Integrate osteopathic concepts and OMT into medical scenarios.
   d. Recognize somatic dysfunction across all age groups and how this may
      impact their overall health.
   e. Explain the application of OMT in family medicine across all age
      groups.
   f. Adapt osteopathic treatment modalities to adequately and safely treat those
      across all age groups.

C. Study Guide

In general, the best approach to studying is to access multiple sources.
Universal Notes is a comprehensive online program to facilitate and guide your study.

This can be supplemented by Rakel, the core reference text. Conn’s Current Therapy and Lange Case Files are excellent supplemental sources, especially when you need focused readings.

D. COMAT Blueprint information Family Medicine

Review the NBOME web site on the COMAT Blueprint for Family Medicine. This will provide a general roadmap for your studies. However, still take the time to read about your patient encounters and any additional material that your preceptor suggests. As you can see, similar to the specialty itself, the Family Medicine COMAT content is broad and fairly evenly distributed.

https://www.nbome.org/exams-assessments/comat/exam-series/comat-family-medicine/

- General
- Cardiovascular System Disorders & Presentations
- Endocrine System Disorders & Presentations
- Gastrointestinal System Disorders & Presentations
- Genitourinary/Renal * Gynecological/Reproductive System Disorders & Presentations
- Hemaotlogy/Oncology & Immune System Disorders & Presentations
- Musculoskeletal/Integumentary System Disorders & Presentations (includes Dermatology)
- Psychiatry/Neurology System Disorders & Presentations (includes Neurology)
- Respiratory System Disorders & Presentations

Pretest/Posttest: Family Medicine

Please refer to section 1.7 Proctored End of Rotation Exams.

E. Required Textbooks


Textbook of Family Medicine, Rakel, et al; Elsevier 9th ed.

Foundations for Osteopathic Medicine, Lippincott Williams and Wilkins 4th ed Diagnosis and Plan for Manual Medicine (refer to this for your Family Medicine H&P case write-up).
F. Additional Resources

**Recommended Texts:** These are additional textbooks that you may find helpful and have additional information on the topics for the COMAT blueprint. You will see some of these textbooks listed in the other disciplines as you progress through the Core Courses in the 3rd year.


*Ham’s Primary Care Geriatrics;* Elsevier, 6th ed.


*Conn’s Current Therapy 2018;* Elsevier

G. Didactic and Reading assignments

**Universal Notes (www.myuniversalnotes.com)**

The free online resource, Universal Notes, offers for each clerkship:

1. Study plan
2. Study material
3. Question bank

Steps to get started with Universal Notes and the Study Plan:

1. Go to www.myuniversalnotes.com
2. Click SIGN UP
3. Complete SIGN UP and choose Medical Student for version
4. Sign in to Medical Student version using the information (email and password) you used for SIGN UP
5. Click on Study Plans for Family Medicine Clerkship
If you have any questions or problems with accessing or using Universal Notes, please contact: senioreditor@myuniversalnotes.com

The list of topics for the Family Medicine Study Plan is found below. It is comprehensive and requires both an organized approach and self-discipline to ensure that all materials are covered. Students should focus their reading on weekdays for topics that involve the common patient conditions seen in the clinical setting, and reserve weekend reading for conditions that are unlikely to be encountered during the rotation. Pairing patient encounters with related material improves understanding, enjoyment, and retention. At a minimum, students should try to get through 1-2 topics each weekday and 20 on each weekend day in order to cover the essential material.

Universal Notes Family Medicine Study Outline

Introduction

Students should be familiar with the sections on History Taking, Physical Exam, Labs, Tests, and Treatments as well as pharmacology.

Week One

Human Development and Milestones

• Geriatrics and the Aging Process (Falls, Physiologic Changes)
• Adult Preventative Health

Cardiovascular

• Aortic and Abdominal Aneurysm
• Aortic dissection
• Atherosclerosis
• Atrial Fibrillation and Atrial Flutter
• Cardiac arrest
• Carotid Artery Stenosis
• Chest Pain (Angina)
• Congestive Heart Failure
• Coronary Artery Disease
• Deep Venous Thrombosis (DVT)
• Edema and Hypervolemia
• Hyperlipoproteinemias (Hyperlipidemia, Hypertriglyceridemia, Familial Hypercholesterolemia)
• Hypertensive Emergency and Urgency
• Hypotension (Including Orthostatic Hypotension)
• Murmurs
• Myocardial Infarction (MI or Heart Attack)
• Palpitations
• Peripheral Arterial Disease (Arterial Occlusion, Claudication)

Ear, Nose, and Throat
• Benign Positional Paroxysmal Vertigo (BPPV)
• Labyrinthitis (Vestibular Neuritis)
• Meniere’s Disease
• Obstructive Sleep Apnea and Obesity Hypoventilation Syndrome (Pickwickian Syndrome)
• Otitis Externa
• Otitis Media and Perforated Tympanic Membrane
• Pharyngitis
• Sialadenitis, Parotitis, and Salivary Gland Stones
• Sinusitis

Endocrine
• Adrenal Insufficiency (Addison disease)
• Cushing Syndrome and Disease (Hypercortisolism)
• Diabetes Mellitus
• Diabetic Ketoacidosis
• Diarrhea
• Galactorrhea (Nipple Discharge)
• Hyperparathyroidism
• Hyperthyroidism (Graves Disease)
• Hypothyroidism (Hashimoto)
• Obesity

Week Two

Gastrointestinal
• Abdominal Pain (Flank, Pelvic, Suprapubic Pain)
• Anal Disorders (Fissures, Hemorrhoids, Abscesses, and Fistulas)
• Appendicitis
• Celiac Disease (Celiac sprue, Gluten-sensitive enteropathy)
• Cholelithiasis, Choledocholithiasis, and Cholecystitis
• Constipation
• Diverticular Disease (Diverticulosis, Diverticulitis)
• Gastritis
• Gastroenteritis
• Gastroesophageal Reflux Disease (GERD) and Barrett Esophagus
• Gastrointestinal Bleeding (Melena, Hematemesis)
• Inflammatory Bowel Disease
  • Crohn's Disease
  • Ulcerative Colitis
• Irritable Bowel Syndrome (IBS)
• Pancreatitis
• Peptic Ulcer Disease (PUD)

Hematology

• Overview of Anemia
• Anemia of Chronic Inflammation (Chronic Disease)
• Blood Loss Anemia
• Folate Deficiency Anemia
• Iron Deficiency Anemia
• Vitamin B12 (Cobalamin) Deficiency and Pernicious Anemia

Infectious Agents and Conditions

• Sepsis, Shock, Systemic Inflammatory Response Syndrome (SIRS)
• Bacteria
  ▪ Borrelia burgdorferi (Lyme Disease)
  ▪ Chlamydia trachomatis (Lymphogranuloma venereum)
  ▪ Escherichia coli
  ▪ Gardnerella vaginalis (Bacterial Vaginosis)
  ▪ Haemophilus influenzae
  ▪ Helicobacter pylori
  ▪ Moraxella catarrhalis
  ▪ Mycobacterium tuberculosis
  ▪ Mycoplasma pneumoniae
  ▪ Neisseria gonorrhoeae
  ▪ Neisseria meningitidis
  ▪ Staphylococcus aureus
  ▪ Streptococcus pneumoniae
  ▪ Streptococcus pyogenes
  ▪ Treponema pallidum

Week Three

Infectious Agents and Conditions (continued)

• Fungi
  ▪ Candida species (Candidiasis, Thrush, Onychomycosis)
  ▪ Pityriasis versicolor (Tinea versicolor, Malassezia furfur)
  ▪ Tinea species
- Parasites and Protozoa
  - *Sarcoptes scabei* (Scabies)
  - *Trichomonas vaginalis*
- Viruses
  - Epstein-Barr Virus (Mononucleosis)
  - Overview of Enteroviruses
  - Hepatitis A
  - Hepatitis B
  - Hepatitis C
  - Herpes Simplex Virus 1, 2 (HSV)
  - Human Immunodeficiency Virus (HIV)
  - Human Papillomavirus (HPV, Condyloma Acuminata, Anogenital Warts)
  - Influenza
  - Parainfluenza
  - Respiratory Syncytial Virus (RSV)
  - Rhinovirus (Common Cold)

**Integumentary**

- Conditions
  - Acne Vulgaris
  - Actinic Keratosis
  - Atopic Dermatitis (Eczema)
  - Basal Cell Carcinoma
  - Contact Dermatitis
  - Epidermal Inclusion Cyst (Sebaceous Cyst)
  - Keratoacanthoma
  - Melanoma
  - Seborrheic Dermatitis
  - Seborrheic Keratosis
  - Squamous Cell Carcinoma
  - Urticaria
  - Warts (Verrucae)
- Procedures
  - Suturing Sutures (Lacerations)

**Week Four**

**Musculoskeletal**

- Ankle Sprain
- Back Pain (Lumbago)
- Carpal Tunnel Syndrome
- Compartment Syndrome
- Costochondritis (Tietze Syndrome)
- Dislocations
• Hip
• Shoulder
• Epicondylitis (Tennis or Golfer's Elbow)
• Fractures
• Fractures and Fracture Terminology
  • Geriatrics and the Aging Process (Falls, Physiologic Changes)
  • Gout
• Joint Pain and Swelling (Arthritis, Bursitis)
• Meniscal Knee Injuries
• Osteoarthritis (Degenerative Joint Disease)
• Osteomyelitis
• Osteoporosis
• Rheumatoid Arthritis
• Rotator Cuff Injury
• Septic Arthritis (Septic Joint)
• Tarsal Tunnel Syndrome
• Tendonitis (Tendinopathy)
• Patellofemoral Pain Syndrome

Neurologic

• Facial Nerve Palsy (Bell Palsy)
• Headache (Cluster, Migraine, Tension)
• Major or Minor Neurocognitive Disorders (Formerly Dementias)
• Meningitis
• Peripheral Neuropathy
• Seizures in Adults (Status Epilepticus, Epilepsy)
• Seizures in Children (Status Epilepticus, Epilepsy, Febrile Seizures)
• Spinal Cord Injury and Disease (Brown-Sequard Syndrome)
• Stroke (Cerebrovascular Accident, CVA, Subarachnoid Hemorrhage)
• Temporal Arteritis (Giant Cell Arteritis)
• Trigeminal Neuralgia
• Vertigo and Dizziness

Week Five

Oncology

• Overview of Neoplasia and Terminology
• Tumor Growth and Metastasis
• Neutropenia (Immunosuppression)
• Neutropenic Fever
• Introduction to Brain and Nervous System Tumors
• Bladder Cancer
• Cervical Cancer
• Colorectal Cancer
• Lung Cancer
• Lymphoma (Hodgkin, Non-Hodgkin)
• Multiple Myeloma
• Prostate Cancer

Ophthalmology

• Conjunctivitis and Red Eye
• Glaucoma
• Macular Degeneration
• Retinopathy (Diabetic, Hypertensive)

Psychiatric

• Anxiety Disorders
  ▪ Introduction to Anxiety Disorders
  ▪ Specific Phobia
  ▪ Social Anxiety Disorder (Social Phobia)
  ▪ Panic Disorder
  ▪ Agoraphobia
  ▪ Generalized Anxiety Disorder
  ▪ Cognitive and Behavioral Therapies for Anxiety
• Depressive Disorders
• Somatic Disorders
  ▪ Introduction to Somatic Symptoms and Related Disorders
  ▪ Somatic Symptom Disorder
• Suicide
• Substance Related and Addictive Disorders
  ▪ Introduction to Substance-Related and Addictive Disorders
  ▪ Alcohol Use Disorder
  ▪ Cannabis Use Disorder
  ▪ Opioid Use Disorder
  ▪ Sedative-Hypnotic and Anxiolytic Use Disorder
  ▪ Stimulant Use Disorder

Renal

• Acute Kidney Injury (Acute Renal Failure)
• Acute Tubular Necrosis (ATN)
• Chronic Kidney Disease (CKD) and Endstage Renal Disease (ESRD)
• Glomerular Disease
  ▪ Overview of Glomerular Disease
  ▪ Nephrotic Syndrome and Diseases
- Diabetic Nephropathy
- Nephrotic Syndrome
- Hematuria
- Hypertension
- Secondary Hypertension
- Reproductive

**Week Six**

**Gynecology**

- Amenorrhea
- Bartholin Cyst and Abscess
- Breast Abnormalities
  - Fibroadenoma
  - Fibrocystic Breast Disease
  - Mastitis and Breast Abscess
- Dysmenorrhea (Premenstrual Syndrome)
- Endometriosis
- Menopause
- Ovarian Cyst
- Ovarian Torsion
- Pelvic Inflammatory Disease (Endometritis)

**Obstetrics**

- Normal
  - Maternal Physiology
- Overview of Pregnancy
- Physiological Changes of Pregnancy
  - Antepartum Care
- Overview of Pregnancy, Gravidity, and Parity
- Prenatal Screening Tests
- Prenatal Diagnosis of Genetic Disease
  - Intrapartum Care
- Normal Labor
  - Postpartum Care
- Newborn Screening Tests
  - Lactation
- Abnormal
  - Abnormal Labor and Delivery
  - Spontaneous Abortion and Termination of Pregnancy
  - Ectopic Pregnancy
  - Prolonged Labor, Arrest, Shoulder Dystocia, Malpresentation
• Postpartum Hemorrhage
  ▪ Postpartum Pituitary Infarction (Sheehan's Syndrome)
  ▪ Postpartum Hemorrhage (Uterine Atony)
• Intrapartum Fever (Chorioamnionitis)
• Postpartum Cardiomyopathy
• Postpartum Depression (PPD)

Respiratory

• Allergic Rhinitis
• Allergies
  ▪ Environmental
  ▪ Food

Week Seven

Respiratory (continued)

• Asthma and Status Asthmaticus
  ▪ Adults
  ▪ Children
• Bronchitis (Acute and Chronic)
• Chronic Obstructive Pulmonary Disease (COPD)
• Croup (Laryngotracheobronchitis)
• Foreign Body Aspiration
• Pneumonia
• Pneumothorax
• Pulmonary Embolus
• Restrictive Pulmonary Disease
  ▪ Overview of Restrictive Lung Disease
  ▪ Pneumoconiosis (Anthracosis, Bagassosis, Berylliosis, Byssinosis, Silicosis)
  ▪ Sarcoidosis
• Tobacco Abuse (Second Hand Smoke)

Toxicology and Environmental Injuries

• Child Abuse and Neglect
• Domestic Violence, Elder Abuse, Stalking
• Heat Related Illness (Non-Febrile Hyperthermia, Heat Stroke)
• Ticks (Tick Bite)
• Trauma

Urinary
- Cystitis (Urinary Tract Infection)
- Dysuria
- Erectile Dysfunction
- Prostatitis
- Pyelonephritis
- Urethral Discharge (Urethritis)
- Urinary Incontinence

**Week Eight**

**Review!**

**H. Additional Recommendations**

Suggested Readings from Rakel's and Conn's Current Therapy:

In addition to the Universal Notes, Rakel’s Textbook of Family Medicine is a core reference text. Both primary and supplemental readings are strongly encouraged. Conn’s Current Therapy has brief overviews of commonly encountered conditions and may be especially useful for a quick review.

You can use the Universal Notes subjects as well as the COMAT categories to guide your additional readings.

Because Family Medicine is so broad, there will be significant overlap between sources; don’t hesitate to consult your Internal Medicine, OB/GYN, Pediatric, and Emergency Medicine texts and references as well.

**DocCom cases**
1. Communicating in Specific Situations: # 20 “Family Interview”
2. Communicating in Specific Situations # 24 “Tobacco Intervention”
3. Communicating in Specific Situations # 25 “Motivating Healthy Diet and Physical Activity”

**Complete the Discussion Questions.** To access the Doc.Com Cases visit: [http://webcampus.drexelmed.edu/doccom/user/](http://webcampus.drexelmed.edu/doccom/user/) you will log in using your Email address and Password.

**I. Procedures/Clinical Skills**

1. **DocCom cases**
   - Communicating in Specific Situations: # 20 “Family Interview”,
   - Communicating in Specific Situations # 24 “Tobacco Intervention”
   - Communicating in Specific Situations # 25 “Motivating Healthy Diet and Physical Activity”
Complete the Discussion Questions. To access the Doc.Com Cases visit: http://webcampus.drexelmed.edu/doccom/user/ you will log in using your Email address and Password.

2. Clinical Key Procedures
   • In lieu of the ability to gain exposure to common clinical procedures in the outpatient family medicine setting, Clinical Key has a vast library of clinical procedures appropriate to various settings.

   Review the following procedure videos in Clinical Key during FM1:
   
   Suturing
   - Laceration Repair: Simple Interrupted Sutures
   Splinting/Casting
   - Short Arm Splint
   - Short Leg Splint
   - Sugar Tong Splint
   Skin Biopsy and Excisions
   - Punch Biopsy
   - Shave Biopsy
   - Excisional Biopsy
   Ear Lavage
   - Cerumen Removal

   All students have access to Clinical Key. Students are encouraged to set up a free account in order to be able to bookmark and save progress. The WVSOM Library has a video with instructions to set up an account found here:

   https://www.youtube.com/watch?v=keNRIty1_Ys&feature=youtu.be

   Once registered and logged in, select “Procedure Videos” from the Browse menu (you may need to first click on the “…” option if it is not visible). Individual procedures may be found by typing the exact name of the procedure in the “Filter List by Title” block at the top of the screen.

3. Electronic Health Record (EHR) Family Medicine Note

   Third year students are required to submit a complete History and Physical on a case study utilizing osteopathic diagnosis and treatment to be completed during the Family Medicine I rotation (refer to The Medical Write-Up section below for specific instructions).
This must be submitted electronically by the **fifth Friday of the rotation** of the FM I rotation.

You will review a patient encounter by video to write-up your case study. This case is also to be used to document and demonstrate the utilization of osteopathic philosophy and, if appropriate, osteopathic diagnosis and osteopathic manipulative treatment in assessment and care of the patient.

The case must be completed and submitted in the Electronic Health Records (Greenway Primesuites’ EHR). It will be graded by WVSOM full time faculty, and the graded case study will be returned to the student electronically with the grader’s comments. No paper submissions will be accepted.

If the case is unsatisfactory, it will be rejected with comments to improve the H&P. The student will resubmit the case within 10 working days for final review and grade of Pass (>= 70) or Reject (<70). It is strongly recommended that you work with your Regional Assistant Dean if your case is rejected and you are not sure how to improve.

**If the Family Medicine Case is not successfully completed, the student will receive an Incomplete “I” for the rotation. If the “I” is not successfully resolved by six weeks following the completion date of the rotation, the rotation grade will be changed to a Failure.**

Step by Step instructions for completion of the assignment are available on eMedley:

- Go to educate
- Select 005-1: Statewide Campus Information in the Search box
- Search for Family Medicine Case Study Instructions
- Choose EHR FM Case Instructions <Month/Year> OLM

**The Medical Write-Up**

One of the goals of the Family Medicine rotation is that the student becomes adept at the art of the H&P—gathering, synthesizing and documenting the information important to the care of their patients. There are many good resources available regarding the elements of a complete H&P.

The Chief Complaint is the statement of why the patient is being seen. It is generally given in the patient’s own words.

Regarding the History of Present Illness, this should be a chronological history of the chief complaint. Remember OLDCAARTS. For the Past Medical History and Social history, remember MMAISHIFT and HORSES.

For allergies remember to list the reaction the patient had to the allergen or any intolerance.

For medications, be sure to list the name of the medication, the dosage, frequency
and how it is being taken. Remember to include OTC's and herbals and how they are taking these.

For the family history list the age, health/death of immediate family—parents, siblings, grandparents and children. If they do not know their family history or were adopted make note of that.

Your Review of systems (ROS) should include at a minimum 11 organ systems: General, Skin, Head, EENT (eyes, ears, nose, throat and mouth), Neck, Cardiovascular, Respiratory, Breasts, Lymphatics, Gastrointestinal, Genitourinary, Musculoskeletal, Neurologic, Hematological, Endocrine, Allergy/Immunology, and Psychiatric. You need at least 3 pertinent positive or negative complaints/symptoms listed in each of the organ systems.

**Do not state “noncontributory” or “none” in the history.** If the patient tells you they have not had a particular problem it is better to word it as “the patient denies…” Under the physical, do not leave a section blank or state “noncontributory” or “normal” or “WNL”. Tell us what you saw/observed. The Physical Exam should be free texted containing 13 systems with 2 findings for each system.

Please do not simply leave the genitourinary/rectal exams blank or state “deferred”. State why it was not done. Did the patient refuse the exam? If so state, “deferred due to patient request”, or something to that effect. Maybe they had a genital/rectal exam done less than one year ago—then state that.

Under the musculoskeletal/osteopathic exam be sure to refer to your Clinical Skills I and OPP texts to be sure you have the necessary elements included here. Do not list your conclusions; tell us what you found on the physical examination. For example, gait, posture, seated and standing flexion tests, straight leg raising, areas of TART, etc.

There is a space available to list the results of labs, imaging studies, or other tests that may have been obtained previously related to the patient’s chief complaint or prior work-up.

The assessment (diagnosis(es)) is derived from the information obtained in the H&P. This is where you commit to diagnoses and provide insight into your reasoning. When you are unsure of an exact diagnosis you still commit to what you think is most likely and why. Your first diagnosis listed in the assessment should be a diagnosis linked to your chief complaint or the focus of your encounter with the patient. Please remember to include somatic dysfunctions, chronic medical illnesses, and any other pertinent diagnoses for that encounter as well.

The plan should logically follow from the assessment. Each assessment should have a corresponding plan. If stable, you can note the patient is stable and he/she will simply continue current medications, etc.

The plan may include the following:
- Additional diagnostic maneuvers needed, e.g. labs, X-rays, etc…
• Therapeutic procedures, referrals, or medications that will be employed, e.g. OMT, PT, etc…
• Patient education.
• Remember to include when the patient is to follow-up next and what your plan is if the patient does not respond to your treatment. If you did OMT include a brief statement on how the patient responded. For example, “OMT was done using muscle energy to the thoracic spine. The patient tolerated the procedure well and noted improvement in his/her symptoms.”

A discussion using the four tenets of Osteopathic Medicine and how they assisted you in developing your plan of care should be included at the end of the H&P and is **required for every H&P** even when OMT is not performed. You will be graded on your consideration for use of Osteopathic Manipulative therapy, although it will not be performed as this case is online.

The FM EHR outline (see below) should be used by students when completing this assignment.
Subjective:
Chief Complaint

HPI
- Onset
- Location
- Duration
- Character
- Aggravating/Relieving factors
- Timing
- Severity
- Focused ROS (elements of ROS pertinent to chief complaint)
  - May include elements of PMH, PH, SH that are relevant to presenting complaint

Past Medical History (previous/current chronic conditions/illnesses, hospitalizations, injuries)
Past Surgical History
Medications/Herbs/Supplements (include dose, frequency, and route)
Allergies (include reaction)
Family History (include living/deceased, diagnosis, age at diagnosis)
Social History
- Occupation
- Relationships (who do you live with, marital status, safety of relationships)
- Living situation
- ETOH, drug use, tobacco use, vaping, substance abuse
- Sexual history
- Environment (exposures, heat source, special circumstances)
- Diet (if pertinent)
- Spirituality

ROS
- Need 11 systems with at least 3 pertinent +/- in each organ system

Objective:
Physical Exam
- VS (be sure to comment on abnormal VS & carry through to your assessment)
- Need 11 systems with at least 2 pertinent findings (including osteopathic structure exam)
  - Should include pertinent +/- findings for patient presentation

Laboratory findings/imaging/Other studies if available at time of patient encounter

Assessment and Plan:
Assessment
- Today’s pertinent problems (w/ consideration of differential diagnoses—can be eluded to via descriptors like exclude, consider, rule out, differential dx include…)
- Somatic dysfunction diagnosis(es)
- Diagnosis(es) regarding vitals (if needed)
- Chronic active problems
- Additional diagnosis(es) regarding tobacco/vaping, ETOH, drug use

Plan
- Each Assessment should have a plan (appropriate for acute diagnosis(es) as well as chronic problems)
- Comments on continuation meds/treatment for stable diagnosis(es)
- Consideration of OMT
- Addresses preventative treatment/counseling for any diagnosis (es) that is needed (such as smoking/drug/ETOH cessation, BMI/diet, med counseling, etc…)

Osteopathic Discussion:
- Discussion of the 4 osteopathic tenets and how they apply to the case
- Appropriate OMT technique consideration when applicable to the case
J. Patient Procedure Logs

If any portion of the Family Medicine 1 rotation is completed in the clinical setting, you are required to maintain a log of your activities while on your rotation. This is important to document the experiences that you are exposed to in the clinical setting. You should get used to maintaining a log as this will continue during your residency. A well-documented log will help you to know the cases and procedures that you are exposed to and those that you may need to see in the future of your education. The log books need to be initialed by the preceptor documenting the accuracy of your entries. The logs need to be reviewed by your Regional Assistant Dean and accepted as proper documentation of your rotation experience. There is limited space but if you need to use more than one line to document, do so.

You should make sure that you make a notation in the log:
1. When you see a patient
2. Note if the patient was seen in the Office/Hospital or other i.e. Nursing home
3. Make sure that you list the diagnosis/ problem that the patient presents with, making sure that you do this in enough detail. (Example: Acute Exacerbation of COPD, or Uncontrolled DM type 2 not just COPD, or DM)
4. Document if you write admit notes in the hospital, progress notes in the office or hospital, discharge summaries and if you did an oral presentation to the preceptor on an encounter.
5. List in detail the procedures that you observed (O), assisted (A) or performed (P).

It is always wise to make a copy of the log for your own records. You may want to review your logs as you participate in your 4th year audition rotations so you can respond to any questions of your experiences in doing certain procedures.

K. Family Medicine Procedure Log: If any portion of the Family Medicine 1 rotation is completed in the clinical setting, this form (see below) is to be signed by your preceptor and turned into your Regional Assistant Dean at the end of your rotation. Failure to comply will result in a professionalism report. If the rotation is completed exclusively or partially in the virtual setting as a result of a worldwide emergency, then students will complete the Clinical Key assignment listed in Section I above.
# FAMILY MEDICINE PROCEDURE LOG

The student will be exposed to the following skills: (to be signed by your preceptor)

<table>
<thead>
<tr>
<th>Skill</th>
<th>Reference</th>
<th>Performed</th>
<th>Observed</th>
<th>Not Done (why)</th>
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</thead>
<tbody>
<tr>
<td>OP&amp;P</td>
<td>OP&amp;P texts and videos</td>
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<td></td>
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<tr>
<td>Demonstrate:</td>
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<tr>
<td>Palpatory diagnostic skills Ability</td>
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<tr>
<td>to do functionalexam Ability to record findings of exam</td>
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<tr>
<td>Ability to record treatment procedures used</td>
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</tr>
<tr>
<td>Ability to use any of the following:</td>
<td>Soft tissue, muscle energy, myofascial, Strain/counterstrain, HVLA, craniosacral, Articulatory</td>
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<tr>
<td>Interpret resting 12-lead EKG</td>
<td>EKG &amp; ACLS texts EKG Basics-LSU• ECG Learning Center• ECG Library• Rhythm Simulator•</td>
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<tr>
<td>Knowledge of venipuncture/puncture</td>
<td>Clinical Skills II Handbook and video</td>
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<tr>
<td>Knowledge of parenteral injections</td>
<td>Clinical Skills II Handbook</td>
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<tr>
<td>Ability to suture</td>
<td>Clinical Skills II Handbook and video</td>
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<td>Knowledge of splint/castannications</td>
<td>Clinical Skills II Handbook</td>
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<td>Knowledge of proper sterile procedures</td>
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<td>Knowledge of urinary bladder catheterization</td>
<td>Clinical Skills II Handbook</td>
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<td>Knowledge of spirometry and interpreting PFT's</td>
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<td>Skin biopsy and excisions</td>
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<td>Joint injections</td>
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<td>Ear lavage</td>
<td>Clinical Keys: Cerumen Impaction</td>
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<tr>
<td>Anoscopy</td>
<td>Clinical Skills II Handbook</td>
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<tr>
<td>Flexible sigmoidoscope</td>
<td>Clinical Keys II Handbook</td>
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<tr>
<td>I&amp;D of abscess: list type of abscess</td>
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<td>Other:</td>
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*ECG Learning Center: [http://library.med.utah.edu/kw/ecg/](http://library.med.utah.edu/kw/ecg/)


*Basic CXR Review-Dept. of Radiology, Uniformed Services, University of Health Sciences, Bethesda, MD: [http://rad.usuhs.mil/rad/chest review/index.htm](http://rad.usuhs.mil/rad/chest review/index.htm)

Preceptor's signature: ____________________________ Date: _____________
L. Grading/Calculations

1. Preceptor grade 65%
2. Family Medicine COMAT end of rotation examination 35%
3. Completion of Patient Procedure Logs, Family Medicine Procedure Log and Preceptor/Site/Course Evaluation
4. Case Study (must be turned in by Friday of the 5th week and score must be passing to receive credit)
   - The patient procedure log and family medicine procedure log along with the preceptor/site/course evaluation must be turned in by the last day of the rotation. Failure to comply will result in a professionalism report.
   - The Family Medicine Case Study in Year 3 must be submitted by the fifth Friday of the rotation. A grade of “incomplete “I” will be recorded until the case study is successfully completed. If they are not completed after six weeks, the “I” will be converted to a rotation failure “F” and the student will be remanded to the student promotions committee “SPC”.

The grade will consist of 65% preceptor and 35% COMAT if applicable; The online assignments must be completed or the grade will be recorded as an incomplete.

If the course is done online, the COMAT will still represent 35% and the average grade given by preceptors for this discipline (as determined by the WVSOM Office of Assessment) will be used for the other 65% of the grade if the online assignments are completed.

5. Completion of the Preceptor/Site/Course Evaluation should be done at the end of the rotation.

6. Note that you will have a standard score of 80 or greater on the COMAT end of rotation exam to pass the Family Medicine 1 rotation/course. Should you score less than a standard score of 80, you will have failed the examination and will be evaluated as per grading policy E-17 to assess for eligibility to retest.

7. If the retest is passed with a standard score of at least 80, a 70 will be recorded as the final rotation course grade.

8. If the retest COMAT score is below standard score of 80, this will be recorded as a rotation course failure and your file will be remanded to the Student
Promotions Committee for review. The committee will make recommendations to the Associate Dean for Predoctoral Clinical Education to repeat the course or other sanctions up to and including dismissal. Please see Institutional Policy: E-17.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
Internal Medicine I

Course Number: 810 OLM

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

Studying the discipline of Internal Medicine provides the foundational knowledge to formulate a diagnostic and therapeutic plan for all adult medical patients.

The Internal Medicine core course is divided into two four-week rotations, which will address the care provided in the ambulatory and hospital settings. During these two four-week rotations it is important that you read and study the conditions that you see in each of the different settings. It is critically important that you integrate your knowledge of pathology, physiology, pharmacology, OPP, and other basic sciences as you note the patient presentation, signs, symptoms, and laboratory and imaging findings. This will allow you to develop a broad differential diagnosis and ultimately will lead you to a diagnosis and treatment plan. This analytical process will be the foundation for your evaluation and care of patients throughout your career.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge

   a. The student will be able to demonstrate understanding of patient presentation and pathophysiology of common presenting complaints seen in the adult patient, including disease of the following systems and subspecialties:
• Cardiovascular
• Gastrointestinal
• Allergic
• Dermatologic
• Immunologic
• Musculoskeletal

• Connective Tissue
• Neurologic
• Endocrine
• Renal
• Infectious
• Pulmonary

b. The student will demonstrate the ability to evaluate and develop a differential diagnosis for each of the following symptoms/conditions:

- Chest Pain
- Syncope
- Edema
- Anemia
- Fatigue
- Headache
- Cough
- Shortness of Breath
- Fever

- Abdominal Pain
- GI bleed
- Constipation
- Diarrhea
- Dizziness
- Back Pain
- Joint Pain
- Rash

c. The student will demonstrate an understanding of the basic principles and current recommendation for adult Immunizations based on ACIP or CDC guidelines. Age appropriate cancer screenings ex: Breast, Colon, Cervical, Prostate Screenings and their utilization of the USPSTF Database.

2. **Patient Care**

   a. Develop a differential diagnosis appropriate to the context of the patient care setting and findings.
   b. Develop an understanding of the altered physiology of the geriatric patient and aging process.

3. **Interpersonal and Communication Skills**

   a. Explain how patient concerns and perspectives including cultural and religious influences impact care
   b. Describe how to write the following:
• different types of medical notes
• SOAP notes
• admission history & physicals
• discharge summaries
• procedure notes

c. Describe the capabilities of electronic health records.

d. Explain how to share diagnostic plan of care, and prognostic information with patients and families.

4. **Professionalism**

a. Summarize understanding and need for supervision, chaperones and/or assistance.
b. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.
c. Explain commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations.
d. Recognize that all patients in emergency situations shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. **Practice-Based Learning and Improvement**

a. Apply fundamental epidemiologic concepts.
b. Detail medical informatics, evidence-based medicine, and research.
c. Identify personal knowledge deficits, strengths, and limits through frequent self-reflection.
d. Explore the ability to locate educational resources and strengthen personal medical knowledge.
e. Explain quality improvement.

6. **System-Based Practice**

a. Be aware of medication and treatment costs (direct patient costs/insurance coverage) and the impact of these factors on the physician's treatment plan.
b. Demonstrate understanding of HIPAA regulations and its impact on the communication of patient care information for patients.
c. Recognize the need to improve your knowledge base, develop and deliver case presentations and demonstrate these skills by utilizing the local electronic medical record, online resources and local patient instruction protocols to provide patient instructions.
d. Understand the training and certification pathways of sub specialties.
e. Demonstrate an understanding of when it is appropriate to refer to specialists.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
   
a. Identify common and preferred pain patterns.
b. Identify key history and physical examination findings pertinent to the working diagnosis and the differential diagnosis.
c. Use appropriate information resources to determine diagnostic evaluations for patients with common and uncommon medical problems.
d. Describe how critical pathways or practice guidelines can be useful in sequencing diagnostic evaluations for the patient.
e. Formulate a differential diagnosis based on findings from the history and physical examination of the patient.
f. Prioritize diagnostic tests and treatment (including OMT) based on sensitivity, specificity, and cost-effectiveness.
g. Apply the 4 tenets of osteopathic medicine to patient care.

C. **Study Plan**

1. **Universal notes Adult Medicine Inpatient Practice exams**

   Go to [https://myuniversalnotes.com](https://myuniversalnotes.com). Login using your WVSOM email and password. Click on the Q in the left hand navigation bar. Then click start a quiz. Then select Clinical for the “Questions by tag.” Then click on the “Clinical Tags” box. Then put a check in the Internal Medicine box. You will then select the number of questions. You will be responsible for completing two 50 question quizzes per 4 week rotation.

   Satisfactory completion of this course requires this monitored assignment to be finished before the end of the block.

2. **Universal Notes: Study Plan for Internal Medicine**

   Go to [https://myuniversalnotes.com](https://myuniversalnotes.com). Login using your WVSOM email and password. Then you can use this URL: [https://web.myuniversalnotes.com/bibliography/view/3063](https://web.myuniversalnotes.com/bibliography/view/3063), or click on “2 Study Plans & Board Prep, then “Study Plans CLERKSHIPS, COMAT, NBME,” then “Study Plan for Internal Medicine.” Click on and complete the modules in the following sections.

   - Patient Symptoms
   - Cardiovascular
For each topic you will complete the competencies including: “Read It”, “Test It”, and “Answer It”. You will not be expected to complete the “Log It,” “Upload It,” or “Assess It” competencies.

Satisfactory course completion requires this monitored assignment to be finished prior to the end of the block.

D. COMAT Blueprint

Review the NBOME web site on the COMAT Blueprint for Internal Medicine. This will provide a general roadmap for your studies. However, still take the time to read about your patient encounters and any additional material that your preceptor suggests.

As you can see, similar to the specialty itself, the COMAT content is broad and fairly evenly distributed across the ten disciplines of Internal Medicine.

The COMAT Exam in Internal Medicine will be taken after both IM1 and IM2 have been completed.

https://www.nbome.org/exams-assessments/comat/exam-series/comat-internal-medicine/

Please refer to section 1.7 Proctored End of Rotation Exams.

E. Required Textbooks


Andreoli and Carpenter’s Cecil Essentials of Medicine, 9th edition, 2016. Saunders*


F. Additional Resources


*available for free on Clinical Key through the WVSOM library

The American Academy of Dermatology (AAD) has excellent free resources available for study

- The comprehensive skin exam:
  
  https://www.aad.org/education/basic-derm-curriculum/suggested-order-of-modules/the-skin-exam

G. Didactics and Reading assignments

1. **Complete the DocCom Basic Modules and Questions for Reflections**

   To access the Doc.Com Cases visit: https://webcampus.drexelmed.edu/docom/db/read.aspxm students will log in using Email address and Password. Basic Modules include: 01 Overview, 02 Mindfulness and Reflection in Clinical Training and Practice, 03 Therapeutic Aspects of Medical Encounters, 04 Balance, Self-Care.

2. **Step-Up to Medicine**

   The foundation of your required study will be comprised of reviewing the material in *Step-Up to Medicine*.


   Go to the WVSOM library page at: https://www.wvsom.edu/library/databases-portals-eresources. In the gray box on the right of the screen you’ll find a heading that says “Search Library Catalog.” In the box underneath this type Step-up to
Step-up to medicine will be the first hit and will include a link to “LWW Health Library.” Click on that and you’ll be in the e-book.

Step-Up to Medicine is intended to provide the content needed to help you succeed in your internal medicine rotations, a means of self-assessment for preparation for the COMAT and COMLEX examinations, and a foundation for further study. Students are expected to expound on the information when needed by utilizing other texts and resources (see sections 2.3.E and 2.3.F). This resource provides an outline of the material essential to Internal Medicine, but provides a knowledge base that may be useful in other disciplines as well, such as Family Medicine, Emergency Medicine, and Surgery.

Subjects Covered:

- Diseases of the Cardiovascular System
- Diseases of the Pulmonary System
- Diseases of the Gastrointestinal System
- Endocrine and Metabolic Diseases
- Diseases of the Central and Peripheral Nervous System
- Connective Tissue and Joint Diseases
- Disease of the Renal and Genitourinary System
- Fluids, Electrolytes, and Acid-Base Disorders
- Hematologic Diseases and Neoplasms
- Infectious Diseases
- Diseases of the Skin and Hypersensitivity Disorders
- Ambulatory Medicine

Additionally, the student is expected to set time aside each day for reading about patient encounters, preceptor assigned reading, and commonly encountered conditions.

H. Additional Recommendations

*Cecil’s Essentials of Medicine* is a foundational textbook and should be in the personal library and heavily referred to by every medical student.

I. Grading/Calculations

*Internal Medicine I*

The grade will be determined based on an average of preceptor evaluations for the course as determined by the WVSOM Office of Assessment if IM1 precedes IM2. The online assignments must be completed or the grade will be recorded as an incomplete.
Completion of the Preceptor/Site/Course Evaluation should be done at the end of each rotation.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
Internal Medicine II

Course Number: 811 OLM

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

Studying the discipline of Internal Medicine provides the foundational knowledge to formulate a diagnostic and therapeutic plan for all adult medical patients.

The Internal Medicine core course is divided into two four-week rotations, which will address the care provided in the ambulatory and hospital settings. During these two four-week rotations it is important that you read and study the conditions that you see in each of the different settings. It is critically important that you integrate your knowledge of pathology, physiology, pharmacology, OPP, and other basic sciences as you note the patient presentation, signs, symptoms, and laboratory and imaging findings. This will allow you to develop a broad differential diagnosis and ultimately will lead you to a diagnosis and treatment plan. This analytical process will be the foundation for your evaluation and care of patients throughout your career.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge

   a. The student will be able to demonstrate understanding of patient presentation and pathophysiology of common presenting complaints seen in the adult patient, including disease of the following systems and subspecialties:
The student will demonstrate the ability to evaluate and develop a differential diagnosis for each of the following symptoms/conditions:

<table>
<thead>
<tr>
<th>Symptoms/Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest Pain</td>
</tr>
<tr>
<td>Syncope</td>
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<tr>
<td>Edema</td>
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<tr>
<td>Anemia</td>
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<tr>
<td>Fatigue</td>
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<tr>
<td>Headache</td>
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<tr>
<td>Cough</td>
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<tr>
<td>Shortness of Breath</td>
</tr>
<tr>
<td>Fever</td>
</tr>
<tr>
<td>Abdominal Pain</td>
</tr>
<tr>
<td>GI bleed</td>
</tr>
<tr>
<td>Constipation</td>
</tr>
<tr>
<td>Diarrhea</td>
</tr>
<tr>
<td>Dizziness</td>
</tr>
<tr>
<td>Back Pain</td>
</tr>
<tr>
<td>Joint Pain</td>
</tr>
<tr>
<td>Rash</td>
</tr>
</tbody>
</table>

The student will demonstrate an understanding of the basic principles and current recommendation for adult Immunizations based on ACIP or CDC guidelines. Age appropriate cancer screenings ex: Breast, Colon, Cervical, Prostate Screenings and their utilization of the USPSTF Database.

2. **Patient Care**

   a. Develop a differential diagnosis appropriate to the context of the patient care setting and findings.
   b. Develop an understanding of the altered physiology of the geriatric patient and aging process.

3. **Interpersonal and Communication Skills**

   a. Explain how patient concerns and perspectives including cultural and religious influences impact care
   b. Describe how to write the following:
• different types of medical notes
• SOAP notes
• admission history & physicals
• discharge summaries
• procedure notes

c. Describe the capabilities of electronic health records.
d. Explain how to share diagnostic plan of care, and prognostic information with patients and families.

4. **Professionalism**

   a. Summarize understanding and need for supervision, chaperones and/or assistance.
   b. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.
   c. Explain commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations.
   d. Recognize that all patients in emergency situations shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. **Practice-Based Learning and Improvement**

   a. Apply fundamental epidemiologic concepts.
   b. Detail medical informatics, evidence-based medicine, and research.
   c. Identify personal knowledge deficits, strengths, and limits through frequent self-reflection.
   d. Explore the ability to locate educational resources and strengthen personal medical knowledge.
   e. Explain quality improvement.

6. **System-Based Practice**

   a. Be aware of medication and treatment costs (direct patient costs/insurance coverage) and the impact of these factors on the physician’s treatment plan.
   b. Demonstrate understanding of HIPAA regulations and its impact on the communication of patient care information for patients.
   c. Recognize the need to improve your knowledge base, develop and deliver case presentations and demonstrate these skills by utilizing the local electronic medical record, on line resources and local patient instruction protocols to provide patient instructions.
   d. Understand the training and certification pathways of sub specialties.
e. Demonstrate an understanding of when it is appropriate to refer to specialists.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**

   a. Identify common and preferred pain patterns.
   b. Identify key history and physical examination findings pertinent to the working diagnosis and the differential diagnosis.
   c. Use appropriate information resources to determine diagnostic evaluations for patients with common and uncommon medical problems.
   d. Describe how critical pathways or practice guidelines can be useful in sequencing diagnostic evaluations for the patient.
   e. Formulate a differential diagnosis based on findings from the history and physical examination of the patient.
   f. Prioritize diagnostic tests and treatment (including OMT) based on sensitivity, specificity, and cost-effectiveness.
   g. Apply the 4 tenets of osteopathic medicine to patient care.

C. **Study Plan**

   1. **Universal Notes Adult Medicine Inpatient Practice exams**

      Go to [https://myuniversalnotes.com](https://myuniversalnotes.com). Login using your WVSOM email and password. Click on the Q in the left hand navigation bar. Then click start a quiz. Then select Clinical for the “Questions by tag.” Then click on the “Clinical Tags” box. Then put a check in the Internal Medicine box. You will then select the number of questions. You will be responsible for completing two 50 question quizzes per 4 week rotation.

      Satisfactory course completion requires this monitored assignment to be finished prior to the end of the block.

   2. **Universal Notes: Study Plan for Internal Medicine**

      Go to [https://myuniversalnotes.com](https://myuniversalnotes.com). Login using your WVSOM email and password. Then you can use this URL: [https://web.myuniversalnotes.com/bibliography/view/3063](https://web.myuniversalnotes.com/bibliography/view/3063), or click on “2 Study Plans & Board Prep, then “Study Plans CLERKSHIPS, COMAT, NBME,” then “Study Plan for Internal Medicine.” Click on and complete the modules in the following sections.

      - Gastrointestinal
      - Hematology
For each topic you will complete the competencies including: “Read It”, “Test It”, and “Answer It”. You will not be expected to complete the “Log It,” “Upload It,” or “Assess It” competencies.

Satisfactory course completion requires this monitored assignment to be finished prior to the end of the block.

D. COMAT Blueprint

Review the NBOME web site on the COMAT Blueprint for Internal Medicine. This will provide a general roadmap for your studies. However, still take the time to read about your patient encounters and any additional material that your preceptor suggests.

As you can see, similar to the specialty itself, the COMAT content is broad and fairly evenly distributed across the ten disciplines of Internal Medicine.

The COMAT Exam will be administered at the end of IM2 (8 total weeks of IM in the third year)

https://www.nbome.org/exams-assessments/comat/exam-series/comat-internal-medicine/

Please refer to section 1.7 Proctored End of Rotation Exams.

E. Required Textbooks


Andreoli and Carpenter’s Cecil Essentials of Medicine, 9th edition, 2016. Saunders*


F. Additional Resources


*available for free on Clinical Key through the WVSOM library

The American Academy of Dermatology (AAD) has excellent free resources available for study

- The comprehensive skin exam:

  [https://www.aad.org/education/basic-derm-curriculum/suggested-order-of-modules/the-skin-exam](https://www.aad.org/education/basic-derm-curriculum/suggested-order-of-modules/the-skin-exam)

G. Didactics and Reading assignments

1. **Complete the DocCom Essential Modules 5-8 and Questions for Reflections**

   To access the Doc.Com Cases visit: [https://webcampus.drexelmed.edu/doccom/db/read.aspxm](https://webcampus.drexelmed.edu/doccom/db/read.aspxm) students will log in using Email address and Password. Basic Modules include: 05 Integrated Patient-centered and Clinician-centered Interviewing- Structure and Content of the Interview, 06 Build a Relationship, 07 Open the Discussion, and 08 Gather Information.

2. **Step-Up to Medicine**

   The foundation of your required study will be comprised of reviewing the material in **Step-Up to Medicine**.


   Go to the WVSOM library page at: [https://www.wvsom.edu/library/databases-portals-eresources](https://www.wvsom.edu/library/databases-portals-eresources). In the gray box on the right of the screen you’ll find a heading that says “Search Library Catalog.” In the box underneath this type Step-up to
Medicine. Step up to medicine will be the first hit and will include a link to “LWW Health Library.” Click on that and you’ll be in the e-book.

Step-Up to Medicine is intended to provide the content needed to help you succeed in your internal medicine rotations, a means of self-assessment for preparation for the COMAT and COMLEX examinations, and a foundation for further study. Students are expected to expound on the information when needed by utilizing other texts and resources (see sections 2.3.E and 2.3.F). This resource provides an outline of the material essential to Internal Medicine, but provides a knowledge base that may be useful in other disciplines as well, such as Family Medicine, Emergency Medicine, and Surgery.

Subjects Covered:

- Diseases of the Cardiovascular System
- Diseases of the Pulmonary System
- Diseases of the Gastrointestinal System
- Endocrine and Metabolic Diseases
- Diseases of the Central and Peripheral Nervous System
- Connective Tissue and Joint Diseases
- Disease of the Renal and Genitourinary System
- Fluids, Electrolytes, and Acid-Base Disorders
- Hematologic Diseases and Neoplasms
- Infectious Diseases
- Diseases of the Skin and Hypersensitivity Disorders
- Ambulatory Medicine

Additionally, the student is expected to set time aside each day for reading about patient encounters, preceptor assigned reading, and commonly encountered conditions.

H. Additional Recommendations

*Cecil’s Essentials of Medicine* is a foundational textbook and should be in the personal library and heavily referred to by every medical student.

I. Grading/Calculations

*Internal Medicine II*

The grade will consist of 65% an average of preceptor evaluations for the course as determined by the WVSOM Office of Assessment and 35% COMAT score. The online assignments must be completed or the grade will be recorded as an incomplete.
Completion of the Preceptor/Site/Course Evaluation should be done at the end of each rotation.

Note that you will need a score of 80 or greater on the IM 2 COMAT end of rotation exam to pass the Internal Medicine rotation/course. Should you score less than a standard score of 80, you will have failed the examination and will be evaluated as per grading policy E-17 to assess for eligibility to retest.

If the retest is passed with a standard score of at least 80, a 70 will be recorded as the final IM 2 rotation course grade.

If the retest COMAT score is below a standard score of at least 80, this will be recorded as an IM 2 rotation course failure and your file will be remanded to the Student Promotions Committee for review. The committee will make recommendations to the Associate Dean for Predoctoral Clinical Education to repeat the course or other sanctions up to and including dismissal. Please see Institutional Policy: E-17.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
Pediatrics I
Course Number: 815 OLM

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

Pediatrics I is the first formal introduction to pediatrics in which students learn about the care of infants, children and adolescents. Children are not “little adults”, as they have unique physiology as they develop, along with a multitude of age specific diseases and conditions.

Pediatrics encompasses preventative and medical care, which includes evaluation of developmental, emotional, and social well-being. Students must learn developmental milestones and become proficient at obtaining psychosocial and developmental histories and performing physical examinations.

In addition, pediatrics provides an introduction to the medical profession to the young patient and can set the tone for future interactions with the healthcare system. Pediatrics is often one of the most fun and rewarding rotations of the third year.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   a. Acquire knowledge of normal growth and development, and apply this to a clinical scenario, from birth through adolescence for health supervision and disease prevention.
b. Acquire knowledge needed for the diagnosis and initial management of acute and chronic illnesses of infancy and childhood including common pediatric emergencies.

c. Acquire knowledge needed for the diagnosis and initial management of congenital problems and genetic diseases of infancy and childhood.

d. Develop the knowledge, skills, and strategies necessary for health supervision including knowledge of medications, immunizations, and age appropriate anticipatory guidance for nutrition, developmental/behavioral counseling, and injury prevention including pharmacology.

e. Select, justify, and interpret clinical tests and imaging with regard to both patient age and pathological processes, including concepts regarding negative and positive predictive value, test sensitivity specifically and cost utilization.

f. Create a list based on the presentation and on physical findings of differential diagnoses for common pediatric disorders and prioritize based on findings and probability. Consider a work-up and treatment plan based on the above.

2. Patient Care
   a. Explain interview and physical examination skills required to conduct interviews with children or adolescents and their families and understand age appropriate physical examinations and osteopathic structural examinations.
   
b. Explain how to educate patients and/or caregivers and evaluate their comprehension of the diagnosis and treatment plan, including conveying clinical condition and obtaining informed consent prior to procedures.
   
c. Discuss how to educate patients and/or caregivers in both well child and a sick child.
   
d. Describe how to accurately convey patient issues and needs when transitioning the patient to other members of the healthcare team, families, and parents.

3. Interpersonal and Communication Skills
   a. Summarize how to effectively communicate with pediatric patients, their caregivers, and the healthcare team.
   
b. Explain how parental and patient concerns and perspectives including cultural and religious influences impact care
   
c. Describe how to write the following:
      - different types of medical notes
      - SOAP notes
      - newborn nursery admission notes
      - admission history & physicals
      - discharge summaries
      - procedure notes
   
d. Describe the capabilities of electronic health records.
   
e. Explain how to share diagnostic plan of care, and prognostic information with patients and families.
4. **Professionalism**
   a. Summarize understanding and need for supervision, chaperones and/or assistance.
   b. Detail an understanding of privacy and independence of adolescents and of the private individual interview of an adolescent during the interview process.
   c. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.
   d. Explain commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations.
   e. Recognize that all patients in emergency situations shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. **Practice-Based Learning and Improvement**
   a. Apply fundamental epidemiologic concepts.
   b. Detail medical informatics, evidence-based medicine, and research.
   c. Identify personal knowledge deficits, strengths, and limits through frequent self-reflection.
   d. Explore the ability to locate educational resources and strengthen personal medical knowledge.
   e. Explain quality improvement.
   f. Apply guidelines to age-appropriate clinical management.
   g. Recognize disparities in clinical research, access, and delivery of health care to younger populations and how these affect the health of the pediatric population.

6. **Systems-Based Practice**
   a. Recognize quality patient care systems and how they may affect the larger health care systems.
   b. Discuss the cost and risk-benefit analysis in patient and/or populations-based care in different delivery systems and settings.
   c. Identify available resources providing specialty care required for specific preventative screening and social situations. For example:
      - Parental and child developmental assistance programs
      - Foster care and adoption
      - Abuse, neglect and domestic violence
      - Hospice
      - Programs for special medical needs
   d. Describe reporting requirements for infectious diseases or psychosocial issues, such as child abuse or suicide.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
   The Four Tenets of Osteopathic Medicine: 1) The body is a unit; 2) Structure and function are interdependent; 3) The body has self-healing and self-regulatory
capabilities; 4) Rational osteopathic care relies on the integration of these tenets in patients care.

Pediatrics provides an opportunity to experience the application of osteopathic principles utilizing diagnostic and treatment skills that focus on both the visceral and somatic functions of the body as they relate to disease processes and the patient’s growth and development. Pediatrics is heavily dependent upon the basics of prevention and anticipatory guidance.

C. Study Guide & Practice Exams

The core foundational study program for the Pediatrics rotation is Universal Notes (www.myuniversalnotes.com). Do your best to cover as much of the program as you can. More in-depth readings can be accessed using the reference texts, especially Nelson’s Essentials.

1. Log in/create an account to Universal Notes (www.myuniversalnotes.com)
2. Click on Chapter 2 "Study Plans"
3. Find Pediatrics and click on it

There are two Pediatrics Study Plans available in Universal Notes:
• Study Plan Pediatrics: Comprehensive
• Study Plan Pediatrics: Inpatient

These can be found in Chapter 2 of the on-line curriculum. The specific topics required for study will vary depending on the service to which you are assigned. Your preceptor can help guide you to specific in-depth readings, especially Nelson’s Essentials of Pediatrics.

Practice Exams
Students should complete the following practice exams in Universal Notes for Pediatrics I:

• Practice Exam: Pediatrics Outpatient 1
• Practice Exam: Pediatrics Outpatient 2
• Practice Exam: Pediatrics Outpatient 3
• Practice Exam: Pediatrics Outpatient 4

The Practice Exams can be accessed through the Quiz Bank in Universal Notes by selecting TOPIC and then typing in the name of the practice exam as shown above.

Students are required to complete each of the five practice exams and score 70% or greater on each of them in order to pass the rotation. Students must retake each exam until the passing score is achieved.

D. COMAT Exam
Take the time to review the NBOME website in regards to the Pediatric COMAT exam.

https://www.nbome.org/exams-assessments/comat/exam-series/comat-pediatrics/

Note that up to 70% of the exam may be focused on:

- Cardiovascular and Respiratory
- CNS, Behavior/Psychiatry
- Gastrointestinal
- Hematology/Oncology/Lymphatic
- Normal Growth and Development

Pretest/Posttest

Please refer to section 1.7 Proctored End of Rotation Exams.

E. Required Textbooks

- *Pediatrics: A Competency-Based Companion*

F. Additional Resources

- *Bright Futures*, 4th edition
- *Harriet Lane Handbook*, 22nd edition
- UpToDate (www.uptodate.com)

G. Didactic and Reading Assignments

**Universal Notes (www.myuniversalnotes.com)**

The free online resource, **Universal Notes**, offers for each clerkship:

- Study plan
- Study material
- Question bank

Steps to get started with Universal Notes and the Study Plan:
1. Go to www.myuniversalnotes.com
2. Click SIGN UP
3. Complete SIGN UP and choose Medical Student for version
4. Sign in to Medical Student version using the information (email and password) you used for SIGN UP
5. Click on Study Plan for Pediatrics Clerkship

If you have any questions or problems with accessing or using Universal Notes, please contact: senioreditor@myuniversalnotes.com

The list of topics for the Pediatrics Study Plan is found below. Students should focus their reading on weekdays for topics that involve the common patient conditions, and reserve weekend reading for conditions that are unlikely to be encountered. At a minimum, students should try to get through 15 topics each weekday and 20 on each weekend day in order to cover the essential material.

Universal Notes Pediatrics Study Outline

Introduction

The Pediatrics Study Plan contains topics that are considered the highest yield for understanding pediatrics and performing well on the COMAT examination.

Students who complete the entire study outline routinely score 99th percentile on their COMAT exams.

Proposed Study Plan:

- **WEEK 1: NORMAL GROWTH & DEVELOPMENT**
  - Overview and Assessment of Variability
  - The Newborn
  - The First Year
  - The Second Year
  - The Preschool Years
  - Middle Childhood
  - Adolescence
  - Assessment of Growth
  - Developmental-Behavioral Screening & Surveillance
  - Assessment & Interviewing
Pediatric Pharmacokinetics
- Principles of Drug Therapy
- The Oral Cavity
- Immunization Practices

**WEEK 2 – CARDIOLOGY/RESPIRATORY/GYN**
- Evaluation of the Cardiovascular System
- Laboratory Evaluation
- Congenital Heart Disease
- Cardiac Arrhythmias
- Cardiac Therapeutics
- Diseases of the Peripheral Vascular System
- Respiratory System – Development & Function
- Disorders of the Respiratory Tract
- Gynecology

**WEEK 3 – CNS/BEHAVIORAL & PSYCHIATRIC DISORDERS/ALLERGY**
- Behavioral & Psychiatric Disorders
- Nervous System
- Nutrition
- Allergic Disorders
- Skin

**WEEK 4 – MISC.**
- Bone & Joint Disorders
- Endocrine
- GI
- GU
- Hematology
- Oncology
- HEENT Infections

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**Essential Pediatric Topics to Read in Universal Notes Study Plan**

**History Taking**
- History Taking in Newborns
- History Taking in Infants and Children
- History Taking in Adolescents (Preparticipation Sports History)

**Physical Exam**
- Physical Exam of the Newborn
- Physical Exam of the Infant
- Physical Exam of the Adolescent (Preparticipation Sports Physical)
- Health Maintenance: Birth - 12 Months
- Health Maintenance: 15 months - 5 Years
- Health Maintenance: 6 -18 Years
- Dental Care (Teeth Hygiene, Teething)
Growth and Development
- Developmental Milestones: Birth
- Developmental Milestones: 1 - 6 Months
- Developmental Milestones: 9 - 12 Months
- Developmental Milestones: 15 Months to 5 Years
- Developmental Milestones: 6-10 Years
- Developmental Milestones: 11-12 Years
- Developmental Milestones: 13-18 Years
- Tanner Stages (Puberty and Pubertal Development)
- Stranger Anxiety Disorder
- Sleep or Night Terror Disorder, Nightmares

Immunizations (Vaccines)
- Introduction to Immunizations
- Immunization Schedule
- Special Immunization Considerations
- Influenza Vaccine

Breast Feeding and Breast Milk
- Breast Feeding Benefits and Education
- Breast Milk Composition and Supplementation
- Breast Feeding Complications and Contraindications

Failure to Thrive

Malnutrition and BMI

Obesity

Prematurity and Nutrition

Vitamin Abnormalities
- Vitamin D Deficiency
- Vitamin K Deficiency (Hemorrhagic Disease of Newborn)

Overview of Pediatric Heart Disease

Fetal Circulation

Murmurs

Early cyanotic heart diseases
- Hypoplastic Left Heart Syndrome
• Tetralogy of Fallot
• Total Anomalous Pulmonary Venous Connection
• Transposition of the Great Vessels
• Truncus Arteriosus

Acyanotic Heart Disease and Structural Abnormalities
• Atrial Septal defect
• Coarctation of Aorta
• Patent Ductus Arteriosus
• Ventricular Septal Defect

Valvular Disorders
• Aortic Stenosis
• Mitral Stenosis

Miscellaneous Conditions
• Cardiomyopathy (Hypertrophic Obstructive Cardiomyopathy)
• Kawasaki Disease (Mucocutaneous Lymph Node Syndrome)
• Patent Foramen Ovale (PFO)
• Rheumatic Heart Disease (Rheumatic Fever)

Skin Conditions in Newborns
• Acne Neonatorum
• Erythema Toxicum Neonatorum

Skin Conditions of Infants and Children
• Acne vulgaris
• Eczema (Atopic Dermatitis, Dyshidrotic Eczema, Nummular Eczema)
• Diaper Rash (Diaper Dermatitis)
• Hemangioma
• Mongolian Spots (Congenital Dermal Melanocytosis)
• Seborrheic Dermatitis (Dandruff, Cradle Cap)
• Viral Exanthems and Enanthems

Infections Conditions of the Skin
• Cellulitis
• Impetigo
• Molluscum Contagiosum
• Staphylococcal Scalded Skin Syndrome (SSSS, Ritter Disease)
• Toxic Shock Syndrome
• Warts (Verrucae)

Other Conditions
• Contact Dermatitis (Allergic, Irritant)
• Drug Allergies (Drug Reactions) and Drug Fever
• Erythema Multiforme
• Pityriasis Rosea
• Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis
• Urticaria (Wheals, Hives)

Conditions of the Lips, Mouth, Parotid, Teeth, and Tongue
• Ankyloglossia (Tongue-Tied)
• Aphthous Ulcer (Aphthous Stomatitis, Canker Sore)
• Dental Caries (Cavities), Periapical Abscess, Periodontal Abscess, Pulpitis
• Cleft Palate and Lip (Orofacial Cleft)
• Teeth Abnormalities (Natal Teeth, Fluorosis, Trauma)

Conditions of the Ear
• Foreign Body in Ear Including Cerumen Impaction
• Mastoiditis
• Otitis externa
• Otitis Media and Perforated Tympanic Membrane

Conditions of the Neck
• Branchial Cleft Cyst (Branchial Sinus)
• Neck Masses
• Thyroglossal Duct Cyst
• Torticollis

Conditions of the Nose and Sinuses
• Allergic rhinitis (Hay Fever)
• Epistaxis (Nose Bleed)
• Foreign body: Nose
• Sinusitis

Conditions of the Throat (Larynx, Pharynx)
• Epiglottitis
• Laryngotracheobronchitis (Croup)
• Pharyngitis
• Retropharyngeal Abscess
• Tonsillitis and Peritonsillar Abscess

Conditions of Growth and Development
• Precocious Puberty
• Short Stature

Conditions of the Pancreas
• Diabetes Mellitus (DM)
• Diabetic Ketoacidosis (DKA)
• Infant of Diabetic Mother
Conditions of the Thyroid
- Congenital Hypothyroidism (Cretinism)
- Hyperthyroidism (Grave's Disease)
- Hypothyroidism

Gastrointestinal Conditions of Neonates
- Diaphragmatic Hernia
- Esophageal and Duodenal Atresia
- Gastrochisis
- Hirschsprung Disease (Congenital Aganglionic Megacolon)
- Jaundice in Neonates (Direct Hyperbilirubinemia, including Dubin-Johnson and Rotor Syndromes)
- Jaundice in Neonates (Indirect Hyperbilirubinemia, Kernicterus, including Gilbert-Syndrome)
- Meconium Ileus and Meconium Plug
- Necrotizing Enterocolitis (NEC)
- Omphalocele
- Tracheoesophageal Fistula

Conditions of Infants and Children
- Celiac Disease (Celiac sprue, Gluten-sensitive enteropathy)
- Constipation and Fecal Impaction
- Foreign Body Ingestion
- Fussy Infant (Colic)
- Intussusception
- Malrotation of the Midgut with Volvulus
- Meckel Diverticulum
- Mesenteric Lymphadenitis
- Pyloric Stenosis

Biochemical Disorders
- Galactosemia
- Glucose-6-Phosphate Dehydrogenase Deficiency (G6PD)
- Phenylketonuria (PKU)

Genetic Abnormalities
- Angelman Syndrome
- Cystic Fibrosis (CF)
- DiGeorge Syndrome (Velocardiofacial Syndrome, Thymic Aplasia)
- Fetal Alcohol Syndrome (FAS)
- Fragile X Syndrome
- Kallman Syndrome
- Klinefelter Syndrome
- Marfan Syndrome
- Noonan Syndrome
- Osteogenesis Imperfecta
- Potter Syndrome (Sequence)
- Prader-Willi Syndrome
- Sickle Cell Trait
- Tuberous Sclerosis
- Turner Syndrome (45 XO)
- Wiskott-Aldrich Syndrome
- Xeroderma Pigmentosum

**Trisomies**
- Trisomy 13 (Patau Syndrome)
- Trisomy 18 (Edwards Syndrome)
- Trisomy 21 (Down Syndrome)

**Genitourinary Disorders**
- Cryptorchidism (Undescended Testes)
- Epididymitis and Orchitis
- Hydrocele
- Hypospadias and Epispadias
- Posterior Urethral Valves
- Testicular Torsion
- Ureteropelvic Junction Obstruction
- Urinary Tract Infection (Cystitis)
- Varicocele
- Vesicoureteral Reflux

**Anemias and Associated Disorders**
- Overview of Anemia
- Anemia in Newborns, Infants, and Children
- Overview of Hemolytic Anemias
- Iron Deficiency Anemia
- Sickle Cell Disease (Sickle Cell Anemia)
- Thalassemia
- Transient Erythroblastopenia of Childhood (TEC)

**Bleeding Disorders**
- Factor VIII Deficiency (Hemophilia A)
- Factor IX Deficiency (Hemophilia B, Christmas Disease)
- Immune Thrombocytopenia (ITP)
- von Willebrand's Disease

**Henoch Schönlein Purpura**

**Hereditary spherocytosis**
Splenic Injury (Spleen Trauma)

Immune Disorders
- Selective IgA Deficiency
- Severe Combined Immunodeficiency (SCID)

Infectious Agents and Conditions
- Bacteremia, SIRS, Sepsis
- Bacteria
  - Bordetella pertussis
  - Borrelia burgdorferi
  - Chlamydia trachomatis
  - Clostridium difficile
  - Escherichia coli
  - Haemophilus influenzae
  - Mycobacterium tuberculosis
  - Mycoplasma pneumoniae
  - Neisseria gonorrhoeae
  - Neisseria meningitidis
  - Pasteurella multocida
  - Staphylococcus aureus
  - Streptococcus agalactiae
  - Streptococcus pneumoniae
  - Streptococcus pyogenes
- Fungi
  - Candida species (Candidiasis, Thrush, Onychomycosis)
  - Pityriasis versicolor (Tinea versicolor, Malassezia furfur)
  - Tinea species
- Parasites and Protozoa
  - Enterobius vermicularis (pinworm)
  - Pediculus humanus (Lice)
  - Sarcoptes scabiei (Scabies)
- Viruses
  - Congenital Cytomegalovirus (CMV)
  - Congenital Herpes Simplex Virus
  - Congenital Rubella
  - Congenital Syphilis
  - Congenital Toxoplasmosis
  - Overview of Enteroviruses
    - Coxsackieviruses A and B (Hand, Foot, and Mouth)
    - Echovirus
    - Poliovirus
- Epstein Barr Virus (mononucleosis)
- Hepatitis A
- Hepatitis B
- Hepatitis C
- Herpes Simplex Virus 1, 2
- Human Herpes Viruses 6, 7 (Roseola, Exanthem Subitum)
- Human Papillomavirus (HPV, Condyloma Acuminata, Anogenital Warts)
- Influenza
- Measles
- Mumps
- Parainfluenza
- Parvovirus B19 (Erythema infectiosum, Fifth disease)
- Respiratory syncytial virus
- Rhinovirus
- Rotavirus
- Rubella Virus (German measles)
- Varicella-Zoster Virus (Chicken Pox, Shingles)
- Yellow fever

**Musculoskeletal and Rheumatology**
- Club foot (Talipes Equinovarus)
- Costochondritis (Tietze Syndrome)
- Developmental Dysplasia of Hip
- Legg Calve Perthes disease (Avascular Necrosis of Proximal Femur)
- Muscular Dystrophy (Becker, Duchenne)
- Osgood Schlatter Disease
- Radial head subluxation (Nursemaid elbow)
- Rickets
- Scoliosis
- Slipped capital femoral epiphysis (SCFE)
- Torticollis

**Nervous System Conditions of Neonates**
- Arnold-Chiari Malformation
- Dandy-Walker Malformation
- Intraventricular Hemorrhage (Germinal Matrix Hemorrhage, IVH)
- Neural Tube Defects (Anencephaly, Spina Bifida, Meningocele, Meningomyelocele, Rachischisis)

**Nervous System Conditions of Infants and Children**
- Cerebral Palsy
- Concussion (Mild Traumatic Brain Injury, MTBI)
- Encephalitis
- Epidural Hematoma (Extradural Hemorrhage)
- Headaches in Children
• Hydrocephalus in Infants and Children
• Meningitis
• Seizures in Children (Status Epilepticus, Epilepsy)
• Subdural hematoma
• Syncope

Oncology
• Ewing Sarcoma
• Leukemia (ALL, AML, CLL, CML, Hairy Cell)
• Lymphoma (Hodgkin, Non-Hodgkin)
• Introduction to Brain and Nervous System Tumors
• Nephroblastoma (Wilms tumor)
• Neuroblastoma
• Osteosarcoma
• Retinoblastoma

Ophthalmology
• Conjunctivitis
• Corneal Abrasion and Ulcer
• Ophthalmia Neonatorum (Neonatal Conjunctivitis)
• Periorbital and Orbital Cellulitis
• Retinopathy of Prematurity (ROP)
• Strabismus/Esotropia/Exotropia

Psychiatry and Behavioral Medicine
• Anxiety Disorders
  o Introduction to Anxiety Disorders
  o Separation Anxiety Disorder
  o Panic Disorder
  o Agoraphobia
  o Generalized Anxiety Disorder
  o Substance-Induced Anxiety Disorder
  o Cognitive and Behavioral Therapies for Anxiety
• Attention Deficit Hyperactivity Disorder (ADHD)
• Autism spectrum disorder
• Conduct disorder
• Mood Disorders
  o Bipolar Disorder (Bipolar I and Bipolar II)
  o Depressive Disorders
• Eating Disorders
  o Anorexia Nervosa
  o Bulimia Nervosa
• Elimination disorders
  o Encopresis
  o Enuresis
• Intermittent Explosive Disorder
• Oppositional Defiant Disorder
• Suicide

Renal, Electrolyte, and Acid-Base Disorders
• Fluid and Electrolyte Management
  o Dehydration
  o Intravenous and Intraosseous Fluids (Lactated Ringers, Normal Saline)
• Overview of Glomerular Disease
  o Minimal Change Disease
  o Postinfectious Glomerulonephritis
• Proteinuria
• Pyelonephritis

Reproductive, Obstetrical, and Gynecological
• Amenorrhea
• Imperforate Hymen
• Labial Adhesion
• Ovarian Cyst
• Ovarian Torsion
• Pelvic Inflammatory Disease (Endometritis)
• Pregnancy

Respiratory
• Anaphylaxis
• Apnea, Apnea of Prematurity, and Periodic Breathing
• Asthma in Children
• Breath-Holding Spell (Temper-Tantrums)
• Bronchiolitis
• Foreign body Aspiration
• Neonatal Respiratory Distress Syndrome (Hyaline Membrane Disease)
• Pneumonia
• Sudden Infant Death Syndrome (SIDS)
• Transient Tachypnea of Newborn (TTN)

Abuse Disorders
• Introduction to Substance-Related and Addictive Disorders
• Alcohol Use Disorder
• Cannabis Use Disorder
• Cocaine
• Inhalant Abuse (Hydrocarbons)
• Lysergic Acid Diethylamide (LSD)
• Neonatal Abstinence Syndrome (NAS, Neonatal Withdrawal)
• Opioid Use Disorder
• Stimulant Use Disorder
• Phencyclidine (PCP) Abuse

**Overdose**
• Acetaminophen Toxicity
• Aspirin Overdose
• Iron Toxicity

**Environmental Injuries**
• Bites (Cats, Dogs, Humans, Rodents, Spiders)
• Burns
• Child Abuse and Neglect
• Gunshot Wounds (Firearms)
• Heat Related Illness (Non-Febrile Hyperthermia, Heat Stroke)
• Shaken Baby Syndrome (Abusive Head Trauma)
• Snake Bites
• Ticks (Tick Bites)

**Toxins**
• Carbon Monoxide Toxicity
• Caustic Ingestion (Acids and Alkalis)
• Lead Toxicity
• Organophosphate Toxicity

**H. Additional Recommendations**

DocCom Cases
Communicating in Specific Situations # 21: Communication and Relationships with Children and Parents

Communicating in Specific Situations #22: The Adolescent Interview

**Complete the Discussion Questions.** To access the Doc.Com Cases visit: [http://webcampus.drexelmed.edu/doccom/user/](http://webcampus.drexelmed.edu/doccom/user/) you will log in using your Email address and Password.

**I. Medical Documentation**

Reference guides for documentation pertaining to pediatrics are below.

**History and Physical Exam for a Newborn should contain:**
• Maternal history
• Family history
• Prenatal history
• Labor and delivery history
• Newborn exam
• Relevant labs and diagnostics from mother and newborn
• Assessment and Plan for newborn
• Anticipatory guidance for discharge including
  o Bathing
  o Breast feeding/Formula feeding
  o Circumcision
  o Exposure to crowds
  o Fever
  o Umbilical cord care

History and Physical Exam for the infant, child, and adolescent should contain:

• Chief complaint
• History of Present Illness
• Past Medical History including hospitalizations with relevant dates
• Birth History
• Past Surgical History
• Medications
• Allergies and reactions
• Family history
• Immunizations
• Dietary history
• Social history
• Review of Symptoms
• Physical Exam
• Relevant Labs and Diagnostics
• Assessment and Plan

The progress notes should contain:

• Chief complaint
• History of Present Illness
• Relevant PMH
• Relevant PSH
• Relevant ROS
• Current medications
• Physical Exam
• Relevant Labs and Diagnostics
• Assessment and Plan
J. Grading/Calculations

For an interrupted rotation block, the grade will consist of 65% preceptor and 35% COMAT if applicable. The online assignments must be completed or the grade will be recorded as an incomplete.

If the course is done online, the COMAT will still represent 35% and the average grade given by preceptors for that discipline as determined by the WVSOM Office of Assessment will be used for the other 65% of the grade if the online assignments are completed.

- Completion of the Preceptor/Site/Course Evaluation should be done at the end of the rotation.

- Note that you will have a standard score of 80 or greater on the COMAT end of rotation exam to pass the Pediatrics I rotation/course. Should you score less than a standard score of 80, you will have failed the examination and will be evaluated as per grading policy E-17 to assess for eligibility to retest.

- If the retest is passed with a standard score of at least 80, a 70 will be recorded as the final rotation course grade.

- If the retest COMAT score is below standard score of at least 80, this will be recorded as a rotation course failure and your file will be remanded to the Student Promotions Committee for review. The committee will make recommendations to the Associate Dean for Predoctoral Clinical Education to repeat the course or other sanctions up to and including dismissal. Please see Institutional Policy: E-17.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email,
then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade Form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other

A. Introduction

No matter which field of medicine you pursue, it is important to understand how a patient’s behavioral health affects their general well-being. This rotation will expose you to the complexities of psychiatric diagnoses and psychopharmacology.

Psychiatric diagnoses can be complex, as often longitudinal interviewing is necessary to form an accurate assessment. Many patients have two or three concurrent diagnoses, such as anxiety and depression. The situation can be further complicated by issues such as substance use disorders and social instability. Past students have recommended the benefit of learning about psychotropic medications. This study should include mechanisms of action, drug-drug interactions and common side effects. Many of your medical standardized examinations will emphasize these topics.

We will approach each person individually, utilizing the biopsychosocial model, to come up with diagnoses and treatment plans.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   a. Understand the medical and organic etiology causing or contributing to psychiatric symptoms.
b. Understand psychiatric psychopharmacology to include side effects and interactions.
c. Understand the most recent DSM (Diagnostic and Statistical Manual of Mental Disorders).
d. Understand the symptoms and signs of psychiatric disorders.

2. **Patient Care**
   
a. Explain interviewing skills and how to perform and present a complete psychiatric evaluation (to include differential diagnosis, rationale and treatment plan).
b. Summarize how to complete a suicide assessment.
c. Explain how to perform a relevant physical evaluation (e.g., AIMS test, musculoskeletal, tremors, substance abuse).
d. Be able to educate the patient and support system about the proposed diagnosis, treatment plan, and therapeutic options.
e. Understand how to assess patient’s barriers to treatment and response to therapeutic interventions.
f. Discuss how to identify and manage psychiatric emergencies.
g. Understand the biopsychosocial model of diagnostic formulation.

3. **Interpersonal and Communication Skills**
   
a. Summarize how to effectively communicate with a culturally diverse patient population with consideration of demographic and mental status variabilities.
b. Describe how to receive and provide appropriate information with the patient’s support system.
c. Understand how to effectively collaborate with immediate team members (nursing, administration, case managers, therapists, etc.) and external community resource teams.
d. Describe how to appropriately document interactions and treatment plans in a manner that supports the diagnosis and provides continuity of care.

4. **Professionalism**
   
a. Understand the importance of empathy, respect and cultural sensitivity toward others.
b. Understand the qualities needed to lead a therapeutic team.
c. Understand how your mannerisms, appearance and behaviors affect therapeutic interactions.
d. Understand the role of confidentiality and ethical behavior in the practice of psychiatry.
e. Understand the common causes of malpractice and disciplinary proceedings in the field of psychiatry.
f. Understand the different settings where psychiatrists and other mental health workers might practice (forensic, hospitals, private practice, community mental health, etc.)

5. **Practice-Based Learning and Improvement**
6. **Systems-Based Practice**
   a. Understand how your anticipated specialty of medicine interrelates with other health care practitioners, organizations and the community to promote psychiatric wellbeing.
   b. Develop an understanding of financial considerations for allocating psychiatric resources.
   c. Understand barriers for patient access to psychiatric services (social, logistical, financial, etc.).
   d. Understand how electronic medical records can impact psychiatric services.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
   a. Recognize how homeostatic imbalance can impact psychiatric symptoms.
   b. Understand the impact of underlying and coexisting organic illnesses on psychiatric symptoms.
   c. Understand how somatic and structural changes can influence psychiatric symptoms.

**C. Study Plan**

In general, the best approach to studying psychiatry medicine is to use multiple sources. For Psychiatry, the foundational required reading and study guide will be Kaplan and Sadock. In addition, First Aid for Psychiatry Clerkship is an excellent overall summary of fundamental concepts. First Aid should be used more as an overall outline, with more in-depth study with Kaplan.

Additionally, there are neuropsychiatric interactive cases: OnlineMedEd: Students will review and complete 14 neuropsychiatric cases. These can be accessed at [https://onlinemeded.org/spa/cases](https://onlinemeded.org/spa/cases) using your WVSOM credentials.

**D. COMAT Exam**

Take the time to review the NBOME web site on the COMAT exam. In addition
Note that up to 78% of the exam focuses on the following concepts:

- Adjustment Disorders
- Anxiety Disorders/Trauma-Related Disorders/Obsessive Compulsive Disorders
- Mood Disorders
- Neurocognitive Disorders
- Neurodevelopmental Disorders

The student is advised to review the specific learner-centered objectives for Psychiatry, review and self-assess knowledge on the topics listed under the subheadings in this section, and address any knowledge gaps through additional readings as the student progresses through the online module. The subheadings are:

- Common Psychiatric Conditions
- Health Promotion/Disease Prevention, Health Care Delivery
- History and Physical Examination
- Management
- Scientific Understanding of Health and Disease Mechanisms.

Pretest/Posttest

Please refer to section 1.7 Proctored End of Rotation Exams.

E. Required Textbooks

*First Aid for the Psychiatry clerkship, 5th edition:*
This is a high yield guide to the psychiatry rotation, and gives you the core information you need to understand the most important concepts in the rotation.

*Kaplan and Sadock, Synopsis of Psychiatry 11th edition:*
This is an excellent reference book and provides narrative and descriptive information for most topics you will experience during your clinical rotation.

*DSM 5:*
The full edition of DSM 5 is an excellent reference book and provides detailed, descriptive information. If you are not planning to make a career of psychiatry, it may be more information than you need for your rotation. Your preceptor will certainly have a copy of the full DSM 5, which you should periodically review. We recommend that you at least purchase the pocket size version; the material is condensed, with shorter narrative explanations.
Case Files Psychiatry 5th edition: This book provides a wide variety of cases and sample question. It is a useful tool to help you think about patient presentations and stimulate discussion with your preceptor.

F. Additional Resources

OnlineMedEd: Students will review and complete 14 neuropsychiatric cases. These can be accessed at https://onlinemeded.org/spa/cases

Stahl's Essential Psychopharmacology:
The full textbook tells you how diseases act in the brain and how drugs act on the diseases. It reviews the psychotropic medications, including their assumed mechanisms of action and side effect profiles.

G. Didactic and Reading Assignments:

Review these to topics in Synopsis of Psychiatry, Case Files: Psychiatry, or First Aid for Psychiatry. It is important not only to read in preparation for COMAT, but also about patient conditions that you encounter. Be proactive about asking for additional readings from your preceptors.

<table>
<thead>
<tr>
<th>Topic</th>
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<tr>
<td>Somatic Symptom and related disorders</td>
<td>Somatic symptoms disorder</td>
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</table>

**H. Doc.com Assignment**

The student will review the following doccom Cases and complete the **Discussion Questions**:

- Communicating in Specific Situations #26: Anxiety and Panic Disorder
- Communicating in Specific Situations #29: Alcohol: Interviewing and Advising

To access the Doc.Com Cases visit: [http://webcampus.drexelmed.edu/doccom/user/](http://webcampus.drexelmed.edu/doccom/user/) you will log in using your Email address and Password.

**I. Procedures and Clinical Skills**

N/A

**J. Grading/Calculations**

For an interrupted rotation block, the grade will consist of 65% preceptor and 35% COMAT if applicable. The online assignments must be completed or the grade will be recorded as an incomplete.

If the entire course is done online, the COMAT will still represent 35% and the average grade given by preceptors for that discipline will be used for the other 65% of the grade as determined by the WVSWOM Office of Assessment if the online assignments are completed.

- Completion of the Preceptor/Site/Course Evaluation should be done at the end of the rotation.
• Note that you will have a standard score of 80 or greater on the COMAT end of rotation exam to pass the Psychiatry rotation/course. Should you score less than a standard score of 80, you will have failed the examination and will be evaluated as per grading policy E-17 to assess for eligibility to retest.

• If the retest is passed with a standard score of at least 80, a 70 will be recorded as the final rotation course grade.

• If the retest COMAT score is below standard score of 80, this will be recorded as a rotation course failure and your file will be remanded to the Student Promotions Committee for review. The committee will make recommendations to the Associate Dean for Predoctoral Clinical Education to repeat the course or other sanctions up to and including dismissal. Please see Institutional Policy: E-17.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade Form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

A surgery rotation is your introduction to the surgical disciplines. The student will learn how to evaluate patients with presenting complaints that may require surgical intervention.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   a. Understand basic surgical principles and terminology.
   b. Understand the basic principles of tissue healing.
   c. Understand the role of pre-operative clearance, intra-operative care and post-operative patient management.
   d. Understand the presentations, pathophysiology, etiology, differential diagnosis and surgical management of the following complaints or diagnosis: acute abdominal pain, appendicitis, cholecystitis, hernias, colon cancer, breast cancer, diverticulitis, thyroid nodules, thyroid cancer, pancreatitis, small bowel obstruction, dyspepsia/peptic ulcer disease, inflammatory bowel disease, upper and lower gastrointestinal bleeding, burn management, and trauma management.
   e. Understand the role of appropriate surgical consultation.
f. Understand and recognize the principles of evidence-based utilization of resources as applied to general surgery (system based).

2. **Patient Care**
   a. Be able to explain a preoperative assessment and management plan.
   b. Create a post-operative management plan.
   c. Explain common post-operative complications.

3. **Interpersonal and Communication Skills**
   a. Preceptors are expected to evaluate student competence in communication including the ability to write language a patient could understand, the ability to explain interviewing techniques and the ability to explain how certain cultural disparities may influence the provision of appropriate care.

4. **Professionalism**
   a. Preceptors are expected to evaluate professionalism, including demonstrated ethical, personal and professional qualities deemed necessary for the continued successful study and practice of Osteopathic Medicine. Professionalism also includes the timely completion of all assignments.
   b. Understand the appropriate use of operating room attire realizing this may be facility specific.
   c. Understand empathy and compassion for patients and their families.
   d. Maintain honesty and integrity in all your communications.
   e. Understand, appreciate and abide by all HIPAA rules.
   f. Be aware of patient’s rights and responsibilities and the need for shared decision making.

5. **Practice-Based Learning and Improvement**
   a. Apply fundamental epidemiologic concepts to practice improvement.
   b. Include topics related to Medical informatics/EBM/Research.
   c. Demonstrate ability to identify personal knowledge deficits.
   d. Demonstrate ability to locate educational resources and strengthen personal medical knowledge.
   e. Display commitment to continuous quality improvement.
   f. Demonstrate ability to teach both peers and lay audiences.

6. **System Based Practice**
   a. Recognize how patient care and professional practice affect other health care professionals, health care organizations, and the larger society.
   b. Recognize how delivery systems differ with controlling health care costs and allocating resources.
   c. Use patient-centered, equitable systems of care that recognize the need to reduce medical errors and improve patient safety.
   d. Be aware of medication and treatment costs (direct patient costs) and the impact of these factors on the physician’s treatment plan.
e. Demonstrate understanding of HIPAA regulations and its impact on the communication of patient care information for surgical patients.

f. Understand the importance of “Time Out” procedures to reduce medical errors and improve patient and staff safety.

g. Recognize the need to improve your knowledge base, develop and deliver case presentations and demonstrate these skills by utilizing the local Electronic Medical Record (EMR), on-line resources, and local patient instruction protocols to provide patient instructions.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
   a. Understand osteopathic diagnostic skills that must be adapted to the physical limitations common to pre- and post-operative care environments.
   b. Recognize somatic dysfunction in the context of common surgical presentations including respiratory dysfunction, visceral dysfunction, and common viscerosomatic pain reflexes.
   c. Recognize osteopathic treatment modalities appropriate to the pre- and post-surgical environment for somatic dysfunction, including the need for early ambulation and fluid mobilization techniques.
   d. Develop an appreciation for the need to treat the entire patient including emotional, spiritual, physical, and family needs.

C. **Study Guide**

   Wise MD videos: 22 cases and 11 Skills Modules

   *Surgery: A Competency-Based Companion*, Mann, for additional readings

D. **COMAT Blueprint**

   Review the NBOME web site on the COMAT Blueprint for Surgery. This will provide a general roadmap for your studies.


   *(Note: the majority of the surgery COMAT exam is focused on endocrine/breast, fluids, gastrointestinal, hepatobiliary, hernias, and trauma.)*

   **Pretest/Posttest**

   Please refer to section 1.7 Proctored End of Rotation Exams.
E. Required Textbooks


*Surgery: A Competency-Based Companion, Mann*

*Essentials of General Surgery, Lawrence*

F. Additional Resources

*Surgery on Call, 4th edition, Lange*

*Zollinger’s Atlas of Surgical Operations*

*Sabistons Textbook of Surgery, 20th edition*

*Core Topics in General and Emergency Surgery, 5th edition*

G. Didactic and Reading Assignments

The following is a list of topics that should be reviewed during your rotation in surgery.

Specific recommended sources include Lawrence, Mann, and the Lange Surgery on Call.

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<td>Anesthesia</td>
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<td>Postoperative Care</td>
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### H. Additional Resources

**DocCom cases**

- Communicating in Specific Situations: #32 “Advance Directives”

**Complete the Discussion Questions.** To access the Doc.Com Cases visit: [http://webcampus.drexelmed.edu/doccom/user/](http://webcampus.drexelmed.edu/doccom/user/) you will log in using your Email address and Password.

### I. Procedures/Clinical Skills

None

### J. Patient Procedure Logs

None

### K. Grading/Calculations

For an interrupted rotation block, the grade will consist of 65% preceptor and 35% COMAT. The online assignments must be completed or the grade will be recorded as an incomplete.

If the course is done online, the COMAT will still represent 35% and the average grade given by preceptors for that discipline as determined by the WVSOM Office of Assessment will be used for the other 65% of the grade if the online assignments are completed.
• Completion of the Preceptor/Site/Course Evaluation should be done at the end of each rotation.

• Note that you will have a standard score of 80 or greater on the COMAT end of rotation exam to pass the General Surgery rotation/course. Should you score less than a standard score of 80, you will have failed the examination and will be evaluated as per grading policy E-17 to assess for eligibility to retest.

• If the retest is passed with a standard score of at least 80, a 70 will be recorded as the final rotation course grade.

• If the retest COMAT score is below standard score of 80, this will be recorded as a rotation course failure and your file will be remanded to the Student Promotions Committee for review. The committee will make recommendations to the Associate Dean for Predoctoral Clinical Education to repeat the course or other sanctions up to and including dismissal. Please see Institutional Policy: E-17.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

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This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designee in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

This is a two or four week rotation. This rotation may provide the student a greater opportunity to identify an area of interest or topics to broaden their experience base during their first clinical year. These rotations may be scheduled as a 4 week rotation or 2 two week rotations which may or may not occur in a consecutive 4 week time period.

The supervising physician (preceptor) is required to review with the student his/her progress toward fulfilling the educational objectives.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   At the conclusion of this rotation, the student will demonstrate medical knowledge, understanding of disease process, and the student’s ability to apply cognitive skills in differential diagnosis as it relates to the assigned modules.

2. Patient Care
   Explain how to educate patients and/or caregivers and evaluate their comprehension of the diagnosis and treatment plan, including conveying clinical condition and obtaining informed consent prior to procedures.

3. Interpersonal and Communication Skills
a. Summarize how to effectively communicate with pediatric patients, their caregivers, and the healthcare team.
b. Explain how parental and patient concerns and perspectives including cultural and religious influences impact care
c. Describe how to write the following:
   • different types of medical notes
   • SOAP notes
   • newborn nursery admission notes
   • admission history & physicals
   • discharge summaries
   • procedure notes
d. Describe the capabilities of electronic health records.
e. Explain how to share diagnostic plan of care, and prognostic information with patients and families.

4. **Professionalism**
a. Summarize understanding and need for supervision, chaperones and/or assistance.
b. Detail an understanding of privacy and independence of adolescents and of the private individual interview of an adolescent during the interview process.
c. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.

5. **Practice-Based Learning and Improvement**
The student will demonstrate ability to integrate evidence-based medicine into the explanation of patient care. This competency may also include an understanding of Research and Quality Improvement.

6. **Systems-based Practice**
Student will demonstrate the ability to understand his/her role as a member of the health care team, the student’s understanding of local community medical resources, and the student’s understanding of providing effective and cost effective medicine.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
All preceptors are expected to encourage and verify application of osteopathic principles

C. **Study Guide**

Using Online MedED, the student will complete 50 interactive cases [for a 4 week elective and 25 interactive cases for a 2 week elective], in Internal Medicine or Neuropsychiatry.
https://onlinemeded.org/spa/cases

D. **COMAT Blueprint**

There is no COMAT exam associated with the Dean’s Selective
E. Required textbooks

None

Required reading

https://osteopathic.org/about/leadership/aoa-governance-documents/aoa-rules-and-guidelines-on-
physicians-professional-conduct/

F. Additional resources

Evidence Medicine Sites:

www.ahrq.gov/clinic/cps3dix.htm
www.clinicalkey.com
www.cochrane.org/

G. Didactic and reading assignments

As above

H. Additional Recommendations

None

I. Procedures and Clinical Skills

None

J. Patient Procedure Logs

None.

K. Grading/Calculations

The grade will be the average grade given by the preceptors in this course as
determined by the WVSOM Office of Assessment. The online assignments must be
completed or the grade will be recorded as an incomplete.

Completion of the Preceptor/Site/Course Evaluation should be done at the end of each
rotation.
Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
Emergency Medicine  
Course Number: 802 OLM  

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction  

At the completion of the on-line learning program, the student will be expected to have gained sufficient medical knowledge and covered all of the core competencies already set forth in the syllabus. This will be achieved through the use of the Clerkship Directors in Emergency Medicine (CDEM) M3 and M4 Curriculum, accessed through the Society of Academic Emergency Medicine (SAEM) website. Competency in the subject matter will be assessed through the on-line testing modules on the SAEM website and through successful completion of the COMAT Exam for EM.

B. Course (Rotation) Objectives and Core Competencies  

1. Medical Knowledge  
   a. Acquire knowledge needed for the diagnosis and initial management of acute and emergent illnesses  
   b. Select, justify, and interpret clinical tests and imaging with regard to both patient age and pathological processes in an acute care setting.  
   c. Create a list based on the presentation and on physical findings of differential diagnoses for common acute disorders and prioritize based on findings and probability.

2. Patient Care  
   a. Explain interview and physical examination skills required to conduct interviews with patients and family presenting for urgent and emergent care
and understand appropriate physical examinations and osteopathic structural examinations.

b. Explain how to educate patients and/or caregivers and evaluate their comprehension of the diagnosis and treatment plan, including conveying clinical condition and obtaining informed consent prior to procedures.

c. Describe how to accurately convey patient issues and needs when transitioning the patient to other members of the healthcare team, families, and parents.

3. **Interpersonal and Communication Skills**
   a. Summarize how to effectively communicate with emergency patients, their caregivers, and the healthcare team.
   b. Explain how parental and patient concerns and perspectives including cultural and religious influences impact care.
   c. Describe how to write the following:
      - different types of medical notes
      - SOAP notes
      - newborn nursery admission notes
      - admission history & physicals
      - discharge summaries
      - procedure notes
   d. Describe the capabilities of electronic health records.
   e. Explain how to share diagnostic plan of care, and prognostic information with patients and families.

4. **Professionalism**
   a. Summarize understanding and need for supervision, chaperones and/or assistance.
   b. Detail an understanding of privacy and independence of adolescents and of the private individual interview of an adolescent during the interview process.
   c. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.
   d. Recognize that all patients in emergency situations shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. **Practice-Based Learning and Improvement**
   a. Apply fundamental epidemiologic concepts.
   b. Detail medical informatics, evidence-based medicine, and research.
   c. Identify personal knowledge deficits, strengths, and limits through frequent self-reflection.
   d. Explore the ability to locate educational resources and strengthen personal medical knowledge.
   e. Explain quality improvement.

6. **Systems-Based Practice**
   a. Recognize quality patient care systems and how they may affect the larger health care systems.
b. Discuss the cost and risk-benefit analysis in patient and/or populations-based care in different delivery systems and settings.

c. Describe reporting requirements for infectious diseases or psychosocial issues, such as elder or child abuse or suicide.

7. Osteopathic Philosophy and Osteopathic Manipulative Medicine

The Four Tenets of Osteopathic Medicine: 1) The body is a unit; 2) Structure and function are interdependent; 3) The body has self-healing and self-regulatory capabilities; 4) Rational osteopathic care relies on the integration of these tenets in patients care.

C. Study Guide

The on-line EM learner shall be required to complete the on-line learning modules which address all of the selected specific learner-centered objective for emergency medicine listed in the traditional clinical rotation syllabus. These modules are not all-inclusive of all EM material which may appear on the EM COMAT, particularly in the subject area of Pediatric Emergencies. It is strongly recommended that if the student has not yet completed their core pediatrics rotation, that they review the Peds EM Curriculum (https://saem.org/cdem/education/online-education/peds-em-curriculum) found on the SAEM website also.

The required modules found in the M3 and M4 Curriculum are as follows:

M3 Required Modules: https://saem.org/cdem/education/online-education/m3-curriculum

Approach to the Undifferentiated Patient:
- Approach to the Undifferentiated Patient
- Undifferentiated and Differentiated Patients

Stabilization of the Acutely Ill Patient:
- Stabilization of the Acutely Ill Patient
- Approach to Shock

Focused Chief Complaint History, Physical Examination and Differential Diagnosis:
- Chest Pain
- Abdominal Pain
- Shortness of breath
- Altered mental status
- Headache
- Ischemic Stroke
- GI Bleeding
- Pelvic Pain and Vaginal Bleeding
- Toxic Ingestion
- Performing a Complaint-Directed History & Physical Exam
- Data-Gathering Skills
- Developing a Case-Specific Differential Diagnosis
- Developing Your Plan of Action

Basic and Advanced Life Support Techniques:

- Airway
- Breathing
- Circulation: Electricity
- Circulation: Tachydysrhythmias

Diagnostic Testing:

- Common Laboratory studies
- Brain Imaging
- Chest Radiograph
- Diagnostic Testing in the Emergency Department

Electrocardiogram (ECG)/Rhythm Recognition:

- Conduction Abnormalities
- STEMI
- Electrolyte Abnormalities
- Cardiac Arrest

Emergency Department Procedures:

- Basic Wound Management
- Abscess incision and drainage
- Lumbar puncture
- Vascular Access
- Procedural Skills

Acute Pain Control:

- Acute pain control

Traumatic and Orthopedic Injuries:

- Approach to the trauma patient
- Orthopedic injuries
- Spinal immobilization
- Cervical Spine Imaging in Trauma
- Neck Trauma
- Blunt and penetrating chest trauma
- Blunt and penetrating abdominal trauma

Bedside Ultrasonography:
- Introduction to Bedside Ultrasound
- Pericardial Effusion
- AAA exam
- FAST exam
- Venous access

Emergency Medical Services (EMS):
- Emergency Medical Services
- Aeromedical Transport

M4 Required Modules: [https://saem.org/cdem/education/online-education/m4-curriculum](https://saem.org/cdem/education/online-education/m4-curriculum)

Approach To:
- Poisonings
- Sepsis

Endocrine and Electrolytes:
- Thyroid Storm

Environmental:
- Hyperthermia
- Hypothermia
- Envenomation
- Snake Bites + Scorpions
- Burns & Smoke Inhalation
- Drowning

Genitourinary:
- Ectopic pregnancy
• PID + TOA
• Ovarian Torsion
• Testicular Torsion

Neurology:
• Meningitis & Encephalitis
• Seizures & Status Epilepticus

Psychiatry:
• Suicidal
• Agitation

Respiratory:
• Asthma
• COPD
• Pneumonia
• Pneumothorax

D. COMAT Emergency Medicine Blueprint

Review the NBOME web site on the COMAT Blueprint for Emergency Medicine. This will provide a general roadmap for your studies. However, still take the time to read about your patient encounters and any additional material that your preceptor suggests.

Pretest/Posttest

Please refer to section 1.7 Proctored End of Rotation Exams.

E. Required Textbooks

(Available on Access Medicine on WVSOM Online Library)

F. Other Resources

Marx: Rosen’s Emergency Medicine, Mosby, 9th Ed.
Seidel’s Guide to Physical Examination, 8th Ed.

G. Didactic and Reading assignments:

Additional Reading Assignments:

It is highly recommended that the student perform additional study on the topic of HEENT Emergencies and Dermatologic Emergencies, as there were no on-line modules available which reviewed this area. The best source for this information would be Tintinalli’s Emergency Medicine: A Comprehensive Study Guide, 9th Edition (available on Access Medicine on WVSOM Online Library).

Any additional in-depth information desired on any emergency topics can also be obtained through the Tintinalli’s Emergency Medicin: A Comprehsive Study Guide and the Rosen’s Emergency Medicine, 0th Edition.

Evaluation:

The student shall complete and pass each of the 28 Practice Tests provided, with a minimum average score of 70%. You will need to log in to the SAEM website. The Practice Tests are located in the My Assignments tab on the SAEM website. The Practice Tests are intended to assist the student in identifying areas of knowledge deficit. Any difficulty in achieving a score of 70% or greater on a Practice Test should trigger the student to review the appropriate learning modules for that subject matter to be better prepared for the EM COMAT Exam.

In the case of a student who has completed 50% of their EM rotation in a clinical rotation site, and now has to complete their remaining requirements utilizing online learning, the following is recommended: The student in this situation should go initially to the Practice Tests before reviewing any of the assigned EM Modules. The Practice Tests should be completed and the scores reviewed by the student. Any score below 70% on the Practice Tests should indicate areas requiring intense review. The appropriate subject matter can then be studied in the EM Modules, in preparation for the EM COMAT.

H. Grading/Calculations

The grade will consist of 65% preceptor and 35% COMAT if applicable. The online assignments must be completed or the grade will be recorded as an incomplete.

If the course is done online, the COMAT will still represent 35% and the average grade given by preceptors for that discipline will be used for the other 65% of the grade if the online assignments are completed.
• Completion of the Preceptor/Site/Course Evaluation should be done at the end of the rotation.

• Note that you will have a standard score of 80 or greater on the COMAT end of rotation exam to pass the Emergency Medicine rotation/course. Should you score less than a standard score of 80, you will have failed the examination and will be evaluated as per grading policy E-17 to assess for eligibility to retest.

• If the retest is passed with a standard score of at least 80, a 70 will be recorded as the final rotation course grade.

• If the retest COMAT score is below standard score of 80, this will be recorded as a rotation course failure and your file will be remanded to the Student Promotions Committee for review. The committee will make recommendations to the Associate Dean for Predoctoral Clinical Education to repeat the course or other sanctions up to and including dismissal. Please see Institutional Policy: E-17.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other

A. Introduction

The Women's Health/OB-GYN course is a four-week rotation focusing on the healthcare provided to female patients. This specialty encompasses preventive health, reproductive health, maternal care and gynecologic surgery for women of all ages.

Regardless of the final specialty choice that the student makes they will be providing care of women. The rotation is challenging with the goal to prepare each medical student to develop competence in the areas of reproductive and preventive care for women.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   a. Demonstrate knowledge of preconception care including the impact of genetic, medical conditions and environmental factors on maternal health and fetal development.
   b. Explain the normal physiologic changes of pregnancy including interpretation of common diagnostic tests.
   c. Describe common problems in Obstetrics.
   d. Demonstrate knowledge of postpartum care.
   e. Describe menstrual cycle physiology, discuss puberty and menopause and explain normal and abnormal bleeding.
f. Demonstrate knowledge of common benign gynecological conditions.
g. Describe common breast conditions and outline the evaluation of breast complaints.
h. Describe gynecological malignancies including risk factors, signs and symptoms and initial evaluation.
i. Develop a thorough understanding of contraception, including sterilization and abortion.
j. Demonstrate knowledge of intrapartum care of the mother and newborn.
k. Formulate a differential diagnosis of the acute abdomen and chronic pelvic pain.
l. Demonstrate knowledge of perioperative care and familiarity with gynecological procedures.
m. Be able to provide a preliminary assessment of patients with sexual concerns.

2. **Patient Care**
   a. Explain interview and physical examination skills required to conduct interviews with the female patient and their families and understand age appropriate physical examinations and osteopathic structural examinations.
   b. Explain how to educate patients and/or caregivers and evaluate their comprehension of the diagnosis and treatment plan, including conveying clinical condition and obtaining informed consent prior to procedures.

3. **Interpersonal and Communication Skills**
   a. Explain how patient concerns and perspectives including cultural and religious influences impact care
   b. Describe a comprehensive women’s interview, including: menstrual history, obstetric history, gynecologic history, contraceptive history, sexual history, family/genetic history, and social history
   c. Describe how to write the following:
      - different types of medical notes
      - SOAP notes
      - newborn nursery admission notes
      - admission history & physicals
      - discharge summaries
      - procedure notes
   d. Describe the capabilities of electronic health records.

4. **Professionalism**
   a. Summarize understanding and need for supervision, chaperones and/or assistance.
   b. Detail an understanding of privacy and independence of adolescents and of the private individual interview of an adolescent during the interview and examination process.
   c. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.
d. Recognize that all patients in emergency situations shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. **Practice-Based Learning and Improvement**
   a. Demonstrate the ability to identify personal knowledge deficits
   b. Demonstrate the ability to correct knowledge deficits identified by seeking out appropriate references, located relevant clinical practice guidelines and formulate clinical questions to research to improve personal knowledge.
   c. Demonstrate the ability to use information technology as a learning tool.

6. **Systems-Based Practice**
   a. Explain how the cost of medication, tests and other treatment modalities affect patient compliance to care plans.
   b. Explain the role of the physician in controlling health care costs and allocating resources.
   c. Discuss the relationship of women’s health as it relates to:
      - Social and political discrimination, poverty, and family care-giver role
      - Population characteristics such as sexual orientation, disabilities, ethnicity, religion and cultural background.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
   a. Understand the basic tenets and fundamental techniques utilized to evaluate, diagnose and treat the female patient osteopathically.
   b. Demonstrate the ability to properly document an osteopathic structural examination on an Obstetrical patient.

C. **Study Guide**

In general, the best approach to studying OB/GYN is utilizing multiple sources. This area is complicated by the fact that it is a relatively short time to learn an area that includes medical and surgical components. The APGO/UWISE resource provides an excellent introduction to common topics. The extensive test questions are an excellent foundation from which to base your review and readings.

Beckmann is a core OB/GYN text and is highly recommended. For a shorter “handbook” style reference, the Obstetrics, Gynecology, and Infertility Handbook would be a useful resource.

APGO offers a collection of free Basic Science Video & Teaching Scripts (notes about each video). Please reference the site at [https://www.apgo.org/basic-science/](https://www.apgo.org/basic-science/).

Additionally, APGO also offers Case-Based studies that the student can access at [https://www.apgo.org/remote-resources/](https://www.apgo.org/remote-resources/).
D. COMAT Blueprint

Review the NBOME web site on the COMAT Blueprint for OB/GYN. This will provide a general roadmap for your studies.


As you can see, similar to the specialty itself, the COMAT content is broad and fairly evenly distributed over the following topics:

- **Patient Presentation:**
  - Abnormal Obstetrics
  - General Gynecology
  - Gynecologic Oncology
  - Normal Obstetrics
  - Reproductive Endocrinology

- **Physician Tasks:**
  - Diagnosis/Management of Pap Smears & DNA Testing
  - History & Physical Examination/Communication & Interaction
  - Preventative Care/Health Maintenance
  - Secondary Overarching Topics

The student is advised to review and refer back frequently to the specific learner-centered objectives for OB/GYN, review and self-assess knowledge on the topics listed under the subheadings in this section, and address any knowledge gaps through additional readings as the student progresses through the online module.

**Pretest/Posttest**

Please refer to section 1.7 Proctored End of Rotation Exams.

E. Required textbooks

- *Obstetrics and Gynecology: a Competency-Based Companion*. 2010 Saunders/Elsevier
F. Additional resources

WVSOM has an active subscription to the Association of Professors of Gynecology and Obstetrics (APGO) uWISE self-assessment tool which allows you to have a personal subscription while you are in the ob/gyn clerkship rotation. The APGO Undergraduate Web-Based Interactive Self-Evaluation (uWISE) is a 600-question interactive self-exam designed to help medical students acquire the necessary basic knowledge in obstetrics and gynecology. Students find this resource to be an extremely valuable study tool since it allows you to gain feedback on each of the questions as you move through the various exams. You will need to work on exam questions throughout the rotation and have it completed by the end. Following completion of the uWISE questions, please print a copy of your transcript and submit to your SWC Regional office.

Students will receive an email link for login access at the start of their OB/GYN rotation. If you have not received this, please contact Leah Stone lstone@osteo.wvsom.edu.

After you register, you can also access the APGO YouTube channel that has brief videos as listed below. (You must be a registered user to view the videos.)

https://www.youtube.com/playlist?list=PLy35JKgvOASnHHXni4mijXX9kwVA_YMDpg

https://www.apgo.org/students/apgo-medical-student-educational-objectives/ (Available video links are free and unrestricted here).

G. Didactic and reading assignments: APGO uWise questions and APGO Videos

<table>
<thead>
<tr>
<th>Topic</th>
<th>Beckmann &amp; Ling, 8th ed.</th>
<th>Videos and uWise question topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAP Smears and Cultures</td>
<td>Chapters 1-2</td>
<td>#3</td>
</tr>
<tr>
<td><strong>You will note that Pap smears are emphasized on the COMAT testing. If you read any Pap guidelines, you will see that the recommendations somewhat vary as to timing and test(s) of choice. Instead of memorizing specific timing intervals, focus on what the Pap and HPV tests are screening for and have a general idea as to what the different classifications of abnormal Paps signify. UptoDate provides an excellent general overview.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preventive Care and Health Management</td>
<td>Chapters 1-2</td>
<td>#7</td>
</tr>
<tr>
<td>Maternal-Fetal Physiology</td>
<td>Chapter 5</td>
<td>#8</td>
</tr>
<tr>
<td>Preconception Care</td>
<td>Chapter 6</td>
<td>#9</td>
</tr>
<tr>
<td>Antepartum Care</td>
<td>Chapter 6</td>
<td>#10</td>
</tr>
<tr>
<td>Intrapartum Care</td>
<td>Chapter 8</td>
<td>#11</td>
</tr>
</tbody>
</table>
### Additional Recommendations:

Using the Procedures Consult website, review the following common procedures used in the setting of women’s health. You can find each procedure by typing the name into the search engine at the website (https://www.clinicalkey.com/#/!) or you can search by browsing through the offered videos at https://www.clinicalkey.com/#!/browse/procedures.

- Vacuum Assisted Delivery
- Intrauterine Contraceptive Device Insertion and Removal
- First-Trimester Obstetric Ultrasound
- Endometrial Biopsy
- Cesarean Section

#### DocCom Cases:
The student will review the following doccom Case and complete the Discussion Questions:

Communicating in Specific Situations: #28-Domestic Violence
To access the Doc.Com Cases visit: http://webcampus.drexelmed.edu/doccom/user/ you will log in using your Email address and Password.

I. Grading/Calculations
The grade will consist of 65% preceptor and 35% COMAT if applicable; The online assignments must be completed or the grade will be recorded as an incomplete.

If the course is done online, the COMAT will still represent 35% and the average grade given by preceptors for that discipline (as determined by the WVSOM Office of Assessment) will be used for the other 65% of the grade if the online assignments are completed.

- Completion of the Preceptor/Site/Course Evaluation should be done at the end of the rotation.
- Note that you will have a standard score of 80 or greater on the COMAT end of rotation exam to pass the Obstetrics and Gynecology/Women’s Health rotation/course. Should you score less than a standard score of 80, you will have failed the examination and will be evaluated as per grading policy E-17 to assess for eligibility to retest.
- If the retest is passed with a standard score of at least 80, a 70 will be recorded as the final rotation course grade.
- If the retest COMAT score is below standard score of 80, this will be recorded as a rotation course failure and your file will be remanded to the Student Promotions Committee for review. The committee will make recommendations to the Associate Dean for Predoctoral Clinical Education to repeat the course or other sanctions up to and including dismissal. Please see Institutional Policy: E-17.

Please note the following:
The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
Family Medicine II  
Course Numbers: 931, 932, 933 OLM

Family Medicine III  
Course Numbers: 960, 961, 962 OLM

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other

A. Introduction

Family Medicine II and III are advanced rotations where the student demonstrates a progressive and significant level of maturation and responsibility in the application of physician skills toward the diagnosis and treatment of those conditions commonly seen by the family practitioner. It is anticipated that the clinical skills acquired during training in Family Medicine I will be expanded in this advanced rotation.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   a. By the end of this rotation the student is expected to possess the knowledge, attitudes and skills to:
      - Assess and manage acute illnesses commonly seen in the office setting, or that they are likely need to be prepared to assess and manage in the hospital setting.
      - Determine the health risks of patients/populations and make recommendations for screening and health promotion (wellness visits).
• Describe a complete history and physical in all age groups, from pediatric to geriatric, which includes osteopathic considerations in the history and physical exam as well as the treatment and management of patients.
• Be able to develop an appropriate assessment and treatment based on the information gathered.
• Incorporate appropriate preventive medicine as per guidelines for each age group.
• Understand and implement focused evaluations of geriatric patients who present for evaluation and care.

b. By the end of the rotation the student should be able to:
• Differentiate between common etiologies that present with that symptom.
• Recognize dangerous/emergency conditions that may present with that symptom and know when emergent referral is needed.
• Describe a focused age appropriate history and physical examination as indicated for all patients.
• Formulate recommendations as to labs/imaging/tests to obtain to narrow the differential.
• Appreciate the importance of a cost-effective approach to the diagnostic work-up.
• Describe the initial management of common and dangerous diagnoses that present with that symptom.

c. For each core chronic disease, the student should be able to:
• Propose diagnostic criteria and surveillance strategies for that problem.
• Locate and evaluate clinical practice guidelines associated with each of the core chronic diseases.
• Describe major treatment modalities for those problems.

d. Adult Health Maintenance:
• Define primary, secondary, and tertiary prevention.
• Identify risks for specific illnesses that affect screening and management strategies.
• Find and apply current guidelines for immunizations.

e. Well child and adolescent visits:
• Describe the core components of child preventive care—health history, physical examination, immunizations, screenings/diagnostic tests, and anticipatory guidance.
• Find and apply the current guidelines for immunizations and be able to order them as indicated, including protocols for “catch-up” if
immunizations are delayed/incomplete.
- Identify and perform recommended age-appropriate screenings.

2. **Patient Care**
   a. Detail a focused history and physical examination that includes identification of complications for chronic conditions.
   b. Detail a chronic follow-up visit for patients with common chronic diseases.
      - Propose an evidence-based management plan that includes pharmacologic and non-pharmacologic treatments, and appropriate surveillance and tertiary prevention.
   c. Develop an evidence-based health promotion/disease prevention plan for any age or gender.
   d. For women: detail a full menstrual, gynecological, and obstetric history.
   e. For men: identify issues and risks related to sexual function and prostate health.
   f. Detail a physical examination on an infant, child, adolescent, and adult.
   g. Summarize skills required for advanced history-taking, communication, physical examination and critical thinking.
   h. Incorporate OP&P into the practice of family medicine.

3. **Interpersonal and Communication Skills**
   a. Demonstrate ability to effectively communicate with patients from the pediatric patient to the geriatric patient.
   b. Detail skills required to effectively communicate with patients from the pediatric patient to the geriatric patient, communicate/identify with caregivers, and establish effective relationships with patients and families.
   c. Discuss how to communicate appropriately with other healthcare professionals (e.g. other physicians, physical therapists, occupational therapists, nurses, counselors, etc.).
   d. Be able to document an acute and chronic care visit appropriately.
   e. Discuss how to communicate respectfully with patients to encourage lifestyle changes to support wellness (e.g. weight loss, smoking cessation, safe sexual practices, exercise/activity/nutrition/diet).
   f. Detail how to respectfully educate a patient about an aspect of his/her disease using language that most patients understand.
   g. Describe how to provide counseling related to health promotion and disease prevention.
   h. Regarding well child visits, be able to identify health risks, including accidental and non-accidental injuries and abuse or neglect.
4. **Professionalism**
   a. Summarize needed aspects of professional relationships with patients and staff.
   b. Describe empathy and cultural competency.
   c. Describe responsibility, reliability and dependability.
   d. Explain patient confidentiality/HIPAA regulations.
   e. Detail components of respect for peers and all members of the health care team.

5. **Practice-Based Learning and Improvement**
   a. Apply fundamental epidemiologic concepts to practice improvement.
   b. Understand how medical informatics/EBM/research can be used to enhance patient care and understand their limitations in the practice of medicine.
   c. Demonstrate ability to identify personal knowledge deficits.
   d. Demonstrate ability to locate educational resources and strengthen personal medical knowledge.
   e. Display commitment to continuous quality improvement.
   f. Discuss an evidence-based, step-wise approach to counseling for lifestyle modifications in patient scenario.
   g. Practice life-long learning skills, including application of scientific evidence in clinical care.

6. **System Based Practice**
   a. Recognize how patient care and professional practice affect other health care professionals, health care organizations, and the larger society.
   b. Use patient-centered, equitable systems of care that recognize the need to reduce medical errors and improve patient safety.
   c. Be able to apply quality improvement concepts, including problem identification, barriers to optimal patient care and design improvement interventions.
   d. Be able to describe the nature and scope of family practice and how it interacts with other health professionals.
      - Discuss the value of family physicians within any health care system.
      - Discuss the principles of osteopathic family medicine care.
   e. Be able to identify community resources available to enhance patient care.
   f. Appreciate the importance of a cost-effective approach to the diagnostic work-up.
   g. Have a basic understanding of Medicare, Medicaid, Third Party, and HMO services.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
   a. Understand and integrate Osteopathic Practices and Principles into all
clinical scenarios.

b. Develop an appreciation for the need to treat the entire patient including mind, body and spirit across all ages.

c. Integrate osteopathic concepts and OMT into medical scenarios.

d. Recognize somatic dysfunction across all age groups and how this may impact their overall health.

e. Explain the application of OMT in family medicine across all age groups.

f. Adapt osteopathic treatment modalities to adequately and safely treat those across all age groups.

C. Study Guide

In general, the best approach to studying is to access multiple sources.

Universal Notes was used in FM 1, and is a comprehensive online program to facilitate your study, and can be reviewed to aid your study of more advanced topics in FM2 and FM3. Additionally, Rakel is the core reference text. Conn’s Current Therapy and Lange Case Files are excellent supplemental sources.

D. COMAT Resources

Not applicable

E. Required Textbooks


Textbook of Family Medicine, Rakel, et al; Elsevier 9th ed.

Foundations for Osteopathic Medicine, Lippincott Williams and Wilkins 4th ed

Diagnosis and Plan for Manual Medicine (refer to this for your Family Medicine H&P case write-up).

F. Additional Resources

Recommended Texts: These are additional textbooks that you may find helpful and have additional information on the topics for the COMAT blueprint. You will see some of these textbooks listed in the other disciplines as you progress.

Cecil Essentials of Medicine; Elsevier, 9th ed.


Essentials of Family Medicine, Sloane, et al; Lippincott, Williams and Wilkins 6th ed

Ham’s Primary Care Geriatrics; Elsevier, 6th ed.
G. Didactics and Reading Assignments

Try to read at least six hours daily during the week, using the recommended and required texts. You can also use online resources for further in-depth readings on the WVSOM library.

Use Universal Notes to read about subjects that you did not cover in FM 1 or want to review.

For FM3: students will additionally complete assignments in the WISE On-Call portion of Aquifer (https://aquifer.org/) and sign in using your WVSOM log-in credentials. Among the listed courses at the top of the page, select “Launch WISE On-Call”. Complete each course listed on the Dashboard. In order to pass the course, students will need to achieve a 70% or above on each course that has assigned points.

H. Additional Recommendations

None specifically for FM2 or FM3.

I. Procedures/Clinical Skills

1. Clinical Key Procedures

   In lieu of the ability to gain exposure to common clinical procedures in the outpatient family medicine setting, Clinical Key has a vast library of clinical procedures appropriate to various settings.

   Review the following procedure videos in Clinical Key during FM2. For FM3, if FM2 was completed in the clinical setting but FM3 will be completed using this OLM, the FM3 student will also review the Clinical Key procedures:

   - Urinary bladder catheterization
     - Female catheterization
     - Male catheterization
   - Joint injections
     - Injection – Shoulder
     - Knee Injection
     - Trochanteric Bursa Injection
     - Trigger Point Injection
Anoscopy
  o Anoscopy
I&D of Abscesses
  o Incision and Drainage of Cutaneous Abscesses
  o Incision and Drainage of an Abscess

All students have access to Clinical Key. Students are encouraged to set up a free account in order to be able to bookmark and save progress. The WVSOM Library has a video with instructions to set up an account found here:

https://www.youtube.com/watch?v=keNRlty1_Ys&feature=youtu.be

Once registered and logged in, select “Procedure Videos” from the Browse menu (you may need to first click on the “…” option if it is not visible). Individual procedures may be found by typing the exact name of the procedure in the “Filter List by Title” block at the top of the screen.

J. Patient and Procedure Logs

If any portion of the Family Medicine 2 or Family Medicine 3 rotations is completed in the clinical setting, you are required to maintain a log of your activities while on your rotation. This is important to document the experiences that you are exposed to in the clinical setting. You should get used to maintaining a log as this will continue during your residency. A well-documented log will help you to know the cases and procedures that you are exposed to and those that you may need to see in the future of your education. The log books need to be initialed by the preceptor documenting the accuracy of your entries. The logs need to be reviewed by your Regional Assistant Dean and accepted as proper documentation of your rotation experience. There is limited space but if you need to use more than one line to document, do so.

You should make sure that you make a notation in the log:

- When you see a patient
- Note if the patient was seen in the Office/Hospital or other i.e. Nursing home
- Make sure that you list the diagnosis/problem that the patient presents with, making sure that you do this in enough detail. (Example: Acute Exacerbation of COPD, or Uncontrolled DM type 2 not just COPD, or DM)
- Document if you write admit notes in the hospital, progress notes in the office or hospital, discharge summaries and if you did an oral presentation to the preceptor on an encounter.
- List in detail the procedures that you observed (O), assisted (A) or performed (P).
It is always wise to make a copy of the log for your own records. You may want to review your logs as you participate in your 4th year audition rotations so you can respond to any questions of your experiences in doing certain procedures.

K. Family Medicine Procedure Log: If any portion of the Family Medicine 2 or Family Medicine 3 rotations is completed in the clinical setting, this form (see below) is to be signed by your preceptor and turned into your Regional Assistant Dean at the end of your rotation. Failure to comply will result in a professionalism report. If the rotation is completed exclusively or partially in the virtual setting as a result of a worldwide emergency, then students will complete the Clinical Key assignment listed in Section I above.
# FAMILY MEDICINE PROCEDURE LOG

The student will be exposed to the following skills: (to be signed by your preceptor)

<table>
<thead>
<tr>
<th>Skill</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPRP</td>
<td>OR&amp;P texts and videos</td>
</tr>
<tr>
<td>Demonstrate:</td>
<td></td>
</tr>
<tr>
<td>Palpatory diagnostic skills</td>
<td></td>
</tr>
<tr>
<td>Ability to do functional exam</td>
<td></td>
</tr>
<tr>
<td>Ability to record findings of exam</td>
<td></td>
</tr>
<tr>
<td>Ability to record treatment procedures used</td>
<td></td>
</tr>
<tr>
<td>Ability to use any of the following:</td>
<td></td>
</tr>
<tr>
<td>Soft tissue, muscle energy, myofascial,</td>
<td></td>
</tr>
<tr>
<td>Strain/counterstrain, HVLA, craniocasial, Articular</td>
<td></td>
</tr>
<tr>
<td>Interpret resting 12-lead EKG</td>
<td>EKG &amp; ACLS texts, EKG Basics—LSU*, ECG Learning Center*, ECG Library*, Rhythm Simulator*</td>
</tr>
<tr>
<td>Knowledge of venipuncture/venepuncture</td>
<td>Clinical Skills II Handbook and video</td>
</tr>
<tr>
<td>Knowledge of parenteral injections</td>
<td>Clinical Skills II Handbook</td>
</tr>
<tr>
<td>Ability to suture</td>
<td>Clinical Skills II Handbook and video</td>
</tr>
<tr>
<td>Knowledge of splint/cast application</td>
<td>Clinical Skills II Handbook</td>
</tr>
<tr>
<td>Knowledge of proper sterile procedures</td>
<td>Clinical Skills II Handbook</td>
</tr>
<tr>
<td>Knowledge of urinary bladder catheterization</td>
<td>Clinical Skills II Handbook</td>
</tr>
<tr>
<td>Knowledge of spirometry and interpreting FIT’s</td>
<td>Clinical Skills II Handbook</td>
</tr>
<tr>
<td>Interpretation of CXR—PA and lat</td>
<td>Radiology text/note, Basic CXR Review—Dept of Radiology, Uniformed Services*</td>
</tr>
<tr>
<td>Skin biopsy and excisions</td>
<td>Clinical Skills II—suturing, Clinical Keys: Skin Biopsy Techniques</td>
</tr>
<tr>
<td>Joint injections</td>
<td></td>
</tr>
<tr>
<td>Ear lavage</td>
<td>Clinical Keys: Cerumen Impaction</td>
</tr>
<tr>
<td>Anoscopy</td>
<td>Clinical Skills II Handbook</td>
</tr>
<tr>
<td>Flexible sigmoidoscopy</td>
<td>Clinical Skills II Handbook</td>
</tr>
<tr>
<td>I&amp;D of abscess: list type of abscess</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

* ECG Learning Center: [http://library.med.utah.edu/kw/ecgs/](http://library.med.utah.edu/kw/ecgs/)
* ECG Library: [www.ecglibrary.com/ecghome.html](http://www.ecglibrary.com/ecghome.html)
* Basic CXR Review—Dept of Radiology, Uniformed Services, University of Health Sciences, Bethesda, MD: [http://rad.lsu.edu/education/reviews/index.html](http://rad.lsu.edu/education/reviews/index.html)

Preceptor’s signature:_________________________ Date:_________________________
L. Grading - Calculations:

- Preceptor grade 100% if enough of the course was completed with a preceptor. If the course was completed online, the grade will be based on the average grade for this course as determined by the WVSOM Office of Assessment.
- Completion of Patient Procedure Logs, Family Medicine Procedure Log and Preceptor/Site/Course Evaluation

The patient procedure logs, family medicine procedure logs and the preceptor/site/course evaluation must be turned in by the last day of the rotation. Failure to comply will result in a professionalism report.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade Form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
Internal Medicine III

Course Number: 910, 916, 917, 911, 912, 913 OLM

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

This is an extension of the internal medicine rotations taught during the student’s third year. It is expected that the student has grasped the basics of the earlier medicine experience and is now adequately prepared to devote time to improving these skills and becoming more involved with the diagnosis and treatment of conditions commonly seen by the general internist and subspecialist.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge

   a. The student will be able to demonstrate understanding of patient presentation and pathophysiology of common presenting complaints seen in the adult patient.
   b. The student will demonstrate the ability to evaluate and develop a differential diagnosis for each of the following symptoms/conditions:

      - Chest Pain
      - Syncope
      - Edema
      - Anemia
      - Fatigue
      - Headache
      - Cough
      - Shortness of Breath
      - Fever
      - Abdominal Pain
      - GI bleed
      - Constipation
      - Diarrhea
      - Dizziness
      - Back Pain
      - Joint Pain
      - Rash
c. The student will demonstrate an understanding of the basic principles and current recommendation for adult Immunizations based on ACIP or CDC guidelines. Age appropriate cancer screenings ex: Breast, Colon, Cervical, Prostate Screenings and their utilization of the USPSTF Database.

2. Patient Care

a. Develop a differential diagnosis appropriate to the context of the patient care setting and findings.
b. Develop an understanding of the altered physiology of the geriatric patient and aging process.

3. Interpersonal and Communication Skills

a. Explain how patient concerns and perspectives including cultural and religious influences impact care
b. Describe how to write the following:
   - different types of medical notes
   - SOAP notes
   - admission history & physicals
   - discharge summaries
   - procedure notes
c. Describe the capabilities of electronic health records.
d. Explain how to share diagnostic plan of care, and prognostic information with patients and families.

4. Professionalism

a. Summarize understanding and need for supervision, chaperones and/or assistance.
b. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.
c. Explain commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations.
d. Recognize that all patients in emergency situations shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. Practice-Based Learning and Improvement
a. Apply fundamental epidemiologic concepts.

b. Detail medical informatics, evidence-based medicine, and research.

c. Identify personal knowledge deficits, strengths, and limits through frequent self-reflection.

d. Explore the ability to locate educational resources and strengthen personal medical knowledge.

e. Explain quality improvement.

6. System-Based Practice

a. Recognize how patient care and professional practice affect other health care professionals, health care organizations, and the larger society.

b. Be aware of medication and treatment costs (direct patient costs/insurance coverage) and the impact of these factors on the physician’s treatment plan.

c. Demonstrate understanding of HIPAA regulations and its impact on the communication of patient care information for patients.

d. Recognize the need to improve your knowledge base, develop and deliver case presentations and demonstrate these skills by utilizing the local electronic medical record, on line resources and local patient instruction protocols to provide patient instructions.

e. Understand the training and certification pathways of sub specialties.

f. Demonstrate an understanding of when it is appropriate to refer to specialists.

7. Osteopathic Philosophy and Osteopathic Manipulative Medicine

a. Identify common and preferred pain patterns.

b. Identify key history and physical examination findings pertinent to the working diagnosis and the differential diagnosis.

c. Use appropriate information resources to determine diagnostic evaluations for patients with common and uncommon medical problems.

d. Describe how critical pathways or practice guidelines can be useful in sequencing diagnostic evaluations for the patient.

e. Formulate a differential diagnosis based on findings from the history and physical examination of the patient.

f. Prioritize diagnostic tests and treatment (including OMT) based on sensitivity, specificity, and cost-effectiveness.

g. Apply the 4 tenets of osteopathic medicine to patient care.

C. Study Plan

1. Universal notes Adult Medicine Inpatient Practice exams
Go to https://myuniversalnotes.com. Login using your WVSOM email and password. Click on the Q in the left hand navigation bar. Then click start a quiz. Then select Clinical for the “Questions by tag.” Then click on the “Clinical Tags” box. Then put a check in the Internal Medicine box. You will then select the number of questions. You will be responsible for completing two 50 question quizzes per 4 week rotation.

Satisfactory course completion requires this monitored assignment to be finished prior to the end of the block.

2. **Universal Notes: Study Plan for Internal Medicine**

Go to https://myuniversalnotes.com. Login using your WVSOM email and password. Then you can use this URL: [https://web.myuniversalnotes.com/bibliography/view/3063](https://web.myuniversalnotes.com/bibliography/view/3063), or click on “2 Study Plans & Board Prep, then “Study Plans CLERKSHIPS, COMAT, NBME,” then “Study Plan for Internal Medicine.” Click on and complete the modules in the following sections.

- Renal Acid-Base and Electrolyte Disorders
- Endocrine
- Infectious Agents and Conditions

For each topic you will complete the competencies including: “Read It”, “Test It”, and “Answer It”. You will not be expected to complete the “Log It,” “Upload It,” or “Assess It” competencies.

Satisfactory course completion requires this monitored assignment to be finished prior to the end of the block.

D. **COMAT**

There is no COMAT for this course

E. **Required Textbooks**


Saunders*


F. Other Resources


*available for free on Clinical Key through the WVSOM library

The American Academy of Dermatology (AAD) has excellent free resources available for study

- The comprehensive skin exam:

https://www.aad.org/education/basic-derm-curriculum/suggested-order-of-modules/the-skin-exam

G. Didactics and Reading assignments

1. Complete the DocCom Essential Modules 5-8 and Questions for Reflections

To access the Doc.Com Cases visit:
https://webcampus.drexelmed.edu/docom/db/read.aspxm students will log in using Email address and Password. Basic Modules include:09 Understand the
2. **Step-Up to Medicine**

The foundation of your required study will be comprised of reviewing the material in *Step-Up to Medicine*.


Go to the WVSOM library page at: [https://www.wvsom.edu/library/databases-portals-eresources](https://www.wvsom.edu/library/databases-portals-eresources). In the gray box on the right of the screen you'll find a heading that says “Search Library Catalog.” In the box underneath this type Step-up to Medicine. Step up to medicine will be the first hit and will include a link to “LWW Health Library.” Click on that and you’ll be in the e-book.

Step-Up to Medicine is intended to provide the content needed to help you succeed in your internal medicine rotations, a means of self-assessment for preparation for the COMAT and COMLEX examinations, and a foundation for further study. Students are expected to expound on the information when needed by utilizing other texts and resources (see sections 2.3.E and 2.3.F). This resource provides an outline of the material essential to Internal Medicine, but provides a knowledge base that may be useful in other disciplines as well, such as Family Medicine, Emergency Medicine, and Surgery.

Subjects Covered:

- Diseases of the Cardiovascular System
- Diseases of the Pulmonary System
- Diseases of the Gastrointestinal System
- Endocrine and Metabolic Diseases
- Diseases of the Central and Peripheral Nervous System
- Connective Tissue and Joint Diseases
- Disease of the Renal and Genitourinary System
- Fluids, Electrolytes, and Acid-Base Disorders
- Hematologic Diseases and Neoplasms
- Infectious Diseases
- Diseases of the Skin and Hypersensitivity Disorders
- Ambulatory Medicine
Additionally, the student is expected to set time aside each day for reading about patient encounters, preceptor assigned reading, and commonly encountered conditions.

H. Additional Recommendations

*Cecil’s Essentials of Medicine* is a foundational textbook and should be in the personal library and heavily referred to by every medical student.

I. Grading/Calculations

*Internal Medicine III*

The grade will be determined based on an average of preceptor evaluations for the course as determined by the WVSOM Office of Assessment. The online assignments must be completed or the grade will be recorded as an incomplete.

Completion of the Preceptor/Site/Course Evaluation should be done at the end of each rotation.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
Internal Medicine IV

Course Number: 910, 916, 917, 911, 912, 913 OLM

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

This is an extension of the internal medicine rotations taught during the student’s third year. It is expected that the student has grasped the basics of the earlier medicine experience and is now adequately prepared to devote time to improving these skills and becoming more involved with the diagnosis and treatment of conditions commonly seen by the general internist and subspecialist.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge

   a. The student will be able to demonstrate understanding of patient presentation and pathophysiology of common presenting complaints seen in the adult patient.
   b. The student will demonstrate the ability to evaluate and develop a differential diagnosis for each of the following symptoms/conditions:

      - Chest Pain
      - Syncope
      - Edema
      - Anemia
      - Fatigue
      - Headache
      - Cough
      - Shortness of Breath
      - Fever
      - Abdominal Pain
      - GI bleed
      - Constipation
      - Diarrhea
      - Dizziness
      - Back Pain
      - Joint Pain
      - Rash
c. The student will demonstrate an understanding of the basic principles and current recommendation for adult Immunizations based on ACIP or CDC guidelines. Age appropriate cancer screenings ex: Breast, Colon, Cervical, Prostate Screenings and their utilization of the USPSTF Database.

2. **Patient Care**

   a. Develop a differential diagnosis appropriate to the context of the patient care setting and findings.
   b. Develop an understanding of the altered physiology of the geriatric patient and aging process.

3. **Interpersonal and Communication Skills**

   a. Explain how patient concerns and perspectives including cultural and religious influences impact care
   b. Describe how to write the following:
      - different types of medical notes
      - SOAP notes
      - admission history & physicals
      - discharge summaries
      - procedure notes
   c. Describe the capabilities of electronic health records.
   d. Explain how to share diagnostic plan of care, and prognostic information with patients and families.

4. **Professionalism**

   a. Summarize understanding and need for supervision, chaperones and/or assistance.
   b. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.
   c. Explain commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations.
   d. Recognize that all patients in emergency situations shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. **Practice-Based Learning and Improvement**
a. Apply fundamental epidemiologic concepts.
b. Detail medical informatics, evidence-based medicine, and research.
c. Identify personal knowledge deficits, strengths, and limits through frequent self-reflection.
d. Explore the ability to locate educational resources and strengthen personal medical knowledge.
e. Explain quality improvement.

6. **System-Based Practice**

a. Recognize how patient care and professional practice affect other health care professionals, health care organizations, and the larger society.
b. Be aware of medication and treatment costs (direct patient costs/insurance coverage) and the impact of these factors on the physician’s treatment plan.
c. Demonstrate understanding of HIPAA regulations and its impact on the communication of patient care information for patients.
d. Recognize the need to improve your knowledge base, develop and deliver case presentations and demonstrate these skills by utilizing the local electronic medical record, on line resources and local patient instruction protocols to provide patient instructions.
e. Understand the training and certification pathways of sub specialties.
f. Demonstrate an understanding of when it is appropriate to refer to specialists.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**

a. Identify common and preferred pain patterns.
b. Identify key history and physical examination findings pertinent to the working diagnosis and the differential diagnosis.
c. Use appropriate information resources to determine diagnostic evaluations for patients with common and uncommon medical problems.
d. Describe how critical pathways or practice guidelines can be useful in sequencing diagnostic evaluations for the patient.
e. Formulate a differential diagnosis based on findings from the history and physical examination of the patient.
f. Prioritize diagnostic tests and treatment (including OMT) based on sensitivity, specificity, and cost-effectiveness.
g. Apply the 4 tenets of osteopathic medicine to patient care.

C. **Study Plan**

1. **Universal notes Adult Medicine Inpatient Practice exams**
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Satisfactory course completion requires this monitored assignment to be finished prior to the end of the block.

2. **Universal Notes: Study Plan for Internal Medicine**

Go to https://myuniversalnotes.com. Login using your WVSOM email and password. Then you can use this URL: https://web.myuniversalnotes.com/bibliography/view/3063, or click on “2 Study Plans & Board Prep, then “Study Plans CLERKSHIPS, COMAT, NBME,” then “Study Plan for Internal Medicine.” Click on and complete the modules in the following sections.

- Respiratory
- Musculoskeletal
- Neurologic

For each topic you will complete the competencies including: “Read It”, “Test It”, and “Answer It”. You will not be expected to complete the “Log It,” “Upload It,” or “Assess It” competencies.

Satisfactory course completion requires this monitored assignment to be finished prior to the end of the block.

D. COMAT

There is no COMAT for this course.

E. Required Textbooks


Andreoli and Carpenter’s Cecil Essentials of Medicine, 9th edition, 2016. Saunders*


F. Additional Resources


*available for free on Clinical Key through the WVSOM library

The American Academy of Dermatology (AAD) has excellent free resources available for study

• The comprehensive skin exam:

https://www.aad.org/education/basic-derm-curriculum/suggested-order-of-modules/the-skin-exam

G. Didactics and Reading assignments

1. Complete the DocCom Essential Modules 5-8 and Questions for Reflections

To access the Doc.Com Cases visit: https://webcampus.drexelmed.edu/doccom/db/read.aspxm students will log in using Email address and Password. Basic Modules include: 13 Responding to Strong Emotions, 14 It Goes without Saying: Nonverbal Communication in
Clinician-Patient Relationships, 15 Understanding difference and Diversity in the Medical Encounter: Communication across Cultures, 16 Promoting Adherence and Health Behavior Change.

2. Step-Up to Medicine

The foundation of your required study will be comprised of reviewing the material in Step-Up to Medicine.


Go to the WVSOM library page at: https://www.wvsom.edu/library/databases-portals-eresources. In the gray box on the right of the screen you'll find a heading that says “Search Library Catalog.” In the box underneath this type Step-up to Medicine. Step up to medicine will be the first hit and will include a link to “LWW Health Library.” Click on that and you'll be in the e-book.

Step-Up to Medicine is intended to provide the content needed to help you succeed in your internal medicine rotations, a means of self-assessment for preparation for the COMAT and COMLEX examinations, and a foundation for further study. Students are expected to expound on the information when needed by utilizing other texts and resources (see sections 2.3.E and 2.3.F). This resource provides an outline of the material essential to Internal Medicine, but provides a knowledge base that may be useful in other disciplines as well, such as Family Medicine, Emergency Medicine, and Surgery.

Subjects Covered:

- Diseases of the Cardiovascular System
- Diseases of the Pulmonary System
- Diseases of the Gastrointestinal System
- Endocrine and Metabolic Diseases
- Diseases of the Central and Peripheral Nervous System
- Connective Tissue and Joint Diseases
- Disease of the Renal and Genitourinary System
- Fluids, Electrolytes, and Acid-Base Disorders
- Hematologic Diseases and Neoplasms
- Infectious Diseases
- Diseases of the Skin and Hypersensitivity Disorders
- Ambulatory Medicine
Additionally, the student is expected to set time aside each day for reading about patient encounters, preceptor assigned reading, and commonly encountered conditions.

H. Additional Recommendations

*Cecil’s Essentials of Medicine* is a foundational textbook and should be in the personal library and heavily referred to by every medical student.

I. Grading/Calculations

*Internal Medicine IV*

The grade will be determined based on an average of preceptor evaluations for the course as determined by the WVSOM Office of Assessment. The online assignments must be completed or the grade will be recorded as an incomplete.

Completion of the Preceptor/Site/Course Evaluation should be done at the end of each rotation.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other

A. Introduction

Surgery II and Surgery III (Selective) are designed to expand the student’s knowledge in the pathophysiology of commonly encountered surgical conditions.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   a. Understand the role of pre-operative risk assessment and post-operative patient management.
   b. Understand the presentations, pathophysiology, etiology, differential diagnosis and surgical management of the following complaints or diagnosis: acute abdominal pain, appendicitis, cholecystitis, hernias, colon cancer, breast cancer, diverticulitis, thyroid nodules, thyroid cancer, pancreatitis, small bowel obstruction, dyspepsia/peptic ulcer disease, inflammatory bowel disease, upper and lower gastrointestinal bleeding, burn management, and trauma management.
   c. Understand the role of appropriate surgical consultation.
   d. Understand and recognize the principles of evidence-based utilization of resources as applied to general surgery (system based).

2. Patient Care
   a. Understand the components of a thorough physical exam of the abdomen, breast, thyroid, anorectal and genital areas.
b. Understand the components of a preoperative assessment and management plan.
c. Recognize common post-operative complications.

3. **System Based Practice**
   a. Recognize how patient care and professional practice affect other health care professionals, health care organizations, and the larger society.
   b. Recognize how delivery systems differ with controlling health care costs and allocating resources.
   c. Be aware of medication and treatment costs (direct patient costs) and the impact of these factors on the physician’s treatment plan.
   d. Demonstrate understanding of HIPAA regulations and its impact on the communication of patient care information for surgical patients.
   e. Recognize the need to improve your knowledge base, develop and deliver case presentations and demonstrate these skills by utilizing the local Electronic Medical Record (EMR), on-line resources, and local patient instruction protocols to provide patient instructions.

4. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
   a. Recognize and apply osteopathic treatment modalities appropriate to the pre- and post-surgical environment for somatic dysfunction, including the need for early ambulation and fluid mobilization techniques.
   b. Develop an appreciation for the need to treat the entire patient including emotional, spiritual, physical, and family needs.

C. **Study Guide**
   There are 22 cases and 16 skills modules in WISEMD. You should have already accessed this through your WVSOM credentials in Year 3.

   [https://aquifer.org/courses/wise-md/](https://aquifer.org/courses/wise-md/)

   Supplemental required readings on the topics covered in Mann’s Surgery, A Competency-Based Companion.

D. **COMAT Resources**
   Not applicable

E. **Required Textbooks**

F. Additional Resources

Surgery on Call, 4th edition, Lange
Zollinger’s Atlas of Surgical Operations
Sabiston Textbook of Surgery, 20th edition
Core Topics in General and Emergency Surgery, 5th edition

G. Didactics and Reading Assignments

There are 22 cases and 16 skills modules in WISEMD. You should have already accessed this through your WVSOM credentials in Year 3.

https://aquifer.org/courses/wise-md/

Supplemental required readings on the topics covered in Mann’s Surgery, A Competency-Based Companion.

H. Grading – Calculations

If a portion of this course was completed with a preceptor, the grade will be based solely on the evaluation form submitted by the preceptor assuming the Site evaluation and other assignments above were completed. If the entire course was completed online, the grade will be based on the average score for this course as determined by the WVSOM Office of Assessment.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email, then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.
The student is responsible for ensuring that the Grade Form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
Pediatrics II

Course Numbers: 950, 951, 952 OLM

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

The Pediatrics II rotation is designed to further refine the knowledge and skills required for the unique care of infants, children and adolescents. This rotation is a continuation of the Pediatrics I course. Greater emphasis should be placed on the study of diagnostic technologies and management aspects during Pediatrics II than in Pediatrics I.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   a. Recall and refine knowledge of normal growth and development, and apply this to a clinical scenario, from birth through adolescence for health supervision and disease prevention.
   b. Recall knowledge needed for the diagnosis and initial management of acute and chronic illnesses of infancy and childhood including common pediatric emergencies.
   c. Recall knowledge needed for the diagnosis and initial management of congenital problems and genetic diseases of infancy and childhood.
   d. Continue to develop the knowledge, skills, and strategies necessary for health supervision including knowledge of medications, immunizations, and age
appropriate anticipatory guidance for nutrition, developmental/behavioral counseling, and injury prevention including pharmacology.

e. Select, justify, and interpret clinical tests and imaging with regard to both patient age and pathological processes, including concepts regarding negative and positive predictive value, test sensitivity specifically and cost utilization.

f. Create a list based on the presentation and on physical findings of differential diagnoses for common pediatric disorders and prioritize based on findings and probability. Consider a work-up and treatment plan based on the above.

2. Patient Care
   a. Explain interview and physical examination skills required to conduct interviews with children or adolescents and their families and understand age appropriate physical examinations and osteopathic structural examinations.
   b. Explain how to educate patients and/or caregivers and evaluate their comprehension of the diagnosis and treatment plan, including conveying clinical condition and obtaining informed consent prior to procedures.
   c. Discuss how to educate patients and/or caregivers in both well child and a sick child.
   d. Describe how to accurately convey patient issues and needs when transitioning the patient to other members of the healthcare team, families, and parents.

3. Interpersonal and Communication Skills
   a. Summarize how to effectively communicate with pediatric patients, their caregivers, and the healthcare team.
   b. Explain how parental and patient concerns and perspectives including cultural and religious influences impact care
   c. Describe how to write the following:
      • different types of medical notes
      • SOAP notes
      • newborn nursery admission notes
      • admission history & physicals
      • discharge summaries
      • procedure notes
   d. Describe the capabilities of electronic health records.
   e. Explain how to share diagnostic plan of care, and prognostic information with patients and families.

4. Professionalism
   a. Summarize understanding and need for supervision, chaperones and/or assistance.
   b. Detail an understanding of privacy and independence of adolescents and of the private individual interview of an adolescent during the interview process.
c. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.

d. Explain commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations.

e. Recognize that all patients in emergency situations shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. **Practice-Based Learning and Improvement**
   a. Apply fundamental epidemiologic concepts.
   b. Detail medical informatics, evidence-based medicine, and research.
   c. Identify personal knowledge deficits, strengths, and limits through frequent self-reflection.
   d. Explore the ability to locate educational resources and strengthen personal medical knowledge.
   e. Explain quality improvement.
   f. Apply guidelines to age-appropriate clinical management.
   g. Recognize disparities in clinical research, access, and delivery of health care to younger populations and how these affect the health of the pediatric population.

6. **Systems-Based Practice**
   a. Recognize quality patient care systems and how they may affect the larger health care systems.
   b. Discuss the cost and risk-benefit analysis in patient and/or populations-based care in different delivery systems and settings.
   c. Identify available resources providing specialty care required for specific preventative screening and social situations. For example:
      - Parental and child developmental assistance programs
      - Foster care and adoption
      - Abuse, neglect and domestic violence
      - Hospice
      - Programs for special medical needs
   d. Describe reporting requirements for infectious diseases or psychosocial issues, such as child abuse or suicide.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
   The Four Tenets of Osteopathic Medicine: 1) The body is a unit; 2) Structure and function are interdependent; 3) The body has self-healing and self-regulatory capabilities; 4) Rational osteopathic care relies on the integration of these tenets in patients care.
   a.
b. Acquire knowledge of the approaches to common presentations to the Emergency Department specific to the Pediatric population.

c. Acquire knowledge needed for the evaluation and initial management of acute illnesses of infancy and childhood including common pediatric emergencies.

d. Recognize conditions that can be potentially life and limb threatening in the Pediatric age group

Be able to formulate a list based on the presentation and on physical findings of differential diagnoses for common pediatric disorders and prioritize based on findings and probability.

C. Study Guide & Practice Exams

The core foundational study program for the Pediatrics rotation is Universal Notes (www.myuniversalnotes.com).

1. Log in/create an account to Universal Notes (www.myuniversalnotes.com)

2. Click on Chapter 2 "Study Plans"

3. Find Pediatrics and click on it

There are two Pediatrics Study Plans available in Universal Notes:

• Study Plan Pediatrics: Comprehensive

• Study Plan Pediatrics: Inpatient

These can be found in Chapter 2 of the on-line curriculum. The specific topics required for study will vary depending on the service to which you are assigned. Your preceptor can help guide you to specific in-depth readings, especially Nelson's Essentials of Pediatrics.

Practice Exams

Students should complete the following practice exams in Universal Notes for Pediatrics II:

• Practice Exam: Pediatric Emergency Medicine 1 and Pediatric Emergency Medicine 2

• Practice Exam: Pediatrics Inpatient

• Practice Exam: Pediatrics Neonatal Intensive Care Unit

• Practice Exam: Pediatrics Prenatal Evaluation and Newborn Nursery 1 and Pediatrics Prenatal Evaluation and Newborn Nursery 2
• Practice Exam: Pediatrics Subspecialties 1 and Pediatrics Subspecialties 2

The Practice Exams can be accessed through the Quiz Bank in Universal Notes by selecting TOPIC and then typing in the name of the practice exam as shown above.

Students are required to complete each of the five practice exams and score 70% or greater on each of them in order to pass the rotation. Students must retake each exam until the passing score is achieved.

**Students are also required to complete the Pediatric EM online module(s) here:**

https://www.saem.org/cdem/education/online-education/peds-em-curriculum

Additional readings in Pediatrics in Universal Notes

1. Log in/create an account to Universal Notes (www.myuniversalnotes.com)
2. Click on Chapter 2 "Study Plans"
3. Find Pediatrics and click on it

Also, in-depth readings can be accessed using the reference texts, especially Nelson’s Essentials.

D. COMAT Exam

Not applicable

E. Required Textbooks and Curriculum Resources

**Universal Notes (www.myuniversalnotes.com)**

The free online resource, **Universal Notes**, offers for each clerkship:

- **Study plan**
- **Study material**
- **Question bank**
  - https://www.saem.org/cdem/education/online-education/peds-em-curriculum

Required Textbooks:
• Nelson’s Essentials of Pediatrics, 8th edition
• Pediatrics: A Competency-Based Companion

F. Additional Resources

• Nelson’s Textbook of Pediatrics, 21st edition

G. Didactic and Reading Assignments

As noted above. The Pediatric EM modules are well-referenced for additional readings. This is encouraged to develop a broader and more in-depth scope of knowledge.

The Universal Notes program is also useful as a rather comprehensive review of pediatrics for the medical student, including review questions.

H. Additional Recommendations

Review the basic components of the pediatric normal physical exam, including newborn, infant, and toddler, including developmental milestones. Frequent review of preventive care, such as parental counseling on diet and safety as well as vaccination schedules is prudent.

I. Grading

If a portion of this course was completed with a preceptor, the grade will be based solely on the evaluation form submitted by the preceptor assuming the Site evaluation and other assignments above were completed. If the entire course was completed online, the grade will be based on the average score for this course as determined by the WVSOM Office of Assessment.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/Supervising physician did not receive the email,
then the student must provide a paper grade form to be completed and Faxed or mailed to the SWC regional office.

The student is responsible for ensuring that the Grade Form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.
COVID-19 Elective OLM

Two-weeks - Spring 2020

Primary Faculty Contact:   Authorizing Physician:
Crystal Boudreaux, Ph.D.   Brian Kendall, M.D.
cboudreaux@osteo.wvsom.edu   bkendall@osteo.wvsom.edu
Phone: 304.793.6822

Supportive Faculty:
Tony Liu, M.D., Ph.D.
tliu@osteo.wvsom.edu
Phone: 304.647.6427

Marc Benson, Ph.D.
mbenson@osteo.wvsom.edu
Phone: 304.647.6275

I. Description
The purpose of this elective is to interpret literature during a medical emergency like the current SARS-CoV2 (COVID-19) pandemic. As physicians, review of medical and experimental literature is critical to maximize knowledge by attaining, maintaining and improving medical competency and stay current with medical trends. In a time of crisis this can be incredibly difficult with the rate in which case and laboratory studies emerge with and without peer review.

II. Outcomes
1. Understand how to do a critical review of literature
2. Demonstrate the ability to do a critical review of literature on the current COVID-19 pandemic
3. Identify falsely reported information or limitations to statistics being reported for COVID-19
4. Explain the basic science mechanisms to projected pathogenesis and treatments for COVID-19
5. Describe parameters that would affect epidemiological analysis of the current COVID-19 pandemic (ex. age, gender, ethnicity, geographic location, occupation, etc.)

III. Osteopathic Relevance
The COVID-19 Elective focuses on communication as an osteopathic physician. It is important to interpret literature and communicate effectively to patients. Understanding that a world medical emergency infectious diseases such as the COVID-19 pandemic incorporates the four osteopathic tenets:
1. The body is a unit; the person is a unit of body, mind, and spirit
2. The body is capable of self-regulation, self-healing, and health maintenance
3. Structure and function are reciprocally interrelated
4. Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function.
Without complete knowledge of the viral pathogen, no effective antivirals, no vaccines, and unknown extraneous factors, we rely on these tenets for treatment and healing from this pandemic.

IV. Activities
1. Read the following brief communications on interpreting scientific literature:
   a. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3191655/
   b. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3687192/
2. In no more than 10 pages (single spaced, Arial font - 11point, 1 inch margins), complete a critical literature review using the guide below to answer the following questions within each section.
   a. Section I: 1 describe the virus and how it compares to the other coronavirus pandemics (MERS-CoV and SARS-CoV1), 2 explain the viral mechanism(s) being described and what factors are known to influence the mechanism(s) of COVID-19, 3 describe the antiviral treatments, vaccines and their mechanisms discussed in the literature of COVID-19
   b. Section II: 1 identify and summarize one controversial report based on basic science mechanisms described in section I, 2 explain the limitations on the statistics being reported to date of the COVID-19 pandemic
   c. Section III: 1 describe the reported risk factors and how they tie directly to the mechanism(s) explained in section I for COVID-19, 2 explain how patient management has evolved over time during the pandemic due to limitation in reporting described in section II, 3 identify influences (if any) on epidemiological parameters of COVID-19 exemplified in outcome 5
   d. Section IV: in a few sentences, comment on how this pandemic has shaped your thoughts on infectious disease and medicine as a training physician

V. Resources
1. Utilize the resources of the WVSOM online library (https://www.wvsom.edu/library/library-home)
3. Two Lancet articles as a starting point
   b. https://www.thelancet.com/action/showPdf?pii=S2213-2600%2820%2930116-8

Core Competencies
The core competencies can be found using this link: http://www.wvsom.edu/Academics/pre-clinica-competencies

Professionalism
Professionalism will be exhibited each day in class and each student will be expected to adhere to institutional policy ST-01 and their own statement below which was written by the student government
association:

“As medical students of the West Virginia School of Osteopathic Medicine, we acknowledge and value the importance of professional conduct. We recognize that the behavior and attitudes of individuals and groups reflects on all of us, our institution, and our profession. Professionalism encompasses but is not limited to the virtues of respect, integrity, honesty, confidentiality, and dependability. We will strive to uphold these values in our endeavors at all times. We will show honesty and integrity to all those we come into contact with, meaning that we will adhere to the moral and ethical principles we have been taught and show soundness of moral character. We will be expected to maintain confidentiality in all settings no matter how small the issue. Above all else we will show self-less service to our patients, colleagues, institution and community.”

For further details that relate to professional behavior, refer to the following institutional policies that can be accessed on the WVSOM Website at http://www.wvsom.edu/About/policies_procedures

Copyright
Materials used in this course may be copyrighted and should not be shared with individuals not currently enrolled in this course. Sharing copyrighted materials outside of WVSOM will result in having a note in the student’s Dean’s file regarding unprofessional conduct.

This syllabus is subject to change upon written notification.
Muscular Dystrophies Elective
Spring 2020

Preceptor:
Predrag Krajacic, MD
pkrajacic@osteo.wvsom.edu
(304) 647-6305

I. Description
The purpose of this elective is to broaden the student’s knowledge on muscular dystrophies with a special focus on Duchenne Muscular Dystrophy (DMD). The elective will incorporate self-guided review of muscular dystrophies in general, followed by guided primary literature search with a special focus on the current state of the search for the cure. Finally, we will wrap up the elective reviewing a JAOA article geared towards osteopathic physicians summarizing the challenges and actions they are uniquely equipped to take in caring for patients with DMD, or diagnosing them early. This will provide the students with the opportunity to get better informed on this devastating disease and be better equipped to help the patients and families struggling to manage it.

II. Outcomes
1. Explain and discuss the disease mechanism and clinical findings for Duchenne Muscular Dystrophy (DMD)
2. Perform a critical review of literature and discuss the current state of research for therapeutic approaches
3. Discuss the current and relevant information regarding DMD diagnosis and management relevant for an osteopathic primary care physician.

III. Osteopathic Relevance
Patients with DMD have dysfunctions in all 5 body physiologic functions and, therefore, would be best approached and optimally treated by relying on all 5 models of osteopathic care. Special focus will be put on an osteopathic primary care physician’s approach to a DMD patient and their family. Approaching DMD care using this osteopathic primary care treatment paradigm will provide the student with up-to-date, holistic, and life-enhancing care options for DMD patients.

IV. Activities
1. Self-guided review of course material related to muscular dystrophies with a special focus on Duchenne Muscular Dystrophy (DMD) in WVSOM Year 1 MSK course and Year 2 Rheum course using textbooks available through the Clinical Key.
2. Guided primary literature search with a special focus on the current state of the search for therapeutics
3. Review and discussion of the JAOA review article "Bridging the Gap: An Osteopathic Primary Care-Centered Approach to Duchenne Muscular Dystrophy"

V. Resources

1. Utilize the resources of the WVSOM online library (https://www.wvsom.edu/library/library-home)
3. JAOA article (https://jaoa.org/article.aspx?articleid=2630265)

VI. Grading

Grade for this elective rotation will be assigned by the preceptor.

Core Competencies
The core competencies can be found using this link: http://www.wvsom.edu/Academics/pre-clinica-competencies

Professionalism
Professionalism will be exhibited each day in class and each student will be expected to adhere to institutional policy ST-01 and their own statement below which was written by the student government association:

“As medical students of the West Virginia School of Osteopathic Medicine, we acknowledge and value the importance of professional conduct. We recognize that the behavior and attitudes of individuals and groups reflects on all of us, our institution, and our profession. Professionalism encompasses but is not limited to the virtues of respect, integrity, honesty, confidentiality, and dependability. We will strive to uphold these values in our endeavors at all times. We will show honesty and integrity to all those we come into contact with, meaning that we will adhere to the moral and ethical principles we have been taught and show soundness of moral character. We will be expected to maintain confidentiality in all settings no matter how small the issue. Above all else we will show self-less service to our patients, colleagues, institution and community.”

For further details that relate to professional behavior, refer to the following institutional policies that can be accessed on the WVSOM Website at http://www.wvsom.edu/About/policies_procedures

Copyright
Materials used in this course may be copyrighted and should not be shared with individuals not currently enrolled in this course. Sharing copyrighted materials outside of WVSOM will result in having a note in the student’s Dean’s file regarding unprofessional conduct.

This syllabus is subject to change upon written notification.
Medical Communication Skills Elective

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction
This is a two-week rotation. This rotation may be scheduled as a 2 two week rotation to occur in a consecutive 2 week time period.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   At the conclusion of this rotation, the student will demonstrate medical knowledge, understanding of disease process, and the student’s ability to apply cognitive skills in differential diagnosis as it relates to the assigned modules related to Medical Communication Skills.

2. Patient Care
   Explain how to educate patients and/or caregivers and evaluate their comprehension of the diagnosis and treatment plan, including conveying clinical condition and obtaining informed consent prior to procedures.

3. Interpersonal and Communication Skills
   a. Summarize how to effectively communicate with patients, their family members, and the healthcare team.
   b. Explain how parental and patient concerns and perspectives including cultural and religious influences impact care.
   c. Explain how to share diagnostic plan of care, and prognostic information with patients and families.

4. Professionalism
   a. Detail an understanding of privacy and independence of adults and adolescents.
b. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.

5. **Systems-based Practice**
   Student will demonstrate the ability to understand his/her role as a member of the health care team, the student’s understanding of local community medical resources, and the student’s understanding of providing effective and cost effective medicine.

6. **Osteopathic Relevance**

C. **Study Guide**
   Using Online DocCom modules. Student will complete the assigned modules and complete both the multiple choice and essay questions associated with each module.

D. **COMAT Blueprint**
   N/A

E. **Required textbooks**
   None

F. **Other resources**
   Evidence Medicine Sites:
   - www.ahrq.gov/clinic/cps3dix.htm
   - www.clinicalkey.com
   - www.cochrane.org/

G. **Didactic and reading assignments**
   As above

H. **Additional Recommendations**
   None

I. **Patient Procedure Logs**
   None.
J. Grading/Calculations

1. Successful completion of assigned online course modules constitutes passage for the Elective.
In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents a syllabus for an elective course available via on-line learning.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction
This is designed to be a two-week self-directed elective. The student will watch on-line learning modules available at no cost which cover the basic core of medical toxicology material.

At the completion of the on-line learning program, the student will be expected to have gained sufficient knowledge and covered all of the core competencies involving the management of toxicologic emergencies. This will be achieved through the use of Toxicology Library located in the Life in the Fast Lane (litfl.com) website and supplemental readings. Competency in the subject matter will be assessed through the on-line testing module for toxicology on the SAEM website.
B. Course (Rotation) Objectives and Core Competencies

1. **Medical Knowledge**
   a. Acquire the knowledge needed for the diagnosis and initial management of toxicologic exposures.
   b. Acquire the ability to formulate an appropriate workup plan for the potentially poisoned patient.
   c. Demonstrate the ability to formulate a differential diagnosis for the patient with an accidental or intentional poisoning.
   d. Be able to describe and identify the commonly seen toxidromes in a potentially poisoned patient.

2. **Patient Care**
   a. Explain the value of history-taking and physical examination of the poisoned patient and the recognition of common toxidromes and their management.
   b. Explain how to educate patients and their families regarding mitigation of the risks of unintentional/accidental poisonings.
   c. Describe situations which may require the consultation and involvement of psychiatric and/or social services agencies in cases of intentional and unintentional poisonings.
   d. Describe the means of conveying the needs and continued care of the patient when transferring the care of the patient to other members of the healthcare team.
   e. Demonstrate the use of additional toxicologic resources and access to Poison Control to guide the management of the poisoned patient.

3. **Interpersonal and Communication Skills**
   a. Summarize how to effectively communicate and gather history from the poisoned patient, or their family/caregivers in the case of the patient with an altered mental status.
   b. Describe how to write the following:
      i. SOAP notes
      ii. Admission history and physicals
      iii. Admission orders
      iv. Procedure notes
      v. Procedure notes
   c. Describe the capabilities and utility of the electronic health record, Poisondex, online resources for toxicology references, and consultation with a medical toxicologist through the Regional Poison Center hotline.
   d. Explain how to share the diagnostic plan of care and prognostic information with the patient and family.

4. **Professionalism**
   a. Summarize understanding and need for supervision, chaperones and/or assistance.
b. Express an understanding of privacy and independence of adolescents and of the private individual interview of an adolescent during the interview process.
c. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.
d. Recognize that all patients in emergency situations shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. **Practice-Based Learning and Improvement**
   a. Apply fundamental epidemiologic concepts.
   b. Detail medical information sources for toxicology, evidence-based medicine, and research.
   c. Identify personal knowledge deficits, strengths, and limits through frequent self-reflection.
   d. Display the ability to locate additional educational resources and strengthen personal medical knowledge.

6. **Systems-Based Practice**
   a. Recognize quality patient care systems and how they may affect the larger health care systems.
   b. Discuss the cost and risk-benefit analysis in patient and/or populations-based care in different delivery systems and settings.
   c. Describe the methods and reporting requirements for possible intentional poisonings or accidental poisonings in adults and in children.

7. **Osteopathic Philosophy and Osteopathic Manipulative Medicine**
   The Four Tenets of Osteopathic Medicine: 1) The body is a unit; 2) Structure and function are interdependent; 3) The body has self-healing and self-regulatory capabilities; 4) Rational osteopathic care relies on the integration of these tenets in patient care.

C. **Study Guide**

The on-line student enrolled in the Toxicology Elective shall be required to complete the on-line learning modules which address all of the learner-centered objectives for the Toxicology Elective as listed above. These modules are not inclusive of all toxicologic emergencies and toxic ingestions but do include those that are more commonly seen. The student is strongly encouraged to watch all of the assigned video presentations and their associated recommended readings.

The required modules are found on the following website:
Go to Toxicology Library Basics.
Review RR SIDEAD
Review Acid-base disorders and Osmolar Gaps video
Review The 12-Lead ECG in Toxicology video
Go to Tox Conference Talks…
Review the Sodium Valproate Metabolism video
Review the Glucagon, Yay or Nay video
Review the Carbon Monoxide video
Review the Opioids video
Review the Sulfonylurea video
Review the Digoxin video
Review the Calcium Channel Blockers video
Review the Toxicology Flashcards
Go to Tox Tutes…
Review Tox Tute video #1: Resuscitation
Review Tox Tute video #2: Risk Assessment
Review Tox Tute video #3: SIDEAD
Review Tox Tute video #4: TCA
Review Tox Tute video #5: Cocaine
Review Tox Tute video #6: Amphetamine
Review Tox Tute video #7: Calcium Channel Blocker
Review Tox Tute video #8: Carbon Monoxide
Review Tox Tute video #9: GHB
Review Tox Tute video #10: Cyanide
Go to LITFL Further Reading Drugs and Synthetic Toxicants…
Read Analgesia and Anti-inflammatories
- Colchicine
- NSAIDs
- Paracetamol
- Salicylates
- Tramadol

Read Antiarrhythmics
- Digoxin
- Quinine

Read Anticonvulsants
- Benzodiazepines
- Carbamazepines
- Newer Agents
- Phenytoin
- Valproic Acid

Read Antidepressants
- Bupropion
- MAOI’s (Monoamine Oxidase Inhibitors)
- Mirtazapine
- SNRI's (Selective Serotonin and Noradrenaline Reuptake Inhibitors)
- SSRI's (Selective Serotonin Reuptake Inhibitors)
- TCA

Read Antihistamines
- Non-sedating antihistamines
- Sedating antihistamines

Read Antihypertensives
- Beta Blockers
- Calcium Channel Blockers
- Clonidine

Read Antipsychotics
- Amisulpride
- Benztropine
- Clozapine
- Lithium
- Olanzapine
- Phenothiazines and butyrophenones
- Quetiapine
- Risperidone

Read Ingestions
- Button Batteries
- Corrosives
- Glyphosphate
- Hydrofluoric Acid
- Hydrogen Peroxide
- Organochlorines
- Organophosphorus agents
- Paraquat
- Strychnine

Read Inhalation/Ingestion (gases, hydrocarbons)
- Carbon Monoxide
- Chlorine
- Cyanide
- Hydrocarbons

Read Metals
- Arsenic
- Iron
- Mercury
- Potassium

Read Miscellaneous toxicants
- Isoniazid
- Theophylline

Read Recreational Drugs
- Amphetamines
-Barbiturates  
-Cannabinoids  
-Cocaine  
-GHB  
-Opioids

D. **COMAT** There is no COMAT for this course but the following test is required:

This is a pass/fail course. There is no remediation for this elective.

The student must achieve a passing score on the Practice Test 2017 Tox, found on the SAEM website, and they must submit a screenshot or printed copy of the test result. Contact must be made with Mary Beth Fitch, SWC Northern Region Director to receive a username and password to gain access to the tests on this website.

1. The student must compose two (2) “board-style” multiple choice questions from the toxicology curriculum. The questions must meet the following requirements:
   a. These should be case-based.
   b. You must provide your rationale for the correct answer and explain why the other answer choices are incorrect.
   c. At the end each question with its accompanying rationale you must provide a list of references you used to create the question. The references need to be in AMA format. Any images used must have the reference information in AMA format next to the image/video.
   i. Your references need to be in AMA format. For guidance in getting them into the correct format please visit [https://owl.purdue.edu/owl/research_and_citation/ama_style/index.html](https://owl.purdue.edu/owl/research_and_citation/ama_style/index.html)
   ii. Use the following format if citing an UpToDate article:

   Marion DW. Pacing the diaphragm: Patient selection, evaluation, implantation, and complications. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on January 04, 2018.)

   d. Any questions not meeting these requirements will be sent back to you for amendment and will need to be resubmitted with the new date of submission at the end (see “f” below on how to save your question).
   e. Please review the guidance “Writing medical board questions” and follow these guidelines when writing your questions. This guidance can be found in this syllabus below. There is an example question in the guidance, your question should be in a similar format.
f. You will submit your questions to my administrative assistant Ashley Millard at amillard@osteo.wvsom.edu. Your questions should be saved as a word document as follows: lastname.US.dateofsubmission for example, “Hrutkay.Tox.3.25.20”

2. The student must create a case-based Power Point presentation covering a toxicology patient case. The presentation must meet the following guidelines:

a. This should be a ten-minute presentation in given in a case presentation format.
b. You will notify me of your topic by the third day of the rotation.
c. Must have a slide with your objectives/outcomes.
d. Any images used in your presentation must have the reference information in AMA format next to the image/video.
e. General references used to create the presentation must be listed at the end, again in AMA format.
f. This presentation will be given virtually during an education day or for the EM residents and EM faculty during the Trinity Health System Emergency Medicine Didactics Program. This will be scheduled during the last week of this rotation. The presentation will be evaluated by the preceptor and the EM faculty in attendance.
g. Be sure to practice your presentation before you give it!
h. You will save your presentation as LastName.Title.Date. For example, Hrutkay.IronOverdose.3.25.20
i. Submit your final presentation to Dr. Lisa Hrutkay at lhrutkay@osteo.wvsom.edu.

This two-week elective course will be limited to no more than ten (10) students per each two-week offering. If the demand for the course exceeds the ten-student limit, the preceptor will work to accommodate these additional students in the following manner:

a) The preceptor will make contact with the students’ Regional Assistant Deans to attempt to make arrangements for additional assistance with the receipt and evaluation of the board-style questions that are required of the student.

b) The preceptor will make contact with the students’ Regional Assistant Deans to attempt to make arrangements for the student to deliver their Power Point presentations for the didactics program for an IM/EM/FM residency program within their respective regions. The student presentation would then be evaluated by the faculty at that residency program and by their Regional Assistant Dean instead of by the course preceptor and the faculty in the EM residency program at Trinity Health System.
E. Required Textbooks

Goldfrank’s Toxicologic Emergencies, 10th Edition
(Available on WVSOM On-Line Library)

(Available on Access Medicine on WVSOM On-Line Library)

F. Additional Resources

None

G. Didactic and Reading Assignments

All reading assignments are listed above and are available on the Life In The Fast Lane website. Supplemental in-depth reading on any of these topics can be found in the Goldfrank’s Toxicologic Emergencies or Tintinalli’s Emergency Medicine: A Comprehensive Study Guide online textbooks.

H. Grading/Calculations

The quizzes, presentations, and all submissions/resubmissions of board style test questions will need to be completed no later than 5 days following the last official day of the rotation. This is a 14 day rotation.

Upon successful completion of this curriculum and achievement of a passing score on the SAEM Practice Test 2017 Tox, the student will receive the average score for an Elective as determined by the WVSOM Office of Assessment.

Guidance for Writing Board Style Questions

Please find below general guidance on writing board style questions. This information is based on content found within the 4th edition of the manual produced by the National Board of Medical Examiners entitled “Constructing Written Test Questions For the Basic and Clinical Sciences”. Please use Chapter 6 in the manual to help you write your questions. You may find the manual at https://www.nbme.org/sites/default/files/2020-01/IWW_Gold_Book.pdf or you may download it from the site https://www.nbme.org/services/workshops-consultancy

Overview of the steps to writing a question
1. Determine the subject of the question
2. Determine which type of question it should be
3. Write the clinical vignette
4. Write the lead in question. Consider looking at the examples of different types of lead in questions before you start writing your clinical vignette.
5. List the answer choices (all of the answer choices must be plausible)
6. Provide your rationale i.e. discuss why the correct answer is the right answer and why the other answer choices are incorrect
7. List the references to support your rationale in AMA format. Use the site https://owl.purdue.edu/owl/research_and_citation/ama_style/index.html to help you put your references into the correct format.

Types of Test Questions (which should be in the form of a clinical vignette)
1. Recall Questions – tests knowledge of facts or definitions
2. Interpretation Questions – requires review of information and makes the student reach a conclusion like a diagnosis
3. Problem-Solving Questions – Presents a situation and make the student take some action (next step in management)

Each question should:
1. Focus on important concepts, not trivial facts
2. Can be answered without looking at the options
3. Includes only relevant facts or data. No red herrings.
4. The question should not be tricky or too complex
5. Avoid negatively phrased lead ins (avoid using except or not)
6. Be grammatically correct

Clinical Vignette Questions:
1. Tests knowledge using a clinical vignette
2. Should focus on common or life-threatening problems
3. Avoid “zebras” or esoteric concepts
4. Avoid clinical situations that would be handled only by a specialist
5. Make sure to focus on content that you are expected to undertake at your next stage of training
6. Could also be on areas where clinical mistakes are often made

Template for the Clinical Vignette
Follow the template found towards the bottom of page 36 of the NBME Guide. Please also follow that order when writing your question.

The Lead In Question…
1. Must be a clear question so that the student can answer without looking at the options
2. Types of lead in questions
   a. Basic Science Lead In Questions: require clinical knowledge and knowledge of a foundational science principle that would have been learned during preclinical study but reinforced during clinical rotations. See page 40 of the guide for examples of these types of questions.
   b. Diagnosis Type Lead In Questions
i. Obtaining and Predicting History and Physical Examination. See page 40 of the guide for examples of these types of questions.
ii. Selecting and Interpreting Diagnostic Studies. See page 41 of the guide for examples of these types of questions.
iii. Formulating the Diagnosis. See page 41 of the guide for examples of these types of questions.
iv. Determining Prognosis/Outcome. See page 41 of the guide for examples of these types of questions.
c. Management Type Lead In Questions
   i. Health Maintenance and Disease Prevention. See page 42 of the guide for examples of these types of questions.
   ii. Pharmacotherapy/Clinical Interventions and Treatments. See page 44 of the guide for examples of these types of questions.
d. Mechanism of Disease Type of Lead In Questions - tests knowledge of pathophysiology in its broadest sense. See page 45 of the guide for examples of these types of questions.

How to submit your questions and example of question format:

You will send your questions as a word document via email to Ashley Millard at amillard@osteowvsom.edu. Your questions should be saved as a word document as follows: lastname.Tox.dateofsubmission for example, “Hrutkay.Tox.3.25.20”

A 28-year-old medical student is at home writing his first board style question. He does not feel prepared to write these types of questions. He suddenly becomes diaphoretic and feels his heart racing. This episode lasted approximately 10 minutes and resolved when he took a break to walk his dog. He is healthy and his parents are also healthy. His roommate, also a medical student, examined him. He has a normal physical exam. Which of the following is his most likely diagnosis?

   A. Myocardial infarction
   B. Post-traumatic stress disorder
   C. Alcohol withdrawal
   D. Panic attack
   E. Hypoglycemia

Rationale
The correct answer is D panic attack. This student is otherwise healthy as are his parents, therefore a myocardial infarction is not likely. Additionally, his age makes myocardial infarction much less likely. You have not been given a history of previous traumatic events he may be suffering from, therefore post-traumatic stress disorder is also unlikely. Since we have not been given his social history alcohol withdraw is also unlikely. His symptoms are most consistent with a panic attack and while these could also be symptoms of hypoglycemia, symptoms of
hypoglycemia would have worsened while walking the dog. Walking the dog likely took his mind off of writing the question allowing his symptoms to resolve.

References


• Your references need to be in AMA format. For guidance in getting them into the correct format please visit https://owl.purdue.edu/owl/research_and_citation/ama_style/index.html
• And use the following format if citing UpToDate:

Marion DW. Pacing the diaphragm: Patient selection, evaluation, implantation, and complications. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on January 04, 2018.)

Grading Rubric for Presentation

This is how you will be evaluated on your presentation. All attendees will submit an evaluation form of your presentation.

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>Excellent (10/10)</th>
<th>Strong (9/10)</th>
<th>Good (8/10)</th>
<th>Adequate (7/10)</th>
<th>Inadequate (0/10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>Highly organized and linear</td>
<td>Mostly linear and easy to follow</td>
<td>Adequate organization and flow</td>
<td>Could be better developed</td>
<td>Poorly organized; unexcused absence</td>
</tr>
<tr>
<td>Objectives</td>
<td>Clear and met</td>
<td>Good and met</td>
<td>A little vague, but still appropriate</td>
<td>Adequate</td>
<td>Inadequate/ none; unexcused absence</td>
</tr>
<tr>
<td>Detail (and accuracy of content)</td>
<td>Excellent, 100% accurate, and appropriate</td>
<td>Accurate and appropriate, at the right level, save for one or two exceptions</td>
<td>Average, maybe a little too detailed, or too general</td>
<td>Multiple content errors and/or detail too much or too vague</td>
<td>Most content is inaccurate; Definitely too detailed or too general; unexcused absence</td>
</tr>
<tr>
<td>Errors in grammar, spelling</td>
<td>None</td>
<td>Few</td>
<td>Some</td>
<td>Multiple</td>
<td>A lot; unexcused absence</td>
</tr>
<tr>
<td>Presentation skills</td>
<td>Spot on, Well-practiced, no fillers, highly engaging, no ticks</td>
<td>Practiced, few fillers, engaging, few, if any, ticks</td>
<td>Could be polished more, but overall appropriate, many fillers, inconsistent</td>
<td>Adequate practice, but ideally would have practiced it much more, a lot of fillers, limited</td>
<td>Lacking in engagement with the audience, Lacking in coherent speech;</td>
</tr>
<tr>
<td></td>
<td>Visuals</td>
<td>Engagement with the audience</td>
<td>Engagement with the audience</td>
<td>Unexcused absence</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------------------------------------------------------------</td>
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<td>------------------------------</td>
<td>------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Visuals</strong></td>
<td>Excellent, not too busy or all words; appropriately cited</td>
<td>Nice images with good explanations/notes; information cited for the most part</td>
<td>On the side of too busy or wordy, hard to see images/busy</td>
<td>Definitely too busy/wordy, many unlabeled images</td>
<td>Lacking in visuals or so wordy it can’t be read through while listening, etc.; unexcused absence</td>
</tr>
<tr>
<td><strong>Time management</strong></td>
<td>Almost perfect: Started and ended on time, did not have to rush or slow down.</td>
<td>Started and ended on time, not rushed or finishing too early</td>
<td>Rushed a couple of slides, finished a little early; Spent too much time on a slide or two; ended late; no time for questions</td>
<td>Rushed a lot of slides or ended too early; Spent too much time on several slides; went over</td>
<td>Poorly timed, had many slides not covered or ended much too early; unexcused absence</td>
</tr>
</tbody>
</table>
Ultrasound Elective Rotation: Online Course Syllabus

2020-2021

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In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to an actual clinically based ultrasound elective.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

Thank you for participating in this course! I hope you’ll enjoy learning the content. This is a self-directed course designed to teach you introductory point of care ultrasound (POCUS) principles and procedures.

This is designed to be a two week self-directed elective. You will watch videos demonstrating proper ultrasound techniques used in diagnosing and treating patients (refer to the Study Guide section for the complete listing). You will then complete three online ultrasound quizzes, write two board style questions related to ultrasound, and deliver a 10 minute presentation on an ultrasound topic (refer to the Evaluation section of this syllabus for further details).
Read this syllabus in its entirety.

At the completion of the on-line learning program, the student will be expected to have gained sufficient medical knowledge and covered all of the core competencies set forth in this syllabus. This is a comprehensive introduction to bedside ultrasound methods and techniques but does not replace the value of the actual application of these techniques in a clinical setting. Additional clinical practice of these techniques is highly recommended for the student to become proficient with these skills. This learning program will make use of the on-line FOAMed (Free Open Access Medical Education) Program at www.sonomojo.org. The student will be expected to complete the learning modules in their entirety and complete the post-testing.

B. Course (Rotation) Objectives and Core Competencies

1. **Medical Knowledge**
   a. Acquire an understanding of the basic physics behind ultrasound and the uses and applications of the various ultrasound transducers to obtain proper diagnostic images.
   b. Develop an understanding of the proper role of ultrasound in the diagnosis of individual patient pathology.
   c. Be able to identify circumstances in which ultrasound would be the first diagnostic test of choice and when it would not be the first choice.

2. **Patient Care**
   a. Explain interview and examination skills required to conduct screening for patients presenting with urgent and emergent conditions to see if bedside ultrasound may be an appropriate diagnostic test.
   b. Summarize the methods of explaining the ultrasound procedure to the patient to make them comfortable with the testing and to understand the benefits and limitations of ultrasound imaging.

3. **Interpersonal and Communication Skills**
   a. Summarize how to effectively communicate with and establish a good rapport with the patient who is presenting for assessment, as well as the family who accompany them.
   b. Explain how parental and patient concerns and perspectives including cultural and religious influences impact care.
   b. Describe how to fully document the ultrasound procedure and how to capture and record the diagnostic images to place them into the patient’s health record.
   c. Explain how to share the diagnostic findings, plan of care, and prognostic information with patients and families.

4. **Professionalism**
   a. Summarize understanding and the need for supervision, chaperones and/or assistance, depending upon the given circumstance.
b. Detail an understanding of privacy and independence of adolescents and of the private individual interview of an adolescent during the interview process and diagnostic testing.

c. Explain how sensitivity, empathy, and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care.

d. Recognize that all patients with an urgent or emergent complaint shall receive care regardless of medical insurance coverage, ethnicity, race, or social economic status.

5. Practice-Based learning and Improvement
   a. Be able to apply fundamental epidemiologic concepts to the patient population with which the student is working.
   b. Detail medical informatics, evidence-based medicine, and research.
   c. Be able to identify personal knowledge deficits, strengths, and limitations through frequent self-reflection.
   d. Explore the avenues through which additional educational resources can be located and use them to strengthen personal medical knowledge.
   e. Explain the methods of quality improvement.

6. Systems-Based Practice
   a. Discuss the cost and risk-benefit analysis in patient and/or populations-based care in different delivery systems and settings, as it pertains to diagnostic imaging modalities.

7. Osteopathic Philosophy and Osteopathic Manipulative Medicine
   The Four Tenets of Osteopathic Medicine:
   1) The body is a unit;
   2) Structure and function are interdependent;
   3) The body has self-healing and self-regulatory capabilities;
   4) Rational osteopathic care relies on the integration of these tenets in patients care.

C. Study Guide

The on-line learner shall be required to complete the on-line learning modules which address all of the selected specific learner-centered objectives for Point of Care Ultrasound (POCUS) listed in this syllabus. These modules are not all-inclusive of all ultrasound training material, but they do include most of the commonly used diagnostic modalities. For optional additional resources see the “Other Resources” section below.

Module One: Ultrasound Basics
Assignments for Module One:
  • Watch the YouTube video “Ultrasound Physics and Instrumentation” (48 minutes 5 seconds) by Chris Fox at (in this video the instructor is using the GE Logic V2 ultrasound)
    https://www.youtube.com/watch?v=531t0deTQwg&list=WL&index=37&t=0s
• Watch the YouTube video “Ultrasound Transducer Manipulation” (7 minutes 20 seconds) by Adam Collins at https://www.youtube.com/watch?v=RskrEsAGzec

Module Two: Abdomen
Assignments for Module Two:
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on Abdominal Ultrasound Module
  o Read Sonoguide: “Renal”
  o Watch 5 Minute Sono: “Hydronephrosis”
  o Watch One Minute Ultrasound: “Kidney”
  o Watch Ultrasound Podcast: “Renal Ultrasound”
  o Watch Ultrasound Podcast: “Appendix”
  o Watch One Minute Ultrasound: “Small Bowel Obstruction”
  o Watch Ultrasound Podcast: “Small Bowel Obstruction”
  o Watch 5 Minute Sono: “SBO”
  o Watch One Minute Ultrasound: “Gallbladder”
  o Watch Ultrasound Podcast: “Gallbladder”
  o Watch USC Ultrasound Learning Module: “Liver”
  o Watch USC Ultrasound Learning Module: “Spleen Ultrasound”
  o Watch 5 Minute Sono: “Bladder Volume”
  o Watch USC Ultrasound Learning Module: “Bladder and Ureter Ultrasound”
  o Watch Ultrasound Podcast: “Using Ultrasound for Hernias”
  o Watch Ultrasound Podcast: “Bonus Hernia”

Module Three: Cardiac Ultrasound
Assignments for Module Three:
• Watch the YouTube video “Bedside Ultrasound Basic Cardiac US” (19 minutes 21 seconds) by POCUS Geek at https://www.youtube.com/watch?v=C60jGZsiPrs
• Watch the YouTube video “Estimating Ejection Fraction with Point of Care Echo” (11 minutes 9 seconds) by Synthesis Medical Education at https://www.youtube.com/watch?v=JJZgO8ML0tk
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on Cardiac Ultrasound Module
  o Read Sonoguide: “Cardiac”
  o Watch One Minute Ultrasound: “Basic Cardiac”
  o Watch Castlefest: “Best Cardiac Ultrasound”
  o Watch Ultrasound Podcast: “ECHO ECHO ECHO”
  o Watch One Minute Ultrasound: “EPSS”
  o Watch Ultrasound Podcast: “E-Point Septal Separation”
  o Watch 5 Minute Sono: “Cardiac Function”
  o Watch One Minute Ultrasound: “Passive Leg Raise”
  o Watch One Minute Ultrasound: “Wall Motion”
  o Watch Ultrasound Podcast: “Wall Motion”
  o Watch 5 Minute Sono: “Right Heart Strain”
Module Four: Lung Ultrasound
Assignments for Module Four:
- Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on Lung Ultrasound Module
  - Watch Ultrasound Podcast: “Dyspnea”
  - Watch Ultrasound Podcast: “Lung Ultrasound” with Mike Stone Part 1, Part 2
  - Watch Ultrasound Podcast: “Lung Ultrasound” with Vicki Noble Part 1, Part 2
  - Watch 5 Minute Sono: “Pulmonary Edema”
  - Watch Ultrasound Podcast: “Multi-Organ Ultrasound for PE”
  - Watch 5 Minute Sono: “PE”
  - Watch 5 Minute Sono: “Pneumonia”
  - Watch 5 Minute Sono: “Pleural Effusion”
  - Watch 5 Minute Sono: “Pneumothorax”

Module Five: FAST and eFAST
Assignments for Module Five:
- Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on Trauma Ultrasound Module
  - Read Quickhits: Life in the eFAST Lane” Part 1, Part 2, Part 3
  - Watch One Minute Ultrasound: “FAST”
  - Watch Ultrasound Podcast Cliff Reid: “eFAST”
  - Watch EMCRIT Podcast: “Don’t Half Ass your FAST”
  - Watch Ultrasound Podcast: “Advanced Trauma Ultrasound”

Module Six: Fluid Responsiveness and Hypotension
Assignments for Module Six:
- Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on Fluid Responsiveness Ultrasound Module
  - Watch One Minute Ultrasound: “IVC”
  - Watch 5 Minute Sono: “Fluid Responsiveness”
  - Watch Ultrasound Podcast: Fluid Responsiveness, Part 1 and Part 2
  - Watch Ultrasound Podcast: “Integrated Ultrasound Approach to Fluid Responsiveness”
  - Watch Ultrasound Podcast: “Carotid VTI Passive Leg Raise for Volume Responsiveness”
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the RUSH Protocol Module
  o Watch Ultrasound Podcast: “RUSH Part 1, Part 2”
  o Watch 5 Minute Sono: “RUSH Exam”

Module Seven: Vascular Ultrasound
Assignments for Module Seven:
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the Vascular Ultrasound Module
  o Read SonoGuide: “DVT”
  o Watch One Minute Ultrasound: “DVT”
  o Watch Ultrasound Podcast: “DVT”
  o Watch Ultrasound Podcast: “DVT How To”
  o Watch Ultrasound Podcast: “DVT: The Whole Leg Approach”
  o Read SonoGuide: “Aorta”
  o Watch One Minute Ultrasound: “Aorta”
  o Watch Mike Stone Vimeo: “How I Scan the Aorta”
  o Watch One Minute Ultrasound: “IVC”
  o Watch Academy of Emergency Ultrasound Vimeo: IVC Ultrasound”

Module Eight: Musculoskeletal Ultrasound
Assignments for Module Eight:
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the Musculoskeletal Ultrasound Module
  o Read SonoGuide: “MSK Overview”
  o Watch Mike Stone Vimeo: “MSK”
  o Watch Academy of Emergency Ultrasound: “Musculoskeletal Ultrasound: Muscles and Tendons”
  o Watch Ultrasound Podcast: “Hip Ultrasound, Aspiration and Injection”
  o Watch One Minute Ultrasound: “Shoulder Dislocation”
  o Read SonoGuide: “Sternum”
  o Read SonoGuide: “Ribs”
  o Watch Ultrasound Podcast: “Scanning the Scaphoid”
  o Watch Ultrasound Podcast: “Ultrasound of Radius Fracture”

Module Nine: Soft Tissue Ultrasound
Assignments for Module Nine:
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the Soft Tissue Ultrasound Module
  • Read SonoGuide: “Soft Tissue Ultrasound”
  • Read SonoGuide: “Foreign Bodies”
  • Watch One Minute Ultrasound: “Soft Tissue”
  • Watch 5 Minute Sono: “Soft Tissue”

Module Ten: Female Pelvic Ultrasound
Assignments for Module Ten:
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the Female Pelvic Ultrasound Module
  • Read SonoGuide: “Ultrasound in Early Pregnancy”
  • Watch One Minute Ultrasound: “Intrauterine Pregnancy (IUP)”
  • Watch One Minute Ultrasound: “Transvaginal Ultrasound”
  • Watch Mike Stone Vimeo: “Essential 1st Trimester Pelvic Ultrasound”
  • Watch Ultrasound Podcast: “Ultrasound for Late Pregnancy”
  • Watch 5 Minute Sono: “Fetal Heart Rate”

Module Eleven: Small Parts Ultrasound
Assignments for Module Eleven:
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the Small Parts Ultrasound Module
  • Read SonoGuide: “ENT Ultrasound Applications”
  • Watch Ultrasound Podcast: “Peritonsillar Abscess”
  • Watch USC Ultrasound Learning Modules: “Thyroid”
  • Read Sonoguide: “Testicular”
  • Watch Ultrasound Podcast: “Testicular Ultrasound Part 1, Part 2”

Module Twelve: Ocular Ultrasound
Assignments for Module Twelve:
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the Ocular Ultrasound Module
  • Read SonoMojo: “Keeping an Eye on Intracranial Pressure: Detecting Elevated ICP Using Ocular Ultrasound”
  • Watch One Minute Ultrasound: “Ocular Ultrasound”
  • Watch Ultrasound Podcast: “Ocular Ultrasound”
  • Watch EMCRIT Podcast: “High ICP Herniation”

Module Thirteen: Pediatric Ultrasound
Assignments for Module Thirteen:
• Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the Pediatric Ultrasound Module
Module Fourteen: Consents and Time Outs

Assignments for Module Fourteen:

- Watch the YouTube video "Informed Consent Checklist" by Pedro Tanaka at https://www.youtube.com/watch?v=AN8CdzQj6xk (7 minutes, 2 seconds)
- Read the UpToDate articles “Informed procedural consent” and “Ethics in the intensive care unit: Informed consent”
- Watch the YouTube video “Bedside Procedure Time Out” by UnitedMemorial MedicalCenter 1 minute 53 seconds at https://www.youtube.com/watch?v=-gO2cV38vZo
- Watch the YouTube video “Time Out: Universal Protocol at University Hospital” by University Health System (1 minutes 28 seconds) at https://www.youtube.com/watch?v=pDXQemdSwlY

Module Fifteen: Ultrasound Guided Procedures

Assignments for Module Fifteen:

- Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the Ultrasound Guided Vascular Access Module
  - Read SonoGuide: “Vascular Access”
  - Watch Mike Stone Vimeo: “Short Axis, Out of Plane Technique”
  - Watch Mike Stone Vimeo: “Long Axis, In Plane Technique”
  - Watch One Minute Ultrasound: “IV Placement”
  - Watch Ultrasound Podcast: “Ultrasound Guided Peripheral IV’s”
  - Watch One Minute Ultrasound: “IJ Ultrasound”
  - Watch Ultrasound Podcast Microcast: “IJ Placement”
  - Watch Ultrasound Podcast: “Wire in Needle a Win for Needle Visualization”
  - Watch 5 Minute Sono: “Superficial Cervical Plexus Block”
  - Watch Ultrasound Podcast Microcast: “Radial Arterial Line Insertion”

FYI (this is optional): The New England Journal of Medicine (NEJM) has several “Videos in Clinical Medicine” that thoroughly demonstrate how to do various procedures including ultrasound guided procedures. To access the NEJM videos log into the NEJM website through the WVSOM Library website. Once you are logged in click on the
heading "Multimedia" then choose “Videos in Clinical Medicine” from the drop down menu, then simply scroll through them to find the video that you would like to watch. Each video has a written article summarizing the content in the video. This is an excellent resource.

Module Sixteen: Useful Protocols Module
Assignments for Module Sixteen:

- Go to the website www.sonomojo.org → Go to Learning Modules → Click on FOAMed Ultrasound Curriculum → Click on the Useful Protocols Module
  - Watch Ultrasound Podcast: “EGLS”
  - Watch Ultrasound Podcast: “Ultrasound Guided CPR Part 1, Part 2”
- Watch the YouTube video “POCUS and CPR: First Do No Harm” (13 minutes 13 seconds) by Michael Schick at https://www.youtube.com/watch?v=yEaDWPMDJI

D. COMAT Blueprint

There is no COMAT Exam for the Ultrasound On-Line Elective. Please refer to the Evaluation section of this syllabus for information regarding measurement of the student’s acquired knowledge in bedside ultrasound.

E. Required Textbooks

There are no required texts for this elective. All learning is done through the available on-line readings, videos and podcasts listed in the syllabus.

F. Additional Resources

The Life in the Fast Lane website offers a large and diverse library of ultrasound quizzes which are highly recommended for the student for review at the completion of this course.

There are many eBooks available to be referenced by the student through the WVSOM library:

- Access Medicine
  --“Pocket Guide to POCUS: Point of Care Tips for Point of Care Ultrasound”

- Clinical Key
  --“Point of Care Ultrasound”
  --“Clinical Doppler Ultrasound”
  --“Clinical Ultrasound”
G. Didactic and Reading Assignments

All reading and required on-line videos are thoroughly outlined under the Study Plan. It is also highly recommended that the student review a minimum of fifty (50) of the Top 100 Ultrasound Case Quizzes found on the website, Life in the Fast Lane. Ultrasound is a patient-focused manual skill and complete competency in this skill cannot be fully achieved without patient contact and practice. It is highly recommended that the student seek out and arrange for practice with this skill in a clinical setting, when circumstances permit the return to clinical rotations.

H. Evaluation

This is a pass/fail course. There is no remediation for this elective.

1. Pass the three short quizzes found on the SonoMojo website.
   a. Go to www.sonomojo.org
   b. Hover over the “Learning Modules” tab
   c. Click on “SonoQuizzes”
   d. Take all three quizzes as many times as needed to “pass” the quiz
   e. Save all three completed quizzes as PDF files and email them to Ashley Millard at amillard@osteo.wvsom.edu.

2. The student will also be required to compose two (2) “board style” multiple choice questions from the ultrasound curriculum. The questions must meet the following requirements:
   a. These should be case-based and should include ultrasound images, if applicable.
   b. You must provide your rationale for the correct answer and explain why the other answer choices are incorrect
   c. At the end each question with its accompanying rationale you must provide a list of references you used to create the question. The references need to be in AMA format. Any images used must have the reference information in AMA format next to the image/video.
i. Your references need to be in AMA format. For guidance in getting them into the correct format please visit https://owl.purdue.edu/owl/research_and_citation/ama_style/index.html.

ii. Use the following format if citing an UpToDate article:
Marion DW. Pacing the diaphragm: Patient selection, evaluation, implantation, and complications. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on January 04, 2018.)

d. Any questions not meeting these requirements will be sent back to you for you to amend and will need to be resubmitted with the new date of submission at the end (see “f” below on how to save your question).

e. Please review the guidance “Writing medical board questions” and follow these guidelines when writing your questions. This guidance can be found in this syllabus below. There is an example question in the guidance, your question should be in a similar format.

f. You will submit your questions to my administrative assistant Ashley Millard at amillard@osteo.wvsom.edu. Your questions should be saved as a word document as follows: lastname.US.dateofsubmission for example, “Hrutkay.US.3.25.20”

3. The student will be required to create a Power Point presentation based on a patient case utilizing ultrasound in the diagnostic workup. The presentation must meet the following guidelines.

a. This should be a ten-minute presentation in given in a case presentation format.

b. You will notify me of your topic by the third day of the rotation.

c. Must have a slide with your objectives/outcomes

d. The presentation should include diagnostic ultrasound images/videos. Any images used must have the reference information in AMA format next to the image/video.

e. General references used to create the presentation must be listed at the end, again in AMA format.

f. This presentation will be given virtually during an education day or for the EM residents and EM faculty during the Trinity Health System Emergency Medicine Didactics Program. This will be scheduled during the last week of this rotation. The presentation will be evaluated by the preceptor and everyone in attendance.

g. Be sure to practice your presentation before you give it!

h. You will save your presentation as LastName.Title.Date. For example, Hrutkay.OcularUltrasound.3.25.20

i. Submit your final presentation to Lisa Hrutkay, Northern Regional Assistant Dean at lhrutkay@osteo.wvsom.edu.

4. This two-week elective course will be limited to no more than ten (10) students per each two-week offering. If the demand for the course exceeds
the ten-student limit, the preceptor will work to accommodate these additional students in the following manner:

a. The preceptor will make contact with the students’ Regional Assistant Deans to attempt to make arrangements for additional assistance with the receipt and evaluation of the board-style questions that are required of the student.

b. The preceptor will make contact with the students’ Regional Assistant Deans to attempt to make arrangements for the student to deliver their Power Point presentations for the didactics program for an IM/EM/FM residency program within their respective regions. The student presentation would then be evaluated by the faculty at that residency program and by their Regional Assistant Dean instead of by the course preceptor and the faculty in the EM residency program at Trinity Health System.

5. The quizzes and all submissions/resubmissions of board style test questions will need to be completed no later than 5 days following the last official day of the rotation. This is a 14 day rotation.

6. Just an FYI (and I hate to even say it) but failure to complete the above is considered a violation of WVSOM’s policy on student professionalism. Institutional Policy ST-01 (https://www.wvsom.edu/About/policies_procedures) and will be reported as such. I know that this will not be a problem with anyone taking this course!

I. Grading/Calculations

Successful completion of the online course modules and the post tests will be factored into passage of the elective. A letter grade will be assigned for this rotation by the preceptor upon receipt of the proof of successful completion of the three on-line quizzes, the preceptors assessment of the quality of the board-style questions submitted by the student, and the combined scoring of the ultrasound presentation given at Trinity EM Didactics Program.

Please note the following:

The preceptor (if an email address is on file) will receive an email with a link to the Clinical Education Grade Form to complete before the end of the rotation. The student needs to inquire if the preceptor/supervising physician has received the email with the link to the form. If the Preceptor/supervising physician did not receive the email, then the student must provide a paper grade form to be completed and faxed or mailed to the SWC regional office.
The student is responsible for ensuring that the grade form is submitted in a timely fashion and should follow-up with the preceptor, if necessary.

Guidance for Writing Board Style Questions
Please find below general guidance on writing board style questions. This information is based on content found within the 4th edition of the manual produced by the National Board of Medical Examiners entitled “Constructing Written Test Questions For the Basic and Clinical Sciences”. Please use Chapter 6 in the manual to help you write your questions. You may find the manual at https://www.nbme.org/sites/default/files/2020-01/IWW_Gold_Book.pdf or you may download it from the site https://www.nbme.org/services/workshops-consultancy

Overview of the steps to writing a question
1. Determine the subject of the question
2. Determine which type of question it should be
3. Write the clinical vignette
4. Write the lead in question. Consider looking at the examples of different types of lead in questions before you start writing your clinical vignette.
5. List the answer choices (all of the answer choices must be plausible)
6. Provide your rationale i.e. discuss why the correct answer is the right answer and why the other answer choices are incorrect
7. List the references to support your rationale in AMA format. Use the site https://owl.purdue.edu/owl/research_and_citation/ama_style/index.html to help you put your references into the correct format.

Types of Test Questions (which should be in the form of a clinical vignette)
1. Recall Questions – tests knowledge of facts or definitions
2. Interpretation Questions – requires review of information and makes the student reach a conclusion like a diagnosis
3. Problem-Solving Questions – Presents a situation and make the student take some action (next step in management)

Each question should:
1. Focus on important concepts, not trivial facts
2. Can be answered without looking at the options
3. Includes only relevant facts or data. No red herrings.
4. The question should not be tricky or too complex
5. Avoid negatively phrased lead ins (avoid using except or not)
6. Be grammatically correct

Clinical Vignette Questions:
1. Tests knowledge using a clinical vignette
2. Should focus on common or life-threatening problems
3. Avoid “zebras” or esoteric concepts
4. Avoid clinical situations that would be handled only by a specialist
5. Make sure to focus on content that you are expected to undertake at your next stage of training
6. Could also be on areas where clinical mistakes are often made
Template for the Clinical Vignette

Follow the template found towards the bottom of page 36 of the NBME Guide. Please also follow that order when writing your question.

The Lead In Question...

1. Must be a clear question so that the student can answer without looking at the options
2. Types of lead in questions
   a. Basic Science Lead In Questions: require clinical knowledge and knowledge of a foundational science principle that would have been learned during preclinical study but reinforced during clinical rotations. See page 40 of the guide for examples of these types of questions.
   b. Diagnosis Type Lead In Questions
      i. Obtaining and Predicting History and Physical Examination. See page 40 of the guide for examples of these types of questions.
      ii. Selecting and Interpreting Diagnostic Studies. See page 41 of the guide for examples of these types of questions.
      iii. Formulating the Diagnosis. See page 41 of the guide for examples of these types of questions.
      iv. Determining Prognosis/Outcome. See page 41 of the guide for examples of these types of questions.
   c. Management Type Lead In Questions
      i. Health Maintenance and Disease Prevention. See page 42 of the guide for examples of these types of questions.
      ii. Pharmacotherapy/Clinical Interventions and Treatments. See page 44 of the guide for examples of these types of questions.
   d. Mechanism of Disease Type of Lead In Questions - tests knowledge of pathophysiology in its broadest sense. See page 45 of the guide for examples of these types of questions.

How to submit your questions and example of question format:

You will send your questions as a word document via email to Ashley Millard at amillard@osteo.wvsom.edu. Your questions should be saved as a word document as follows: lastname.US.dateofsubmission for example, “Hrutkay.US.3.25.20”

A 28 year old medical student is at home writing his first board style question. He does not feel prepared to write these types of questions. He suddenly becomes diaphoretic and feels his heart racing. This episode lasted approximately 10 minutes and resolved when he took a break to walk his dog. He is healthy and his parents are also healthy. His roommate, also a medical student, examined him. He has a normal physical exam. Which of the following is his most likely diagnosis?

A. Myocardial infarction
B. Post-traumatic stress disorder  
C. Alcohol withdraw  
D. Panic attack  
E. Hypoglycemia  

Rationale  
The correct answer is D panic attack. This student is otherwise healthy as are his parents, therefore a myocardial infarction is not likely. Additionally, his age makes myocardial infarction much less likely. You have not been given a history of previous traumatic events he may be suffering from, therefore post-traumatic stress disorder is also unlikely. Since we have not been given his social history alcohol withdraw is also unlikely. His symptoms are most consistent with a panic attack and while these could also be symptoms of hypoglycemia, symptoms of hypoglycemia would have worsened while walking the dog. Walking the dog likely took his mind off of writing the question allowing his symptoms to resolve.  

References  

- Your references need to be in AMA format. For guidance in getting them into the correct format please visit https://owl.purdue.edu/owl/research_and_citation/ama_style/index.html  
- And use the following format if citing UpToDate: Marion DW. Pacing the diaphragm: Patient selection, evaluation, implantation, and complications. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on January 04, 2018.)
**Grading Rubric for Presentation**
This is how you will be evaluated on your presentation. All attendees will submit an evaluation form of your presentation.

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>Excellent (10/10)</th>
<th>Strong (9/10)</th>
<th>Good (8/10)</th>
<th>Adequate (7/10)</th>
<th>Inadequate (0/10)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization</strong></td>
<td>Highly organized and linear</td>
<td>Mostly linear and easy to follow</td>
<td>Adequate organization and flow</td>
<td>Could be better developed</td>
<td>Poorly organized; unexcused absence</td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td>Clear and met</td>
<td>Good and met</td>
<td>A little vague, but still appropriate</td>
<td>Adequate</td>
<td>Inadequate/ none; unexcused absence</td>
</tr>
<tr>
<td><strong>Detail (and accuracy of content)</strong></td>
<td>Excellent, 100% accurate, and appropriate</td>
<td>Accurate and appropriate, at the right level, save for one or two exceptions</td>
<td>Average, maybe a little too detailed, or too general</td>
<td>Multiple content errors and/or detail too much or too vague</td>
<td>Most content is inaccurate; Definitely too detailed or too general; unexcused absence</td>
</tr>
<tr>
<td><strong>Errors in grammar, spelling</strong></td>
<td>None</td>
<td>Few</td>
<td>Some</td>
<td>Multiple</td>
<td>A lot; unexcused absence</td>
</tr>
<tr>
<td><strong>Presentation skills</strong></td>
<td>Spot on, Well-practiced, no fillers, highly engaging, no ticks</td>
<td>Practiced, few fillers, engaging, few, if any, ticks</td>
<td>Could be polished more, but overall appropriate, many fillers, inconsistent engagement with the audience</td>
<td>Adequate practice, but ideally would have practiced it much more, a lot of fillers, limited engagement with the audience</td>
<td>Lacking in engagement with the audience, Lacking in coherent speech; unexcused absence</td>
</tr>
<tr>
<td><strong>Visuals</strong></td>
<td>Excellent, not too busy or all words; appropriately cited</td>
<td>Nice images with good explanations/notes; information cited for the most part</td>
<td>On the side of too busy or wordy, hard to see images/busy</td>
<td>Definitely too busy/wordy, many unlabeled images</td>
<td>Lacking in visuals or so wordy it can’t be read through while listening, etc.; unexcused absence</td>
</tr>
<tr>
<td><strong>Time management</strong></td>
<td>Almost perfect: Started and ended on time, did not have to rush or slow down.</td>
<td>Started and ended on time, not rushed or finishing too early</td>
<td>Rushed a couple of slides, finished a little early; Spent too much time on a slide or two; ended late; no time for questions</td>
<td>Rushed a lot of slides or ended too early; Spent too much time on several slides; went over</td>
<td>Poorly timed, had many slides not covered or ended much too early; unexcused absence</td>
</tr>
</tbody>
</table>
Opioid Use Disorder and Treatment Elective

In response to a widespread emergency affecting multiple hospitals and other clinical learning sites, this represents an alternate syllabus to the course.

This syllabus is only to be used when the student is notified of such by the Associate Dean of Predoctoral Clinical Education or his/her designees in response to a severe disruption or other dire circumstances that preclude access to clinical learning by direct or indirect patient care.

This syllabus will describe remote learning, including but not limited to delivery methods such as readings, online modules, video presentations, or other.

A. Introduction

This is a two-week rotation. This rotation may be scheduled as a two-week rotation to occur in a consecutive two-week time period.

B. Course (Rotation) Objectives and Core Competencies

1. Medical Knowledge
   At the conclusion of this rotation, the student will demonstrate medical knowledge, understanding of disease process, and the student’s ability to apply cognitive skills in differential diagnosis as it relates to the assigned modules related to Opioid Use Disorder, Pain Management, Addictions, and MAT.

2. Patient Care
   Explain how to educate patients and/or caregivers and evaluate their comprehension of the diagnosis and treatment plan, including conveying clinical condition and obtaining informed consent prior to procedures.

3. Interpersonal and Communication Skills
   a. Summarize how to effectively communicate with patients, their family members, and the healthcare team regarding substance use disorders and pain.
   b. Explain how parental and patient concerns and perspectives including cultural and religious influences impact care of substance use disorders and pain.
   c. Explain how to share diagnostic plan of care, and prognostic information with patients and families regarding substance use disorders and pain.

4. Professionalism
a. Detail an understanding of privacy and independence of adults and adolescents with substance use problems.
b. Explain how sensitivity, empathy and responsiveness to diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation impacts care of individuals with substance use disorders and pain.

5. **Systems-based Practice**
   Student will demonstrate the ability to understand his/her role as a member of the health care team, the student’s understanding of local community medical resources, and the student’s understanding of providing effective and cost effective medicine related to substance use.

6. **Osteopathic Relevance**
   Substance Use disorder and the Opioid Crisis is a crisis of mind-body-and-spirit. Competent care involves sensitive, respectful use of CDC guidelines and evidence-based best practices. Pain management using the least dangerous forms, particularly OMM, is in line with Osteopathic relevance.

C. **Study Guide**
   Using Online PCSS, the student will complete 35 modules on [https://onlinemeded.org/spa/cases](https://onlinemeded.org/spa/cases)

D. **COMAT Blueprint**
   N/A

E. **Required textbooks**
   None

F. **Other resources**

   Evidence Medicine Sites:
   - [www.ahrq.gov/clinic/cps3dix.htm](http://www.ahrq.gov/clinic/cps3dix.htm)
   - [www.clinicalkey.com](http://www.clinicalkey.com)
   - [www.cochrane.org/](http://www.cochrane.org/)

G. **Didactic and reading assignments**
   As above

H. **Additional Recommendations**
   None
I. Patient Procedure Logs

None.

J. Grading/Calculations

Successful completion of assigned online course modules (pass is 70% on each module quiz) constitutes passage for the Elective.
Introduction to the ICU: Online Course

Introduction to the ICU: Online
Course Syllabus 2019-2020

Course director: Elizabeth Ziner, DO
eziner@osteo.wvsom.edu
Office phone: 304-647-6569

Dr. Ziner’s Administrative Assistant: April Williams
awilliams@osteo.wvsom.edu
Office phone: 304-793-6806

Thank you for participating in this course! I hope you’ll enjoy learning the content. This is a self-directed course designed to teach you introductory intensive care unit (ICU) principles and procedures. I have tried to provide you with very high-yield, easy to learn content. If you, along your journey, find other sources that you find helpful in learning these topics, please share them with me so that I can share them with others. You will also be given resources for you to use during your residency when you are responsible for direct patient care in the ICU – most of this content is under the “Additional (optional) Resources” heading for each module.

Just to be clear:

The Global Objective of the course is: Students will learn introductory intensive care unit principles and procedures required to diagnose and manage a critically ill patient with hypoxemia, hypercapnia, shock, and pneumonia.

The Global Outcome for the course is: Students will be able to apply the basic skills required to diagnose and manage a critically ill patient with hypoxemia, hypercapnia, shock, and pneumonia.

You may find the links to all of the policies, disclaimers, core entrustable professional activities for entering residency, and all other fine print related to this course at the end of this document. These are all in one place for your convenience.

It is imperative that you email your Statewide Campus Dean and April Williams, my administrative assistant @awilliams@osteo.wvsom.edu, and tell them that you are officially taking this course.

Read this syllabus in its entirety.
How to find this course in eMedley: Login to eMedley, go to educate, then filter for 005-1 Statewide Campus Information – CO2020 & CO2021. Then search for ICU Online Course. All documents for the course are posted within the announcement folder. If you have difficulty accessing the course please email Janet Miller at jmiller@osteo.wvsom.edu or call her at 304-647-6278 or email Machelle Lisenmeyer at alisenmeyer@osteo.wvsom.edu or call her at 304-793-6871.

For this course:
The content in this course is broken down into eight modules. You will be busy during this two week rotation! Don’t procrastinate. Each module has a theme(s). Most of the content is found on the New England Journal of Medicine (NEJM) Website, NEJM Resident 360 website, UpToDate, YouTube, and a couple of other sources such as websites, and dare I say, one book chapter.

There are several NEJM Videos in Clinical Medicine for you to watch. To access these videos log into the NEJM website at www.nejm.org. Once you are logged in click on the heading “Multimedia” then choose “Videos in Clinical Medicine” from the drop down menu, then simply scroll through them to find the video you have been directed to watch. Each video has a written article associated with it – I will want you to read through the written content. To find these just click on the “PDF” download button found to the left of the video. I will also want you to read any corrections to the articles or correspondence related to the articles – you can find those links to the right of the video under the heading “related articles”.

You will need to set up a “NEJM Resident 360” account. Instructions on how to do this are provided in the screen shot below. If you have trouble setting up your account please contact the library library@osteo.wvsom.edu or call (304) 647-6261. I will not be able to help you with that. Once you’ve created your account follow the login instructions provided on the screenshot below (next page).
I have also found another way to login to NEJM Resident 360. Go to www.nejm.org then in the top left hand corner of the website there is a drop down menu called “NEJM Group” – hover over the menu, then choose “NEJM Resident 360”. Then use the username/password you created for the NEJM Resident 360 site. See the screen shots below. I think you all will enjoy using NEJM Resident 360 – it has a lot of nice content.
I have provided you with the links to the YouTube videos and other websites. Simply hover your cursor over the hyperlink and click. If for some reason it doesn’t work I’ve provided enough information to you so that you can find the video on your own if needed. You could also copy and paste the hyperlink into your web browser.

Read the outcomes for each module and try to focus in on those while going through the content.
If you are unable to find the content that is not accessed via the WVSOM library (such as a YouTube video or a website), please contact me or my administrative assistant April Williams at awilliams@osteo.wvsom.edu or phone 304-793-6806. If you are having trouble accessing content that you access via the WVSOM library (such as NEJM, NEJM Resident 360, Clinical Key, etc.) then you need to contact the library to help you gain access at library@osteo.wvsom.edu or call (304) 647-6261.

**This elective rotation is pass/fail. There is no remediation. See below for how you will be evaluated. When you have completed all the modules:**

1. You will have a 10 question quiz in Universal Notes. You may take the quiz as many times as you need in order to achieve a score of ≥ 80%. Please see the instructions below on how to access the quiz.

2. You will write two board style questions, in clinical vignette style. You must choose from the topics listed in the required modules. You must provide your rational for the correct answer and provide a list of references you used to create the question. The references need to be in AMA format. I will review the questions and give you feedback about them – you will be able to resubmit any question(s) which needs improvement. Please review the document “Writing medical board questions” and follow these guidelines when writing your questions. This document can be found in eMedley under this course. You will submit your questions to my administrative assistant April Williams at awilliams@osteo.wvsom.edu. Her phone number is 304-793-6806. Your questions should be saved as a word document as follows: lastname.ICU.dateofsubmission for example, “Ziner.ICU.3.25.20”

3. The quiz and all submissions of board style test questions (including resubmissions of test questions) will need to be completed no later than 5 days from the last official day of the rotation. This is a 14 day rotation.

4. Just an FYI (and I hate to even say it) but failure to complete the above is considered a violation of WVSOM’s policy on student professionalism Institutional Policy ST-01 ([https://www.wvsom.edu/About/policies_procedures](https://www.wvsom.edu/About/policies_procedures)) and will be reported as such. I know that this will not be a problem with anyone taking this course!

**To access the quiz:**

1. Log into Universal Notes at [https://web.myuniversalnotes.com/index#home](https://web.myuniversalnotes.com/index#home)
2. Click on the Q-bank (circled Q on left column)
3. Click on Start a Quiz
4. In the “Questions by Tag” drop down menu select Topic and
5. In the box labeled “topic tags” type: Rotation Exam: WVSOM Intensive Care Unit. Click to select that exam.
6. Select appropriate testing mode (Test Mode will lock you into 1 minute per question)
7. Set number of questions to 10
8. Click Submit and begin the test
9. At the end of the test click Finish Quiz and it will show your results.

Retake your quiz by clicking on “retake quiz” (as seen in the screenshot below) or by following the steps above.
I hope you enjoy working through the modules! At the end of the course you will receive a survey - thank you in advance for your thoughtful feedback on how to improve the course.

Before we get started let’s review the osteopathic relevance for this course:

**Osteopathic Relevance:**
It is of the utmost importance that an osteopathic physician be able to initiate management of a critically ill patient and do so with empathy and compassion for the patient and the family. Osteopathic physicians do so while remembering the Four Tenets of Osteopathic Medicine:
1. The body is a unit
2. Structure and function are interdependent
3. The body has self-healing and self-regulatory capabilities
4. Rational osteopathic care relies on the integration of these tenets in patient care

The osteopathic physician should always:
1. Apply the five models of osteopathic care to each relevant clinical scenario;
2. Diagnose and treat related somatic dysfunction when applicable;
3. Determine if OMT is primary, supportive, or non-contributory to treatment of the representative cases.
Please also refer to the osteopathic code of ethics that can be found in your clinical education manual at https://www.wvsom.edu/sites/default/files/u127/%24Clinical_Manual_2018-

Osteopathic Oath

The Osteopathic Oath

I do hereby affirm my loyalty to the profession I am about to enter.

I will be mindful always of my great responsibility to preserve the health and life of my patients, to retain their confidence and respect both as a physician and a friend who will guard their secrets with scrupulous honor and fidelity, to perform faithfully my professional duties, to employ only those recognized methods of treatment consistent with good judgment and with my skill and ability, keeping in mind always nature’s laws and the body’s inherent capacity for recovery.

I will be ever vigilant in aiding in the general welfare of the community, sustaining its laws and institutions, not engaging in those practices which will in any way bring shame or discredit upon myself or my profession. I will give no drugs for deadly purposes to any person, though it be asked of me.

I will endeavor to work in accord with my colleagues in a spirit of progressive cooperation, and never by word or by act cast imputations upon them or their rightful practices.

I will look with respect and esteem upon all those who have taught me my art. To my college I will be loyal and strive always for its best interests and for the interests of the students who will come after me. I will be ever alert to further the application of basic biologic truths to the healing arts and to develop the principles of osteopathy which were first enunciated by Andrew Taylor Still.

19%20Class%20of%202020rev101419.pdf
Module One

Hypoxemia and Hypercapnia

Oximetry

Acute respiratory failure

Capnography

Outcomes for Module One

- Students will be able to create a differential diagnosis for hypoxemia. AACOM 2016 and AAMC 2017 EPA 2
- Students will be able to recognize clinical features of hypercapnia and create a differential diagnosis of hypercapnia. EPA 2
- Students will be able to describe different oxygen delivery devices. EPA 10
- Students will be able to describe proper use and the limitations of pulse oximetry. EPA 10
- Students will be able to create a differential diagnosis for acute respiratory failure. EPA 2 and 10
- Students will be able to describe how capnography is used to monitor patients. EPA 10

Assignments for Module One

- Find Chapter 36 “Acute Respiratory Failure” in the book Critical Care Medicine: Principles of Diagnosis and Management in the Adult, 5th edition, in Clinical Key. Just read all the sections up to Acute Respiratory Distress Syndrome (ARDS). You do not need to read the ARDS sections in this chapter. You will be learning about ARDS later.
- In UpToDate read “Measures of oxygenation and mechanisms of hypoxemia”
- In UpToDate read “The evaluation, diagnosis, and treatment of the adult patient with acute hypercapnic respiratory failure”
- Watch YouTube video “Oxygen delivery devices in ICU.” (8 minutes 11 seconds) by IUCriticalCare at https://www.youtube.com/watch?v=LYc-cjd3x-A&t=252s
- Watch YouTube video “Oxygen Delivery Device” (4 minutes 19 seconds) by xtremern1 at https://www.youtube.com/watch?v=LGxV9mHqXP0&t=36s
- Learn about different Oxygen Delivery Devices by going to the website https://teachim.org/2017/07/15/oxygen-delivery-devices/
- Watch the video on YouTube titled “RT Clinic: Heated High Flow Cannula” (11 minutes 30 seconds) https://www.youtube.com/watch?v=tGtbHxjS6r8
- In NEJM watch the video in clinical medicine on “Pulse Oximetry” (16 minutes 4 seconds). Also read its accompanying PDF article (April 21, 2011 N Engl J Med 2011; 364:e33 DOI: 10.1056/NEJMvcm0904262). To access the video sign in to NEJM.org. Click on “Multimedia” select “Videos in Clinical Medicine”, then find the video. Find the PDF by clicking on “PDF” located to the left of the video image.
- Watch the NEJM video in Clinical Medicine “Monitoring Ventilation with Capnography” (16 minutes 31 seconds) and read its accompanying PDF article (November 8, 2012 N Engl J Med 2012; 367:e27 DOI: 10.1056/NEJMvcm1105237)
Additional (optional) resources for Module One:

- Read through the journal article “BTS guideline for oxygen use in adults in healthcare and emergency settings” (O’Driscoll BR, et al. Thorax 2017;72:i1–i90. doi:10.1136/thoraxjnl-2016-209729) can be accessed at https://thorax.bmj.com/content/thoraxjnl/72/Suppl_1/ii1.full.pdf
- https://www.capnography.com/ This is a terrific website for learning more about capnography!
- UpToDate “Carbon dioxide monitoring (capnography)”

Module Two
Use of Bag Valve Mask (BVM)

Intubation

Mechanical Ventilator Basics and Intro to Noninvasive Positive Pressure Ventilation
The ventilator bundle (strategies to prevent ventilator associated pneumonia)

Outcomes for Module Two

- Students will be able to describe the proper use of a bag valve mask. EPA 12
- Students will be able to describe how to intubate a patient. EPA 12
- Students will be able to describe noninvasive positive pressure ventilation. EPA 12
- Students will be able to describe basic ventilator modes (assist control - pressure control or volume control, pressure support). EPA 12
- Students will be able to give examples of how to prevent ventilator associated pneumonia. EPA 13

Assignments for Module Two

- Watch the YouTube Video “Lesson 3 – Mask Ventilation: MICU Fellows Airway Course” (8 minutes 23 seconds) by Dr. Gallagher’s Neighborhood at https://www.youtube.com/watch?v=Igoz1l28kUQ

• Watch the YouTube video “Lesson 5 - Direct Laryngoscopy: MICU Fellows Airway Course” (14 minutes 32 seconds) by Dr. Gallagher’s Neighborhood at https://www.youtube.com/watch?v=ZJtFb7lGPic

• Watch the YouTube video “Anatomical Landmarks When Intubating” (7 minutes 24 seconds) by George O. RRT at https://www.youtube.com/watch?v=P9U4nBziewy&list=WL&index=3&t=63s

• In NEJM Resident 360 click on “Rotation Prep”, select the “critical care” rotation
  o Click on the “ventilation” tab read all of the information under heading “fast facts”.
  o Scroll down towards the bottom of site and click on the “additional resources” heading and watch the NEJM video in clinical medicine: “noninvasive positive pressure ventilation” (10 minutes 20 seconds) and read its accompanying PDF article (June 4, 2015, N Engl J Med 2015; 372:e30, DOI: 10.1056/NEJMvcm131336).
  o This part of the assignment is not required but strongly recommended especially before your ICU rotation during residency…watch the MedCram videos “Mechanical ventilation explained clearly” See below for the complete list of MedCram vent videos.

• Watch the YouTube video “Ventilator Association Pneumonia Prevention” (1 minute 53 seconds) by Kaiser Permanente Thrive at https://www.youtube.com/watch?v=51VraZs4W-U

• In UpToDate read “Risk factors and prevention of hospital-acquired and ventilator-associated pneumonia in adults”

MedCram Vent Videos found on YouTube
• Mechanical Ventilation Explained Clearly – Ventilator Settings and Modes (Remastered) by MedCram https://www.youtube.com/watch?v=i6hmGVBbIJk
• Ventilator Modes Explained! PEEP, CPAP, Pressure vs. Volume at https://www.youtube.com/watch?v=iP_jN1qAPtI
• Mechanical Ventilation Explained Clearly - Ventilator Settings & Modes at https://www.youtube.com/watch?v=gk_Qf-JAL84&t=13s
• Mechanical Ventilation Explained Clearly by MedCram.com | 2 of 5 at https://www.youtube.com/watch?v=K0maLgTzlto
• Mechanical Ventilation Explained Clearly by MedCram.com | 3 of 5 at https://www.youtube.com/watch?v=6Bdv7QhNNy4
• Mechanical Ventilation Explained Clearly by MedCram.com | 4 of 5 at https://www.youtube.com/watch?v=KHpJ21UWbhg
• Mechanical Ventilation Explained Clearly of MedCram.com | 5 of 5 at https://www.youtube.com/watch?v=Jx7oeJKzI9g
- Ventilator Pearls Explained Clearly at https://www.youtube.com/watch?v=NUN32O054G0
- Ventilator Pearls Explained Clearly by MedCram.com | Part 2 at https://www.youtube.com/watch?v=ex4Uh2J2hWQ

Additional (optional) Resources for Module Two
- UpToDate article “Rapid sequence intubation for adults outside the operating room”
- YouTube video “Lesson 6 - Glidescope® or its Cousins: MICU Fellows Airway Course” by Dr. Gallagher’s Neighborhood at https://www.youtube.com/watch?v=I1k_z8kGwt4
- YouTube video “Will This Patient be Difficult to Intubate?” by JAMA Network at https://www.youtube.com/watch?v=RnclqUYfjwY
- For a brief overview of ventilator management go to the website Stat Pearls Ventilator Management at https://www.ncbi.nlm.nih.gov/books/NBK448186/
- Series of ventilator lectures by Strong Medicine on YouTube: for a complete list go to https://www.youtube.com/playlist?list=PLBA5A30910F1FBF47
- Rebelem.com also does a series on ventilator videos on YouTube (see the list below)
  o Frank Lodeserto at REBEL EM: Simplifying Mechanical Ventilation – Part I
  o Frank Lodeserto at REBEL EM: Simplifying Mechanical Ventilation Part 2 – Goals of Mechanical Ventilation & Factors Controlling Oxygenation and Ventilation
  o Frank Lodeserto at REBEL EM: Simplifying Mechanical Ventilation Part 3 – Severe Metabolic Acidosis
  o Frank Lodeserto at REBEL EM: Simplifying Mechanical Ventilation Part 4 – Obstructive Physiology
  o Frank Lodeserto at REBEL EM: Simplifying Mechanical Ventilation Part 5 – Refractory Hypoxemia & APRV
  o Frank Lodeserto at REBEL EM: Simplifying Mechanical Ventilation Part 6 – Choosing Your Initial Settings
Module Three

Arterial blood gas (ABG) interpretation
Insertion of arterial line
Arterial line (pressure transducer) troubleshooting
Venous blood gas (VBG) interpretation

Outcomes for Module Three
- Students will be able to interpret an arterial blood gas result. EPA 3
- Students will be able to create a differential diagnosis for an acid base disorder. EPA 2
- Students will be able to describe how to insert an arterial catheter. EPA 12
- Students will be able to troubleshoot problems with an arterial catheter. EPA 12

Note to the students: ABGs take some time to master. Keep learning and practicing!! Find a system that works for you and stick with it!!

Assignments for Module Three
- Watch the YouTube video “Understand the Arterial Blood Gas “ABG”! Awesome!” (22 minutes 20 seconds) [https://www.youtube.com/watch?v=1TnykLis7nA](https://www.youtube.com/watch?v=1TnykLis7nA) by MedImmerson. This is a good introduction video to ABG interpretation.
- Here is another good introductory ABG video on YouTube, “Acid/Base || USMLE” (8 minutes 22 seconds) by Dirty Medicine at [https://www.youtube.com/watch?v=J9jisOXB_Oo&t=189s](https://www.youtube.com/watch?v=J9jisOXB_Oo&t=189s)
- Then read NEJM article “Physiological Approach to Assessment of Acid-Base Disturbances” (October 9, 2014, N Engl J Med 2014; 371:1434-1445 DOI: 10.1056/NEJMra1003327) and work through the examples at the end of the article and those in the supplementary appendix (click on the supplementary appendix link in the article to access those exercises – keep scrolling down the supplement to find the exercises). Read the correction to the original article – find the link to the correction on the right hand side of the screen listed under “related articles”. Because this article and the supplement can be a little difficult to find, I’ve uploaded it into eMedley for you. Go to the course “Introduction to the ICU: Online Course” and find the document entitled, “Physiological Approach to Assessment of Acid-Base Disturbances”, the document called “ABG NEJM Supplement”, and the document called “Correction to ABG NEJM Article”.
- Watch the NEJM video in clinical medicine “Ultrasound Guided Insertion of a Radial Arterial Catheter” (9 minutes and 35 seconds) and read its accompanying PDF article (October 9, 2014, N Engl J Med 2014; 371:e21, DOI: 10.1056/NEJMvcm1213181).
- Watch the NEJM video in clinical medicine “Use of Pressure Transducers” (13 minutes and 21 seconds) and read its accompanying PDF article (April 6, 2017, N Engl J Med 2017; 376:e26, DOI: 10.1056/NEJMvcm1513613) and the correspondence about the article (July 27, 2017, N Engl J Med 2017; 377:400-401, DOI: 10.1056/NEJMc1705833)
- Read the UpToDate article “Venous blood gases and other alternatives to arterial blood gases”

Additional (optional) Resources for Module Three
• There is a series of ABG Lectures on YouTube on Strong Medicine – these are very comprehensive and would be good to watch before your residency https://www.youtube.com/playlist?list=PLFDCF820E88FC83ED
• An online acid-base book can be found at https://www.anaesthesiamcq.com/AcidBaseBook/ABindex.php
• The above website has practice cases that you can work through and you can access those at https://www.anaesthesiamcq.com/AcidBaseBook/ab9_6.php#cases

Module Four
Acute Respiratory Distress Syndrome (ARDS)
The Prone Position in ARDS
Community Acquired Pneumonia (CAP)
Health care associated pneumonia (HCAP)/Ventilator associated pneumonia (VAP)

Outcomes for Module Four
• Students will be able to describe the pathophysiology of acute respiratory distress syndrome. EPA 2
• Students will be able to diagnose acute respiratory distress syndrome. EPA 2
• Students will be able to create a differential diagnosis for acute respiratory distress syndrome. EPA 2
• Students will be able to explain why prone positioning is used in acute respiratory distress syndrome. EPA 12
• Students will be able to diagnose community acquired pneumonia, hospital acquired pneumonia, and ventilator associated pneumonia. EPA 2
• Students will be able to access the guidelines for community acquired pneumonia, hospital acquired pneumonia, and ventilator associated pneumonia. EPA 7

Assignments for Module Four
• Watch the YouTube video “Acute Respiratory Distress Syndrome (ARDS)” (13 minutes 16 seconds) by Doctor Mike Hansen at https://www.youtube.com/watch?v=INGKH7JnPpM&list=WL&index=8&t=0s
• In NEJM Resident 360 click on the “rotation prep” tab, click on the “change rotation” tab and choose “critical care”, then click on the “ARDS” tab, read everything under the “fast facts” tab
• Watch the YouTube video “Acute respiratory distress syndrome (ARDS) Etiology, Clinical features, Diagnosis, and Treatment” (21 minutes 59 seconds) by Premiered at https://www.youtube.com/watch?v=KXw8LXXcmrw&list=WL&index=9&t=1052s
• Watch the YouTube video “Proning the ARDS patient- why do we do it?” (3 minutes and 57 seconds) by Jonathan Downham at https://www.youtube.com/watch?v=FS4t5w1eCYw&list=WL&index=1
• In NEJM Resident 360 click on the “rotation prep” tab, click on the “change rotation” tab and choose “infectious disease”, then click on the “pneumonia tab”, read everything under the “fast facts” tab

Additional (optional) Resources for Module Four (you should know the guidelines below when you do your residency)
• Download your very own ARDS ventilator protocol pocket card at http://www.ardsnet.org/tools.shtml
• Centers for Disease Control (CDC) CAP/HAP links to Prevention Guidelines found at https://www.cdc.gov/pneumonia/management-prevention-guidelines.html

Module Five
Sedation and delirium in the ICU
Stress ulcer prophylaxis
DVT prophylaxis

Outcomes for Module Five
• Students will be able to describe the use of sedation in the intensive care unit (ICU). EPA 4
• Students will be able to describe the causes of delirium in the intensive care unit. EPA 2
• Students will be able to describe strategies to reduce delirium in the ICU (i.e. the general principles of the ABCDEF bundle and the PADIS mnemonic (guidelines)). EPA 13
• Students will be able to identify which patients require stress ulcer prophylaxis. EPA 4
• Students will be able to describe the general principles of venous thromboembolism prevention. EPA 4

Assignments for Module Five
• In NEJM Resident 360 click on the “rotation prep” tab, click on the “change rotation” tab and choose “critical care”, then click on the “sedation and delirium” tab, read everything under the “fast facts” tab
  o Scroll down to the bottom and click on “additional resources” and click to view the CAM (Confusion Assessment Method) Worksheet – just look around so you can see all of the resources you could use in the future.

• Go to https://www.sccm.org/ICULiberation/ABCDEF-Bundles and read the purpose for the ABCDEF Bundle, know what the mnemonic stands for, and click around to skim through the various components, see the resources available for you to use in the future. FYI - You will need to know this stuff for your residency ICU rotations.

• Go to https://www.sccm.org/ICULiberation/Guidelines and skim through this website, know what the mnemonic PADIS stands for, and see the resources available for you to use in the future. FYI - For your residency ICU rotation you will need to know the PADIS Guidelines, which you can download at the website above but you don’t need to read through them today.

• Read the “summary and recommendations” section in the UpToDate article “Stress ulcers in the intensive care unit: Diagnosis, management, and prevention”, (reading the entire article is much better), know which patients require stress ulcer prophylaxis.

• In the UpToDate article “Prevention of venous thromboembolic disease in acutely ill hospitalized medical adults” read the following sections: introduction, epidemiology, definition of VTE prophylaxis, our approach, and the summary and recommendations. Skip the section on “methods of thromboprophylaxis” (just know that you will need to know this for your residency).

Additional (optional) Resources for Module Five


• Read the UpToDate article “Sedative-analgesic medications in critically ill adults: Selection, initiation, maintenance, and withdrawal”

• Read the UpToDate article “Sedative-analgesic medications in critically ill adults: Properties, dosage regimens, and adverse effects”
Module Six
Types of shock
Vasopressors
Central line placement
PICC line placement

Outcomes for Module Six

- Students will be able to describe the different types of shock. EPA 2
- Students will be able to diagnose a patient with shock. EPA 2
- Students will be able to describe the general principles for the treatment of shock. EPA 4
- Students will be able to describe the different vasopressors used in shock. EPA 4
- Students will be able to describe how to place a central venous catheter using ultrasound guidance. EPA 12
- Students will be able to describe how a PICC line is inserted. EPA 12

Assignments for Module Six

- In NEJM Resident 360 click on the “rotation prep” tab, click on the “change rotation” tab and choose “critical care”, then click on the “shock and sepsis” tab, read everything under the “fast facts” tab
- Watch the YouTube videos on shock by Strong Medicine – as listed below
  - Shock: Lesson 1 - Diagnosis and Classification (12 minutes 37 seconds) at https://www.youtube.com/watch?v=vKr_B6zw7M8&list=PLYojB5NEEakXi2wW00LkbkcaESav1Quk9
  - Shock: Lesson 2 - Distinguishing Shock Types (Hypovolemic/Distributive/Cardiogenic/Obstructive) (23 minutes 33 seconds) at https://www.youtube.com/watch?v=HA_zX-uMFNU&list=PLYojB5NEEakXi2wW00LkbkcaESav1Quk9&index=2
  - Shock: Lesson 3 - General Treatment Principles (5 minutes 10 seconds) at https://www.youtube.com/watch?v=NWjNPtsZKOs&list=PLYojB5NEEakXi2wW00LkbkcaESav1Quk9&index=3
  - IV Fluid Resuscitation (IVF Lesson 3 / Shock Lesson 4) (21 minutes 8 seconds) at https://www.youtube.com/watch?v=r14sqgk2d0Q&list=PLYojB5NEEakXi2wW00LkbkcaESav1Quk9&index=4
  - Shock: Lesson 5 – Pressors (17 minutes 5 seconds) at https://www.youtube.com/watch?v=WHGURz11-nE&list=PLYojB5NEEakXi2wW00LkbkcaESav1Quk9&index=5
- Watch one out of the two following NEJM videos in clinical medicine on central line placement using ultrasound in its entirety (and read the accompanying pdf), the others are there for your reference. The last three videos rely on anatomical land marks for placement (good to know in case ultrasound isn’t available – you don’t need to watch them now unless you want to)

- Watch the YouTube video on “PICC LINE INSERTION FULL PROCEDURE” (14 minutes and 14 seconds) by Toni Aoun at https://www.youtube.com/watch?v=9FvUsjjje8ic
- Read the UpToDate article “Complications of central venous catheters and their prevention”

Additional (optional) Resources for Module Six
- You can YouTube various videos about the RUSH ultrasound exam for further information
- Before your residency you should be familiar with central line associated blood stream infections. For an introduction to this topic read the online article “Central Line Associated Blood Stream Infections (CLABSI)” by StatPearls found at https://www.ncbi.nlm.nih.gov/books/NBK430891/
- UpToDate article, “Intravascular catheter-related infection: Prevention”
Module Seven
Sepsis
Septic Shock
CXR Interpretation

Outcomes for Module Seven

- Students will be able to describe sepsis and septic shock. EPA 2
- Students will be able to recognize and diagnose a patient with sepsis and septic shock. EPA 2
- Students will be able to initiate treatment for sepsis and septic shock using the one hour bundle. EPA 4
- Students will know where to find the complete guidelines used to diagnose and treat septic shock. EPA 7
- Students will be able to interpret a normal and an abnormal chest x-ray. EPA 3

Assignments for Module Seven

- Watch the YouTube video “Sepsis and Septic Shock” (17 minutes 20 seconds) by Strong Medicine at https://www.youtube.com/watch?v=3EVpyBORw5Y
- Read the UpToDate article “Sepsis syndromes in adults: Epidemiology, definitions, clinical presentation, diagnosis, and prognosis”. Know how to identify patients with sepsis, i.e. how to diagnose it. Early recognition of sepsis is critical to improving mortality. Sepsis is a medical emergency!
- Go to the website https://www.sccm.org/SurvivingSepsisCampaign/Home
  o Hover over the tab “guidelines and bundles”, choose “adult patients” from the drop down menu, scroll down and read the “1-hour bundle” information, know all of the one hour bundle elements.
  o Click on the “Hour-1 Bundle Pocket Card and Infographic” and read through it – you can download this for yourself if you’d like.
  o Go back to the website (listed above) and hover over the tab “tools and education”, choose “implementation guide” from the drop down menu. Download and read through the entire guide.
  o Eventually you will need to know the entire sepsis guideline for your residency, if you want to download it now just go back to the “guidelines and bundles” tab, choose “adult patients” from the drop down menu, then click on the blue wording that says “Critical Care Medicine” or “Intensive Care Medicine”. You do not need to read through this now. For now I want you to be able to identify a septic patient and know how to start the one hour bundle. Also know that if the nurse cannot draw blood cultures on the patient (because of difficulty getting IV access, etc), this should not delay the administration of antibiotics. But every reasonable effort should be made to try to get the cultures first. Remember antibiotics in sepsis is life saving!
  o Go back to the website (listed above) and hover over the tab “tools and education”, choose “protocols and checklists” from the drop down menu. Check
out some of the ways hospitals choose to identify patients with sepsis, i.e., their protocols. Every hospital has its own protocol—when you get out to your residency, make sure you know your hospital’s protocol for identifying septic patients. However, every hospital should follow the one-hour sepsis treatment bundle and the rest of the sepsis guidelines.

- Watch the video “The Hour One Bundle: Functional or Fantasy” (31 minutes 1 second) located on the website [https://www.sccm.org/LearnICU/Resources/Surviving-Sepsis-Campaign-Hour-1-Bundle-Teaching-S](https://www.sccm.org/LearnICU/Resources/Surviving-Sepsis-Campaign-Hour-1-Bundle-Teaching-S)

- Watch the YouTube CXR Lecture Series on CXR interpretation done by Strong Medicine (11 videos, each video is between 11–24 minutes). The list can be found via this link [https://www.youtube.com/watch?v=PDaRNPUnc10&list=PLYojB5NEEakU6vTUAoUeVhgRzQgaoSnFi&index=2&t=0s](https://www.youtube.com/watch?v=PDaRNPUnc10&list=PLYojB5NEEakU6vTUAoUeVhgRzQgaoSnFi&index=2&t=0s)

**Additional (optional) Resources for Module Seven**

- Download the phone app “Sepsis Clinical Guide” – this is a very good app.
- Chest radiographs at [https://www.saem.org/cdem/education/online-education/m3-curriculum/group-diagnostic-testing/radiographic-interpretation/chest-radiograph](https://www.saem.org/cdem/education/online-education/m3-curriculum/group-diagnostic-testing/radiographic-interpretation/chest-radiograph)

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**Module Eight**

- Communication of bad news
- DNR Orders
- Palliative care in the ICU
- Post-ICU care syndrome
- Neuromuscular weakness related to critical illness

**Outcomes for Module Eight**

- Students will be able to apply breaking bad news techniques during patient encounters. EPA 1
- Students will be able to discuss Do Not Resuscitate wishes with a patient. EPA 11
- Students will be able to describe the general principles of palliative care in the intensive care unit. EPA 4
- Students will be able to describe post-ICU syndrome and describe the general strategies employed to mitigate the syndrome. EPA 2
- Students will be able to describe intensive care unit-acquired weakness (ICUAW). EPA 2

**Assignments for Module Eight**

• Watch the YouTube video “5 Tips for breaking bad news to patients” (47 seconds) by TheDOMagazine at https://www.youtube.com/watch?v=tGxnBDi9Vy8
• Watch the YouTube video “How Should Providers Deliver Bad News?” (7 minutes 27 seconds) by IHI Open School at https://www.youtube.com/watch?v=qHGvJv_7PLU
• Watch the YouTube video “We’re Doing Dying All Wrong | Ken Hillman | TEDxSydney” (14 minutes 2 seconds) by Tedx Talks at https://www.youtube.com/watch?v=gQVC-8WEB7s
• Watch the YouTube video “How to Discuss Do Not Resuscitate (DNR) Orders with Patients” (11 minutes 8 seconds) by OhioHealth at https://www.youtube.com/watch?v=H6-yUpzdt4
• Watch the YouTube video “DNR Code Status Explained Clearly” (14 minutes 9 seconds) by MedCram at https://www.youtube.com/watch?v=L3ejcbtaXEc
• Watch the YouTube video “Palliative Care in the ICU & End of Life Care Explained Clearly” (8 minutes 37 seconds) by MedCram at https://www.youtube.com/watch?v=b3QraGZ9BSg
• Read the UpToDate article “Palliative care: Issues in the intensive care unit in adults”
• Watch the YouTube video “Post-intensive care syndrome? What is it? How can we help?” (26 minutes 14 seconds) by Critical Care Summit at https://www.youtube.com/watch?v=WpKnLeNJRfA
• Watch the video on “Intensive care unit-acquired weakness: The next challenge” (3 minutes 52 seconds) at https://www.esicm.org/ictv-intensive-care-unit-acquired-weakness-angus-dec-2017/

Additional (optional) Resources for Module Eight
• UpToDate article “Palliative care: The last hours and days of life”
• UpToDate article “Post-intensive care syndrome (PICS)”
• YouTube video “THRIVE: Redefining Recovery” by SCCM at https://www.youtube.com/watch?v=T03palv4mYU
• UpToDate article “Neuromuscular weakness related to critical illness”

Policies, disclaimers, and other resources (i.e. the fine print) for this course

Failure to Complete Required Assignments
Failure to complete the required assignments listed in this document is considered a violation of WVSOM’s policy on student professionalism Institutional Policy ST-01 (https://www.wvsom.edu/About/policies_procedures) and will be reported as such.

Evaluation Policies
Students will receive a pass or fail from this elective. Evaluation will be based on completion of assignments.
**Remediation Policy**
There is no remediation for this elective.

**Core Competencies**

The core competencies can be found using this link: [http://www.wvsom.edu/Academics/pre-clinica-competencies](http://www.wvsom.edu/Academics/pre-clinica-competencies)


The AAMC 2017 core entrustable professional activities for entering residency can be found at [https://www.aamc.org/what-we-do/mission-areas/medical-education/cbme/core-epas/publications](https://www.aamc.org/what-we-do/mission-areas/medical-education/cbme/core-epas/publications)

**Professionalism**
Professionalism will be exhibited each day in class and each student will be expected to adhere to institutional policy [ST-01](#) and their own statement below which was written by the student government association:

“As medical students of the West Virginia School of Osteopathic Medicine, we acknowledge and value the importance of professional conduct. We recognize that the behavior and attitudes of individuals and groups reflects on all of us, our institution, and our profession. Professionalism encompasses but is not limited to the virtues of respect, integrity, honesty, confidentiality, and dependability. We will strive to uphold these values in our endeavors at all times. We will show honesty and integrity to all those we come into contact with, meaning that we will adhere to the moral and ethical principles we have been taught and show soundness of moral character. We will be expected to maintain confidentiality in all settings no matter how small the issue. Above all else we will show self-less service to our patients, colleagues, institution and community.”

For further details that relate to professional behavior, refer to the following institutional policies that can be accessed on the WVSOM Website at [http://www.wvsom.edu/About/policies_procedures](http://www.wvsom.edu/About/policies_procedures)

**Copyright**
Materials used in this course may be copyrighted and should not be shared with individuals not currently enrolled in this course. Sharing copyrighted materials outside of WVSOM will result in having a note in the student’s Dean’s file regarding unprofessional conduct.
All Institutional Student Related Policies

To view all institutional student related policies, log onto the WVSOM web page and access the following: http://www.wvsom.edu/OMS/student-policies

This syllabus is subject to change upon written notification.