

685U SURGICAL INTENSIVE CARE

This course satisfies the ICU requirement for UCI students

Course Description: This is a four week rotation offered at UC Irvine Medical Center. Students function as sub-interns, becoming integral members of the ICU team, and serve as primary caregivers under supervision.

Department: Surgery

Prerequisites: UC Irvine students must have successfully completed the 1st, 2nd and 3rd year curriculum or have completed the 3rd year clerkship within the same area as the ICU they are enrolling in. Extramural students must be in their final year of undergraduate medical education.

Restrictions: Priority is given to UC Irvine students. This rotation does not accept international students.

Elective Director: Sebastian Schubl, MD, FACS

sschubl@uci.edu | 714-456-5890

UC Irvine Medical Center, Department of Surgery
333 City Blvd. West, Suite 1600, Orange, CA 92868

Instructing Faculty: Michael Lekawa, MD – Surgery; Matthew Dolich, MD – Surgery; Cristobal Barrios, MD – Surgery; Allen Kong, MD – Surgery; Jeffrey Nahmias, MD – Surgery; Sebastian Schubl, MD – Surgery; Dr. Kuncir, MD – Surgery; Dr. Joe, MD – Surgery; Dr. Bernal, MD – Surgery; Dr. Chin, MD – Surgery; Trung Vu, MD – Anesthesiology

Course Website: <http://www.surgery.uci.edu/traumacriticalcareburn/>

Who to Report to on First Day: If you have questions regarding any details prior to or during your rotation, you should contact the critical care clerkship team at your chosen site.

Location/Time to Report on First Day: 6 AM, Douglas Hospital, 6th floor, SICU

Site Coordinator:

Staci Reichenecker, Medical Education Coordinator
reichens@uci.edu ; 714-456-5532

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Periods Available: Throughout the year

Duration: 4 weeks

Number of Students: 4

Scheduling Coordinator:

UC Irvine students UC Irvine students must officially enroll for the course by contacting the Scheduling Coordinator via email or phone (714) 456-8462 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 this website <https://students-residents.aamc.org/attending-medical-school/electives-and-make-courses/applyingaway-electives-vsas/>

Course Objectives:

During this rotation, you are expected to enhance these clinical skills:

- Assess patients' overall status – the ABC's.
- Improve basic skills in chest radiograph review, intravenous and arterial cannulation, order writing, and oral case presentation.
- Interpret and manage hemodynamic variables.
- Interpret normal and abnormal ECGs.
- Assess adequacy of ventilation/oxygenation and treat dysfunction.
- Understand fluid, electrolyte, and acid-base management.
- Understand blood product transfusion indications and concerns.
- Recognize and manage shock and shock states.
- Recognize and manage single and multiple organ dysfunction.
- Understand inherent post-operative changes and problems.
- Perform sedation and pain management skills.
- Understand social and ethical aspects of critically ill patient care and end-of-life issues.
- Understand ventilator management and modes.
- Perform ACLS.
- Perform ATLS.

Key Topics:

Focus your attention and energy on these basic disease processes:

- Respiratory failure, types/diagnosis/treatment, ALI/ARDS
- Ventilator therapy/modes/weaning
- Invasive hemodynamic monitoring, placement/interpretation
- Cardiogenic shock/cardiovascular dynamics
- Venous thromboembolic disease/Pulmonary embolism
- Cardiac dysrhythmias/ACLS
- Fluid, electrolyte, acid-base management
- Sepsis/infection control
- Renal insufficiency/failure
- Coagulopathy/blood component therapy
- Hepatic/gastrointestinal dysfunction and failure

Competencies:

- Assess patient's overall status – the ABC's

- Interpret and manage hemodynamic variables
- Recognize an abnormal ECG
- Knowledgeable about ACLS protocols
- Knowledgeable about ATLS protocols
- Assess adequacy of ventilation/oxygenation and treat dysfunction
- Understand fluid, electrolyte, and acid-base management
- Understand blood product transfusion concerns.
- Recognize and manage shock and shock states.
- Recognize and manage single and multiple organ dysfunction.
- Understand the inherent post-operative changes and problems.
- Perform sedation and pain management skills
- Understand the social and ethical aspects of critically ill patient care
- Understand ventilator management
- Improve basic skills in chest radiology review, intravenous and arterial cannulation, order writing, and oral case presentation.

Attitudes and Commitment:

- Competence
- Compassion
- Professionalism
- Integrity
- Sensitivity
- Respect
- Commitment

Educational Activities:

Simulation: There will be a mandatory Critical Care Simulation Session conducted from 1 to 4 PM at the UC Irvine Medical Education Simulation Center. It is usually scheduled on a Tuesday or Thursday afternoon on the 2nd or 3rd week of your rotation. You will receive an email informing you about the exact date and time. Please make sure that you have familiarized yourself with the sections in the FCCS book pertaining to shock, hemodynamic failure and monitoring, treatment of shock and vasopressors, causes, types and diagnosis of respiratory failure, and initiation and basics of mechanical ventilation. Familiarity with these topics will ensure that you have a more productive and interactive simulation session.

The simulation session is located at: Medical Education, Building 836 Irvine, CA 92697-4089 Phone: 949.824.8835 A map can be found at: <http://www.medsim.uci.edu/contact01.html>

For all of us, the ICU is the best ILU (Intensive Learning Unit). The diversity and intensity of pathology to which you are exposed is incomparable to any other clinical setting. You are privileged to take care of the sickest patients in the hospital. Cherish the experience, and do your best to make the most of it.

Your faculty are there to make your learning experience as meaningful and effective as possible. If there are problems hampering your growth, approach them. Show enthusiasm and interest; you will be taken seriously, and will witness reciprocal enthusiasm. Try to carry 2-3 patients at each time. You will learn more if you expose yourself to a variety of pathophysiologic processes, so work with your team to try and avoid repetitive cases. Every patient on the team is “your patient”. Pay attention to all the patients on rounds. You will multiply your experience. Offer to do short 5-10 minute presentations on topics relevant to your patients. The best way to master a topic is to teach it.

Clinical Responsibilities of the Student: Students function as sub-interns, becoming integral members of the ICU team and serve as primary care givers under supervision

Patient Care Responsibilities: Students function as sub-interns, becoming integral members of the ICU team and serve as primary care givers under supervision

Call Schedule of the Student: Students are expected to work the same shifts as their team.

Procedures students will learn:

- Airway management
- Peripheral and Central IV catheter placement
- Arterial line placement
- Lumbar puncture

Percentage of Time in Ambulatory Setting: 20%

Conference/Lecture/Small Group Sessions:

Hemodynamic Monitoring & Optimization

Fluid & Shock management

Respiratory Failure & Ventilation

ARDS Trauma and Head Injury Ethics and End of Life Issues Pediatrics Critical Care Course

Hours Weekly Summary: Varies

Total Content Theme Integration: You will encounter these associated themes regularly in the ICU. Use the opportunity to gain experience in: • Terminal Illness, Death & Dying • Ethics (Esp. End-of-Life Issues) • Genetics & Genetics Counseling • Nutrition • Pain Management • Palliative Care • Research Methods • Substance Abuse / Drug Toxicity

Required Reading: Your syllabus is the FCCS, the main text provided by the Society of Critical Care Medicine for medical students. You are required to study it during your 4-week rotation, discuss any questions with your faculty, and will be tested based on it on your end-of-rotation written MCQ exam.

Contact your site clerkship coordinator to collect the book at the beginning of the rotation, and make sure you return it at the end. For additional recommended reading please see:

- *Handbook of Critical Care* - Jesse B. Hall (September, 2009)
- *Critical Care Medicine: The Essentials* - John J. Marini and Arthur P Wheeler (November - 2009)
- *The Washington Manual of Critical Care* - Marin H Kollef, Timothy J Bedient, Warren Isakow, and Chad A Witt (October - 2007)
- *Irwin and Rippe's Intensive Care Medicine 6th edition* - Richard S Irwin and James M. Rippe (August - 2007)
- The ICU Book, 3rd Edition - Paul L. Marino (September - 2006)

Official Grading Policy:

Your final grade is a composite based on your end-of-rotation written MCQ exam (usually administered on the Friday of week 4) and your clinical evaluations. The clinical evaluations are based on motivation, knowledge of clinical medicine, clinical skills, and personal characteristics. A passing grade requires daily attendance at rounds, attendance and participation in lectures, discussions, and clinical assignments, as well as satisfactory scores for the categories listed in the clinical evaluations. Absences will be excused only upon approval by the course director. Comments will be made available for your Dean's Letter. The written examination is comprised of 50 multiple-choice questions which are derived directly from the FCCS content. Students can be eligible for Honors if they receive a satisfactory score on all clinical evaluation categories, score at least 80% on the MCQ examination, have perfect attendance, and show exceptional skills in a number of clinical categories and prepare a relevant presentation. Students who receive a failing grade will meet with the course director to discuss options for re-evaluation that may include additional time in the SICU along with a written re-examination. A score of 60% or greater is required on the MCQ exam in order to pass the course.

Attendance: You are expected to participate as a team member, every weekday in addition to one day every weekend, other than the last weekend. You are encouraged to take call with one of your team interns; you should coordinate the details regarding hours of attendance and the call schedule with your site clerkship director and ICU faculty.

Absence: With prior notification, you are allowed a maximum of three (3) days of absence during your 4-week rotation. You will need to reschedule your rotation for another date if you miss more than 3 days. Any questions or issues regarding your critical care clerkship grade should be presented to your course director and the grading faculty.