

**CLINICAL PEDIATRIC NEUROLOGY  
NEU 813**

**Course Department, Title, Department & Number:** NEU 813, Clinical Pediatric Neurology

**Course credit or length:** Two to four weeks

**Course director and contact information:** Mitzi Payne, M.D., [paynem@marshall.edu](mailto:paynem@marshall.edu), 304.691-1787

**Course Coordinator contact information:** Amanda Jones, [cartmel1@marshall.edu](mailto:cartmel1@marshall.edu), 304.691.1751

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

**Brief Course Description:** This course will expose the student to pediatric patients with various neurologic disorders. The student will learn how to examine patients ranging in age from neonates to teenagers and how to obtain a thorough history from patients and /or family members. Appropriate evaluation of the patient's condition will also be emphasized. 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 pediatric neurology, with an emphasis on neurological problems unique to the infant and child; (3) gain knowledge regarding newer treatment modalities and research in the field; (4) explore the option of pediatric neurology as a career choice; (5) learn more about sub specialization in pediatric neurology.

**Key Responsibilities of the student while on Elective:**

1. Function as an integral member of the inpatient pediatric neurology team (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. Option of call in evenings or weekends (no more frequent than every 4<sup>th</sup> night), under supervision.
7. Attend assigned clinics, including Neonatal ICU high risk clinic and Botox clinic.
8. Attend and participate in the Department's grand rounds, journal club, EEG conference, epilepsy conference 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  
Autism  
Attention Deficit Hyperactivity Disorder  
Cerebral Palsy

Development Delay  
Hypotonia  
Headache  
Head Injury  
Movement Disorders (spasticity, dystonia)  
Neonatal brain injury (prematurity, anoxic encephalopathy)  
Seizures, Febrile seizures  
Stroke  
Tic disorder

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 Imaging 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 Course Director shall then forward a copy of the form to the Office of Academic Affairs. The form will NOT be included in the student's official academic record.

### **Case Presentation- 25%**

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. The course director will assess the presentation and assign a percentage score.

### **Preceptor Evaluation- 75%**

**Grading**                      **Honors= 100 – 95%**      **P=95- 70%**      **F= below -70%**

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

Each component (Case Presentation and Preceptor Evaluation) must be passed in order to pass the course.

## **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 two days make up for every day missed.

If a student misses two or more unexcused days, the student will be required to reschedule the entire 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, Journal Club, EEG and epilepsy conferences is mandatory with the exception of being assigned to the operating room by your preceptor. 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:

<https://musom.marshall.edu/students/documents/policies/Standards-of-Professionalism-and-Honor-Code.pdf>

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](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):**

*Clinical Pediatric Neurology*, Fenichel GM 5<sup>th</sup> edition

*Lange's Clinical Neurology*; Ed. Aminoff MJ, Greenberg DA, Simon RP. 6th ed.

*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:**

*Child Neurology*, Menkes JH, Sarnat HB, Maria BL, 7<sup>th</sup> edition

*Adams and Victor's Principles of Neurology*. Ropper AH, Brown R. Eighth Ed.

*Neurology of the Newborn*, Volpe J. 4<sup>th</sup> edition