

655B BLOOD BANKING

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

Course Description: Students will actively participate in the day-to-day activities of a busy transfusion medicine/blood bank service. Activities will include interaction with ordering clinicians regarding indications for blood and blood components, evaluation and management of patients for whom therapeutic apheresis is considered, and the workup and management of transfusion reactions. Students will develop an understanding of transfusion medicine laboratory testing, including antibody screens, direct and indirect antiglobulin tests, red cell antigen typing, cross-matching, HLA and platelet antibody testing, and the use of these testing principles in the workup and management of platelet and red cell alloimmunization, hemolytic and serologic transfusion reactions, neonatal alloimmune thrombocytopenia, and hemolytic disease of the fetus and newborn. Students will gain an understanding of the coagulation-related aspects of transfusion medicine including interpretation of test results and how they pertain to rational blood component ordering and utilization of transfusion alternatives. Students will also be exposed to blood component collection and care of the donor throughout the donation process. Donor screening, reactions to blood donation, and interpretation of infectious disease tests as they relate to transfusion medicine will be covered during this rotation. Students will spend time both at the UCIMC fixed-site blood donor center, UCI Campus Blood Donor Center, and at off-site collection events.

Department: Pathology & Laboratory Medicine

Prerequisites: UC Irvine 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 UC Irvine's Clinical Pathology and General Pathology courses.

Restrictions: Students must obtain permission from faculty prior to enrollment. This rotation is not accepting international students.

Elective Director: Robert A. Edwards, M.D., Ph.D., UC Irvine School of Medicine, Department of Pathology & Laboratory Medicine, Med Sci I, Room D435, Irvine CA 92697, 949-824-8576, redwards@uci.edu

Course Website: None

Who to Report to First Day: Contact site coordinator

Location to Report on First Day: Contact site coordinator

Time to Report on First Day: Contact site coordinator

Instructing Faculty: Minh-Ha Tran, D.O., & staff

Elective Coordinator: Stefani Ching, UC Irvine School of Medicine, Department of Pathology & Laboratory Medicine, Med Sci I, Room D440, Irvine, CA 92697-4800, (949) 824-5367, stefani.ching@uci.edu

Site: UC Irvine Medical Center, Douglas Hospital, 3rd Floor, Room 3431 (follow signs to Blood Bank)

Periods Available: Throughout the year.

Duration: 2 weeks minimum

Number of Students: 2

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: At the end of this rotation the student will be able to:

- discuss the risks and benefits of blood component therapy.
- understand the importance of properly identifying specimens, donors, and recipients.
- demonstrate a basic understanding of routine blood bank serology, indications for blood component therapy, and apheresis - both donor and therapeutic.
- interpret basic coagulation test results and describe how blood component ordering may be guided by these results.
- understand principles of blood collection, processing, storage, and issue, including the interpretation of pretransfusion test results.

Key Topics: Serologic testing, hemolytic anemia, indications for blood component therapy and therapeutic apheresis, donor screening, blood component manufacture, coagulation testing and application of results, see above for further details.

Competencies: Not stated

Attitudes & Commitments: all interested students who are committed to learning and actively participating in their education are invited to participate.

Educational Activities: see above

What Students Should do to Prepare for the Rotation: Contact the instructor the week prior to starting in order to receive journal club articles or other reading assignments.

Clinical Responsibilities of the Student: Communicating with clinicians, gathering information from patients and patient charts, interacting with donors, patients, and laboratory staff.

Patient Care Responsibilities: Variable, dependent upon the workload at the time.

Call Schedule of the Student: No call

Procedures to be Learned by the Student: None; however, there are many diagnostic procedures performed by laboratory staff. It is expected that students observe and develop an understanding of these procedures.

Percentage of Time Student will Participate in Ambulatory Setting: Blood Bank/Mobile Collection Event~20%

Conference/Lecture/Small Group Sessions: Daily

Course Hours Weekly Summary: 40 hours/week

Content Theme Integration: Not stated

Recommended Reading: Selected in accordance with case material.

Official Grading Policy: The student will receive a grade of Honors, Pass or Fail. The student's final grade will be submitted on the standard UC Irvine elective form. Based upon attendance, initiative and course knowledge. If the student fails the elective, a grade of "F" will be permanently recorded on his/her transcript. The student can repeat the course for a second grade; however, the "F" will not be removed from the transcript.