

640C Neuromuscular Medicine

Elective at a Glance		
Available to: [X] UCI MS4 students [X] UCI MS3 students [X] Extramural Students		
Duration: 4weeks	Number of Students: 2	Grading: H / P / F
Periods available: available all year excluding blocked dates		

1. Course Director, Coordinator and General Administrative Information

FACULTY AND STAFF

Name	Office Location	Phone	Email
Director: Jeffrey Mullen, MD	Department of Neurology, 200 S. Manchester Ave, Ste. 206 Orange, CA 92868	714-456-6808	jamullen@hs.uci.edu
Staff Coordinator: Teresa Sapien	Department of Neurology, 200 S. Manchester Ave, Ste. 206 Orange, CA 92868	714-456-5384	mtsapien@hs.uci.edu

DESCRIPTION

This elective provides experience in neuromuscular disorders including participation in specialty neuromuscular clinics, (dealing with a variety of acquired and inherited disorders) and exposure to basic and advanced electrodiagnostic procedures, muscle and nerve pathology, skin biopsy and autonomic testing.

PREREQUISITES

Successful completion of first- and second-year curriculum. Successful completion of the third-year neurology core rotation

RESTRICTIONS

- This course does not accept visiting students or international students
- Extramural students enrolled at a U.S. LCME medical school must use VSAS to apply. To apply please refer to the [Visiting Student Learning Opportunities](#) website.

COURSE LEADERSHIP EXPERTISE

Dr. Jeffrey A. Mullen is a board-certified UCI Health neurologist who is fellowship-trained in the diagnosis and treatment of neuromuscular disorders. He earned his medical degree at the UCI School of Medicine, followed by an internship in internal medicine, a residency in neurology and a fellowship in neuromuscular medicine, all at UCI Medical Center.

Teresa Sapien is the course coordinator for the 640 E Neuro Critical Care elective rotation. Teresa has been working in medical education with Neurology since 2022 as the CME Grand Rounds Coordinator. Alongside the neurology medical education team she helps assist with the neurology and fellowship programs throughout the year.

INFORMATION FOR THE FIRST DAY

Time to Report on First Day: 8:30 am

SITE

UCI-MDA ALS and Neuromuscular Center, 200 South Manchester Avenue, Ste. 110, Orange CA 92868

DURATION

4 weeks

Scheduling Coordinator: UCI students please email comsched@hs.uci.edu to make a scheduling appointment. Extramural students enrolled at a U.S. LCME medical school must use VSAS to apply. To apply please refer to the [Visiting Student Learning Opportunities](#) website.

Periods Available:

Every four weeks. The time of the course must be pre-approved by the elective director at least three months prior to the start of the course. No exceptions.

NUMBER OF STUDENTS ALLOWED

2

WHAT STUDENTS SHOULD DO TO PREPARE FOR THE COURSE

The students should revise their knowledge of peripheral nerves in the limbs and the muscles innervated by these nerves. We also recommended that they are fully informed of the root values and plexus origins of these muscles.

COMMUNICATION WITH FACULTY

Questions about logistics should be directed to the Course Coordinator. Direct questions, comments, or concerns about the course can be directed to the Course Director. Contact information and office location are at the beginning of this document.

The Course Director is also available to meet in person. Please email Teresa Sapien to arrange an appointment. To ensure that your email will not be lost in the large volume of email received, please use the following convention for the subject line:

SUBJECT: COURSE NAME, your last name, your issue (e.g. XXX, Smith, Request for appointment)

2. Course Objectives and Program Objective Mapping

The following are the learning objectives for the 640E Neuro Critical Care course. Students are expected to demonstrate proficiency in these areas in order to satisfactorily complete the course. In addition, the extent of a student's mastery of these objectives will help guide the course evaluation and grade.

Course Objective	Mapped UCI School of Medicine Program Objective	Sub Competency	Core Competency
Be capable of performing a neurologic history and examination with emphasis on neuroanatomical localization	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination.	Patient Management	Skillful
Gain a familiarity with diagnosis and management of common neurological disorders.	B-3. The ability to articulate a cogent, accurate assessment and plan, and problem list, using diagnostic clinical reasoning skills in all the major disciplines.	Patient Management	Skillful
Recognize clinical patterns that help differentiate central nervous system disorders from Peripheral nervous system disorders		Disease Pathogenesis & Treatment	
Recognize clinical patterns that help differentiate disorders of muscle from disorders of peripheral nerves from disorders of neuromuscular junction			
Have a better understanding of tests used in neurological evaluation when they are appropriately used, their limitations, and the experience of these tests	B-3. The ability to articulate a cogent, accurate assessment and plan, and problem list, using diagnostic clinical reasoning skills	Patient Management Disease Pathogenesis & Treatment	Skillful

<p>from the patient's perspective</p> <p>Recognize the utility of various diagnostic tools that aid in reaching a diagnosis of neuromuscular disorders</p> <p>Recognize importance of palliative and hospice care in patients with advanced and fatal neuromuscular disorders.</p>	<p>in all the major disciplines.</p>		
<p>Correlate neurological disorders with their knowledge in basic neurosciences.</p> <p>Recognize clinical patterns that help differentiate central nervous system disorders from Peripheral nervous system disorders</p> <p>Recognize clinical patterns that help differentiate disorders of muscle from disorders of peripheral nerves from disorders of neuromuscular junction</p>	<p>A-2. Knowledge of the pathogenesis of diseases, interventions for effective treatment, and mechanisms of health maintenance to prevent disease.</p>	<p>Patient Management</p> <p>Disease Pathogenesis & Treatment</p>	<p>Knowledgeable</p>
<p>Students will communicate and collaborate professionally and effectively, both orally and in writing, with patients, patients' families, colleagues, and interprofessional teams with whom physicians must exchange information in carrying out their responsibilities.</p>	<p>A-3. Knowledge of basic clinical skills required to meet the skills objectives, including interviewing, physical diagnosis, communication, and clinical reasoning.</p> <p>C-1. Honesty and integrity reflecting the standards of the profession, in</p>	<p>Patient Management</p> <p>Disease Pathogenesis & Treatment</p>	<p>Knowledgeable</p> <p>Altruistic</p>

	interacting with colleagues, patients, families, and professional organizations.		
Display ethical and professional behavior, respecting ethically appropriate boundaries, in all interactions with patients, families, and other healthcare providers, always demonstrating the clinical virtues required for competent and compassionate patient care, including good clinical judgement, benevolence, effacement of self-interest, accountability and reliability, respect for confidentiality and patient autonomy, and justice/fairness in dealing with all patients.	C-1. Honesty and integrity reflecting the standards of the profession, in interacting with colleagues, patients, families and professional organizations. C-2. Professional behaviors reflecting compassion and respect for patient privacy, altruism and a commitment to comprehensive, holistic medical care.	Patient Management Cultural and Social Awareness	Altruistic Dutiful
Students will engage and learn through interprofessional interactions with other health care professionals to build a multidisciplinary approach to patient care.	D-2. A commitment to coordinated patient care and to the well - being of patients and colleagues as evidenced by effective collaboration on interprofessional health care teams.	Patient Management Disease Pathogenesis & Treatment	Dutiful

3. Course Resources

TEXTS AND READINGS: REQUIRED

Michael H. Brooke, MD. A clinician's view of neuromuscular diseases. Second Edition. Williams & Wilkins, Baltimore, MD. 1986 (out of print – but reserved copy

available in the Neuromuscular Center)

TEXTS AND READINGS: SUPPORTING AND REVIEW

Anthony A. Amato, James A. Russell. Neuromuscular Disorders. 1st Edition. McGraw Hill Medical, New York, NY. 2008 (copy available in the neuromuscular center)

4. Major Exams, Assignments and Grading

MANDATORY SESSIONS

Educational Activities:

Monday AM (8 AM – 12 noon)	EMG (Dr. Habib, Dr. Mullen)
Monday PM (1 PM – 5 PM)	EMG (Dr. Habib) Neuromuscular Clinic (Dr. Mullen)
Tuesday all day (8 AM – 5 PM)	ALS/Muscular Dystrophy Association Clinic (Dr. Mozaffar, Dr. Goyal, Dr. Habib) EMG (Dr. Mullen)
Wednesday AM (8 AM – 12 PM)	Educational Activities (Didactic lectures, EMG cases and review of neuromuscular pathology)
Wednesday PM (1 PM - 5 PM)	EMG (Dr. Goyal) Neuromuscular Clinic (Dr. Mullen)
Thursday AM (8 AM – 12 PM)	Neuromuscular Clinic (Dr. Habib, Dr. Mullen) EMG (Dr. Goyal)
Thursday PM (1 PM – 5 PM)	EMG (Dr. Mullen) Neuromuscular Clinic (Dr. Habib)
Friday AM (8-9 AM)	Neurology Grand Rounds
Friday AM (9 AM – 12 PM)	Neuromuscular Clinics (Drs. Mozaffar) 1st and 2nd
Fridays of the month,	ALS Clinic (Dr. Mullen) 4th Friday of the month
Friday PM (1 PM – 5 PM)	Myasthenia Gravis Clinics (Dr. Habib) 2nd and 3rd Friday of the month
Friday PM (1 PM – 5 PM)	Urgent EMG or Clinic (Dr. Mozaffar), individual study time

Conference/Lecture/Small Group Sessions:

Approach to neuropathy	Lecture
Approach to myopathies	Lecture

Approach to Neuromuscular Junction disorders	Lecture
Fundamentals of muscle biopsy	SGD
Fundamentals of EMG and nerve conductions	SGD
Weekly case presentations	Case vignettes

MAJOR ASSIGNMENTS AND EXAMS

Clinical Responsibilities of the Student: Rounds, new inpatient visits, and daily pre-rounding on their assigned patients, consults in the Emergency Department

Patient Care Responsibilities:

- Rounds with Attending Physician
- Initial Patient evaluation

GRADING

Medical Students are graded using the following scale: Honors (H), Pass (P), Fail (F) and Incomplete (I) on the standard UCI student evaluation form. For further information, please review the [Grading Policy](#)

A passing grade on the final evaluation requires:

- Daily attendance at rounds
- Attendance and participation in lectures, discussion, and clinical assignments
- Satisfactory scores for aptitudes listed in the clinical evaluations

In addition, special attention will be paid to:

- Ethical behavior
- Reliability & dependability
- Ability to work with peers and under faculty direction
- Relationships with nurses and other hospital personnel
- Quality of verbal & written communication skills
- Use & knowledge of medical literature
- Knowledge of student's own limitations

CLINICAL PERFORMANCE

Your clinical performance will include input from your assigned faculty members and residents. They use the School of Medicine standardized evaluation form that assesses for knowledge, skills, and attitudes.

- Evaluations of clinical performance are assigned to all residents/fellows and attending physicians who work with the student.

- A minimum of 5-8 evaluations are needed to comprise the clinical performance portion of the student's grade.
- Evaluation scores are averaged to create a total clinical performance grade.

REQUIREMENTS FOR "PASS":

To receive a grade of Pass, students must demonstrate performance meeting all the following criteria:

- Knowledge
- Patient Care
- Practice-Based Learning
- Interpersonal & Communication Skills
- Professionalism
- System-Based Practice

REQUIREMENTS FOR "HONORS":

To receive a grade of Honors, students must demonstrate exceptional performance in all the following areas:

- Knowledge
- Patient Care
- Practice-Based Learning
- Interpersonal & Communication Skills
- Professionalism
- Systems-Based Practice

Grounds for "Incomplete": You will not be issued a grade until all elements of the course have been completed.

Grounds for "Fail": You will receive a grade of "Fail" if the requirements for passing the course have not been met (score below 65%). Please refer to the [Grading Policy](#) for the impact of the "Fail" grade to the transcript.

Grade Appeal Process:

The student has 30 days from the initial final grade submission to initiate the grade appeal process. The following steps outline the grade appeal process.

1. A student is expected to directly engage the course coordinator via email or phone call to discuss their appeal. The purpose of the meeting is to have the student review their file.
2. Student meets with coordinator to review their file.

3. If upon the student's review of their file, a mutually agreeable resolution has not been reached between the student and the coordinator, then the student must submit an email to the course director that should describe the student's concerns regarding the grade.
4. The director will follow up with the student to address their concerns.

REMEDICATION

Remediation, if needed, will be designed by the Course Director to address the issue(s) at hand. This can include:

- Repeating a portion or the elective or the entire elective
- Additional assessments of knowledge (e.g. standardized exams, oral examination, simulation) [optional to include]
- Creating a study plan with the assistance of the Elective Director [optional to include]

For further information, review the [Grading Policy](#).