685U Surgical Intensive Care

This course is available to UC Irvine students only

Elective at a Glance		
Available to: [ ] UCI MS3 students [X] UCI MS4 students [ ] Extramural Students		
Duration: 4 weeks	**Number of Students:** Four per rotation.	**Grading:** H / P / F
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.		

1. Course Director, Coordinator and General Administrative Information

FACULTY AND STAFF

Name	Office Location	Phone	Email
Course Director: Lourdes Swentek, MD	3800 Chapman Ave, Suite 6200, Orange, CA	714-456-5532	lyrobles@hs.uci.edu
Course Coordinator: Staci Reichenecker	3800 Chapman Ave, Suite 6200, Orange, CA	714-456-5532	reichens@hs.uci.edu

DESCRIPTION

This is a four-week rotation offered at UCI Medical Center. Students function as subinterns, becoming integral members of the ICU team and serve as primary caregivers under supervision.

PREREQUISITES

This course is intended for fourth-year students enrolled in the undergraduate medical education program at UCI School of Medicine or visiting 4th year medical students who are on an external sub-internship rotation.

RESTRICTIONS

This rotation does not accept international students.

COURSE DIRECTOR

Dr. Lourdes Y. Swentek is a board-certified surgeon who specializes in trauma, critical care, Emergency and general surgery. She earned a medical degree at Loyola University Chicago's Stritch School of Medicine in Maywood, IL. She completed a residency in general surgery at Loma Linda University Medical Center in Loma Linda, Calif., followed by fellowship training in trauma and critical care surgery at

UCI Medical Center. She worked at Loma Linda for two years before being recruited back to UCI to join the trauma and critical care team.

Staci Reichenecker is the course coordinator for 685U course.

Instructing Faculty: Michael Lekawa, MD; Matthew Dolich, MD; Cristobal Barrios, MD; Allen Kong, MD; Sebastian Schubl, MD; Jeffry Nahmias, MD; Victor Joe, MD; Theresa Chin MD; Alliya Qazi MD; Lourdes Swentek MD; Areg Grigorian MD; James Jeng MD, Sigird Burruss MD; Syed Saquib; Mallory Jebbia; Anushka Bagga – Surgery; Trung Vu, MD; Balbi Lopez MD; Jennifer Elia MD;– Anesthesiology/Critical Care

INFORMATION FOR THE FIRST DAY
Who to Report to on First Day: If you have questions regarding any details before or during your rotation, you should contact the critical care clerkship coordinator, Staci Reichenecker, or director, Dr. Swentek. You should receive an email prior to your start date with the SICU resident's contact information.

Location/Time to Report on First Day:
6 AM, Douglas Hospital, 6th floor, SICU (6200 work room)

SITE: UCI Medical Center

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
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: Four per rotation.

WHAT STUDENTS SHOULD DO TO PREPARE FOR THE COURSE
Study course competencies & topics.

COMMUNICATION WITH FACULTY
Communication with Faculty is under the Director of the Surgical Intensive Care Unit, Dr. Jeffry Nahmias. 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 (Dr. Swentek). 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, at reichens@hs.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 685U 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
Assess patients' overall status – the ABC's.	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
Improve basic skills in chest radiograph review, intravenous and arterial cannulation, order writing, and oral case presentation.	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
Interpret and manage hemodynamic variables.	B-6. The ability to function effectively within the context of complexity and uncertainty in medical care	Patient Managment	Skillful

Interpret normal and abnormal ECGs.	B-6. The ability to function effectively within the context of complexity and uncertainty in medical care	Patient Management	Skillful
Assess adequacy of ventilation/oxygenation and treat dysfunction.	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
Understand resuscitation, fluids, electrolyte, and acid-base management.	A-2. Knowledge of the pathogenesis of diseases, interventions for effective treatment, and mechanisms of health maintenance to prevent disease	Disease Pathogenesis and Treatment	Knowledge
Understand blood product transfusion indications and concerns.	A-2. Knowledge of the pathogenesis of diseases, interventions for effective treatment, and mechanisms of health maintenance to prevent disease	Disease Pathogenesis and Treatment	Knowledge
Recognize and manage different types of shock and shock states.	B-6. The ability to function effectively within the context of complexity and uncertainty in medical care	Patient Management	Skillful
Recognize and manage single and multiple organ dysfunction.	B-2. The ability to competently perform a complete and organsystem-specific examination including a	Physical Exam	Skillful

	mental health status examination		
Understand inherent postoperative changes and problems.	A-2. Knowledge of the pathogenesis of diseases, interventions for effective treatment, and mechanisms of health maintenance to prevent disease	Disease Pathogenesis and Treatment	Knowledge
Understand and/or perform various sedation and pain management skills.	B-6. The ability to function effectively within the context of complexity and uncertainty in medical care	Patient Management	Skillful
Understand social and ethical aspects of critically ill patient care and end-of-life issues.	C-3. Sensitivity and awareness of diverse cultures, health beliefs and social factors impacting patient health and illness	Cultural and Social Awareness	Altruistic
Understand ventilator management and modes.	B-6. The ability to function effectively within the context of complexity and uncertainty in medical care	Patient Management	Skillful
Perform ACLS.	B-2. The ability to competently perform a complete and organsystem-specific examination including a mental health status examination	Physical Exam	Skillful
Perform ATLS.	B-2. The ability to competently perform a complete and organsystem-specific examination including a mental health status examination	Physical Exam	Skillful

Key Topics: Focus your attention and energy on these basic disease processes treatment modalities:

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

Competencies:

- Assessing patient's overall status – the ABCs
- Interpreting & managing hemodynamic variables
- Recognizing an abnormal ECG
- Advanced Cardiac Life Support protocols
- Advanced Trauma Life Support protocols
- Assessing adequacy of ventilation/oxygenation and treating dysfunction
- Understanding fluid, electrolyte, and acid-base management
- Understanding blood product transfusion concerns
- Recognizing & managing shock and shock states
- Recognizing & managing single and multiple organ dysfunction
- Understanding inherent postoperative changes and problems
- Sedation and pain management skills
- Understanding the social & ethical aspects of critically ill patient care
- Understanding ventilator management
- Improving basic skills in chest radiology review, intravenous and arterial cannulation, ultrasound, order writing and oral case presentation

Attitudes and Commitment:

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

Educational Activities:

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; vasopressors; causes, types and diagnosis of respiratory failure; and initiation and basics of mechanical ventilation.

For all of us, the ICU is the best ILU (Intensive Learning Unit). The diversity and intensity of pathology to which you are exposed are 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 is there to make your learning experience as meaningful and effective as possible. The critical care fellows are an extension of the faculty and are there to assist in your learning and growth. 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 any time, first day or two, you may only have one. (When census is low and there are many Sub-interns, you will occasionally carry only one patient) 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 a short five-10 minute presentation on topics relevant to your patients. The best way to master a topic is to teach it. The first day of your rotation you will orient yourself to how rounds are carried out and which patients would be most appropriate for you to start rounding on and presenting. Once you receive the assignment, it is your responsibility to gather all the relevant information on your patient so you can provide a detailed systems-based presentation for team rounds, which typically starts at 8 am. An example of a presentation would include:

- a brief history of the patient, including relevant PMH, PSH, and social HX
- overnight events, subjective, objective physical exam/ vitals
- system-based assessment and plan: Neuro, Cardiac, Pulmonary, GI/Hepatic/nutrition, labs/renal, heme, ID, endocrine, and lines tubes and drains. Challenge yourself to develop your own daily plans for the patient.

Clinical & Patient Care Responsibilities of the Student: Students function as subinterns, becoming integral members of the ICU team and serving as primary caregivers under supervision.

Call Schedule of the Student: Students are expected to work the same shifts as their team and stay until their team dismisses them for the day.

Procedures Students will Learn:

- Airway management
- Peripheral & central IV catheter placement
- Arterial line placement

- Critical care ultrasound

Conference/Lecture/Small Group Sessions: Mandatory attendance at Wednesday afternoon conferences at 2:00pm until 3:30 pm via Zoom, during which you will learn about topics such as:

Hemodynamic Monitoring & Optimization, Fluid & Shock management, Respiratory Failure & Ventilation, ARDS, Trauma and Head Injury, Ethics and End of Life Issues, Pediatrics Critical Care

3. Course Resources

TEXTS AND READINGS: SUGGESTED
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)

4. Major Exams, Assignments and Grading

MANDATORY SESSIONS
N/A

MAJOR ASSIGNMENTS AND EXAMS
No structured exam for this acting internship. Evaluations from Faculty are major contributors to student grading.

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.

Students will receive a final grade of Honors, Pass or Fail. Your final grade for this rotation is a composite based upon your end-of-rotation written MCQ exam, and your clinical evaluations. The written examination consists of 50 multiple-choice questions, which are derived directly from the FCCS content. The student's final evaluation will be submitted on the standard UCI Elective Evaluation Form. The final evaluation will be derived from input from Attendings, Fellows and Residents, and it will be based upon the following aptitudes:

- Knowledge base of relevant basic & clinical science
- Observed history & physical examination skills
- Ability to present a patient case with appropriate coherence, organization & length
- Ability to create an appropriate & prioritized differential diagnosis
- Ability to devise a rational plan of care appropriate to the differential diagnosis
- Motivation for learning & enthusiasm for teaching others
- Informatics & critical appraisal skills
- Self-directed learning skills and likelihood of becoming an effective lifelong learner
- Therapeutically & ethically sound patient relationships
- Use of open-ended and facilitative interviewing techniques
- Integrity, accountability & teamwork
- Humanistic qualities & respect for diversity
- Sensitivity & responsiveness to patients' culture, age, gender and disabilities
- Understanding of health systems, population health & socioeconomic implications of care

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

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.