

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

Course Name Anesthesiology Pain Management
Course Director Ariana Nelson, MD

Academic Year 2020-2021

1. Course Director, Coordinator and General Administrative Information

FACULTY AND STAFF

Name	Office Location	Phone	Email
Director: Ariana Nelson, MD	333 City Blvd. W., Suite 2150, Orange CA, 92868	714-456-5342	arianamn@hs.uci.edu
Coordinator: Dean Wong	101 The City Dr. S., Bldg. 53 – rm. 205, Orange, CA 92868	714-456-5342	deanw@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. The 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 4th-year students enrolled in the undergraduate medical education program at University of California, Irvine School of Medicine (UCISOM).

RESTRICTIONS

This course is intended for 4th-year students enrolled in the undergraduate medical education program at University of California, Irvine School of Medicine (UCISOM).

This rotation is not accepting international students.

COURSE DIRECTOR

Ariana Nelson, MD

HS/Associate Clinical Professor

Director, Medical Student Clerkship Rotations

Dr. Ariana Nelson believes that contribution to the education of students at all levels is a tacit obligation of faculty at any University hospital. Therefore, Dr. Nelson has devoted much of her time to training students spanning from the early stages of secondary education to post-doctoral fellows. This includes her presentations to high school students, cadaver dissection alongside medical students, intraoperative slideshow presentations to residents and education sessions for fellows. Although formal didactics have value, Dr. Nelson also feels that bedside or day-to-day instruction is more memorable for trainees. She prides herself on spending a few minutes after each patient encounter to highlight the learning points from the interaction. Additionally, she feels that students have a more comprehensive understanding of the medical field when they are exposed to a variety of settings, such as with the Global Outreach Initiative. Dr. Nelson enjoys being part of a faculty group at UC Irvine dedicated to education, student development and research will resonate with the burgeoning clinicians that we train in our operating rooms, inpatient wards and clinic procedure suites.

Dean Wong is the course coordinator for 605E course.

INFORMATION FOR THE FIRST DAY

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

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

DURATION: 2-4 weeks

Scheduling Coordinator: UC Irvine 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 3 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 deanw@uci.edu 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 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
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,	B-1. The ability to competently conduct a medical interview and counseling to take into account patient health	Medical Interview	Skillful

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and exacerbating and alleviating factors.	beliefs, patient agenda and the need for comprehensive medical and psychosocial assessment		
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 comprehensive, holistic medical care	Compassion	Altruistic
Identify patients that may require urgent or emergent intervention.	B-5. The ability to practice effective preventive medicine by identifying, addressing and advocating for	Patient Management	Skillful

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	strategies to maintain health and well-being, to identify and treat disease early where appropriate and to advise on lifestyle practices		
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

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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	B-4. The ability to search the medical	Evidenced-Based Medicine	Skillful

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potential disadvantages of different treatment options (pharmacologic, interventional and behavioral).	literature, including electronic databases, and to locate and interpret up-to-date evidence to optimize patient care		
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	Professionalism	Altruistic

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	interacting with colleagues, patients, families and professional organizations		
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 those supersede self interest.	C-3. Sensitivity and awareness of diverse cultures, health beliefs and social factors impacting patient health and illness	Cultural and Social Awareness	Altruistic
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	D-2. A commitment to patient care and to the	Patient Care	Dutiful

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patient's culture, age, gender and disabilities.	well-being of patients and colleagues		
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
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

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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 affects other healthcare professionals, the healthcare organization, and our larger society.	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
Practice cost effect 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	D-2. A commitment to patient care and to the	Patient Care	Dutiful

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patients in dealing with system complexities.	well-being of patients and colleagues		
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 systems (ROS) into	A-3. Knowledge of basic clinical skills required to meet the skills objectives, including interviewing, physical diagnosis, communication and	Basic Clinical Skills	Knowledgeable

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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

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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
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

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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 mental health status examination	Physical Exam	Skillful

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 attending's 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 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.

REMEDIATION

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

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.