Please Note: At MSUCOM, we are constantly working to improve our curriculum and to meet new AOA accreditation guidelines. We need to meet the challenges of modern medicine that force us to innovate. While major changes will generally be instituted at the beginning of the school year, most minor changes may be implemented semester to semester.

Please be mindful of the need to read this syllabus before the first C3 Module.
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Introduction and Overview

Welcome!!

The purpose of this syllabus is to provide you with an overview of the goals and objectives of the Clinical Core Concepts (C3) curriculum as well as identify all individual elements of the curriculum as they pertain to students and faculty involved in the delivery of the curriculum. As you progress through each month of the C3 curriculum, you will gain insight into various signs and symptoms as well as the pathologies that are often responsible for them. In addition, you will have opportunity to develop clinical and cognitive skills that will be critical to your successful completion of your Clerkship as well as formative exams (i.e. COMAT and COMLEX). Please make sure you review this entire syllabus to understand the format and content of this course.

Format of Course

This course will be presented over a span of nine months, starting in August and ending in April of your third year of medical school. Each month is focused on a specific set of systems and/or symptoms that students will focus on. The primary component of instruction (and where all essential elements of the curricular content are found) is within the designated readings, presentations and online resources provided to the student via Desire2Learn (D2L). Students will be expected to have read and reviewed all elements of content for each month on a week-to-week basis in advance of their didactic session.

The online content will be enhanced and integrated through active student participation in weekly didactic sessions provided at the student’s base hospital. These sessions will have separate, interactive elements that may involve additional preparatory work for students to accomplish individually or in teams prior to the session. Sessions are designed to be held in a four-hour block on a weekly basis, although some variation may occur at individual base hospitals due to scheduling. All sessions will be overseen and usually lead by the C3 Director, a designated faculty member within the base hospital. Sessions may be lead by other, qualified individuals at the discretion of the C3 Director.

What’s In This Syllabus?

This syllabus is broken down into the following areas:

Goals & Objectives – A list of learning goals & objective covering the scope of medical knowledge as presented within the C3 curriculum.

General C3 Expectations & Required Activities – General expectations of student participation in the elements of the C3 curriculum, including review of online materials, timely completion of preparatory activities, active participation in didactic sessions and appropriate understanding/completion of testing elements.

C3 Modules Overview – A list of the nine C3 modules including their general categorization, the breakdown of preparatory elements and activities, and a list of testing elements for each module.

Special Considerations – Things to remember while participating in the C3 curriculum.

Corrective Action Process – An explanation of remediation steps should you not pass the course initially.
Goals and Objectives

In 2006 and 2009, the NBOME sought to more clearly define the osteopathic medical competency domains by creating a report that described measurable elements available to measure these domains as well as what outcomes could be anticipated from the assessments. This document was further revised in 2011 and 2012 and serves as the basis for the creation of this curriculum. The following is a list of stated goals and objectives that participation in the C3 will accomplish. Each goal achieved directly relates to specific measurable outcomes as defined in the NBOME ‘Fundamental Osteopathic Medical Competencies’ report. These goals and objectives are related to all learning activities present within the curriculum.

General C3 Expectations & Required Activities

In each of the C3 Modules, students are expected to complete all required reading assignments and preparatory work for the module PRIOR to attending that week’s didactic session. All such information will be clearly identified to the student within D2L in the relevant area. Successful participation in each week’s didactic sessions will rely on timely completion of the preparatory elements, as well as following basic tenants of professional behavior. Below are examples of activities students may encounter in preparing for each month’s modules:

Articles or textbook sections – the student will read the identified element, taking note of relevant information as they pertain to the module’s topics.

Online videos/content – the student will review the relevant videos and/or associated content.

Physician summary documents – the student will review specific summary documents created by the module writers.

Student activities – the student will complete an assigned activity (either individually or with a designated small group) and provide results of said activity during the didactic session.

Topical Formal: The student will complete a 20-25 minute presentation on a specific medical topic. This will be a formal presentation developed in conjunction with the C3 Director of the hospital and will cover relevant areas as identified by the C3 Director and student. All students will engage in Topical Formal presentation development and delivery, either individually or in small group (based on the C3 Director’s instruction). Students will be evaluated by the C3 Director after presenting successfully to receive a passing grade for the course (this is in addition to other grading elements for each module as outlined below). Students may present multiple topical formals, but will be graded on their initial topical formal. C3 Directors will complete an evaluation form for all graded Topical Formal presentations via the clerkship evaluation system prior to the end of the C3 curricular schedule for the academic year.

Self-Study Elements: Included in each module are self-study elements designed for you to use and complete to enhance and integrate your learning. Self-study elements will be presented in the form of quizzes, tests, reading, and study questions. Where indicated, these elements must be completed by the end of the Module to receive a passing grade. In an ideal situation, you will complete these elements as indicated throughout the module (i.e. a week one quiz during week one). However, you may complete these on an individualized schedule to allow for flexibility, but they must be completed by the end of the module. Please be aware that Module I has self-study elements that must be completed TWICE (at the beginning of the module and at the end to evaluate knowledge acquisition). There is no passing score; however these elements must be completed both times to receive a passing grade.
C3 Modules Overview

**Module A: General Tasks & Non-Specific Symptoms**

The focus of this module is to introduce basic signs and symptoms as well as pathophysiologic processes to the student. In addition to reviewing basic elements of vital signs, the student will review basic concepts and information regarding fevers, anemia, fluid and nutritional states. The student will also go over specific tasks during this month, including designing studies and reviewing medical literature, reviewing and writing prescriptions and practicing the inpatient osteopathic medical exam (OME) as well as reviewing soft tissue and lymphatic techniques for the hospitalized patient. Finally, the student will go over the basic elements of presentations as well as be introduced to the concept of the Topical Formal Presentation.

**Module A Goals:**

| Week 1 | • Describe the basic pathophysiologic mechanisms that result in fevers  
       | • Recall the method by which antipyretics abort fever  
       | • Identify different sources for fever in both pediatric and adult populations  
       | • Define Fever of Unknown Origin (“FUO”) and febrile neutropenia  
       | • Define anemia and list basic categories of anemia  
       | • Recognize the importance of serial vital signs |
| Week 2 | • Recognize critical differences between volume states in both the adult and pediatric population  
       | • Understand the purpose of a nutritional assessment in the hospitalized patient |
| Week 3 | • Identify a working definition of Evidence-Based Medicine (EBM)  
       | • Understand basic statistical elements used in research analysis  
       | • Comprehend different research models commonly used in medicine |
| Week 4 | • Recognize components of a valid prescription  
       | • Calculate basic dosing regimens for pediatric patients based on weight  
       | • Understand basic rules of content development for presentations  
       | • Identify and complete the elements of the inpatient osteopathic structural exam  
       | • Understand indications and perform techniques for Soft Tissue and Lymphatic Drainage in the hospitalized patient |

**Module A Objectives:**

| Week 1 | • Given the preparatory materials provided, MSIII students will be able to describe the basic pathophysiologic mechanisms that result in fevers; will recall the method by which antipyretics abort fever; as well as meet the individual learning objectives of the individual activities below.  
       | • Given the information provided MSIII students will prepare curricular elements and attend didactic sessions as instructed by the C3 Director and the College.  
       | • Given a case scenario of febrile illness, MSIII students will be able to provide a differential diagnosis for the condition as well as define FUO and febrile neutropenia if present within the time allotted.  
       | • Given a case scenario of anemia, MSIII students will be able to identify whether the patient has one of three types of anemia and develop an accurate diagnostic plan within 15 minutes.  
       | • Given a case scenario of pediatric fever, MSIII students will be able to identify Fever of Unknown origin and compare and contrast this with adult febrile illness within the time allotted.  
       | • Given a particular medical topic by the C3 Director, MSIII students will be able to recall and apply salient points in a provided clinical scenario. |
Week 2

- Given the presentation provided MSIII students will review the purpose of a nutritional assessment and identify the critical elements in performing the assessment by the end of the presentation.
- Given an inpatient case scenario, MSIII students will review the relevant data and formulate a nutritional assessment and be able to answer specific questions regarding management of the patient.
- Given 4 cases of pediatric dehydration, MSIII students will review basic principles of pediatric volume status identify the calculation process and provide answers to questions regarding management.

Week 3

- Given the presentation provided, MSIII students will identify the 6 elements of a study; the 5 components used in study design and the differences between primary and secondary research and their subsets.
- Given a set of medical articles in a ‘journal club’ style format, MSIII students will be able to apply previously learned techniques to evaluate each article and provide specific feedback on elements including: research question, design and outcomes.

Week 4

- Given a patient with specific somatic dysfunctions, MSIII students will complete an Osteopathic Structural Exam (OSE) and identify specific lymphatic dysfunctions, then perform relevant treatments to correct the dysfunction.
- Given a case scenario, MSIII students will list 3 key elements of slide design and list the elements of a Topical Formal Presentation.
- Given a presentation on prescription writing; MSIII students will be able to identify 6 elements of a valid prescription as well as perform basic calculations for prescription dosing.

Self-Study Elements:
- Weeks 1-4 weekly quiz; all four quizzes MUST be completed by the end of the module for a passing grade

Module B: Skin Rashes, Skin Lesions, Burns and Other skin Injuries, Wound Care and Healing

This module focuses upon skin conditions and cutaneous manifestations of serious localized and systemic disease that all primary care physicians should be able to diagnose and, most often, at least partially manage by themselves. And since subspecialists frequently come across the same conditions, they too should be prepared to recognize the important ones and at least co-manage a few of them. By the end of the module, all students who participate in preparation for, participation in, and satisfactory completion of its interactive learning activities will have a greatly enhanced ability to accomplish these goals.

Module B Goals:

Week 1

- Review and bring to one’s mental fingertips the essential concepts and vocabulary of dermatology
- Explore and apply the fundamental principles of excellent clinical decision making
- Develop and use an effective and efficient diagnostic process while solving dermatological problems
- Learn about integrating OMT into Dermatology by reading, "Osteopathic Manipulative Treatment..Novel Approach to Dermatological Disease"

Week 2

- Utilize preparatory elements prior to class to enhance problem solving capabilities during the didactic session
- Develop increasing comfort with presenting and defending ideas and explanations to peers
- Sharpen your ability to recognize all dermatologic emergencies across the lifespan.

Week 3

- Sharpen your ability to recognize skin signs that may suggest systemic illness
- Sharpen your ability to recognize skin findings that point to underlying anatomical abnormalities
- Expand your capacity to develop and efficiently sort out differential diagnosis of common and important dermatologic conditions across the lifespan

Week 4

- Be able to outline the principles of necessary, effective, and safe treatment for the conditions discussed in the module
- Know when consultation for skin findings is truly required to optimize patient care
- Leave each module ready to apply skills and tools to patient care
### Module B Objectives:

#### Week 1
- Given examples of normal, injured, and diseased skin, the student will apply correctly his or her understanding of skin anatomy to clinical practice.
- Given examples of unlabeled skin lesions and rashes, the student will describe them correctly in his or her own words and by so doing demonstrate that he or she accurately understands the meaning of commonly used dermatologic concepts and the terms applied to them.
- Given a set of unknowns and choosing an efficient and effective diagnostic process, the student will practice, correctly defining and sorting out emergent and urgent dermatologic problems which demand immediate care or more involved evaluation from common and important ones which require less intensive intervention.

#### Week 2
- Given a series or unknowns, the student will successfully identify conditions requiring emergent care or immediate referral which manifest in the skin: Infectious disease emergencies, Coagulopathy Child abuse and self-injury, Skin cancer.
- Given a series of unknowns, the students will successfully identify the cutaneous manifestations of common non-infectious systemic diseases.
- Given a series of unknowns, the student will successfully identify the diffuse rashes and localized eruptions of common infectious diseases.

#### Week 3
- Given a series of unknowns, the student will successfully distinguish emergent skin conditions in the neonate from non-emergent ones and correctly diagnose localized and systemic disorders in young children which present with dermatologic features: Common skin conditions in the neonate, Skin flags of underlying anatomic malformations, Common genodermatoses.
- Given a series of unknowns, the student will successfully identify common skin conditions of the elderly.
- Given a series of unknowns, the student will successfully identify external signs of abuse and neglect and correctly differentiate them from their mimics.

#### Week 4
- Given unlabeled examples, the student will correctly evaluate burns (including solar) and cold injury, by describing in his or her own words the degree (depth), location and extent of burns and the severity of frostbite. The student will also accurately convey in his or her own words how the anatomic structures involved in burns relate to management and to the expected rate and completeness of healing.
- Given a set of cases, the student will correctly describe the early and late signs of altered skin integrity and accurately differentiate among leg ulcers of infectious, self-injury, diabetic, and pressure origin.
- Given examples of lacerations which differ by location, as well as length, depth, and associated tissue injury, the student will successfully select and practice applying a variety of appropriate techniques for wound closure to promote effective healing.

### Self-Study Elements:
- Weeks 1-4: weekly quiz; all four quizzes MUST be completed by the end of the module for a passing grade

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**Module C: Dyspnea, Wheezing, Cough, and Upper Respiratory Symptoms**

The focus of this module is to introduce third year medical students to a systematic approach to the management of patients with various respiratory symptoms. The modules will help the student’s process patient-centered symptoms and establish a differential diagnosis of both common and rare etiologies. The modules are meant to be foundational, not all-encompassing in scope. The lectures include components of cost-effectiveness, patient preferences, evidence-based medicine, pediatric and geriatric considerations, and professional behaviors. OPC principles are applied throughout the modules.
Module C Goals:

Week 1
- Identify the common infectious causes of upper respiratory infections
- Describe the symptoms associated with allergic rhinitis
- Understand some of the tests that are available when evaluating patients with allergic rhinitis
- Identify complications for upper respiratory infections
- Recall the organisms that are the common causes of bacterial sinusitis
- Describe the symptoms associated with acute sinusitis
- Develop a plan for working up upper respiratory infections and their complications in the geriatric population
- Recognize the common cause of difficulty in breathing in the pediatric population

Week 2
- List examples of low-flow oxygen delivery systems
- Define acute respiratory failure
- Describe the differences between non-invasive and invasive mechanical ventilation
- Identify the causes of croup
- Develop a plan for treating decompensated heart failure
- Define asthma

Week 3
- Define community acquired pneumonia
- Define healthcare acquired pneumonias
- Define the acronym CURB-65 and describe the Pneumonia Severity Index
- Describe treatment options for inpatient pediatric pneumonias based on age
- Identify when to use isolation precautions

Week 4
- Define metabolic acidosis
- Define metabolic alkalosis
- Define respiratory acidosis
- Define respiratory alkalosis
- Calculate anion-gap given a clinical scenario
- Utilize winter’s formula
- Determine the compensatory mechanism given an acid-base disorder

Module C Objectives:

Week 1
- Given the materials provided, MSIII students will be able to cite the common causes of upper respiratory infection symptoms
- Explain the natural course of viral respiratory infections
- Predict common patterns of seasonal allergies
- Apply OPP/OMT principals to the treatment of sinuses, upper respiratory infections and allergy symptoms.

Week 2
- Given the material provided, MSIII students will be able to recognize signs of acute respiratory failure, justify appropriate use of oxygen therapy, distinguish between the respiratory patterns of croup, bronchiolitis, asthma, COPD and heart failure and apply OPP/OMT principals to the treatment of asthma and congestive heart failure.

Week 3
- Given the material provided, MSIII students will be able to describe community acquired vs health care associated pneumonia, risk factors, pathogens, empiric treatment, recognize differences in pediatric and adult airway diseases and management, recognize effective respiratory and contact isolation procedures and apply OPP/OMT principals to the treatment of pneumonia.

Week 4
- Interpret arterial blood gas results differentiating between metabolic acidosis, metabolic alkalosis, respiratory acidosis and respiratory alkalosis.

Self-Study Elements:
- Weeks 1 & 2 weekly quizzes; both quizzes MUST be completed by the end of the module for a passing grade. In addition, although not a self-study, participation in the in-class Jeopardy game activity during week three is required.
Module D: Musculoskeletal Disorders

The primary aim of this module is to help you become more confident in the evaluation of common musculoskeletal complaints. In the era of cost containment you will be disincentivized to refer patients out to specialists and will be expected to manage various conditions. Patients do not care to spend more time and money on an ailment that is hampering their daily life. The physical exam skills you have acquired in the clinical skills courses dovetails with your knowledge of the musculoskeletal system and will serve you well in this segment of the Core Clinical Concept series. The main source of study is a widely used resource by orthopedic surgeons and was highly recommended for this course. As you will find there seems to be a significant amount of reading. Each topic is only a few pages long. I encourage you to take separate notes on main clinical points for each condition as you read. Even though it is provided free online, I strongly encourage you to consider purchasing it for future use in your clinical setting. It also contains excellent patient education materials. One last thought: recall one of our Osteopathic tenants that “the body has the natural capacity to self-heal”. Using this as a part of your treatment plan will help minimize further testing, reduce narcotic prescribing and provide hope of returning to full function.

Module D Goals:

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<thead>
<tr>
<th>Week 1</th>
<th>The primary aim of this module is to help you become more confident in the evaluation and treatment of common musculoskeletal disorders.</th>
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<tr>
<td>Week 2</td>
<td>The primary aim of this module is to help you become more confident in the evaluation and treatment of common musculoskeletal disorders.</td>
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<tr>
<td>Week 3</td>
<td>The primary aim of this module is to help you become more confident in the evaluation and treatment of common musculoskeletal disorders.</td>
</tr>
<tr>
<td>Week 4</td>
<td>The primary aim of this module is to help you become more confident in the evaluation and treatment of common musculoskeletal disorders.</td>
</tr>
</tbody>
</table>

Module D Objectives:

| Week 1 | Students will demonstrate an organized approach of a physical exam of the upper extremity.  
|         | Groups will work through the cases then present the case history, demonstrate the physical exam and describe the treatment plan. Afterwards each group should document their exam findings.  
|         | After having reviewed the OPP workshop video segments students can practice OMM where appropriate.  
|         | Having reviewed a video on shoulder injections, students will be able to explain step by step the indications, contraindications and step by step procedure. Students will also practice if resources for doing so are available.  
|         | Students will recall salient points from earlier activities and readings and provide answers to class via Jeopardy format. |
| Week 2 | Students will demonstrate an organized approach of a physical exam of the cervical spine.  
|         | Groups will work through the cases then present the case history, demonstrate the physical exam and describe the treatment plan. Afterwards each group should document their exam findings.  
|         | After having reviewed the OPP workshop video segments students can practice OMM where appropriate.  
|         | Detail the side effects of NSAIDS  
|         | Students will recall salient points from earlier activities and readings and provide answers to class via Jeopardy format. |
Week 3
- Students will demonstrate an organized approach of a physical exam of the lower extremity.
- Groups will work through the cases then present the case history, demonstrate the physical exam and describe the treatment plan. Afterwards each group should document their exam findings.
- Having reviewed a video on knee injections, students will be able to explain step by step the indications, contraindications and step by step procedure. Students will also practice if resources for doing so are available.
- Students will recall salient points from earlier activities and readings and provide answers to class via Jeopardy format.

Week 4
- Demonstrate an organized approach of a physical exam of the lumbar spine.
- Groups will work through the cases then present the case history, demonstrate the physical exam and describe the treatment plan. Afterwards each group should document their exam findings.
- List the "red flags" of serious pathologic causes of low back pain.
- Explain the role of various imagining modalities in the evaluation of low back pain.
- After having reviewed the OPP workshop video segments students can practice OMM where appropriate.
- Students will recall salient points from earlier activities and readings and provide answers to class via Jeopardy format.

Self-Study Elements:
- Weeks 1-4: weekly quizzes; all four quizzes **MUST be completed by the end of the module for a passing grade.** In addition, although not a self-study, participation in the in-class Jeopardy game activity during week four is required.

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**Module E: Genitourinary Issues**

The focus of this module is to provide an overview of common challenges in the genitourinary system. A general understanding of addressing male and female complaints as well as more contemporary issues (such as gender identity) will be reviewed during this module. As you work through these elements, you will be better prepared for elements you will see in further depth during rotations such as OB/GYN and urology.

The focus of week one is to prepare the 3rd year medical student to properly evaluate the female patient in the 1st trimester of pregnancy and to recognize the proper approach to management of 1st trimester bleeding. Emphasis is placed on the importance of recognizing normal pregnancy, various forms of spontaneous abortion and ectopic pregnancy. The student will also gain an understanding in the recognition and approach to management of nausea and vomiting in pregnancy, as well as a general approach to other medical conditions affecting pregnancy. Students will learn to be comfortable in early approach to these problems in the emergency department or the primary care setting.

The focus of week two is to prepare the 3rd year medical student to properly evaluate the female patient with menstrual bleeding problems and to understand a basic approach to abnormal uterine bleeding. Emphasis is also placed on obtaining a complete menstrual and sexual history. An understanding of the PALM-COEIN classification system for abnormal uterine bleeding will also be emphasized. The student will also learn to properly evaluate acute vaginal discharge complaints as well as point of care evaluation and management for common causes of vaginitis.

**Module E Goals:**

<table>
<thead>
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<th>Week 1</th>
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<tr>
<td>• Describe accurate diagnosis and dating of the pregnant patient</td>
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<td>• Understand the importance of pre-conceptual counseling</td>
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<tr>
<td>• Identify how pregnancy affects the natural history of various medical disorders and how a preexisting medical disorder affects maternal and fetal health</td>
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<tr>
<td>• Understand continued management of preexisting medical conditions during pregnancy</td>
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| Week 2 | • Understand the difference between AUB during perimenarche, reproductive years, perimenopause and postmenopause  
  • Be familiar with the PALM-COEIN classification system for AUB  
  • Understand the approach to diagnosing and treating vaginitis |
|---|---|
| Week 3 | • Discuss the differential diagnosis of microscopic and gross hematuria  
  • Discuss the differential diagnosis of Hematospermia  
  • Diagnose, treat and prevent urinary tract stone disease  
  • Appreciate male sexual dysfunction  
  • Understand and utilize new gender categories |
| Week 4 | • Select appropriate therapy based on patient variables  
  • Understand the diagnosis and treatment of BPH  
  • Understand the diagnosis and treatment of Prostatitis  
  • Discuss the differential diagnosis and treatment of the acute scrotum  
  • Differentiate urinary tract infections and pyleonphritis  
  • Understand common urinary and male reproductive cancers: kidney cancer, bladder cancer and testicular cancer  
  • Understand and utilize new gender categories |

**Module E Objectives:**

| Week 1 | • Outline a basic approach to 1st trimester bleeding evaluation and management including: differential diagnosis, risk factors and etiologies, complications  
  • Demonstrate understanding of classification and differential diagnosis of spontaneous abortions  
  • Demonstrate ability to counsel patients on: diagnosis and treatment options for ectopic pregnancy, Diagnosis and management options for spontaneous/threatened abortion  
  • Outline a basic approach to evaluation and management of medical disorders in pregnancy  
  • Understand what medications may be safely continued in pregnancy and which should be discontinued |
|---|---|
| Week 2 | • Elicit an accurate and detailed menstrual and sexual history  
  • Outline a basic approach to evaluation and management of vulvar and vaginal complaints including defining the role of wet mount preparation  
  • Identify 5 causes of acute vaginal discharge  
  • Identify the 3 major types of vaginitis including: Pathogenesis/epidemiology, clinical manifestations/diagnosis, CDC treatments/prevention strategies  
  • Explain the pathophysiology and etiology of different causes of AUB  
  • Outline an approach to evaluation and management of AUB  
  • Identify risk factors, common presenting signs and symptoms, physical exam findings, and consequences of lack of treatment for AUB |
| Week 3 | • Interpret urinalysis results  
  • Explain why and how to place a urinary catheter  
  • Select the most appropriate urinary catheter given a specific patient scenario |
| Week 4 | • Differentiate the treatment options for prostate cancer  
  • Research new treatment options for advanced prostate cancer |

**Self-Study Elements:**
There are no specific self-study quizzes or tests for this module. Preparatory readings and didactic session participation are the primary focus of this module.

**Module F: Chest Discomfort & Syncope**
The focus of this module is to prepare the student to be able to evaluate the adult and pediatric patient who presents with chest pain or syncope. In addition, the diagnostic criteria for pediatric hypertension will be covered along with common causes, and appropriate interventions. Understanding the strengths and weaknesses of various testing modalities for these entities will be a focus. OMM DVD 5 Cases will be the focus of the OMM for Module F. The student will practice interpretation of EKGs and rhythm strips, will perform an EKG, and will interpret EKG, CXR and laboratory studies as related to patient cases of chest pain and syncope in small group format. Finally several students will complete their topical formal presentations on a variety of topics germane to the overall module of chest discomfort and syncope. An EVOLVE patient will visit, and OMM will focus on rib dysfunction. Heart sound and lung sound simulation will be used.

Module F Goals:

| Week 1 | Develop a basic understanding of identifying and diagnosing acute chest discomfort  
Using a case based approach evaluate several patients with presenting complaint of chest pain  
Interpret basic EKGs  
Understand the value of diagnostic imaging in the workup of chest pain and syncope |
| Week 2 | Develop an understanding of syncope  
Using a case based approach evaluate several patients with presenting complaint of syncope  
Interpret basic EKGs  
Understand the value of diagnostic imaging in the workup of chest pain and syncope |
| Week 3 | Differentiate between pediatric and adult hypertension  
Interpret basic EKGs  
Understand the value of diagnostic imaging in the workup of chest pain and syncope |
| Week 4 | Review elements learned in previous weeks.  
Interpret basic EKGs  
Understand the value of diagnostic imaging in the workup of chest pain and syncope  
Using OMM module 5 be able to diagnose and treat musculoskeletal causes of chest pain |

Module F Objectives:

| Week 1 | Identify ten causes of acute chest discomfort.  
Distinguish between life threatening and non-emergent causes of chest pain.  
Illustrate the anatomic relationships of mediastinal, cardiac, and pulmonary structures.  
Interpret signs/symptoms that may indicate a referred source for chest discomfort.  
Describe the advantages and limitations of cardiac stress testing.  
Identify and interpret relevant laboratory testing results in the case of acute chest pain and/or syncope.  
Be able to identify normal and abnormal EKGs, static and dynamic rhythms. |
| Week 2 | Distinguish between life threatening and non-emergent causes of syncope.  
Illustrate the anatomic relationships of mediastinal, cardiac, and pulmonary structures.  
Describe the advantages and limitations of cardiac stress testing.  
Describe the pathophysiology of syncope.  
Identify and interpret relevant laboratory testing results in the case of acute chest pain and/or syncope.  
Be able to identify normal and abnormal EKGs, static and dynamic rhythms. |
| Week 3 | Discuss the diagnostic criteria/evaluation of the pediatric vs adult patient with hypertension.  
Be able to differentiate normal and abnormal heart and lung sounds utilizing a sound generator.  
Be able to identify normal and abnormal EKGs, static and dynamic rhythms. |
Week 4
- Identify ten causes of acute chest discomfort.
- Distinguish between life threatening and non-emergent causes of chest pain.
- Distinguish between life threatening and non-emergent causes of syncope.
- Illustrate the anatomic relationships of mediastinal, cardiac, and pulmonary structures.
- Interpret signs/symptoms that may indicate a referred source for chest discomfort.
- Describe the advantages and limitations of cardiac stress testing.
- Describe the pathophysiology of syncope.
- Identify and interpret relevant laboratory testing results in the case of acute chest pain and/or syncope.
- Discuss the diagnostic criteria/evaluation of the pediatric vs adult patient with hypertension.
- Be able to differentiate normal and abnormal heart and lung sounds utilizing a sound generator.
- Be able to identify normal and abnormal ekg's, static and dynamic rhythms.

This is really a culmination week with some additional information and time to review OMM for the musculoskeletal chest pain patient, test their knowledge on dynamic rhythms.

Self-Study Elements
Weeks 1-3: three weekly quizzes and one comprehensive final exam; the three quizzes and the final exam MUST be completed by the end of the module for passing a grade.

While these tests are self-study tools a 75% overall grade indicates you reasonably mastered the material.
Each quiz is worth 20 points (3 quizzes = 60 points) and the final exam worth 100 points.
Total points = 160 ➤ 75% = 120 points

Module G: Alterations in Behavior

The Alterations in Behavior C3 Module is designed to remind students about basic neurology and psychiatry as they apply concepts learned in years one and two to clinical work with patients. The psychiatric component of this module (weeks one and three) focuses on helping students fine-tune their interviewing skills by practicing medical history interviews on patients with psychiatric challenges. Students will learn strategies to deal with difficult behavior in hospitalized patients including an approach for assessing and treating the cognitively impaired patient who is agitated and combative.

The emphasis during week two will be on learning various presentations and causes of diffuse brain dysfunction leading to alterations in behavior. Emphasis will be placed on being able to discern emergent from non-emergent conditions. Students should learn the necessary evaluation and treatment modalities in such settings. Week four will focus on the presentation of patients exposed to common poisoning and overdoses as well as caring for patients withdrawing while in the hospital. Educational material will be presented through required readings, case and video presentations.

During week 3 students will complete an active learning project matching developmental disabilities to symptoms, genetics, behaviors and treatments in order to remind them of the challenges associated with these disorders. Videos will be provided to help students develop increased understanding of the behavioral challenges associated with providing medical care to patients with developmental disabilities.

Module G Goals:

Week 1
- Recognize the importance of an accurate medical history in the treatment of psychiatric patients
- Understand key strategies to elicit effective medical information from a depressed and anxious patient
- Appreciate the behaviors associated with anxiety in older adults
- Identify at least four reversible causes for behavioral disturbance

Week 2
- Understand the basic terminology used in classifying causes of altered mental status
- Understand the basics of adult and pediatric altered mental status
- Identify pertinent historical and examination findings in patients with altered mental status
- Formulate a plan for evaluating and treating common causes of altered mental status
**Module G Objectives:**

**Week 1**
- Given the materials provided, the MSIII student will be able to identify the key components of a medical history in patients with psychiatric illness
- Understand behavioral approaches to address anxiety management in patients who are cognitively impaired
- List and consider treatment for the medical causes of agitation and aggression
- As well as meet the individual learning objectives in the individual activities.

**Week 2**
- Given the materials provided, the MSIII student will be able to appropriately define, provide common differential diagnosis, recognize urgency, treatment strategies and potential time course of the various causes of altered mental status
- Meet the specific learning objectives of each individual activity.

**Week 3**
- Given the materials provided, the MSIII students will be able to describe the key features of patients with developmental disabilities including the epidemiology, genetics, behaviors and treatment for each condition and describe behavioral pharmacological strategies that may be used to treat behaviors associated with developmental disability.

**Week 4**
- Given the materials provided, the MSIII student will be able to describe the common signs and symptoms of alcohol intoxication and treatment as well as understand evidence based treatments for alcohol dependence.
- The student will also be able to describe the basic pathophysiology of common toxidromes, as well as meet the specific learning objectives of each individual activity.

**Self-Study Elements:**
Weeks 1-3: weekly quizzes; all three quizzes MUST be completed by the end of the module for a passing grade.

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**Module H: Abdominal Pain (Initial Presentation)**

The focus of this module is to review with the student the basic elements of abdominal pain and the abdominal exam. During this module, you will review the complete abdominal exam and critical findings associated with acute abdomens. In addition, you will review and identify common causes of both acute and non-acute abdominal pain. Age-specific conditions will also be identified. Last, imaging modalities for the evaluation of abdominal pain will also be included.

**Module H Goals:**

**Week 1**
- Have an understanding of how to perform an abdominal exam, including differentiating between acute and non-acute states
- Recall various diagnoses that may represent acute and non-acute pathologies contributing to the presentation of abdominal pain
- Understand age-related differences in causes of abdominal pain
- Know the value of testing in the evaluation of abdominal pain
Module H Objectives:

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Module H Objectives:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Define the symptom review of patients with abdominal pain (PPQRST)</td>
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<tr>
<td></td>
<td>• Describe and perform a physical assessment of the abdomen</td>
</tr>
<tr>
<td></td>
<td>• Distinguish between somatic and referred pain</td>
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<tr>
<td>Week 2</td>
<td>• Identify and distinguish between imaging modalities for abdominal pain</td>
</tr>
<tr>
<td></td>
<td>• Identify the initial lab workup to distinguish cause of abdominal pain</td>
</tr>
<tr>
<td>Week 3</td>
<td>• Identify the most common causes of non-surgical abdominal pain in adults</td>
</tr>
<tr>
<td></td>
<td>• Identify the most common causes of non-surgical abdominal pain in children</td>
</tr>
<tr>
<td></td>
<td>• Identify the cause of abdominal pain based on a given clinical presentation: Chronic cholecystitis, Pancreatitis, Duodenal/gastric ulcer disease, Diverticulitis, Irritable Bowel Syndrome/Inflammatory bowel disease</td>
</tr>
<tr>
<td>Week 4</td>
<td>• Provide the major steps in ED treatment of the acute abdomen</td>
</tr>
<tr>
<td></td>
<td>• Identify the cause of abdominal pain based on a given clinical presentation: Acute complicated cholecystitis, Acute appendicitis, incarcerated/strangulated hernias, Acute bowel obstruction, Obstructive urinary calculi, Diverticulitis with abscess, ruptured/leaking aortic aneurysm</td>
</tr>
</tbody>
</table>

Self-Study Elements:
There are no specific self-study quizzes or tests for this module. Preparatory readings and didactic session participation are the primary focus of this module.

Module I: Health Maintenance and Life-Long Care

The focus of this module is to re-acquaint the student with the normal physical exam, concepts of wellness and preventative health, as well as, birth to death medical care. In addition, the student will be introduced to the concept of optimal aging. Optimal aging is defined as the capacity to function across many domains—physical, functional, cognitive, emotional, social, and spiritual—to one’s satisfaction and in spite of one’s medical conditions. The intent is to educate the student to help all of one’s patients through the various stages of life from birth to death. The student will be exposed to various life and life-altering situations that physicians, patients, and families encounter in their journey through life and death. Through exposure to these situations the student will complete specific tasks during this month, including discussing and practicing OMM screening exams, defining
patient specific wellness prescriptions, communicating with patients of all ages, and helping patients and their families live healthier lives. Finally, the student will encounter the challenges of working with patients and their families at the end of life. Formal topical presentations will be included.

**Module I Goals:**

| Week 1 | To understand the following topics for pediatrics: Schedule of Visits, Nature of Health Maintenance Visit, Physical Exam, Screening tests-physical, behavioral, and labs, Anticipatory Guidance, and Vaccines |
| Week 2 | To become conversant with the latest information on health screening recommendations, screening exams, for common health concerns, and immunization recommendations for adult patients.  
  To perform, interpret and explain the findings of a comprehensive adult health maintenance exam to a patient who has presented for this exam.  
  To help the patient plan a strategy for their continued health, wellness, and optimal aging based on their current health status. |
| Week 3 | To become conversant with the latest information on health screening recommendations, screening exams, for common health concerns, and immunization recommendations for geriatric patients.  
  To perform, interpret and explain the findings of a comprehensive adult health maintenance exam to a patient who has presented for this exam.  
  To help the patient plan a strategy for their continued health, wellness, and optimal aging of the geriatric patient based on their current health status. |
| Week 4 | To be able to summarize the end of life decision making issues of patient autonomy, surrogates, living wills and ethical issues.  
  To be able to differentiate between palliative care and hospice care.  
  To be able to recognize and verbalize the complexity of family dynamics and to assist patients and families in making end of life decisions.  
  To be able to work with and recognize the challenges and opportunities associated with working with a team of health care professionals. |

**Module I Objectives:**

| Week 1 | Identify the frequency of visits and associated physiologic transitions during the first year of life  
  Identify and perform the components of the typical health maintenance visit  
  Be able to identify pediatric vitals including height-weight ranges  
  Identify specific tools used during pediatric screening, including: pulse oximetry, Denver Developmental Scales, Autism screening tools, CRAFFT screening for substance abuse and laboratory screening for different disease states (anemia, TB, STIs, hypercholesterolemia, lead)  
  Be able to provide age-appropriate anticipatory guidance for a given child  
  Be able to identify age-appropriate immunizations for a given child |
| Week 2 | Perform a 12 step OMM exam in a simulation setting with one or more partners and record the findings  
  Identify the elements of physical exam that should be included in adult physical exams for health maintenance  
  Identify the screening tests available, those suggested for health maintenance of adult and the cost-effectiveness of ordering or performing them  
  Identify the laboratory screening tests available, those suggested by health maintenance guidelines, the cost, and the cost-effectiveness in their performance on adult patients  
  Identify the immunizations that are required and suggested for adult patients and their risk-benefit profile  
  Describe nutritional supplements that are recommended and their evidence based value to your patient for adult patients  
  Describe dietary and exercise guidelines for healthy weight maintenance in adult patients  
  Discuss preventive care for skin cancer, dental, vision and hearing for adult patients  
  Discuss appropriate screening for mental health concerns for adult patients  
  Discuss appropriate strategy for injury prevention with adult patients  
  Discuss preventive sexual practices to promote safe sexual habits in adult patients |
Week 3
- Have experienced some of the challenges that aging patients experience as they age and develop limiting physical conditions by participating in an instant aging experience
- Verbalize the feelings that were experienced in the instant aging experience with their peer group in an instructor led group discussion
- Identify the elements of physical exam that should be included in geriatric physical exams for health maintenance
- Identify the screening tests available, those suggested for health maintenance of geriatric and the cost-effectiveness of ordering or performing them
- Identify the laboratory screening tests available, those suggested by health maintenance guidelines, the cost, and the cost-effectiveness in their performance on geriatric patients
- Identify the immunizations that are required and suggested for geriatric patients and their risk-benefit profile

Week 4
- Identify the goals of a family conference
- Participate in a family conference in a simulated experience by playing the role assigned to help facilitate the expressed and best interests of the dying patient and his family
- Assist in developing a palliative care and/or hospice care plan that reflects the wishes of the patient despite the sometimes dysfunctional plans of individual family members
- Verbalize the challenges of working with patients and families who are facing end of life care
- Recognize opportunities to provide anticipatory guidance to the patient and family
- Verbalize the positive and negative aspects of working with a team of health care professionals.

Self-Study Elements:
Module I has a self-study element that must be completed TWICE (at the beginning of the module and at the end to evaluate knowledge acquisition), which is the GATE (Geriatrics and Aging through Transitional Environments) Questionnaire. In addition, there is a Facts on Aging pre-quiz and a post-test in week two. There are no passing scores; however all of these elements must be completed by the end of the module to receive a passing grade.

Summary of MSUCOM Requirements
For OST603 Core Clinical Concepts (C3)

<table>
<thead>
<tr>
<th>Module</th>
<th>Requirement</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module A</td>
<td>Weeks 1-4: weekly quiz</td>
<td>Last day of Module A</td>
</tr>
<tr>
<td>Module B</td>
<td>Weeks 1-4: weekly quiz</td>
<td>Last day of Module B</td>
</tr>
<tr>
<td>Module C</td>
<td>Week 1 &amp; 2: weekly quiz Participation in the in-class Jeopardy during week three</td>
<td>Last day of Module C</td>
</tr>
<tr>
<td>Module D</td>
<td>Weeks 1-4: weekly quiz Participation in the in-class Jeopardy game during week four</td>
<td>Last day of Module D</td>
</tr>
<tr>
<td>Module E</td>
<td>There are no specific self-study quizzes or tests for this module. Preparatory readings and didactic session participation are the primary focus of this module.</td>
<td>Last day of Module E</td>
</tr>
</tbody>
</table>
Module F
Weeks 1-3: three weekly quizzes and one comprehensive final exam
Last day of Module F

Module G
Weeks 1-3: weekly quizzes
Last day of Module G

Module H
There are no specific self-study quizzes or tests for this module. Preparatory readings and didactic session participation are the primary focus of this module.
Last day of Module H

Module I
The GATE (Geriatrics and Aging through Transitional Environments) Questionnaire in the beginning of the module and again at the end, and the Facts on Aging pre-quiz and post-test in week two.
Last day of Module I

**Special Considerations**

Didactic sessions are a critical element of the curriculum. These sessions are meant to be attended and actively participated in. Attendance is mandatory for all MSUCOM students and any absence must be reported to the college, as well as the C3 Director and DME of the student’s base hospital. It is the expectation that C3 didactic sessions will take precedence over any and all rotational requirements. The Medical Education department of each hospital is aware of this expectation and will seek to enforce it when needed. Failure to attend sessions will hamper one’s ability to successfully complete this course and may result in remediation (see below) and possible repetition of any and all aspects of clerkship up to and including the clinical clerkship year. Remediation will most likely result in delayed graduation and possibly more significant consequences.

The C3 Directors at each hospital may choose to add elements to the curriculum (but will not subtract any elements) over the course of the academic year. Any additional elements required by the C3 Director or the Department of Medical Education will be completed by the medical student and may contribute to overall passage of OST 603.

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**C3 Module Corrective Action Process**

Failure to complete required elements of the curriculum including (but not limited to): attendance, timely completion of preparatory activities, poor participation in C3 didactics, failure to successfully complete the Topical Formal presentation, and/or failure of the self-study elements of C3 modules will result in a Corrective Action Plan as follows:

Students who do not successfully pass any individual module of the C3 curriculum will be required to complete a specific corrective action which may take one of several different forms (papers on professionalism, review of study questions, retake of self-study elements, etc.) based on the reason for not passing. The C3 Director at the student’s base hospital, as well as the Instructor of Record for the C3 curriculum, will review these elements for appropriateness and quality of answers. Once these have been evaluated by the C3 Instructor of Record and deemed to be satisfactory, the student will receive a passing grade on his or her transcript. In addition, corrective action for elements NOT specifically related to the curricular content (e.g. unexcused absence, unprofessional behavior,
COMLEX failure, etc.) will be determined on a case-by-case basis by Academic Programs in concert with the Office of Student Services and the base hospital’s Department of Medical Education.

Failure to successfully complete the Topical Formal presentation will result in the student being assigned a successive topical formal topic by the C3 Director, which must be presented to the C3 Director and reviewed by the Instructor of Record for a passing grade.

Corrective action will be considered successful once completed and evaluated by the Instructor of Record for this course. Failure to successfully complete corrective action will result in the student’s case being brought before COSE for final judgment and may include (but not be limited to) remediation, repetition of the C3 curriculum in whole or in part and expulsion.

MSU College of Osteopathic Medicine Standard Policies

The following are the standard MSUCOM policies students must adhere to across rotations.

ATTENDANCE POLICY

Attendance at all scheduled Clerkship activities is mandatory.

If a student is unable to be present for a scheduled clerkship activity because of extenuating circumstances, the student is required to complete a Clerkship Excused Absence Request form. In all cases except for emergencies or sudden illness, requests for scheduled absences are to be submitted at least 30 days prior to the date(s) of absence. Absences are not approved until the form is completed with all required signatures. Once approved, the student is required to notify their preceptor of their absence within 24 hours. Failure to complete this form or obtain required signatures will result in an unexcused absence from the rotation. Unexcused absences are considered unprofessional behavior and could be noted as a mark of unprofessionalism on the student’s performance evaluation, and may lead to failure of the rotation.

An absence request for the first or last day of the rotation will be denied. All absences (excused or unexcused) must be made up as specified on the Excused Absence Form as outlined under the conditions of approval. Makeup experience will be determined by the Director of Medical Education and may include additional clinical day(s) or written assignment(s).

If a student has an emergency or sudden illness they should immediately notify the Director of Medical Education and rotation preceptor. The excused absence request form must be submitted to the Medical Education Office within 24 hours of the original emergency or sudden illness notification.

IMPORTANT NOTE: The only exception to this attendance policy is Emergency Medicine, where attendance is based on a shift schedule assigned by the hospital. Please refer to the Emergency Medicine “Introduction and Overview” for more information.

STATEMENT OF PROFESSIONALISM
Principles of professionalism are not rules that specify behaviors, but guidelines that provide direction in identifying appropriate conduct. These principles include the safety and welfare of patients, competence in knowledge and skills, responsibility for consequences of actions, professional communication, confidentiality, and lifelong learning for maintenance of professional skills and judgments. Professionalism and professional ethics are terms that signify certain scholastic, interpersonal and behavioral expectations. Among the characteristics included in this context are the knowledge, competence, demeanor, attitude, appearance, mannerisms, integrity and morals displayed by the student to faculty, peers, patients and colleagues in other health care professions. Students are expected to conduct themselves at all times in a professional manner and to exhibit characteristics of a professional student.

**STUDENTS RIGHTS AND RESPONSIBILITIES**

Each individual student is responsible for their behavior and is expected to maintain standards of academic honesty. Students share the responsibility with faculty for creating an environment that supports academic honesty and principles of professionalism. Proper relationship between faculty and student are fundamental to the college's function and this should be built on mutual respect and understanding together with shared dedication to the education process. It is a fundamental belief that each student is worthy of trust and that each student has the right to live in an academic environment that is free of injustice caused by dishonesty. While students have an obligation to assist their fellow students in meeting the common goals of their education, students have an equal obligation to maintain the highest standards of personal integrity.

**FACULTY RESPONSIBILITIES**

It is the responsibility of the college faculty to specify the limits of authorized aid (including but not limited to exams, study aids, internet resources and materials from senior students) in their syllabi, and it is the responsibility of students to honor and adhere to those limits. Course instructors shall inform students at the beginning of the semester of any special criteria of academic honesty pertinent to the class or course.

**COURSE GRADES**

- **P-Pass** – means that credit is granted and that the student achieved a level of performance judged to be satisfactory according to didactic and clinical performance by the department.
- **N-No Grade** – means that no credit is granted and that the student did not achieve a level of performance judged to be satisfactory according to didactic and clinical performance by the department.
- **ET-Extended Grade** – means that a final grade (“Pass” or “No Grade”) cannot be determined due to one or more missing course requirements. In Years 3 and 4, the ET grade is used instead of an “Incomplete (I)” grade. Once all course requirements have been completed, received, and processed, the ET grade will be changed to a final grade. An “ET” will NOT remain on a student’s transcript.

**C3 MODULE EVALUATIONS**

- **Student Evaluation of Module** Students will submit their module evaluations electronically at the conclusion of every module by accessing their online C3 schedule through Kobiljak.

**EXPOSURE INCIDENTS PROTOCOL**

A form has been developed by the University to report exposure incidents. These forms will be on file in your DME's office. You can also access the form at www.com.msu.edu/AP/clerkship_program/clerkship_documents/exposure.pdf. Please make yourself familiar with the procedure and the form.