

655C Clinical Chemistry

This rotation is not accepting international students.

Course Name Clinical Chemistry

Course Director Robert A. Edwards, MD, PhD

Elective at a Glance		
Available to: [X] UCI MS3 students [X] UCI MS4 students [X] Extramural Students		
Duration: 1 week	Number of Students: 2	Grading: H / P / F
Periods available: Throughout the year, based on instructor/lab staff available		

1. Course Director, Coordinator and General Administrative Information

FACULTY AND STAFF

Name	Office Location	Phone	Email
Course Director: Robert A. Edwards, MD, PhD	Medical Sciences D449	949-824-8576	redwards@hs.uci.edu
Course Coordinator: Ashley Dunicliffe	Medical Sciences D440	949-824-5367	pathelectives@hs.uci.edu

DESCRIPTION

The student will be introduced to the clinical laboratory. Laboratory testing will be approached from both a clinical and analytical perspective. Analytical aspects cover testing methods (e.g., immunoassay, mass spectrometry, etc.) in addition to sources of error in testing. Clinical interpretation includes electrolytes, blood gases, cardiac markers, renal and liver function testing, urine drug testing, and protein electrophoresis interpretation for monoclonal gammopathies. The student will be introduced to concepts used for the evaluation of reference intervals, analytical test performance, and diagnostic test performance.

PREREQUISITES

UCI students must have successfully completed the basic science curriculum. Extramural students must be in the final year of undergraduate medical education and have completed course work equivalent to UCI's Clinical Pathology and General Pathology courses.

RESTRICTIONS

Students must obtain permission from faculty prior to enrollment

COURSE DIRECTOR: Robert A. Edwards, MD, PhD

Instructing Faculty: Bridgit Crews, PhD, DABCC (CT) and clinical laboratory specialist staff.

Elective Coordinator: Ashley Dunicliffe

INFORMATION FOR THE FIRST DAY

Who/Location/Time to Report to on First Day: Contact site coordinator

SITE: UCI Medical Center

DURATION: 2 weeks minimum

Scheduling Coordinator: UC Irvine 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: Throughout the year but will depend on the availability of the instructors and laboratory staff. 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: 2

WHAT STUDENTS SHOULD DO TO PREPARE FOR THE COURSE: N/A

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 pathelectives@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. 655C, Smith, Request for appointment)

2. Course Objectives and Program Objective Mapping

The following are the learning objectives for the 655C 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
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Discuss appropriate ordering and interpretation for various laboratory tests			
Interpret specific laboratory test results including urine drug testing, electrolytes, troponin, renal and liver function testing, and serum and during protein electrophoresis			
Describe the role of the clinical pathologist as a medical director and clinical consultant			

Interpretation of:

- Cardiac markers
- Electrolytes
- Blood Gases
- Renal and Liver function tests
- Urine Drug Testing
- Serum Protein Electrophoresis for Monoclonal Gammopathies

Competencies:

- Discuss analytical performance of laboratory tests.
- Evaluate diagnostic performance of laboratory tests.
- Discuss appropriate selection and interpretation of laboratory tests.

Attitudes & Commitments: learn to recognize the breadth of information that must be incorporated into the clinical reasoning process

3. Course Resources

TEXTS AND READINGS: SUGGESTED

Recommended Reading: Selected in accordance with case material.

4. Major Exams, Assignments and Grading

MANDATORY SESSIONS

Conference/Lecture/Small Group Sessions: There is not standardized material for this course

Course Hours Weekly Summary:

Hours	Computer Assisted Instruction
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5.0	Case Based
5.0	Conference
5.0	Clinic

Content Theme Integration:

- Biostatistics
- Decision Making
- Epidemiology
- Evidence Based Medicine
- Informatics
- Population Based Medicine
- Research Methods
- Technology Assessment

MAJOR ASSIGNMENTS AND EXAMS

Educational Activities:

- Assignment to clinical lab workbench
- Discussion with clinical chemist and/or clinical pathologist
- Review tests requiring interpretation
- Sign-out with attending
- Attend quality and staff meetings
- Attend conferences

Clinical Responsibilities of the Student:

Preview test results requiring review by a pathologist and formulate an interpretation. Interact with clinical staff as requested and consult with technical staff as needed.

To be learned by the Student:

- Evaluation of laboratory tests
- Test interpretation

Aspects of laboratory management

GRADING

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.