

605E Anesthesiology Pain Management

Students must obtain permission from the course coordinator who will obtain faculty approval based on availability prior to enrollment in this course.

1. Course Director, Coordinator and General Administrative Information

FACULTY AND STAFF

Name	Office Location	Phone	Email
Director: Navid Alem, MD	101 The City Dr. S, Bldg. 53, Orange, CA 92868	714-456-5518	alemn@hs.uci.edu
Coordinator (Interim): Rhonda Chu	101 The City Dr. S., Bldg. 53 – Rm. 205, Orange, CA 92868	714-456-5518	rhondalc@hs.uci.edu

DESCRIPTION

Pain is the most common clinical condition encountered by a physician. Its prevalence exceeds that of diabetes, coronary artery disease and cancer put together. We encourage you all to take this opportunity to inculcate the skills of doing a thorough pain evaluation and developing a comprehensive treatment plan. Irrespective of the clinical specialty you chose to follow, this rotation will offer you tools to excel in your practice. Students will have the opportunity to be an integral part of the team that provides interventional and medical management of chronic and acute pain in both the outpatient continuity care setting and the inpatient consultation setting.

PREREQUISITES

This course is intended for fourth-year students enrolled in the undergraduate medical education program at UCI School of Medicine.

RESTRICTIONS

This course is intended for fourth-year students enrolled in the undergraduate medical education program at UCI School of Medicine.

This rotation is not accepting international students.

COURSE DIRECTOR

Navid Alem, MD

HS/Associate Clinical Professor

Associate Program Director, Residency in Anesthesiology

Section Chief, Acute Pain Service

Course Director, 605E and 605C Clerkship

Course Director, Acute Pain Medicine Rotation for Anesthesiology Residents

Dr. Alem has devoted much of his time to training students spanning from the early stages of secondary education to post-doctoral fellows. He has won many teaching awards and continuously tries to foster environments rooted in creating a light and dynamic culture of inquiry and education. He remains clinically active in the realms of anesthesiology, acute (inpatient)

UCI School of Medicine
Curriculum and Educational Policy Committee

pain medicine, and chronic (outpatient) pain medicine. As an Associate Program Director for Residency in Anesthesiology, he oversees all curricular matters for the training program. He also serves as the Section Chief of the Acute Pain Service and is the Chief anesthesiology liaison for orthopedic and neurosurgical spine procedures at UC Irvine. He has done research in the realm of perioperative pain optimization care paradigms as well as virtual reality therapy for patients.

INFORMATION FOR THE FIRST DAY

Who to Report to on First Day: Gina Peralta, Nurse Manager
Location to Report on First Day: Gottschalk Medical Plaza, 2nd floor, Center for Comprehensive Pain Management
Time to Report on First Day: 7:45 AM

SITE: Gottschalk Medical Plaza, 1 Medical Plaza Drive, Irvine, CA.

DURATION: 2 weeks or 4 weeks

Scheduling Coordinator: UCI students please call 714-456-8462 to make a scheduling appointment.

Periods Available: 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: 1 per rotation

WHAT STUDENTS SHOULD DO TO PREPARE FOR THE COURSE

Review pain pharmacology
Review musculoskeletal and neurological examinations

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 the Course Coordinator to arrange an appointment.

2. Course Objectives and Program Objective Mapping

The following are the learning objectives for the 605E 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
------------------	---	----------------	-----------------

UCI School of Medicine
Curriculum and Educational Policy Committee

Provide compassionate, appropriate and effective patient care. Use appropriate empathy in patient care while screening for abuse and diversion related issues.	B-5. The ability to practice effective preventive medicine by identifying, addressing and advocating for strategies to maintain health and well-being, to identify and treat disease early where appropriate and to advise on lifestyle practices	Patient Management	Skillful
Take a thorough pain history, including pain location, radiation, intensity, quality, onset, duration, and exacerbating and alleviating factors.	B-1. The ability to competently conduct a medical interview and counseling to take into account patient health beliefs, patient agenda and the need for comprehensive medical and psychosocial assessment	Medical Interview	Skillful
Perform a musculoskeletal and neurologic physical examination.	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination	Physical Exam	Skillful
Provide a comprehensive evaluation, in addition to those elements listed above; include laboratory and imaging study review and interpretation.	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
Interact effectively with patients and their families.	C-1. Honesty and integrity reflecting the standards of the profession, in interacting with colleagues, patients, families and professional organizations	Professionalism	Altruistic
Demonstrate respect and care for individuals, recognizing the role of psychosocial factors in chronic pain.	C-2. Professional behaviors reflecting compassion and respect for patient privacy, altruism and a commitment to	Compassion	Altruistic

UCI School of Medicine
Curriculum and Educational Policy Committee

	comprehensive, holistic medical care		
Identify patients that may require urgent or emergent intervention.	B-5. The ability to practice effective preventive medicine by identifying, addressing and advocating for strategies to maintain health and well-being, to identify and treat disease early where appropriate and to advise on lifestyle practices	Patient Management	Skillful
Formulate a differential diagnosis.	A-3. Knowledge of basic clinical skills required to meet the skills objectives, including interviewing, physical diagnosis, communication and clinical reasoning processes	Basic Clinical Skills	Knowledgeable
Formulate a multimodal treatment plan based on the individual patient's history, expectations and expected course of his/her condition. In many cases, patient education on realistic pain goals will be necessary.	B-1. The ability to competently conduct a medical interview and counseling to take into account patient health beliefs, patient agenda and the need for comprehensive medical and psychosocial assessment	Medical Interview	Skillful
Work together with other members of our interdisciplinary healthcare team to optimize patient care and enhance quality of life.	C-1. Honesty and integrity reflecting the standards of the profession, in interacting with colleagues, patients, families and professional organizations	Professionalism	Altruistic
Demonstrate knowledge about established and evolving biomedical, clinical and cognate sciences and the application of this knowledge to patient care.	A-4. Knowledge of population health, epidemiology principles and the scientific basis of research methods relevant to healthcare	Population Health and Epidemiology	Knowledgeable

UCI School of Medicine
Curriculum and Educational Policy Committee

Apply relevant scientific knowledge and reasoning to the practice of chronic pain management.	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
Demonstrate basic knowledge of the anatomy, physiology and pharmacology of pain medicine.	A-2. Knowledge of the pathogenesis of diseases, interventions for effective treatment, and mechanisms of health maintenance to prevent disease	Disease Pathogenesis and Treatment	Knowledgeable
Demonstrate how specific physical and psychological states affect the management of chronic pain patients.	B-1. The ability to competently conduct a medical interview and counseling to take into account patient health beliefs, patient agenda and the need for comprehensive medical and psychosocial assessment	Medical Interview	Skillful
Demonstrate appropriate knowledge of opioid medication use and risk mitigation strategies.	A-2. Knowledge of the pathogenesis of diseases, interventions for effective treatment, and mechanisms of health maintenance to prevent disease	Disease Pathogenesis and Treatment	Knowledgeable
Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.	C-1. Honesty and integrity reflecting the standards of the profession, in interacting with colleagues, patients, families and professional organizations	Professionalism	Altruistic
Discuss the utility, advantages and potential disadvantages of different treatment options (pharmacologic, interventional and behavioral).	B-4. The ability to search the medical literature, including electronic databases, and to locate and interpret up-to-date evidence to optimize patient care	Evidenced-Based Medicine	Skillful

UCI School of Medicine
Curriculum and Educational Policy Committee

Create and sustain a therapeutic and ethically sound relationship with patients.	C-2. Professional behaviors reflecting compassion and respect for patient privacy, altruism and a commitment to comprehensive, holistic medical care	Compassion	Altruistic
Use effective listening skills to elicit appropriate clinical information.	C-1. Honesty and integrity reflecting the standards of the profession, in interacting with colleagues, patients, families and professional organizations	Professionalism	Altruistic
Work effectively with others in an interdisciplinary health care team.	C-1. Honesty and integrity reflecting the standards of the profession, in interacting with colleagues, patients, families and professional organizations	Professionalism	Altruistic
Identify challenging clinical interactions and recognize how to deal with them.	D-1. A commitment to lifelong learning and independently seeking new knowledge and skills in their own recognized areas of learning deficit	Lifelong Learning	Dutiful
Demonstrate a commitment to carrying out professional responsibilities.	C-1. Honesty and integrity reflecting the standards of the profession, in interacting with colleagues, patients, families and professional organizations	Professionalism	Altruistic
Demonstrate respect, compassion and integrity.	C-2. Professional behaviors reflecting compassion and respect for patient privacy, altruism and a commitment to comprehensive, holistic medical care	Compassion	Altruistic
Respond to the needs of patients and those of society; understand that	C-3. Sensitivity and awareness of diverse cultures, health beliefs and social factors	Cultural and Social Awareness	Altruistic

UCI School of Medicine
Curriculum and Educational Policy Committee

those supersede self-interest.	impacting patient health and illness		
Demonstrate accountability to patients, society, colleagues, UCI, and our profession.	D-3. A commitment to serve our community	Community	Dutiful
Demonstrate a commitment to excellence and on-going professional development.	D-1. A commitment to lifelong learning and independently seeking new knowledge and skills in their own recognized areas of learning deficit	Lifelong Learning	Dutiful
Demonstrate a commitment to ethical principles pertaining to the provision or withholding of care, the confidentiality of patient information, informed consent and business practices.	C-2. Professional behaviors reflecting compassion and respect for patient privacy, altruism and a commitment to comprehensive, holistic medical care	Compassion	Altruistic
Demonstrate responsiveness to patient's culture, age, gender and disabilities.	D-2. A commitment to patient care and to the well-being of patients and colleagues	Patient Care	Dutiful
Investigate and evaluate one's own patient care practices, appraise and assimilate scientific evidence and improve patient care practices.	B-4. The ability to search the medical literature, including electronic databases, and to locate and interpret up-to-date evidence to optimize patient care	Evidence-Based Medicine	Skillful
Locate, appraise and assimilate information and evidence from scientific studies related to patient's health care problem(s), pain condition or interventional procedure.	B-4. The ability to search the medical literature, including electronic databases, and to locate and interpret up-to-date evidence to optimize patient care	Evidence-Based Medicine	Skillful
Assist in the teaching of other medical students.	D-1. A commitment to lifelong learning and independently seeking new knowledge and skills in their own recognized areas of learning deficit	Lifelong Learning	Dutiful

UCI School of Medicine
Curriculum and Educational Policy Committee

Apply the knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.	A-5. Knowledge of medical practice, including healthcare economics and health systems impacting delivery and quality of patient care	Medical Practice	Knowledgeable
Use information technology to manage information, access online medical information and support one's own education.	B-4. The ability to search the medical literature, including electronic databases, and to locate and interpret up-to-date evidence to optimize patient care	Evidence-Based Medicine	Skillful
Demonstrate an awareness of and responsiveness to the larger context and system of healthcare and the ability to effectively call on system resources to provide care that is of optimal value.	D-2. A commitment to patient care and to the well-being of patients and colleagues	Patient Care	Dutiful
Understand how one's own patient care and other professional practices affect other healthcare professionals, the healthcare organization and society-at-large.	C-1. Honesty and integrity reflecting the standards of the profession, in interacting with colleagues, patients, families and professional organizations	Professionalism	Altruistic
Understand which activities affect system performance.	A-5. Knowledge of medical practice, including healthcare economics and health systems impacting delivery and quality of patient care	Medical Practice	Knowledgeable
Practice pain medicine within the context of this healthcare institution and in cooperation with other healthcare professionals.	C-1. Honesty and integrity reflecting the standards of the profession, in interacting with colleagues, patients, families and professional organizations	Professionalism	Altruistic

UCI School of Medicine
Curriculum and Educational Policy Committee

Practice cost effective healthcare; prescribe medications that will be covered by insurance providers and avoid over-utilizing resources.	C-3. Sensitivity and awareness of diverse cultures, health beliefs and social factors impacting patient health and illness	Cultural and Social Awareness	Altruistic
Advocate for quality patient care; assist patients in dealing with system complexities.	D-2. A commitment to patient care and to the well-being of patients and colleagues	Patient Care	Dutiful
Know how to partner with healthcare managers and providers to assess, coordinate and improve healthcare. Assume responsibility for interacting with healthcare services (social and home care services, physical therapy) and other providers (psychiatry, neurology, surgery...) for coordinating optimal patient care and authorization for coverage of appropriate pharmacologic and interventional therapeutics.	B-6. The ability to function effectively within the context of complexity and uncertainty in medical care	Patient Management	Skillful
Conduct an evaluation and summarize the Chief Complaint and HPI (pain history), including the pain location, radiation, duration, frequency, onset, quality and pain onset. Also include alleviating and exacerbating symptoms and associated symptoms.	B-1. The ability to competently conduct a medical interview and counseling to take into account patient health beliefs, patient agenda and the need for comprehensive medical and psychosocial assessment	Medical Interview	Skillful
Conduct a full medical, surgical history, social, psychological and pain treatment history. Incorporate an appropriate review of the	A-3. Knowledge of basic clinical skills required to meet the skills objectives, including interviewing, physical diagnosis, communication and	Basic Clinical Skills	Knowledgeable

UCI School of Medicine
Curriculum and Educational Policy Committee

systems (ROS) into the full historical examination.	clinical reasoning processes		
Conduct an appropriate musculoskeletal and neurological physical examination, including, when appropriate, a cranial nerve examination, stance and gait inspection examination, cervical and lumbar range of motion, upper and lower extremity manual motor testing, sensory testing and reflex examination and appropriate provocative and nerve tension testing. Use manual motor testing grades and reflex scores appropriately.	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination	Physical Exam	Skillful
Report on the type of pain: visceral, somatic, nociceptive, neuropathic, acute, chronic or mixed. Differentiate spinal pain as axial or radicular. Differentiate fibromyalgia and other central pain syndromes from myofascial pain. Provide a thoughtful differential diagnosis of the Chief Complaint. For radicular pain, provide a hypothesis for the level of nerve root irritation based on the history and physical examination.	B-5. The ability to practice effective preventive medicine by identifying, addressing and advocating for strategies to maintain health and well-being, to identify and treat disease early where appropriate and to advise on lifestyle practices	Patient Management	Skillful
Observe/ perform lumbar interlaminar, caudal and transforaminal ESI using fluoroscopy.	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination	Physical Exam	Skillful

UCI School of Medicine
Curriculum and Educational Policy Committee

Observe/ perform lumbar medial branch blocks and/or intra-articular facet injections under fluoroscopic guidance.	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination	Physical Exam	Skillful
Observe/ perform sacroiliac joint injections under fluoroscopy.	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination	Physical Exam	Skillful
Observe /perform Greater Trochanter bursa (or other bursa) injections.	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination	Physical Exam	Skillful
Observe/ perform trigger point injections (TPI).	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination	Physical Exam	Skillful
Observe/ perform intra-articular injections (such as knee, shoulder).	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination	Physical Exam	Skillful
Observe/ perform peripheral nerve blocks (such as pudendal, ilioinguinal).	B-2. The ability to competently perform a complete and organ-system-specific examination including a mental health status examination	Physical Exam	Skillful
Observe/assist advanced neuromodulation techniques (spinal cord stimulators, intrathecal pumps).	B-2. The ability to competently perform a complete and organ-system-specific examination including a	Physical Exam	Skillful

	mental health status examination		
--	----------------------------------	--	--

3. Course Resources

TEXTS AND READINGS: SUGGESTED

Essentials of Pain Medicine and Regional Anesthesia, 2nd edition Authors: Benzon, Raja, Molloy, Liu, Fishman (copy available in Pain clinic)

Week One:

Chapter 4: Physical Examination of the Pain Patient
Chapter 12: Minor and Short-Acting Opioids

Week Two:

Chapter 5 Pain Assessment
Chapter 11 Major Opioids in Pain Management

Week Three:

Chapter 15: Membrane Stabilizer
Chapter 17: Non-Opioid Analgesics: NSAIDS, COX-2 inhibitors and acetaminophen

Week Four:

Chapter 29: Patient-controlled analgesia
Chapter 43: Overview of low back pain disorders

4. Major Exams, Assignments and Grading

MANDATORY SESSIONS

- Attendance and participation in the lectures, grand rounds and clinical case conferences

MAJOR ASSIGNMENTS AND EXAMS

Pretest: The pre-test serves merely to gauge the knowledge base of our incoming medical students with regards to anesthesia and is not included in your rotation grade.

Post test: You must score at least 80% on the post-test to be considered for honors.

GRADING

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

Final grades will be based on the following:

- Evaluations by residents and attendings in the OR
- Attendance and participation in the lectures, grand rounds and clinical case conferences

- Post-test score

Attending and resident evaluations of your performance will be factored in based on the following guidelines:

- Knowledge: The student demonstrated appropriate knowledge of medicine and surgery for his/her educational level and was able to apply that knowledge clinically.
- Clinical Skills: The student was able to learn and perform hands-on techniques (IV cannulation, mask ventilation, and airway management).
- Patient Care: The student interacted well with his/her patients, performed interviews well, and conveyed information to the team appropriately.
- Motivation: The student demonstrated a desire to learn and participate.
- Teachability: The student demonstrated an ability to listen and assimilate new information and apply that information to the situation at hand.
- Professionalism: The student was professional in his/her interactions with patients, residents, staff, and attendings.
- Self-Analysis: The student has an awareness of his/her own limitations in knowledge and skills and makes efforts to improve on them.
- Desirability: This medical student would make a good resident and we should seek to recruit him/her to our program.

You have 30 days from the date of the grade to appeal any aspect of this grade. Please contact your clerkship/course director should you have any questions

Requirements for “Pass”: To receive a grade of Pass, students must demonstrate successful performance in all the following areas:

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

You must score at least 80% on the post-test to be considered for honors.

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

REMEDICATION

Remediation, if needed, will be designed by the Course Director to suit the issue at hand.

UCI School of Medicine
Curriculum and Educational Policy Committee

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