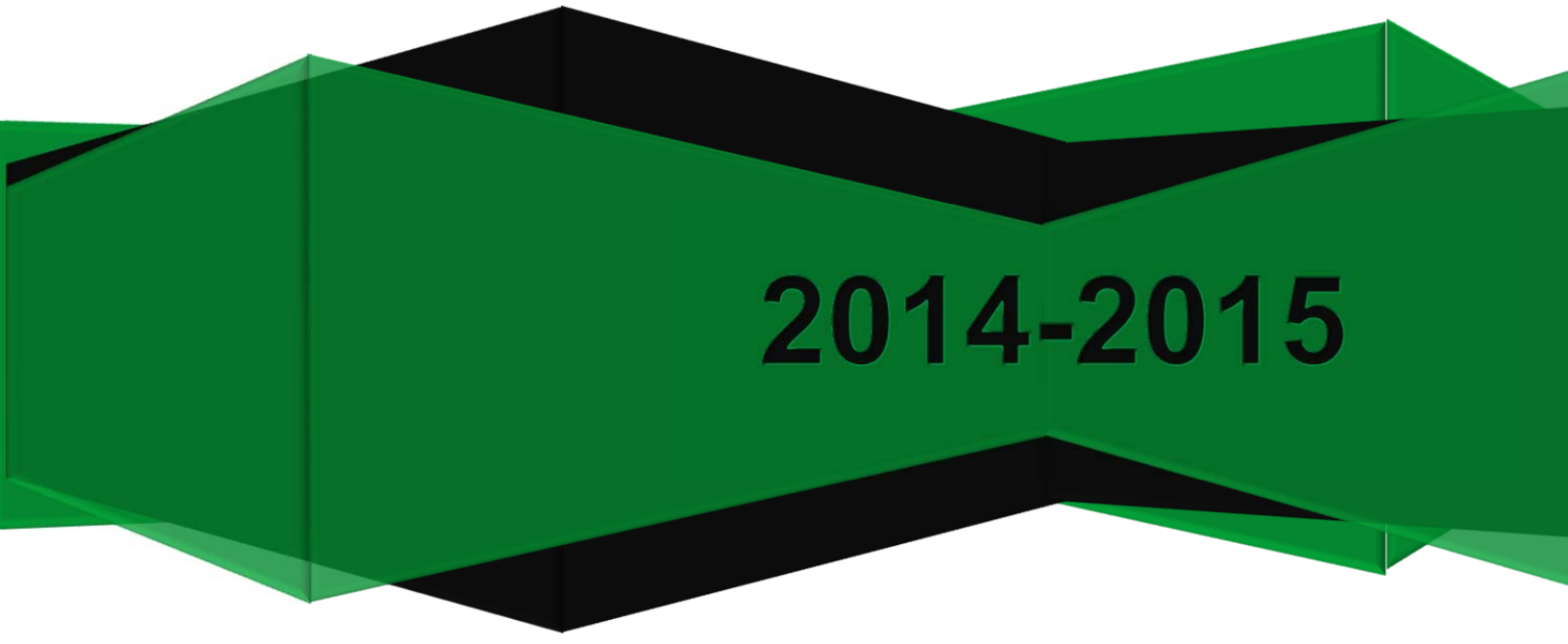
Osteopathic Manipulative Medicine Clerkship

Syllabus - MEDE 8417

Clerkship Director: Clay Walsh, D.O.



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Clinical Clerkship Purpose

The clinical clerkships affiliated with the Texas College of Osteopathic Medicine serve to provide supervised, high quality opportunities for third and fourth year medical students to apply and transform the declarative medical knowledge and basic clinical skills that they have acquired into procedural clinical competence, while also functioning as learning members of health care teams.

The clinical clerkships promote and support TCOM students in developing clinical competence with emphasis on the core competencies beyond medical knowledge alone. Clerkships are encouraged to seek opportunities for students to provide Health and Wellness Counseling, develop improved interpersonal and communication skills, professionalism, as well as practice-based learning and improvement.

The Osteopathic Manipulative Medicine clerkship reinforces the philosophy, principles and practice of osteopathic medicine for primary care physicians in a clinical and hospital setting. This rotation is designed to train osteopathic medical students for assessment of the health potential of patients; for diagnosis and treatment of disease, particularly as they are related to the neuromusculoskeletal system; by the application of osteopathic philosophy and principles in patient care and the application of osteopathic manipulative treatment. A basic foundation of academic, research, and clinical experience is included, integrating the basic medical sciences and osteopathic philosophy and principles with the clinical manifestations of health and disease.

Activities include:

- Obtaining initial patient histories
- Performing physical examinations, including biomechanical exams
- Applying osteopathic philosophy, principles and practices under faculty supervision
- Applying physical therapy modalities
- Attending to the care of an acute and chronic patient population under faculty supervision

Core Competencies

The **GOALS** of the Clinical Clerkships are to enable TCOM students to achieve competence as graduate osteopathic medical students. As such, the **goals** of the clerkship curriculum are represented by the AACOM Osteopathic Core Competencies for Medical Students.

For the purposes of the TCOM Clinical Clerkship Competencies, the AACOM 14 Competencies have been condensed into the following 8:

1. Osteopathic Principles and Practices
2. Medical Knowledge
3. Patient Care
4. Interpersonal and Communication Skills
5. Professionalism
6. Practice-Based Learning and Improvement
7. Systems-Based Practice
8. Health Promotion/Disease Prevention

Clerkship Learning Objectives

The goal of the Department of Manipulative Medicine rotation is to provide the student doctor with an opportunity to broaden professional understanding and application of osteopathic philosophy, principles and practices. During the rotation the student doctor will develop further by applying his/her skills to patient care and academic activities. The student doctor is a valued member of the clinical staff and academic department.

The rotation is based in the Manipulative Medicine Clinic (UNTHSC PCC, 6th floor) and at each assigned preceptor's clinic. The student doctor gains exposure to variations in style approaches to patients, and in the application of osteopathic philosophy and principles. Student doctors work with undergraduate teaching fellows, teaching assistants, residents and department faculty. By the end of the rotation, the student doctor will be able to:

- Incorporate osteopathic manipulative medicine and, specifically, osteopathic manipulative diagnosis and treatment into the clinical and/or hospital setting.
- Differentiate and apply appropriate OMT techniques to treat common conditions that present in the clinical and/or hospital setting.
- Exhibit proficiency in history-taking and physical exam skills.
- Demonstrate comprehension of material covered in the didactics and clinical setting by passing the shelf exam at the completion of the OMM clerkship.

Treatment opportunities are provided in primary care settings with scheduled clinical patients and/or hospital patients, where hospital service is established. The student doctor is expected to see and treat his/her own patients and faculty private patients in the clinic when assigned and to be prepared to participate in all patient care responsibilities. These include reviewing patient case histories and progress notes, locating x-ray films prior to the patient's office visit and consulting with the supervising physician or faculty for any questions.

Other responsibilities include:

- The composition of a case report based on the medical history, treatment and outcomes verified in the care of a single patient attended to in the OMM clinical rotation.
- Documenting patient care activities in a weekly log.
- For student doctors assigned to OMM faculty, attendance and participation as a teaching assistant in all Year I and II Lab activities and Student Assistant preparatory sessions.

Clerkship Required Didactics and Study Assignments

Working under the supervision of faculty members during the OMM core rotation, student doctors evaluate and treat private patients in the preceptor's practice, the OMM Patient Care Clinic and in a hospital environment. The student observes and, where appropriate, assists in the interview, examination and treatment of patients. Opportunities for discussion with the attending physician are available and conducted in private. These activities are documented in a weekly clinic log, submitted by 10:30 p.m., each Friday of the rotation.

Resources are delivered digitally to all rotation participants using UNTHSC's Canvas platform. A Didactic Review includes: a Learning Module populated with required Core Lectures; a Media Library hosting 20 manipulative technique videos; a Web Links library of authoritative Osteopathic-specific sites and Medical Science libraries (NIH & CDC) with abstracts; and tutorials. These resources augment the Gibson Lewis Library guides, tutorials, collections and services and support successful completion of the Case Report assignment and COMAT exam.

The COMAT exam, covering topics pertinent to the OMM clerkship and Osteopathic principles generally, is administered online on the last Friday for DFW-based clerkships. The exam is proctored on campus in the Gibson D. Lewis Library, room 400 and taken online. For student doctors in remote locations, a paper exam is administered on the last Friday of the rotation by the remote site coordinator. Failure to score above 70 results in remediation, in which the student may retake the exam again. Failure to score above 70 on the second exam results in dismissal from the program. If the student scores above 70 on the exam, a total grade of 70 will be given for the rotation, regardless of the scores achieved in other components of the rotation.

Case Report Assignment

The OMM Case Report illustrates current practice and treatment issues for the Osteopathic physician and medical student. The OMM rotation emphasizes the application of manipulative treatment across a broad landscape of specialties serving as primary caregivers – in family practice, physical medicine and rehabilitation, geriatrics, pain management and others. The case report allows the student doctor to focus deeply on the medical history of an actual patient

encounter, investigate the history, integration and application of OMT, course of treatment, literature and test findings, discuss failings and best practices - and draw his/her own conclusions. It is the expectation of the Department that the training, education and unique OMM rotation experience will have prepared each student doctor to craft a case report worthy of consideration for submission to a peer-reviewed osteopathic journal. Student and faculty work is submitted for publication to educate, inform, develop and support manipulative medicine practices in the osteopathic community.

Evaluation and Grading

The final grade for the core rotation is derived from the following components:

- Clinical Performance and Skills Assessment 25%
- COMAT Examination 25%
- Case Report 25%
- Pre-requisite Didactic Quiz and weekly Clinic Log 25% (12.5% each)

The above items are mandatory for successful course completion. **Clinical Performance and the COMAT must be passed with a minimum grade of 70**. IRB documentation is also mandatory and must be submitted with your case report. The IRB form is to be filled out and submitted online (no signature is required). Failure to do this will result in your case report not being graded and subsequently failure for the assignment. Failure to successfully pass any mandatory component after a remediation attempt will result in failure of the course.

The Clinic Log will be graded on three components. Number of records - 50% (a minimum of 50 records is required to be accepted for grading), Completion of entered records – 25%, Diversity of records – 25%.

Clinical Performance is assessed by each attending with which the student has contact. A composite score is derived for this element. Professionalism and work habits are a significant portion of the clinical assessment. These include the student attitude, demeanor, and interaction with attendings, peers, and staff. Character qualities such as punctuality, teachability, honesty, bedside manner, integrity, etc. are important in your professional development.

If a student fails any of the listed components, he/she will be given one opportunity to remediate that requirement. Successful remediation will permit the student to receive a maximum grade of 70 for that component, pending the successful passing and completion of all other components of the course requirements. Failure and successful remediation of two components in the same rotation will permit the student to receive a maximum grade of 70 for the rotation. Failure of any remediation constitutes a failure in the course. Failure and remediation policy shall be directed by the Vice President for Student Affairs as set forth in the Uniform Policies.

Student Responsibilities

The OMM Rotation Schedule will be posted on Canvas in early June 2014, the student will have ten (10) days to make switches of location with someone within the scheduled period. In order for those switches to be accepted, an email from both students requesting the change, with an explanation for the request is required. Once the ten (10) days have passed, no further changes to the schedule will be allowed for the remainder of the academic year. The OMM rotation pre-requisites, assignments and assessments are delivered online via UNTHSC Canvas. The site opens to the student at 5 p.m. on the Friday before the first day of rotation. The deadline for submitting the orientation component of the rotation is 10:30 p.m. on the first day of rotation. There are two rotation assignments, a clinic log in which the student enters each care event in which he/she participated and the case report, which includes UNTHSC Institutional Research Board form. Your case report will not be submitted for grading until the completed form is received.

- The case report and accompanying IRB form are due by 10:30 p.m. on the last Friday of the rotation.
- A clinic log is submitted weekly, due by 10:30 p.m. each Friday.
- Professional demeanor with patients and colleagues is expected at all times.
- Strict observance to the dress code established at T.C.O.M. is observed in the clinic, hospital and practice training areas. Clinic jackets are required and, per clinic policy, the use of perfume or fragrances is not allowed.
- The student doctor is expected to respect the patient's right to privacy with confidentiality and to respect the physician-patient relationship.
- During the rotation the student doctor will be held responsible for conduct consistent with the T.C.O.M. Code of Student Conduct. (http://www.hsc.unt.edu/Departments/StudentAffairs/StudentPolicyHandbook/StudentCodeofConductandDiscipline.cfm)
- 100% attendance is expected and absence is allowed only under extreme circumstance such as illness, death in the family and other emergency family circumstances. In case of absence, the assigned preceptor and the Clerkship Coordinator must be notified. A *Request for Absence from Clerkship* form, available on the Office of Clinical Education site at http://www.hsc.unt.edu/departments/clined/forms.cfm, must be completed and signed by the rotation preceptor, director and Office of Clinical Education before the rotation or within three (3) days of student's return from absence. If absence is due to

medical issues, a physician’s note is required, the dates must match those missed and may not be signed by a member of the student’s family.

Questions and comments concerning a patient's care are kept until it is feasible to consult with the physician in private.

Rotation Sites

DFW Metroplex

UNT Health – Patient Care Center UNTHSC
Dr. Clay Walsh, Dr. Thomas Crow, Dr. Sharon Gustowski, Dr. Kendi Hensel
Dr. David Mason, , Dr. Ryan Seals, Dr. Sajid Surve
855 Montgomery St, 6th Floor, Fort Worth, TX 76107

Local Private Clinics under the direction of:
Dr. Ade Adedokun, Dr. Stevan Cordas, Dr. Randy Davis, Dr. Nick DeFauw, Dr. Mark Dirnberger, Dr. Randall Hayes, Dr. Sheri Hull, Dr. Allen Kalich, Dr. Samuel Lee, Dr. Joseph Moran, Dr. Chau Pham, Dr. Jay Roop, Dr. Arthur Speece

Longview, TX

Good Shepherd Medical Center – Dr. John McDonald
700 E. Marshall Ave., Longview, TX 75601

Conroe, TX

Conroe Medical Education Foundation, Dr. Stephen McKernan
704 Old Montgomery Rd., Conroe, TX 77301

Houston, TX

Dr. Cheryl Howard
4219 Richmond Ave, Ste 110, Houston, TX 77027
Dr. Adam Weglein
6800 West Loop S., Ste 500, Bellaire, TX 77401

Corpus Christi , TX

Dr. Ron Bowen
5656 South Staples Street, Ste. 250, Corpus Christi, TX 78411
Dr. Marian Hendricks
5833 Spohn Dr., Bldg. 601, Corpus Christi, TX 78414

Faculty and Staff

University Faculty

- David Mason, D.O., FACOFP, Associate Professor and Chairman
- Clay Walsh, D.O., Associate Professor and Year III Course Director
- Thomas Crow, D.O., FAAO, Professor, Residency Program Director
- Sharon Gustowski, D.O., Assistant Professor
- Kendi Hensel, D.O., Ph.D., Associate Professor
- Ryan Seals, D.O., Assistant Professor and Year II Course Director
- Sajid Surve, D. O., Associate Professor and Year I Course Director

Adjunct Clinical Faculty

- Dallas/Fort Worth metroplex (current listing maintained by the OMM Core Coordinator)

OMM CORE Rotation Staff

- Cari McTaggart, Rotation Coordinator
  MET-552
  817-735-0234

UNTHSC Patient Care Clinic Contact

- Bianca Pleitez
  Patient Care Clinic - 6th Floor
  817-735-5184 or 817-735-2237

Disclaimer

The OMM clinical clerkship is operated in accordance with the policies and procedures of the academic programs of Texas College of Osteopathic Medicine as presented in the class Clerkship Protocol, Student Handbook and College Catalog.

The provisions contained herein do not constitute a contract between the student and the College. These provisions may be changed at any time for any reason at the discretion of a faculty member. When necessary, in the view of the College, appropriate notice of such change will be given to the student.

COMPLIANCE WITH POLICIES

All policies of the UNTHSC/Texas College of Osteopathic Medicine will be observed in the MEDE 8417 course. Students are expected to be familiar with those policies as presented in the Student Handbook and College Catalog. In general, course policies are contained within the body of this syllabus. You are responsible for reading and understanding the contents of this syllabus. Any questions regarding this document should be directed to the Course Director for clarification.

The course is operated in accordance with the policies and procedures of the academic programs of the UNTHSC/Texas College of Osteopathic Medicine, as presented in your Student Handbook and College Catalog.

The provisions contained in this syllabus do not constitute a contract between the student and the College. These provisions may be changed at any time for any reason at the discretion of the course section director committee. When necessary, in the view of the College, appropriate notice of such change will be given to the student.
http://www.hsc.unt.edu/policies/PoliciesList.cfm

Policy Statement

Each student enrolled at UNT Health Science Center is responsible for knowing current academic policies and scholastic regulations, general and specific requirements, and operational policies that apply to registration and instruction.

The Health Science Center reserves the right to amend or add to the academic policies and improves the quality of education and is introduced in a fair and deliberate manner with appropriate notice provided to all students affected by the changes. For a detailed view of all UNTHSC policies, see: http://www.hsc.unt.edu/policies/

Academic Integrity/Honor Code

Enrollment is considered implicit acceptance of the rules, regulations, and guidelines governing student behavior at UNT Health Science Center. It the responsibility of the student to be familiar with all policies governing academic conduct which can be found in the UNTHSC Student Catalog, Student Policy Handbook and the Student Code of Conduct and Discipline which are located on the UNTHSC Internet at http://www.hsc.unt.edu/Sites/DivisionofStudentAffairs/

Academic Assistance

Students may schedule one-on-one academic assistance with faculty through in-person appointments, telephone calls or e-mail communication. Academic assistance is also available through the UNTHSC Center for Academic Performance (CAP). http://www.hsc.unt.edu/CAP

Attendance and Drop Procedure

Course instructors and the School's administration expect students to attend class. It is the responsibility of the student to consult with the instructor *prior* to an absence, if possible. Withdrawal from a course is a formal procedure that must be initiated by the student. Students who stop attending class and do not withdraw will receive a failing grade. Students should consult with the instructors prior to withdrawing. In some cases a perceived problem may be resolved, allowing the student to continue in the course. It is the student's responsibility to be familiar with the policies and procedures as stated in the Student Handbook and the UNTHSC Catalog located on the UNTHSC Internet at http://www.hsc.unt.edu/Sites/DivisionofStudentAffairs/

Americans with Disabilities Act

The University of North Texas Health Science Center does not discriminate on the basis of an individual's disability and complies with Section 504 and Public Law 101-336 (American with Disabilities Act) in its admissions, accessibility, treatment and employment of individuals in its programs and activities. UNTHSC provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law, who are otherwise qualified to meet the institution's academic and employment requirements. For assistance contact the Equal Employment Opportunity Office at the health science center. Reference Policy 7.105 Americans with Disabilities Act Protocol in the Student Policy Handbook and online at: http://www.hsc.unt.edu/policies/

Course and Instructor Evaluation

It is a requirement of all students that they are responsible for evaluating each of their courses and instructors as defined in UNTHSC Policy 7.120 Student Evaluation of Courses and Instruction. Please adhere to all guidelines established in the policy. http://www.hsc.unt.edu/policies/

Course Assessment

In some instances, courses will have a course assessment that will provide immediate feedback to the course director regarding progress of the course identifying potential problems and determining if student learning objectives are being achieved.

(Provide all pertinent information regarding the specifics of the groups in the syllabus as defined in UNTHSC Policy 7.120 Student Evaluation of Courses and Instruction.)

Syllabus Revision

The syllabus is a guide for this class but is subject to change. Students will be informed of any change content or exam/assignment dates.

Turnitin and the Family Education Rights and Privacy Act (FERPA)-If applicable

NOTE: UNTHSC has contracted with Turnitin.com for plagiarism detection services.

Use of Turnitin.com is entirely in the discretion of the instructor, but use of such a service requires that you provide notice (via syllabus) to your students that you are using such services. In addition, instructors who use Turnitin should be sure to remove student identifiable information from the work before sending to Turnitin or receive written permission from the student. There are two methods for using Turnitin for written assignments. Please refer to the wording guidelines and consent form located on the Faculty Affairs website at
http://www.hsc.unt.edu/Sites/OfficeofFacultyAffairs/index.cfm?pageName=Turnitin

Appendix 1
Learning Resources

Required Textbooks

American Osteopathic Association. (2011). *Foundations for Osteopathic Medicine.* Philadelphia: Chila, Anthony G. Lippincott Williams and Wilkins.
Foundations for Osteopathic Medicine 3rd ed., 2011

Recommended Reading

DiGiovanna, Eileen L.; Schiowitz, Stanley; Dowling, Dennis J. (Eds.). (2005). *An Osteopathic Approach to Diagnosis and Treatment* (3rd ed.). Philadelphia: Lippincott Williams & Wilkins.
An Osteopathic Approach to Diagnosis and Treatment

The Pocket Manual of OMT: Osteopathic Treatment for Physicians (Book with Access Code). (2010) Beatty, David R.; Li, To Shan; Steele, Karen M., Lippincott, Williams and Wilkins. 2nd Edition.
The Pocket Manual of OMT: Osteopathic Treatment for Physicians 2nd ed., 2011

Nicholas, Alexander, & Nicholas, Evan A. (2008). *Atlas of Osteopathic Techniques*. Philadelphia: Lippincott Williams & Wilkins.
Atlas of Osteopathic Techniques

Magoun, Harold. (Ed.). (1976). *Osteopathy in the Cranial Field* (3rd ed.). Kirksville, MO; Journal Printing Co.
Osteopathy in the Cranial Field

Hoppenfeld, Stanley, & Hutton, Richard. (1976). *Physical Examination of the Spine and Extremities*. New York: Appleton-Century-Crofts.
Physical Examination of the Spine and Extremeties

Greenman, Philip E. (2003). *Principles of Manual Medicine*, (3rd ed.). Philadelphia: Lippincott Williams & Wilkins.
Principles of Manual Medicine

Nelson, Kenneth E., & Glonek, Thomas. (Ed.) (2007). *Somatic Dysfunction in Osteopathic Family Medicine*. Philadelphia: Lippincott Williams & Wilkins.
Somatic Dysfunction in Osteopathic Family Medicine

Kuchera, Michael L. & Kuchera, William A. (1991). *Osteopathic Considerations in Systemic Dysfunction* (2nd ed.). Kirksville, MO: Kirksville College of Osteopathic Medicine.
Osteopathic Considerations is Systemic Dysfunction

Kuchera, William. (1992). *Osteopathic Principles in Practice* (2nd ed.). Kirksville, MO: Kirksville College of Osteopathic Medicine.
Osteopathic Principles in Practice

Kimberly, Paul E. (2000). *Outline of Osteopathic Manipulative Procedures; the Kimberly Manual (*millennium ed.).
Outline of Osteopathic Manipulative Procedures; the Kimberly Manual

Schuenke, Michael; Schulte, Erick; Schumacher, Udo.(Eds.). (2010).*Thieme Atlas of Anatomy; General Anatomy and Musculoskeletal System*. Stuttgart; New York: Thieme.
Thieme Atlas of Anatomy; General Anatomy and Musculoskeletal System

Jones, Lawrence H.; Kusunose, Randall S., Goering, Edward K. (1995). *Strain and Counterstrain* (2nd ed.). Boise, Idaho: Jones Strain-CounterStrain, Inc.
Strain and Counterstrain

Board Review Books

Simmons, Steven L. (2001). *Osteopathic Manipulative Medicine: Review for the Boards.* Fort Worth, TX; Steven L. Simmons
Osteopathic Manipulative Medicine: Review for the Boards

Savarese, Robert G.; Capobianco, John D.; Cox, James J. Jr. (2003). *OMT Review; A Comprehensive Review in Osteopathic Medicine*. S.I: Savarese.
OMT Review; A Comprehensive Review in Osteopathic Medicine

Crow, William Thomas. (2001). *The Osteopathic Principles and Practices Review Book for Levels One, Two and Three Comlex-USA Exam.* Indianapolis, IN: American Academy of Osteopathy.
The Osteopathic Principles and Practices Review for Comlex-USA Levels 1, 2 and 3

Appendix 2
Didactic Review Syllabus I

Osteopathic Principles and Practices
This lecture provides students with general Osteopathic Principles and Practices.

Upon completion, the student should be able to:

- explain the basic principles of the Osteopathic Concept.
- identify 35 anatomical landmarks.
- perform a musculoskeletal examination.
- describe the barrier concept and perform motion on a patient.
- define Somatic Dysfunction.
- use the proper terminology in describing somatic dysfunction.
- recognize tissue texture (T) changes, physiologic asymmetry (A) and deficiencies in ranges (R) of motion as well as elicit areas of tenderness (T) on a patient in the cervical, thoracic, lumbar, sacral, pelvic and upper and lower extremities (TART).
- list and describe the performance of three direct methods and three indirect method used to treat somatic dysfunction.

Somatic Dysfunction
The lecture provides students with information pertinent to diagnose and treat somatic dysfunction of the following regions: The Cervical Spine; The Thoracic Spine; The Rib Cage; The Lumbar Spine; The Pelvis; and The Extremities.

Upon completion, the student should be able to:

- recognize and identify the anatomy of each region.
- describe the physiology of each region as it applies to normal motion and somatic dysfunction.
- perform an osteopathic structural examination of each region.
- treat somatic dysfunction of each region with direct and indirect methods utilizing a variety of activating forces.
- describe how somatic dysfunction of each region can effect or be effected by other structures or organ systems in the body (somato-visceral/viscero-somatic dysfunction).

Appendix 3
Didactic Review Syllabus II

Clinical Applications

1. Ear, Nose, Throat

The student will learn to effectively apply OMT in the treatment of patients with common ENT problems. These include otitis media, sinusitis, vertigo rhinitis, pharyngitis, tonsillitis and allergies.

The student will show an understanding of and be able to identify the major elements of the upper respiratory anatomy and physiology to include ear, nose & throat structures:

- nose
- throat/neck
- lymph nodes
- soft tissue of face and neck
- And related sympathetic and parasympathetic innervation and lymphatic drainage

The student will be able to list and perform the six key diagnostic techniques in the osteopathic structural diagnosis of the patient as it relates to common ENT problems:

- soft tissue diagnosis of cervical and thoracic regions of the related sympathetic innervation: acute viscero-somatic
- Cervical and thoracic arthrodial/skeletal diagnosis of related sympathetic innervation
- Thoracic spine, rib cage, thoracic inlet, diaphragm, c-spine (phrenic nerve) examination in relation to the lymphatic function
- OA, AA and sacral soft tissue examination to diagnose related parasympathetic areas: acute viscero-somatic
- Cranium, OA, AA, and sacral arthrodial/skeletal examination to diagnose related parasympathetic areas

The student will be able to perform a standard physical examination of the ear, nose and throat.

The student will be able to list and perform seven key OMT techniques utilized in the treatment of common ENT problems:

- soft tissue: knead, stretch, inhibition
- fascial release: cervical, cervical thoracic junction, thoracic inlet
- effleurage to face and neck
- sphenopalatine ganglion release
- Condylar decompression
- direct/indirect techniques to cervical, thoracic and rib cage to correct any specific arthrodial/skeletal somatic dysfunction
- redome diaphragm
- lymphatic pump techniques

2. Cardiovascular

The student will learn to effectively apply OMT in the treatment of patients with the following common cardiovascular problems:

- Hypertension
- Congestive heart failure
- Coronary spasm
- Arrhythmia

And post-operative conditions:

- Edema

Upon completion, the student will be able to identify the major elements of the cardiovascular anatomy and physiology:

- The heart – atria, ventricles, SA node, AV node.
- The autonomic nervous system right deep plexus, left deep plexus, and superficial plexus.
- The carotid body and sinus.
- The sympathetic innervation lateral chain ganglia, T1-T5, cervical chain ganglia.
- T10-L2 aorticorenal ganglion, celiac plexus, splanchnic
- The parasympathetic innervation vagus nerve
- Lymphatics chest, abdomen, pelvis

The student should be able to list and perform key diagnostic techniques in the structural diagnosis of a patient as it relates to common cardiovascular problems including:

- Thoracic soft tissue diagnosis of the related sympathetic areas.
- Thoracic skeletal/arthrodial diagnosis of the related sympathetic areas.
- Rib cage diagnosis of symmetry, motion and respiratory effort.
- Fascial assessment of the thoracic and lumbar secondary chain ganglia.
- OA and sacral soft tissue diagnosis of the related parasympathetic areas.
- OA and sacral skeletal/arthrodial diagnosis of the related parasympathetic areas

Cardiovascular (continued)

The student should be able to list, relate and perform key OMT techniques utilized in the treatment of common cardiovascular problems:

- Soft tissue stretch, knead, parasympathetic inhibition
- Myofascial release thoracic, lumbar, secondary chain ganglia
- Rib raising
- Indirect rib techniques
- Indirect sacrum
- Condylar decompression
- Redome diaphragm
- Release thoracic inlets
- Lymphatic pump techniques

3. Pulmonary

The student will learn to effectively apply OMT in the treatment of patients with common pulmonary problems. Knowledge of the major elements and terms of anatomy and physiology should include:

- Pulmonary structures and divisions
- Thoracic wall anatomy
  - Sternum
  - Ribs
  - Vertebra
- Muscles of respiration
  - Intercostal
  - Accessory
- Rib cage motion
  - Bucket
  - Pump
- Nerve supply
  - Parasympathetic
  - Sympathetic
  - Phenic
- Lymphatic
  - Inlet/Outlet
  - Diaphragm
- Sibson's fascia
- Excursions – inspiration, expiration
- Central tendon – attachments, crura
- Lungs
- Pleura, pulmonary ligaments
- Fissures
- Lobes
- Muscles
- Accessory – pectoralis major, pectorales minor, subcostal, serratus posterior, serratus anterior
- Levatores – costarum, trapezius, latissimus dorsi, rectus abdominis, sternocleidomastoid, platysma
- Strap – hyoid, thyroid
- Nerve supply
- C3, 4, 5 "keeps the man alive" – phrenic nerve
- Vagus – parasympathetics
- Lymphatic drainage
- Thoracic duct
- Cervical chains

Physiology:

- Understanding how a pulmonary problem can cause somatic dysfunction throughout the entire body.
- Review pulmonary function testing.
- Review changes in obstructive and restrictive lung disease.
- Understanding how OMT can increase chest cage compliance and improve diaphragmatic excursion.
- Increases FEV1, FVC, total lung capacity can increase or decrease residual volume/can improve peak flow.

Pulmonary (continued)

The student will understand how OMT influences respiratory functions and can augment the lymphatic pump by:

- increasing lymphatic drainage
- increasing venous return
- enhancing negative intrathoracic pressure

The student will be able to demonstrate how OMT can:

- decrease secretions
- relieve bronchospasm
- induce bronchospasm if incorrectly applied

The student will be able to diagnose in the seated position (and understand why putting the patient in the prone position can increase respiratory distress) and follow best practices by understanding and accessing:

- accessory breathing muscles
- 3 zones of aeration in uptight, supine, lateral recumbent positions

The student will be able to confidently observe a patient for signs of respiratory distress through:

- respiratory rate
- accessory muscle recruitment
- leaning forward posturing
- pursed lip breathing
- cyanosis - central/peripheral
- level of consciousness
- paradoxical respirations (especially in children)
- nasal flaring in infants

The student will be able to:

- diagnose motion of 3-5 diaphragms
- diagnose rib motion - bucket/pump handle
- diagnose clavicle and sternal angle dysfunction
- diagnose cervical, lumbar, abdominal somatic dysfunction

The student will be able to apply appropriate Osteopathic Manipulative Treatment by means of:

- lymphatic pump/effleurage
- release thoracic inlet/Sibson's Fascia
- rib raising
- diaphragm release (thoracic inlet, abdominal, pelvic)
- indirect technique for hyoid release
- springing technique for sternal angle

4. Gastrointestinal

The student will learn to demonstrate effective application of Osteopathic Manipulative Treatment in patients with common gastrointestinal problems such as gastritis and peptic ulcer disease, irritable bowel syndrome and postoperative ileus.

The student will show an understanding of the major elements of gastrointestinal anatomy and physiology to include:

- sympathetic innervation
- parasympathetic innervation
- lymphatics

The student will be able to list and perform six key diagnostic techniques in the structural diagnosis of the patient as it relates to common gastrointestinal problems:

- thoracic soft tissue diagnosis of the related sympathetic areas: acute viscero-somatic
- thoracic skeletal/arthrodial diagnosis of the related sympathetic areas
- fascial assessment of the abdominal secondary chain ganglia
- OA and sacral soft tissue diagnosis of the related parasympathetic areas: acute viscero-somatic
- OA and sacral skeletal/arthrodial diagnosis of the related parasympathetic areas

The student will be able to list and perform eight key OMT techniques utilized in the treatment of common gastrointestinal problems:

- soft tissue: knead, stretch, paraspinal inhibition
- myofascial release: abdomen, secondary chain ganglia
- rib raising
- indirect: rib techniques
- indirect: sacrum
- condylar decompression
- redome diaphragm
- release thoracic inlets
- lymphatic pump techniques

5. Genitourinary

The student will learn to effectively practice Osteopathic Manipulative Treatment in the patient with common genitourinary problems to include pyelonephritis, cystitis, dysmenorrhea, pelvic pain, prostate and BPH.

The student will know the major anatomy and physiology as it relates to the genitourinary systems including:

- Kidney, bladder (and related structures)
- Male & female reproductive system
- Sacrum/pelvis
- psoas/iliopsoas/Iliolumbar
- piriformis muscles
- diaphragms (thoracoabdominal & ribs)
- UG viscera with fascial attachments to the musculoskeleton, visceromotor, viscerosensory, lymphatics
- Sympathetic, parasympathetic & lymphatic

The student will make the necessary structural diagnoses as they pertain to genitourinary signs and symptoms including history, collateral ganglia, low back pain, pelvic splanchnic nerves, musculoskeletal tenderpoints, short leg syndrome, pelvic obliquity, muscle strains, fascial asymmetry, congestion and physical stresses.

The student will perform key Osteopathic Manipulative Treatment forces and techniques for common genitourinary problems pertaining to:

- soft tissue
- muscle
- strain/counterstrain
- HVLA
- myofascial release
- redome diaphragms
- shock release
- sacral base anterior
- lumbar rolls
- lymphatic pumps
- rib raising

6. Geriatrics

The student will learn to effectively apply Osteopathic Manipulative Treatment in the treatment of geriatric patients with the loss of functional ability related to the following:

- axial skeleton
- appendicular skeleton
- somatovisceral dysfunctions

The student will know the major elements of the musculoskeletal and visceral anatomy and physiology including sympathetic and parasympathetic innervation and lymphatics.

The student will be able to list and perform six key diagnostic techniques in the structural diagnosis of the patient as it relates to the treatment of common geriatric problems:

- thoracic soft tissue diagnosis of the related sympathetic areas: acute viscero-somatic
- thoracic skeletal/arthrodial diagnosis of the related sympathetic areas
- fascial assessment of the abdominal secondary chain ganglia
- the student will engage in OA and sacral soft tissue diagnosis of the related parasympathetic areas and acute viscera-somatic
- OA and sacral skeletal/arthrodial diagnosis of the related parasympathetic areas

The student will be able to list and perform, with necessary modifications, the 10 key OMT techniques utilized in the treatment of common geriatric problems:

- soft tissue: knead, stretch, paraspinal inhibition
- myofascial release: abdomen, secondary chain ganglia
- rib raising
- indirect: rib techniques
- indirect: sacrum
- condylar decompression
- redome diaphragm
- release thoracic inlets
- lymphatic pump techniques
- Spencer’s shoulder techniques

7. Cephalgia

The student will learn to effectively apply OMT and osteopathic concepts in patients with cephalgia.

The student will know and be able to reproduce the anatomy and physiology of common headaches including sympathetic and parasympathetic innervation and lymphatics.

The student will be able to list and perform key diagnostic techniques in the structural diagnosis of the patient as they relate to the common headache:

- Thoracic soft tissue diagnosis of the related sympathetic areas: acute viscero-somatic
- Thoracic skeletal/arthrodial diagnosis of the related sympathetic areas
- Fascial assessment of the cervical secondary chain ganglia
- OA soft tissue diagnosis of the related parasympathetic areas: acute viscero-somatic
- OA skeletal/arthrodial diagnosis of the related parasympathetic areas

The student will be able to list and perform the 8 key OMT techniques utilized in the treatment of cephalgia:

- soft tissue: knead, stretch, paraspinal inhibition
- myofascial release: cervical spine secondary chain ganglia
- rib raising
- indirect: rib techniques
- condylar decompression
- redome diaphragm
- release thoracic inlets
- lymphatic pump techniques

Pediatrics

The student will learn to effectively apply OMT in the treatment of pediatric patients with common upper and lower respiratory problems including otitis media, sinusitis, pneumonia, pharyngitis and asthma.

The student will be able to identify the major elements of the upper and lower respiratory anatomy and physiology, including sympathetic and parasympathetic innervation and lymphatics.

The student will list and perform the 5 key diagnostic techniques in the structural diagnosis of the pediatric patient as it relates to common upper and lower respiratory problems:

- thoracic soft tissue diagnosis of the related sympathetic areas
- thoracic skeletal/arthrodial diagnosis of the related sympathetic areas
- OA soft tissue diagnosis of the related parasympathetic areas
- OA skeletal/arthrodial diagnosis of the related parasympathetic areas
- Chapman's Reflex points.

The student will be able to list and perform the 8 key OMT techniques utilized in the treatment of common pediatric upper and lower respiratory problems:

- soft tissue: knead, stretch, paraspinal inhibition
- rib raising
- indirect rib techniques
- condylar decompression
- redome diaphragm

- release thoracic inlets
- lymphatic pump techniques
- effleurage

8. Low Back Pain

The student will learn to effectively apply Osteopathic Manipulative Treatment and osteopathic theory in the diagnosis and treatment of patients with common low back problems.

The student will know the major elements of the lower back anatomy and physiology, shared muscles and fascia and venous and lymphatic drainage.

The student will be able to perform appropriate differential diagnostic techniques in order to assign the patient to one of the following general categories:

- medical
- surgical
- traumatic
- metastatic
- biomechanical

The student will be able to list and perform key Osteopathic Manipulative Treatment techniques used in the treatment of common low back problems and know when each type is appropriate:

- soft tissue
- direct - HVLA
- direct – Muscle Energy
- indirect

9. Pelvic Obliquity

The student will learn to effectively apply Osteopathic Manipulative Techniques in the treatment of patients with leg length discrepancy by:

- reviewing the gravitational model and its importance in recurring or chronic somatic dysfunction
- explaining proper procedure for taking postural X-rays

The student will be able to identify patients who are potential candidates for lift therapy and provide them with the necessary tools to adequately and safely treat the affected patients.

The student will be able to apply Osteopathic principals in the diagnosis and treatment of patients with pelvic obliquity, become practiced in the interpretation of a film of the pelvis to determine the presence or absence of pelvic obliquity.

The student will be able to identify potential candidates for postural X-rays; be familiar with the radiographic procedure utilized to ensure high quality and consistency of radiographic evaluation; interpret radiographs and identify significant aspects of the films and reports; formulate a treatment plan for affected patients; diagnose and treat patients with pelvic obliquity; and properly interpret a pelvic postural radiograph.

OMT In Primary Care
The student will effectively apply OMT in the primary care setting.

The student will be able to:

- identify common problems in primary care that can be addressed by OMT including URI, headache and lower respiratory infection
- identify viscero-somatic reflexes related to common primary care problems
- list and perform five OMT techniques that are efficient and efficacious in the primary care setting for each of the areas discussed above
- identify barriers to OMT in primary care
- discuss the benefits of OMT in primary care

10. Hospital Structural Examination

The student will learn to perform the Osteopathic structural exam portion of the hospital history and physical in accordance with AOA guidelines.

The student will be able to demonstrate and explain the major elements of anatomy and physiology in the hospitalized patient.

The patient will be examined in at least two of the following positions: standing, sitting, supine, prone, lateral recumbent. And, if only one position is used, explain why.

Regarding gait and posture, the student will be able to give a general description with specific comments on lateral curves (scoliosis) and sagittal plane curves.

The student will demonstrate understanding and observational analysis in verbalization during any specific regional examination of the head, cervical, thoracic, lumbar, pelvis, rib cage, upper extremity, lower extremity and abdomen, with specific attention given to somatically related areas in reference to the chief complaint or chronic illnesses.

During observation, the student will be able to contextually relate the following:

- T - *tissue texture change*: skin and soft tissues
- A - *asymmetry*: structure and soft tissue
- R - *range of motion*: regional and specific segmental range of motion determination
- T – *tenderness*: any area of soreness, pain, tenderness, ache, sensitiveness, etc.

… noting that written documentation of TART is necessary in the areas of the body related to the chief complaint: anatomically, viscerally, mechanically, via the autonomic/somatic nervous system, lymphatics and/or circulation.

Guidelines for the OMM Case Report

An Introduction to the Case Report and Medical Writing

The OMM Case Report illustrates current practice and treatment issues for the osteopathic physician and medical student. The development and honing of medical writing skills, informed by current and foundational medical literature, supports the exploration of patient care and outcomes, and influences practice within the medical community. A case report is a means of communicating something new that been learnt from clinical practice. Case reports provide essential sources of information for the optimum care of patients because case reports can describe important scientific observations that are missed or are undetectable in clinical trials, provide insightful information that expands our knowledge and spawns new research, and provide information that strays from the classical textbook case and leads to better and safer patient care.

Your OMM rotation emphasizes the application of manipulative treatment across a broad landscape of specialties – in family practice, physical medicine and rehabilitation, geriatrics, pain management and others. The case report allows you to focus deeply on the medical history of single patient, investigate the history, course of treatment, literature and test findings, discuss failings and best practices – and draw your own conclusions.

It is the expectation of the OMM Department that your training, education and unique OMM rotation experience will have prepared you to craft a case report worthy of consideration for submission to a peer-reviewed osteopathic journal. Student and faculty work is submitted for publication to educate, inform, develop and support manipulative medicine practices in the osteopathic community.

The Organization of the Writing

Scientific writing protocol generally **requires writing in the third-person perspective** and the use of **AMA style for format and citation**. Your paper should be **at least 750 words, but no greater than 1,500 words** (not including citation page), **double spaced, in 12 pt. Times Roman font, formatted with 1' margin on all sides, with a running header after the title page. You must save and submit your work/documents as YourLastName.doc or YourLastName.docx by the date/time due.**

The paper is divided into five discrete sections (Title page and Reference pages not included) Incorporate the sections of the paper into your report as subheadings. Each section is weighted and important to the successful construction of the paper as a whole

Title Page – See Example next page	**_____ 5 Points**
Brief Narrative Abstract	**_____ 15 Points**
Introduction and Literature Review	**_____ 15 Points**
Case Report "Patient presentation and findings"	**_____ 15 Points**
Comment "Discussion"	**_____ 15 Points**
Conclusion	**_____ 15 Points**
References	**_____ 5 Points**
Writing (organization/grammar/typos)	**_____ 15 Points**

The Grading Rubric

<u>This is a guideline on how to begin your paper, for a more definitive guideline see the JAOA link below.</u>

Title of Paper

Student Name

UNTHSC/Texas College of Osteopathic Medicine

Preceptor

Period # and Dates

A. A **Title Page** containing the date of submission. The title page should list the full names of all authors according to the author's preferred usage. Authors' names should include all doctoral and master degrees in the order in which they were earned. For authors without doctoral or masters degrees, their highest earned academic degrees should be listed. In addition, the full professional titles and affiliations of all of the manuscript's authors should be included on the title page.
B. A **Brief Narrative Abstract** that delivers a brief, concise description – the essentials- of the article. Should consist of four distinct sections. Case Presentation Intro, Literature Review, Discussion and Conclusions/Summary. This abstracted is limited to **150 words.**
C. An **Introduction** to the topic which includes the literature review of relevant publications. Literature review should include osteopathic sources. Introductions should end with a brief objective statement that clearly identifies the purpose of the case report or study.
D. **Case Report "Patient Presentation & Findings"** This should be in two parts: HPI should include a description of the patient's chief complaint, age, gender, medical history both past and present, (past medical history, past surgical history, past social history, past family history) past and present medications, past treatments, current treatment plan, review of systems. Physical portion: vital statistics, physical exam, osteopathic structural exam with proper nomenclature as indicated in the Glossary of Osteopathic Terminology, osteopathic treatment plan and outcome. OMT Techniques used or recommended may be added here or included in the Discussion of the case.
E. **Comment "Discussion"** of the case in the context of relevant medical literature reviewed that shows an exploration and deep understanding of current literature for the pathology regarding best practices, impediments to recovery, other testing, methods of treatment and approaches to improving quality of health/life. This is where you bring it all together. Elaboration of unique techniques, types and goals of treatment and expected outcomes are discussed as related to your case.
F. **Conclusion** that identifies the study's major findings as they relate to the study's purpose and the clinical applications of those findings, if appropriate. They should not consist of a summary of the study. This conclusion should be limited to 1 paragraph.
G. **Acknowledgements** – Authors should limit acknowledgements to people who substantially contributed to either the study or the preparation of the manuscript (optional). Make sure no patient names are included.
H. **References -** References are required for all material derived from the work of others and should follow the guidelines described in the 10th edition of *AMA Manual of Style: A Guide for Authors and Editors* (2007). References should include direct, open-access URLs (uniform resource locators) to full-text versions of the reference articles. A URL to an abstract in the National Library of Medicine's PubMed database does NOT meet this requirement. References should reflect recent or current works as well as from osteopathic sources/journals.

Generally speaking the "A" paper has logical flow from point to point and section to section; the information is credible, take from primary (patient interview, records and test results) and authoritative sources (Such as

JAOA, JAMA, and the International Journal of Osteopathic Medicine); all quotes, images, tables and graphs included in the report are given full attribution and in-text citations, used when paraphrasing, acknowledged the original source of information.

Resources

JAOA Information for Authors http://www.jaoa.org/site/misc/ifora.xhtml

AMA Manual of Style: A Guide for Authors and Editors (2007)
http://www.amamanualofstyle.com/view/10.1093/jama/9780195176339.001.0001/med-9780195176339