SYLLABUS

CORE 8002 OMS IV Neurology

5.5 CREDIT HOURS

Course Director:
Robert J. Coppola, D.O., M.S.
rcoppola@atsu.edu
Course Description:
The clinical clerkship in Neurology is a required, two-week core rotation. This clerkship is designed to provide the student with an understanding of neurology through the integration of didactic knowledge and clinical experiences. Students will receive exposure to patients in both ambulatory and inpatient settings. The curriculum content will be delivered to students via the Blackboard 9.1 website. During the clerkship, students will access the learning website to review learning modules on topics appropriate for a fourth year neurology clerkship. These prescribed learning modules will be based upon the 125 clinical presentations encountered during the first two years of medical education.

Neurology is an adult medical neurology rotation. Neurosurgery (adult or pediatric) and Pediatric Neurology patient access cannot be substituted for this core rotation in whole or in part, but possibly can be taken as an elective rotation by permission from Surgery or Pediatric preceptors respectively. This rotation must be under the direction of a preceptor who is either board certified or board eligible by the American Osteopathic Board of Neurology and Psychiatry (D.O.) or American Board of Psychiatry and Neurology (M.D.). The preceptor’s practice, may be outpatient, inpatient or a combination thereof, and must consist primarily of adult medical neurology cases.

The course goals are to teach the principles and skills underlying the recognition and management of neurologic diseases a primary care physician or medical practitioner is most likely to encounter in practice.

Clinical Supplemental Reading Assignments:
Designed to supplement contextual learning (patient encounters), you will also find required text reading that support the management skills for the clinical presentations listed. Didactic material and specific learning objectives are provided by the course director (see recommended textbooks). The learning objectives are designed to guide the student's independent study of the assigned material. The preceptor may or may not wish to assign other readings and activities, but students will receive directives of patient case material to review through Blackboard 9.1 website. The Blackboard learning materials are in addition to the reading materials required by the preceptor.

Textbooks:
Required
Neurology for the Non Neurologist 6th ed.
Authors: William J. Weiner, Christopher G. Goetz, et. al. 2010
Publisher: Oxford University Press
List Price: $71.99 on Amazon
Note: Available on-line and free through the A.T. Still Memorial Library (Arizona Catalog)

Recommended
Author: Anuradha Singh
Publisher: Demos Medical Publishing, LLC
List Price: $109.00 on Amazon
Note: Available on-line and free through the A.T. Still Memorial Library (Arizona Catalog)

Harrison’s Neurology in Clinical Medicine, 2nd ed.
Authors: Stephen Hauser, Dennis Kasper
List Price: $45.97 on Amazon
Note: Available on-line and free through the A.T. Still Memorial Library (Arizona Catalog)
Curricular Domain Objectives:
The objectives are intended to be a guide for the student’s learning activities and serve as a baseline for assessment of the student's enhanced knowledge, skills, and professional behavior. Not all of the objectives listed below will be encountered during any single rotation. While each student is expected to further expand his/her knowledge base and to care for all assigned patient cases, he/she is also expected to avail him/herself of the SOMA educational materials provided. Each Objectives category below, maps to the corresponding evaluation categories and competencies on the course Clinical Rotation Evaluation (CRE) and coursework assignments.

Students will refer to individual schemes and review the associated learning objectives and learning activities associated with each. These are found under separate tab on Blackboard9.1.

I. Osteopathic Principles and Practices (OPP)
Graduates must demonstrate knowledge of osteopathic principles and practice (OPP), and they must exhibit and apply knowledge of somatic dysfunction diagnosis and osteopathic manipulative treatment (OMT) in clinical settings.

1. Demonstrate and communicate knowledge of a.) OPP; b.) the basic science, mechanisms of action, and physical findings of somatic dysfunction; and c.) the mechanism of action, indications and contraindications, and basic application of OMT.

2. Perform and document a complete and appropriately focused structural examination in a respectful, logical and organized manner.

3. Apply osteopathic principles and OMT into an appropriate patient care plan.

4. Demonstrate sufficient depth of knowledge and skills to integrate osteopathic principles and practice into all aspects of whole person healthcare.

II. Clinical Skills & Osteopathic Patient Care (CS)
Graduates must demonstrate effective use of motor and cognitive skills in diagnosis, management and prevention of common health problems encountered in patient care within a variety of clinical settings and across the lifespan.

1. Elicit a comprehensive and appropriately focused history and generate a list of a patient's concerns in a respectful, rationale and organize manner.

2. Perform a complete & appropriately focused physical examination in a respectful, rationale and organized manner; and correlate abnormal findings to clinical presentations and disease processes.

3. Perform basic clinical procedures essential for general osteopathic medical practice.

4. Utilize clinical reasoning strategies to accurately diagnose medical conditions originating from common clinical presentations.

5. Determine and implement evidence-based clinical intervention plans and management strategies, while monitoring their effectiveness and adjusting appropriately.

6. Incorporate health education counseling, preventive medicine approaches, and health promotion strategies during patient encounters.
III. **Medical Knowledge (MK)**
Graduates must demonstrate knowledge and application of osteopathic, biomedical, clinical, epidemiological, biomechanical, social and behavioral sciences in the context of patient-centered care.

1. Recognize and explain normal structure and function across the lifespan.
2. Identify and explain the molecular, biochemical and cellular mechanisms that support normal structure and function.
3. Distinguish between the mechanisms of disease pathogenesis, describe their impact on the body, and relate them to patient signs and symptoms.
4. Explain and apply principles of contemporary therapeutics, including osteopathic, surgical, pharmacologic, molecular, biologic, behavioral and contemporary/alternative.
5. Interpret diagnostic studies and correlate abnormal findings to disease states.
6. Describe the epidemiology of common disease states within a defined population, and the systematic approaches useful in reducing the incidence and prevalence of those disease states.

IV. **Professionalism (P)**
Graduates must demonstrate through knowledge, behavior and attitudes, a commitment to the highest standards of competence, ethics, integrity, and accountability to patients, society and the osteopathic profession.

1. Demonstrate respect, altruism, compassion, interest, integrity, honesty, accountability and trustworthiness in all interactions with patients, their families, faculty, staff, peers and colleagues.
2. Apply ethical decision making in all aspects of professional practice.
3. Demonstrate awareness, sensitivity and responsiveness to culture, socio-economic status, religion, age, gender, sexual orientation, and mental/physical disabilities of patients, their families, faculty, staff, peers and colleagues.
4. Demonstrate professional work behaviors such as punctuality, appropriate appearance, accepting responsibility for errors, and maintaining professional boundaries.
5. Demonstrate a commitment to continuous professional development, learning, and internal & external assessment.

V. **Interpersonal and Communication Skills (ICS)**
Graduates must demonstrate the knowledge, behaviors and attitudes that facilitate accurate and efficient information gathering, empathetic rapport building, and effective information giving in interactions with patients, their families and colleagues of the inter-professional health care team.

1. Document and record patient information in an accurate, organized, and confidential manner appropriate to the clinical situation and present relevant aspects of a patient’s case in a logical, articulate fashion both orally and in writing.
2. Work effectively and collaboratively with patients, their families and colleagues of the inter-professional healthcare team in providing whole person healthcare.
3. Demonstrate effective and appropriate active listening, verbal, non-verbal, and written and electronic communication skills when dealing with patients, their families, faculty, staff, peers and colleagues of the inter-professional health care team.
VI. **Practice-Based Learning and Improvement (PBL)**
Graduates must demonstrate the ability to apply scientific theory and methodology and exhibit the critical thinking skills essential for integrating evidence-based principles and practice into patient care.

1. Apply fundamental biostatistical and epidemiologic concepts to practice-based learning and improvement.
2. Conduct a systematic review of literature on basic and clinical science research and critically synthesize the results for relevance and validity.
3. Describe the clinical significance of and apply strategies for integrating best medical evidence into clinical practice.
4. Identify, describe and apply systematic methods relating to continuous evaluation of osteopathic clinical practice patterns, practice-base improvements, and the reduction of medical errors.
5. Integrate technology into the practice of medicine and the delivery of healthcare services.

VII. **Systems-Based Practice (SBP)**
Graduates must demonstrate awareness of and responsiveness to the larger context and systems of health care, and effectively identify system resources to advocate for and maximize the health of the individual and the community or population at large.

1. Demonstrate knowledge of health delivery systems that affect the practice of an osteopathic physician and how delivery systems influence the utilization of resources and access to health care.
2. Demonstrate knowledge of how patient care and professional practices affect other health care professionals, health care organizations, and society.
3. Demonstrate the ability to work effectively in a variety of health care systems (with an emphasis on community health care) and provide quality patient care while advocating for the best interests of patients.
4. Demonstrate the ability to implement safe, effective, timely, patient-centered and equitable systems of care in a team-oriented environment.
Course Assignments:

Week One – 8 hours
• Chapters 8, 13, 17, 20, 21, and 26 in the text Neurology for the Non-Neurologist, ed. 6
• Consider review of specific lecture material from NMSK B course, 2016, at your own discretion.
• Schemes: See Blackboard
• Log 100% of patient encounters – Pass/Fail

Week Two – 8 hours
• Chapters 5, 6, 7, 9, and 18 in the text Neurology for the Non-Neurologist, ed. 6
• Consider review of specific lecture material from NMSK B course, 2016, at your own discretion.
• Schemes: See Blackboard
• Log 100% of patient encounters – Pass/Fail
• Complete the 35 question End of Rotation Quiz in Blackboard-0 – 1.25 points MK 3,4,5 CS 4,5

Due by end of course
• Complete 50 question Final Course Exam on Blackboard
• Complete Student Evaluation of Rotation (SER)

Grading:

Grade Format
All of the courses in OMS III and OMS IV are “honors”, “high pass”, “pass”, “low pass”, and “fail” per the following point scale:
>4.75 = Honors
4.0-4.75 = High Pass
3.0-3.9 = Pass
2.1-2.9 = Low Pass
≤ 2.0 = Fail

In order to pass this course, you will need to complete the following:

Clinical Rotation Evaluation (CRE) = 40% of overall Grade
Students will need to receive a passing score on the Clinical Rotation Evaluation (CRE) for each four-week course section (rotation) of the course.

CRE = 0 - 5 points
>4.75 = Honors
4.0-4.75 = High Pass
3.0-3.9 = Pass
2.1-2.9 = Low Pass
≤ 2.0 = Fail

Final Course Exam (based on questions from Board Vitals) = 40% of overall grade
At or near the end of the rotation, you will be required to take and pass a subject or course exam. The content of the exam is based on clinical presentations most frequently seen on rotation. Most, if not all of these presentations were addressed in the OMS I and OMS II courses. Many of the presentations are covered in the rotation syllabus. You must receive a passing score on the course exam linked to this course to pass the course; and the score is worth 40% of the overall grade.
There is a very strong probability that some clinical presentations covered in the course exam may not be addressed directly in the syllabus. There is a possibility that some of the clinical presentations covered in the course exam may not have been observed during the rotation.

**Study suggestions:** review all items in question banks in Boards Vitals USMLE step 2 and 3 neurology questions.

**Course Exam = 0 – 5 points (to convert the standard score to a 5-point scale, use rubric)**

- 98+= honors
- 92-96= high pass
- 82-90= pass
- 74-80= low pass
- <74= fail

**Course work – Quizzes**

**Weekly Assignments / Quizzes = 20% of overall grade**

Weekly Assignments / Quizzes will make up 20% of the overall grade.

Weekly Assignments / Quizzes will be graded as follows:

- >4.75 = Honors
- 4.0-4.75 = High Pass
- 3.0-3.9 = Pass
- 2.1-2.9 = Low Pass
- ≤ 2.0 = Fail

Weekly assignments / quizzes are due by midnight on Sunday each week. Failure to submit the weekly quiz on time will result in the grade for that assignment being lowered one level. Any assignment or quiz submitted more than 1 week past the due date will result in a zero for that assignment.

**Failures and Remediation**

Students are required to repeat failed clinical rotations with a preceptor other than the initial preceptor. If the student fails a subject exam, the student must retake the subject exam as specified in the SOMA Catalog and rotation manual.

**Course Requirements and Expectations:**

**Student Evaluation of Rotation (SER)**

Submission of the Student Evaluation of Rotation (SER) is REQUIRED for completion of the course. The grade for the clerkship course will not be submitted to the registrar until the evaluation is received.

**Clinical Documentation (Case Log) Requirements (PxDx)**

Logging of every clinical interaction via the E*Value electronic log system is a course requirement and a professional responsibility of every student on every rotation in OMS III and OMS IV. Log information will be used to evaluate the volume and variety of student experiences. Students must document at least one diagnosis per patient encounter and, if procedures were performed, at least one procedure per patient encounter. 100% of encounters must be logged. Failure to log clinical interactions will result in the grade being lowered, and may adversely affect the student’s professionalism score for the rotation. Failure to log may also be commented upon in the Medical Student Performance Evaluation (MSPE) formerly known as the Dean’s Letter.
Course Director will review all logs, and determine if logging is 100% AND adequate in volume and variety. In the event the course director does not feel that the student has sufficient logs, the Course Director will note a failure for logs and the students overall grade will be lowered one level (i.e. the CRE, Course Exam and Weekly Assignments averaged to be a “High Pass”, inadequate logs reduce the overall grade to a “Pass”). Periodic audits of clinical activity compared to logs could result in serious concerns about adherence to professional responsibilities. Completion of logging 100% of patient interactions is NOT optional. Concerns about professionalism will be considered for referral to the Student Performance Committee.

Procedures

All procedures are to be entered in to E*Value, and supervised and evaluated by your preceptor. During the Neurology Clerkship, students are expected to develop their competencies in many basic clinical skills. While not every skill listed below can be performed during this brief rotation, the student should avail him/herself of as many of the following procedures as possible, and seek out opportunities to perform these skills in other rotations as well.

1. Lumbar puncture
2. Electroencephalogram (EEG)
3. Electromyography (EMG)
4. Neuroimaging (MRI/MRA/CT)
5. Carotid Doppler Ultrasound
6. Observed Neurological examination

Professionalism and Academic Honesty:

An essential aspect of the SOMA curriculum is the development of professional behaviors among students. SOMA considers breeches in professional conduct and/or academic honesty as serious academic deficiencies. The ATSU University Handbook (http://www.atsu.edu/student_affairs/handbook/pdfs/UniversityHandbook-2.19.14.pdf) has important information with respect to professionalism including a Code of Academic Conduct and Code of Behavioral Standards. The course director expects professional behavior and academic honesty at all times during this course.

Academic Adjustments:

The University can make accommodations for students with documented disabilities who are otherwise qualified. Students with disabilities are encouraged to contact the Disability Resources Advisor. Requests for accommodations must be made in writing to the Disability Resources Advisor. The contact information for the Disability Resources Advisor is as follows:

Disability Resources Advisor
5850 E. Still Circle
Mesa, AZ 85206
480-245-6248
krjones@atsu.edu

The Disability Resources Advisor will confer with the student and may request documentation and may refer the student for individual assessment by qualified experts. The ATSU Technical Standards and Accommodations Committee shall review any requests for accommodations. The Committee determines whether there are disabilities as protected by the Americans with Disabilities Act and/or Section 504 of the Rehabilitation Act and then decides if reasonable accommodations can be made without fundamentally altering the essential nature of the school’s program or instruction being pursued.
The Committee makes recommendations for or against accommodations to the Director - Learning & Disability Resources who then will notify the student and the appropriate faculty and staff members who have an educational need to know. Within ten (10) days of receiving the Committee’s determination from the Director - Learning & Disability Resources a student can appeal the decision in writing to the dean of the appropriate school.

**Course Director Office Hours:**
The course director may be contacted by email at any time. It is expected that the course director will answer a student within 24 hours during normal working days, and by Monday if contact is made over the weekend. Email addresses is listed on the first page of this syllabus.
Appendix:
AOA Core Competencies

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<tr>
<th>Domain</th>
<th>Competency</th>
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<tbody>
<tr>
<td>1. Osteopathic Philosophy and Osteopathic</td>
<td>Physicians are expected to demonstrate and apply knowledge of accepted standards in Osteopathic Manipulative Treatment (OMT) appropriate to their specialty, remain dedicated to lifelong learning, and to practice habits in osteopathic philosophy and manipulative medicine.</td>
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<tr>
<td>Manipulative Medicine</td>
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<tr>
<td>2. Medical Knowledge</td>
<td>Physicians are expected to demonstrate and apply knowledge of accepted standards of clinical medicine in their respective specialty area, remain current with new developments in medicine, and participate in lifelong learning activities, including research.</td>
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<td>3. Patient Care</td>
<td>Physicians must demonstrate the ability to effectively treat patients and provide medical care that incorporates the philosophy, patient empathy, awareness of behavioral issues, the incorporation of preventive medicine, and health promotion.</td>
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<td>4. Interpersonal and Communication Skills</td>
<td>Physicians are expected to demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of the health care team.</td>
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<td>5. Professionalism</td>
<td>Physicians are expected to uphold the Osteopathic Oath in the conduct of their professional activities that promote advocacy of patient welfare, adherence to ethical principles, collaboration with health professionals, lifelong learning, and sensitivity to a diverse patient population. Physicians should be cognizant of their own physical and mental health in order to effectively care for patients.</td>
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<tr>
<td>6. Practice-Based Learning and Improvement</td>
<td>Physicians must demonstrate the ability to critically evaluate their methods of clinical practice, integrate evidence-based medicine into patient care, show an understanding of research methods, and improve patient care practices.</td>
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<tr>
<td>7. Systems-Based Practice</td>
<td>Physicians are expected to demonstrate an understanding of health care delivery systems, provide effective and qualitative patient care within the system, and practice cost-effective medicine.</td>
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Changes to the Syllabus:
The syllabus for this course may change at the discretion of the course directors in consultation with and approval of Assistant/Associate Dean of Clinical Education. As a general policy, SOMA course directors alter syllabi only when absolutely necessary.

Students will be notified by the course directors or course facilitator in writing of any changes in course requirements or policies.