



Course No.:	OM 7020, 7021	Course Title: IM1 and IM2	Internal Medicine Clerkship
Credit Hours:	4 weeks, 4 Credit Hours for each Rotation	Clerkship Directors:	Nishita Patel, MD, Vice-Chair Emmanuel Katsaros DO, Chair
Term - Dates:	Academic Year 2024- 2025	Level:	OMS III

Educational Goal

OM 7020 Internal Medicine I (IM 1) (4 credit hours)

This course provides supervised clinical education in general internal medicine including clinical management, technical and procedural skills, interpretation of diagnostic data, patient education, development of diagnostic and management plans, and interprofessional communication. In subsequent courses in this series, students are exposed to progressive involvement and independence in patient management.

OM 7021 Internal Medicine II (IM2) (4 credit hours)

Continuation of OM 7020.

Preparing for the Rotation

1. Attend the plenary/orientation presentation.
2. Welcome email will have mandatory video links assigned to the IM1 students via Elentra community.
3. Look at emails and Elentra for schedules and instructions daily.
4. Read ahead on common presentations and conditions for patients admitted to the hospital. Take notes to make them quickly available on your phone or iPad. Make notes on the differentials, workups, and treatments of common diseases. Also, note emergency/urgent conditions that can cause the following symptoms.

Here is the link: *Harrison's Principles of Internal Medicine* Part 2 has well written sections on the approach to the following [Harrison's Principles of Internal Medicine, 21e | AccessMedicine | McGraw Hill Medical \(westernu.edu\)](#):

Patients Presenting with a Symptom, Sign, or Lab Abnormality

- Abdominal pain
- Altered mental status (Confusion Delirium)
- Anemia
- Back pain
- Chest pain
- Cough
- Diarrhea
- Dyspnea
- Dysuria
- Fever
- Fluid, electrolyte, and acid-base disorders
- Gastrointestinal bleeding
- Knee pain
- Rashes (Fever and Rash)
- Stroke (Neurologic Causes of Weakness and Paralysis)
- Urine Abnormalities and Azotemia

In addition, the following should be reviewed (especially for those in the outpatient setting) to practice health promotion.

- Cancer screening
- Smoking Cessation
- Depression Screening
- Alcohol Abuse Screening
- Diets: Low Cholesterol/low fat, Low Sodium, ADA Diet, High Fiber

5. Download apps to your hand-held device to have “at the ready” for patient care.

- Epocrates
- Medscape
- UptoDate (App is available Free through Pumerantz Library)
- Medical Calc
- AHRQ ePSS
- ECG Basics
- Chest X-ray interpretation
- Washington Manual (some free content on the app) or Pocket Medicine: The Massachusetts General Hospital Handbook of Internal Medicine (app is Pocket Notebook for the Pocket Medicine book published by Wolters Kluwer Health)
- Internal Medicine On-Call (LANGE On Call) (paperback and App with some free content) by Robbins, John, Haist, Steven

6. Required Equipment

- Lab Coat
- Stethoscope
- Portable otoscope/ophthalmoscope (often hospital room and wards do not have these readily available)

- Penlight
 - Reflex Hammer
 - Measuring Tape
6. Review your physical exam and specialized exams in cardiology and neurology etc. Keep notes on the interpretation of exam findings.
- Please refer to Bates Videos found in the Pumerantz Library
7. Review the interpretation of the following:
- ECG
 - ABG
 - CXR
 - Abdominal X-ray
 - Urine Analysis

Expectations and Requirements During the Rotation

Expectations

1. Review the Plenary lecture, including any updated versions (please see Elentra under “Introduction”)
2. Practice the skills as described below identified as “Entrustable Professional Activities.”
3. Readings and Modules
 - a. Complete lessons, cases and modules associated with the “Topics to Know” (Please see below and Elentra under the “Curriculum” and then “Topic to Know” tabs).

4. Online-Professionalism:

The following are expected behaviors during your online meeting via Zoom or any other online meeting applications.

- a. In all instances, please have your camera on while using Zoom. Our voices are only part of the way we communicate; our facial expressions are just as important.
- b. Turn mic off (mute) when not in use to avoid background noise that may be disrupting the online session.
- c. Dress professionally. Avoid T-shirts if possible, and sleepwear is prohibited.
- d. Be professional and cautious in the way you communicate, including when using the chat.
- e. Be aware of the background behind you while your camera is on.
- f. Please check your emails and Elentra page daily for any updates. Therefore, have your iPhone or iPad with COMP Connect available.
- g. Select a quiet space to be on the Zoom call at your rotation site, outdoors,

or wherever distractions and noise are at a minimum.

- h. Do not drive while you are on the Zoom Case Conference or any Zoom meeting.

- 2. Check Elentra and emails daily for any notifications and assigned Case Conference groups, dates, and times. Dates and times may change depending on the attendings' schedules. However, a Case Conference schedule for the month at the beginning of each rotation is available on Elentra (See below)

Required Activities

- 1. Case Conference
 - a. Case Conference: Students are required to attend all assigned case conferences where an attending faculty member will guide students through a case from chief complaint to management.
 - i. You are given a chief complaint for each conference on the schedule, which is posted in Elentra (see iv). Please prepare by reading about the symptom (chief complaint).
 - ii. At the end of the case, one of the students in attendance will be asked to orally present the case discussed, so pay attention and take notes.
 - iii. You will only get credit for attending if you participate. You must be reasonably prepared and answer questions when called upon. Ideally, you should be asking questions, volunteering to provide differential diagnoses, and answering questions.
 - iv. To access the Case Conference Schedule, please go to Elentra (IM1 or IM2) under the "Curriculum," then select "Case Conference," and then select "Case Conference Schedule" under "Additional Pages" at the top left side of page.
 - b. Objectives: Case Conference is an opportunity to
 - i. Formulate differential diagnoses
 - ii. Prioritize differential diagnoses
 - iii. Formulate an assessment
 - iv. Formulate treatment plans
 - v. Organize thoughts into an efficient oral presentation.
- 2. Aquifer Modules:
 - a. Students are required to complete 7 Aquifer modules for IM 1 and 7 Aquifer modules for IM 2.
 - b. To access the modules, please go to Elentra (IM1 or IM2) under the "Curriculum tab" then select "Topics to Know," and then download "(IM1 or IM2) Aquifer IM Cases PDF."
- 3. Online MedED (OME):

- Complete at least 5 lessons from a list provided by the IM department.
- Complete 3 Case X cases per week from a list provided by the IM department.
Completion metrics are:
 - Read the Prime notes and click “Go to next activity.”
 - Watch >90% of the Acquire video.
 - Answer the Challenge questions.
 - Review all case content through the last question.
- To access the list provided by the IM department, please go to Elentra (IM1 or IM2) under the “Curriculum tab” then select “Topics to Know,” and then download “OnlineMed Ed Requirement” file.

SUMMARY of REQUIREMENTS

1. Attend all assigned Case Conferences
2. Complete 7 - IM1 Aquifer modules and 7 - IM2 Aquifer modules
3. Complete assigned lessons and cases from OnlineMed ED (OME)

TOPICS to KNOW

The following are topics that you need to know. Please look at the topics you need to know under the rotation name (below) that you are assigned to (either IM1 or IM2). These topics are associated with the required OnlineMed Ed and Aquifer modules. For additional reading on these topics below, we recommend either Harrison's or Current Medicine (available free through Pumerantz Library's Access Medicine).

IM 1					
<u>WEEK 1: Cardiology</u>	Lesson Name		Case x & Aquifer Modules		Topics to read
Choose 5 out of 10 lessons from the selected list	Aortic Pathologies	All cases are mandatory	Cardiology 1	Recommended for further reading	CHF 1: In the Clinic
	Acute Coronary Syndrome		Cardiology 2		CHF 2: In the Hospital
	ACLS - Rhythm Identification		Cardiology 3		Afib and Afib with RVR
	Infective Endocarditis				Coronary Artery Disease
	Heart Failure		Aquifer Internal Medicine 01		Hypertension
	Coronary Artery Disease		Aquifer Internal Medicine 06		Treating Hypertension
	Pericardial Diseases				Treating Atherosclerosis
	Vascular Surgery				
	Syncope				
	Hypertension				
<u>WEEK 2: Pulm and Critical Care</u>	Lesson Name		Case x & Aquifer Modules		
Choose 5 out of 8 lessons from the selected list	Asthma	All cases are mandatory	Infectious Disease 3		
	Chronic Obstructive Pulmonary Disease		Pulmonology 2		
	Pleural Lung Disease		Pulmonology 5		
	Lung Cancers				
	Community Acquired Pneumonia		Aquifer Internal Medicine 22		
	SIRS, Sepsis, and Septic Shock		Aquifer Internal Medicine 28		
	Shock 1: Approach				
3 Shock videos is 1 lesson	Shock 2: Treating Shock				

	Shock 3: Septic Shock				
	Deep Vein Thrombosis / Pulmonary Embolism				
WEEK 3: Renal	Lesson Name		Case x & Aquifer Modules		Topics to read
Choose 5 out of 9 lessons from the selected list	Acute Kidney Injury	All cases are mandatory	Nephrology 1	Recommended for further reading	Sodium
	Nephrotic Syndrome		Nephrology 2		Potassium
	Nephritic Syndrome		Nephrology 3		Chronic Kidney Disease
	Chronic Kidney Disease				
	Derangements of Potassium		Aquifer Internal Medicine 23		
	Derangements of Sodium		Aquifer Internal Medicine 25		
	Acid-Base 1				
	Acid-Base 2				
	Approach to Renal Failure				
WEEK 4: Infectious Disease	Lesson Name		Case x & Aquifer Modules		
Choose 5 out of 7 lessons from the selected list	Skin and Soft Tissue Infections	All cases are mandatory	Infectious Disease 1		
	Urinary Tract Infections		Infectious Disease 2		
	HIV and AIDS		Infectious Disease 7		
	Community Acquired Pneumonia				
	Genital Ulcers		Aquifer Internal Medicine 24		
	Tuberculosis				
	Brain Infections				

IM 2					
WEEK 1 - GI and Hepatology	Lesson Name		Case x & Aquifer Modules		Topics to read
Choose 5 out of 12 lessons from the selected list	Acute Diarrhea	All cases are mandatory	Gastroenterology 1	Recommended for further reading	Liver Function Test
	Approach to LFTs and Hyperbilirubinemia		Gastroenterology 5		Cirrhosis 4: Hepatocellular Carcinoma
	Viral Hepatitis		Gastroenterology 9		GI Bleed
	Compensated Cirrhosis and Hepatocellular Carcinoma				
	Surgical Small Bowel		Aquifer Internal Medicine 09		
	Gallstone Diseases		Aquifer Internal Medicine 11		
	Diverticular Diseases				
	Decompensated Cirrhosis				
	Inflammatory Bowel Disease				
	Gastrointestinal Hemorrhage				
	Pancreatitis				
	Peptic Ulcer Disease				
WEEK 2 - Neurology/Rheumatology	Lesson Name		Case x & Aquifer Modules		
Choose 5 out of 6 lessons from the selected list	Back Pain and Lumbar Spine	All cases are mandatory	Neurology 2		
	Monoarticular Arthropathies		Neurology 1		
	Systemic Lupus Erythematosus		Neurology 5		
	Seizure and Epilepsy				
	Brain Infections		Aquifer Internal Medicine 31		
	Syncope		Aquifer Internal Medicine 32		
Week 3- Hematology-Oncology	Lesson Name		Case x & Aquifer Modules		Topics to read
Choose 5 out of 9 lessons from the selected list	Leukemia	All cases are mandatory	Hematology Oncology 1	Recommended for further reading	Anemia
	Approach To Anemia		Hematology Oncology 2		
	Microcytic Anemia		Hematology Oncology 3		
	Macrocytic Anemia		Hematology Oncology 5		
	Normocytic Anemia				
	Thrombocytopenia		Aquifer Internal Medicine 19		
	Lymphoma				

	Plasma Cell Dyscrasias				
	Sickle Cell Anemia				
Week 4 - Endocrinology	Lesson Name		Case x & Aquifer Modules		Topics to read
Choose 5 out of 6 lessons from the selected list	Pituitary Adenomas and Adrenal Insufficiency	All cases are mandatory	Endocrinology 1	Recommended for further reading	Inpatient Diabetes
	Outpatient Type 2 Diabetes Mellitus		Endocrinology 3		Diabetic Ketoacidosis
	Type 1 Diabetes and Insulin Strategies		Endocrinology 4		Treating Diabetes
	Diabetic Emergencies				
	Functional Thyroid Disorders		Aquifer Internal Medicine 07		
	Structural Thyroid Disorders		Aquifer Internal Medicine 08		

Procedures to Perform or Observe

Basic Procedures

Prior to graduation, medical students must obtain experience performing the basic, yet essential, procedures listed below. In addition, students must be able to define, describe and discuss these procedures, and understand their indications, risks, contraindications, and benefits.

- Venipuncture
- Blood Culture
- Arterial blood gas sampling and interpretation
- ECG performance and interpretation
- Nasogastric tube placement
- Urethral catheterization
- Peripheral intravenous catheter insertion
- Urine dip stick and interpretation
- Subcutaneous injection
- Intramuscular injection
- Wound culture
- Dressing Change
- PPD placement

Advanced Procedures

All students must be able to define, describe and discuss the following procedures, and understand their indications, risks, contraindications, and benefits.

1. Lumbar Puncture
<https://www.youtube.com/watch?v=WpXGUn7eGZE>
2. A-line Placement
<https://www.youtube.com/watch?v=8hK04ai17-k>
3. Arthrocentesis
<https://www.youtube.com/watch?v=fZ2dcZhoGP8&list=PLSojLeKIMzEaZavVDeaHMHCLQPFqUxaEt>
4. Thoracentesis
<https://www.youtube.com/watch?v=ivTyH09BcHg>
5. Paracentesis
<https://www.youtube.com/watch?v=KVpwXK7cvzQ>
6. Central Line Placement -Internal Jugular Line_
<https://www.youtube.com/watch?v=HE5QhsPRaPU>
7. Central Line Placement – Subclavian Line_
<https://www.youtube.com/watch?v=kTav19s5WIQ>

8. Central Line Placement - Femoral Vein Placement_
<https://www.youtube.com/watch?v=IO0eiqhpA-A>
9. Pulmonary artery Catheterization
https://www.youtube.com/watch?v=MplFz_p3cqk
10. Echocardiogram
<https://www.youtube.com/watch?v=le4SWaF-oSY>
11. Coronary artery anatomy
<https://www.youtube.com/watch?v=xSnFf62GDBI>
12. Catheterization Left and Right Coronary Arteries_
<https://www.youtube.com/watch?v=z2mqnneasuU>
13. Coronary Angiogram. A video for patient education _
<https://www.youtube.com/watch?v=F2bJFDvDVxg>

Skills to Practice (Entrustable Professional Activities Specific for Rotation)

Practicing the following skills is essential:

1. Interpret ECG
2. Read Chest X-rays
3. Detailed Physical Exam
4. Interpret ABGs
5. Interpret Urine Analysis, CBC,
6. Identify the quality of a sputum sample
7. Create a differential of organisms based on a gram stain.
8. Interpret the findings of cerebral fluid analysis

Skills (AACOM Entrustable Professional Activities)

The following are the professional activities that you will be entrusted to perform independently on day 1 of your residencies. Practicing these skills and working towards mastery is essential to your ability to medical education.

EPA 1: Gather a history and perform a physical examination. *

EPA 2: Prioritize a differential diagnosis following a clinical encounter.*

EPA 3: Recommend and interpret common diagnostic and screening tests*

EPA 4: Enter and discuss orders and prescriptions.

EPA 5: Document a clinical encounter in the patient record*

EPA 6: Provide an oral presentation of a clinical encounter*

EPA 7: Form clinical questions and retrieve evidence to advance patient care.

EPA 8: Give or receive a patient handover to transition care responsibility.

EPA 9: Collaborate as a member of an interprofessional team.

EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and management.

EPA 11: Obtain informed consent for tests and/or procedures.

EPA 12: Perform general procedures of a physician.

EPA 13: Identify system failures and contribute to a culture of safety and improvement.

*Indicates the EPAs required to be submitted for the ISSM 5 course

Resources and Media

1. Harrison's Principle of Internal Medicine, 21st Ed. (Access Medicine).
2. Uptodate (free through WesternU Pumerantz Library)
3. Current Medical Diagnosis & Treatment 2024 (Access Medicine).
4. Hospital Medicine, 2nd Edition (Access Medicine).
5. Bates' Guide to Physical Examination & History Taking, 2021, 13th Ed. Bickley, et al. (Wolters Kluwer)
6. Pocket Medicine: The Massachusetts General Hospital Handbook of Internal Medicine, 4th Ed.
7. Clinician's Pocket Reference: The Scut Monkey, 11e. McGraw-Hill. (Access Medicine).

Core Rotation Learning Objectives

The osteopathic medical student will be expected to:

1. Apply basic knowledge of the pathology and physiology of the organ systems into the care of the medical patient.
2. Apply basic knowledge of molecular, biochemical, and cellular mechanisms to the care of the medical patient for maintaining homeostasis.
3. Perform an appropriately comprehensive history and physical examination, collect pertinent diagnostic data, and develop an assessment and plan. Then synthesize these items into a concise oral presentation and written note.
4. Formulate and communicate differential diagnoses tailored to each medical patient and prioritize the list.
5. Search the medical literature for the most current aspects of diagnostic and management strategies to thereby apply the principles of evidence-based medicine to the care of the individual medical patient.
6. Formulate strategies for disease prevention based on knowledge of disease pathogenesis and mechanisms of health maintenance.
7. Formulate strategies of treatment and apply them to the care of the individual medical patient in the context of their ability to comply with the plan, whether it be due to socioeconomic or medical/behavioral conditions.
8. Formulate diagnostic and treatment plans taking into consideration a cost-benefit analysis and access to healthcare.
9. Respect the cultural and ethnic diversity of their patients' beliefs in evaluating and managing their medical care.
10. Display honesty, integrity, respect, and compassion.
11. Participate in the education of patients, families, and other students.
12. Display collegiality and professionalism toward all members of the healthcare team.
13. Communicate effectively with the patient, patient family member, and all members of the patient's larger health care team.

See Tables 1 & 2 at the end of this document.

Grading (See Example Below)

Evaluation/Grading

Grading for your clerkship will be calculated according to the Clinical Education Manual (<https://www.westernu.edu/media/osteopathic/pdfs/cem.pdf>). However, completion of the rotation will also depend on:

- Completing the assignment described in the Section “Expectations and Requirement During the Rotation”

Rotation Faculty

Appointments made on an as needed basis.

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Rotation Schedule

Schedules are posted on Elentra and subject to change on a regular basis. Please check emails and Elentra regularly.

General Policies

Policy on Disability Accommodations: To obtain academic accommodations for this rotation, students with disabilities should contact the Center for Disability Issues and the Health Professions and the system coordinator within ten days of the beginning of the system. Disability Services can be reached at 909.469.5380.

Remediation Policy: Refer to the Clinical Education Manual

Attendance Policy: Refer to the Clinical Education Manual

Academic Dishonesty: Complete confidence in the honor and integrity of the health professions student and health care professional is essential. Such confidence depends entirely on the exemplary behavior of the individual health care provider in his or her relations with patients, faculty, and colleagues. Strict honesty as a personal way of life should be nurtured during the period of education for professional service. The student shall conduct all aspects of his or her life with honor and integrity. This includes accountability to oneself and to relationships with fellow students, future colleagues, faculty, and patients who come under the student's care or contribute to his or her training and growth, and members of the general public. This applies to personal conduct that reflects on the student's honesty and integrity in both academic and non-academic settings, whether or not involving a University sponsored activity. Upon accepting admission to the University, each student subscribes to and pledges complete observance to the Standards of Academic and Professional Conduct as outlined in the University Catalog for each academic program. A violation of these standards is an abuse of the trust placed in every student and could lead to suspension or dismissal.

Table 1

WU INSTITUTIONAL OUTCOMES	Learning Objective	Health Professional Education
Critical Thinking	1,2,3,4,5,6, 7,8,11,	The student should be able to identify and solve problems that require the integration of multiple contexts when performing patient care.
Breadth and Depth of Knowledge in the Discipline/Clinical Competence	1,2,3,4,5,6, 7,8,9,11	The student should be able to perform appropriate diagnostic and therapeutic skills, to apply relevant information to patient care and practice, and to educate patients regarding prevention of common health problems.
Interpersonal Communication Skills	3,4,9,10, 11, 12, 13	The student should be able to effectively use interpersonal skills that enable them to establish and maintain therapeutic relationships with patients and other members of the health care team.
Collaboration Skills	3,4,8,9,11, 12, 13	The student should be able to collaborate with patients and with other health professionals to develop a plan of care to achieve positive health outcomes for their patients
Ethical and Moral Decision- Making Skills	8,9,11	The student should be able to perform the highest quality of care, governed by ethical principles, integrity, honesty, and compassion.
Lifelong Learning	5,7,8,9	The student should be able to engage in life-long, self-directed learning to validate continued competence in practice.
Evidence-Based Practice	2,3,4,5,6,7, 8,9	The student should be able to utilize research and evidence-based practice and apply relevant findings to the care of patients.
Humanistic Practice	8,10,11,12, 13	The student should be able to carry out compassionate and humanistic approaches to health care delivery when interacting with patients, clients, and their families. They should unfailingly advocate for patient needs.

Table 2

COMP/AOA CORE COMPETENCIES	Learning Objective	Competency: Osteopathic Medical Students are part of an educational continuum that leads to residency and the curriculum provides the foundation for the following outcomes:
Osteopathic Philosophy and Osteopathic Manipulative Medicine	6,9,10,11,	Residents are expected to demonstrate and apply knowledge of accepted standards in Osteopathic Manipulative Treatment (OMT) appropriate to their specialty. The educational goal is to train a skilled and competent osteopathic practitioner who remains dedicated to life-long learning and to practice habits in osteopathic philosophy and manipulative medicine.
Medical Knowledge	1,2,3,4,5,6, 7,8,9,11	Residents are expected to demonstrate and apply knowledge of accepted standards of clinical medicine in their respective specialty area, remain current with new developments in medicine, and participate in life-long learning activities, including research.
Patient Care	2,3,9,10,11 13	Residents must demonstrate the ability to effectively treat patients, provide medical care that incorporates the osteopathic philosophy, patient empathy, awareness of behavioral issues, the incorporation of preventative medicine, and health promotion.
Interpersonal and Communication Skills	4,8,9,10, 11, 12, 13	Residents are expected to demonstrate interpersonal/communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.
Professionalism	7,9,10,11, 12, 13	Residents are expected to uphold the Osteopathic Oath in the conduct of their professional activities that promote advocacy of patient welfare, adherence to ethical principles, collaboration with health professionals, life-long learning, and sensitivity to a diverse patient population. Residents should be cognizant of their own physical and mental health in order to effective care for patients. Please note that professionalism is an integral part of the career of a physician. Clinical sites do have the right to fail a student or remove them from rotation due to deficits in professionalism.
Practice-Based Learning and Improvement	5,6,7,8,	Residents must demonstrate the ability to critically evaluate their methods of clinical practice, integrate evidence-based medicine into patient care, show an understanding of research methods, and improve patient care practices.
Systems-based Practice	5,6,7, 8,	Residents are expected to demonstrate an understanding of health care delivery systems, provide effective and qualitative patient care within the system, and practice cost- effective medicine.

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