Course Department, Title, Department & Number: NEU 829, Clinical Neurology

Course credit or length: Two to four weeks

Course director and contact information (office phone and e-mail): Paul Ferguson, M.D. paul.ferguson@marshall.edu 304.691.8795 Amanda Jones 304.691.1751

Course location: Cabell Huntington Hospital; Marshall Medical Center, Department of Neurosciences

Brief Course Description: This course will familiarize the student with the presentation and techniques of evaluation appropriate to patients with neurological disorders. The student will participate as an integral member of the neurology team. This involvement allows the students to: (1) build on their basic science and clerkship experience in terms of knowledge and physical examination skills; (2) expand their skills in ambulatory neurology, with an emphasis on neurological problems which they will encounter throughout their career, regardless of specialty; (3) gain knowledge regarding newer treatment modalities and research in the field; (4) explore the option of neurology as a career choice; (5) learn more about sub specialization in neurology.

Key Responsibilities of the student while on Elective:

1. Function as an integral member of the outpatient and inpatient neurology team (ward and/or consults)
2. Independently assess patients, present their findings, and begin a plan of care under the supervision of senior residents and attending physicians.
3. Appropriately follow and document their patients' progress.
4. Presentation of the neurological patient and demonstration of the neurological examination.
5. Appropriate application of neurological and neurophysiological techniques.
6. Attend assigned clinics.
7. Attend and participate in the Department's grand rounds and other regularly scheduled conferences

Institutional Objective

Patient Care - Students must demonstrate the ability to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Course Objective

The student will demonstrate the ability to perform and interpret the basic neurological examination and to make a reasonably correct clinical diagnosis.

Outcome Measure

During a two week elective, the student will orally present to the faculty member at least fifteen (15) patient encounters from the following list of inpatient and outpatient encounters (five patient encounters will be randomly selected by the faculty member). The student must also orally demonstrate the ability to perform and interpret the basic neurologic examination and make a reasonably correct clinical diagnosis for the following:

- Altered Mental Status
- Back Pain
- Balance Problems
- Headache
- Memory Disorders
- Movement Disorder
- Multiple Sclerosis
Neuropathy
Seizure
Stroke
Weakness

For a four week elective, the student shall present thirty (30) patient encounter presentations utilizing the same criterion as noted above and below.

**Course Objective**
The student will know principles of laboratory and neuroimaging workup to aid in differentiation of diagnostic problems.

**Outcome Measure**
The student will include in the oral presentation to a faculty member from the above, the principles of laboratory and neuroimaging workup to aid in differentiation of diagnostic problems.

**Course Objective**
The student will know principles of treatment, management and rehabilitation of patients with neurologic diseases and deficits.

**Outcome Measure**
The student will orally discuss with a faculty member, the principles of treatment, management and rehabilitation of patients with neurologic diseases and deficits.

**Institutional Objective**
**Medical Knowledge** - Students must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.

**Basic Science Objective**
The student shall be able to demonstrate the ability to apply evolving biomedical, clinical, epidemiological and social-behavioral sciences to neurological patient care.

**Outcome Measure**
The student shall present to the faculty a topic such as “Treatment of Brain Tumors” or “MRI Imagining in MS” during the two week rotation. For a four week rotation, the student shall make two presentations to the faculty. The presentation topic(s) is (are) to be pre-approved by the course director.

**Course Objective**
Students will have the opportunity to see patients undergoing EMG and EEG tests. They will also have the opportunity to understand the role of multiple diagnostic modalities including CT, MRI and ultrasound imaging as well as lumbar puncture and other lab investigations relevant to patients seen on the floors and in the clinics.

**Outcome Measure**
Students shall see at least two EMG’s and two EEG’s and shall record the experiences on the patient logger system. Students shall also orally demonstrate to the faculty a basic understanding of the role of other multiple diagnostic modalities including CT, MRI and ultrasound imaging as well as lumbar puncture and other lab investigations relevant to patients seen on the floors and in the clinics.

**Institutional Objective**
**Interpersonal and Communication Skills** - Students must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.
**Course Objective**
As part of the health care team, the student must be able to communicate information effectively.

**Outcome Measure**
The student will orally present to a faculty member on a regular basis as described above. Communication skills will be assessed at that time.

**Institutional Objective**

**Professionalism** - Students must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

**Course Objective**
Students must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health and in an ethical, responsible, reliable and dependable manner.

**Outcome Measure**
The student will be directly observed by faculty to determine the appropriateness of the behaviors noted above.

**ASSESSMENT METHODS**

**Mid-Point Evaluation**

**Two Week Rotations**
Students will be given verbal feedback on their performance at the end of week one.

**Four Week Rotations**
The Course Director will evaluate student performance at the end of the first two week to review the student’s professional, clinical and academic performance up to that point. This formative evaluation must be reviewed with the student and the student will have an opportunity to discuss with the Course Director. The form must be signed by the student and returned to the Course Director. The form will NOT be included in the student’s official academic record.

**Preceptor Evaluation - 100%**
The preceptors’ evaluation will be based upon, but are not limited to, the following factors:
- Attendance and participation in tutorials
- Conference attendance
- Demonstration of basic knowledge of patient care during clinic
- Maturity and Professionalism
- Oral Case presentation/patient workup
- Participation in call
- Participation in clinic
- Performance on Clinical Presentations
- Preparedness
- Topic Presentations
FOR THOSE TAKING THE FOUR WEEK ROTATION a case presentation will also be required.

Case Presentation
The student will be required to give a 10-15 minute case presentation at a pre-arranged time during their clinical rotation. The presentation will be given to the course director and medical students. Students will be notified of the date and time of their presentation one week in advance.

GRADING
The final grade for this course will be either Honors, Pass or Fail and will be based upon the factors outlined above.

ATTENDANCE
If at any time the medical student is unable to meet their clinical responsibilities they must notify the Course Director directly during working hours Monday-Friday, 8:00 am - 5:00 pm. All absenteeism will be required to be made up and may be at a rate of one days make up for every day missed.

If a student misses two or more unexcused days, the student will be required to reschedule the missed days on the rotation. Request for an excused absence must be submitted in writing at least one week in advance via the Student Scheduler to the course coordinator. The request will be reviewed by the course director who will either grant or deny the request. Excused absences will not be retroactively granted.

Attendance at Grand Rounds is mandatory. Unexcused absences will result in one extra case presentation for each absence.

MUJCESOM Policies: All medical students taking this course will comply with School of Medicine policies given at http://musom.marshall.edu/students/policies.

Individual policies can be found at the following websites:

Student Infectious Material Exposure:
http://musom.marshall.edu/ups/postexposure.asp

MS-IV Attendance:
https://musom.marshall.edu/students/documents/policies/Yr4attendance.pdf

Academic Dishonesty Policy:

Academic Standards Policy:
https://musom.marshall.edu/students/documents/Policies/ASC-FINAL-POLICY.pdf

Policy for Students with Disabilities:
https://musom.marshall.edu/students/documents/Guidelines.pdf

University Computing Services’ Acceptable Use Policy:
http://www.marshall.edu/ucs/CS/accptuse.asp

Affirmative Action Policy:
pp. 16-17
http://www.marshall.edu/catalog/Graduate/S2008/gr_sp08.pdf

Inclement Weather Policy:
https://musom.marshall.edu/students/documents/policies/MUSOM-Inclement-Weather-Policy.pdf
Notification of delays and cancellations of classes are posted on the Medical Education Home Page when Marshall University Main Campus is not in session
https://musom.marshall.edu/weather

Required/Recommended Reading:

Overview of Neurology, suggested as background reading during clerkship (choose one):

*Blueprints in Neurology* (Blueprints Series), by Frank Drislane et al.

Brief review of neurology as part of USMLE review series.
Weiner and Levitt’s Neurology (Neurology for the House Officer); Rae-Grant, A.

Comprehensive textbooks of Neurology, useful for reference purposes:

*Harrison’s Neurology in Clinical Medicine*; Ed. Hauser S..
*Neurology in Clinical Practice*. Bradley, Daroff, Fenichel, Jankovic. 5th Ed.