

DEPARTMENT OF PATHOLOGY

**Transfusion Medicine and Coagulation**

<b>Course Number</b>	CLNS 950T		<b>Duration</b>	4 weeks
<b>Credit Type</b>	<input checked="" type="checkbox"/> Clinical Elective	<input type="checkbox"/> Non-Clinical Elective	<input type="checkbox"/> Sub-Internship	<input type="checkbox"/> ICU
<b>Available Blocks</b>	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input checked="" type="checkbox"/> 8
	<input type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/> 12
	<input checked="" type="checkbox"/> 13	<input checked="" type="checkbox"/> 14		
<b># of Students per Rotation</b>	<input type="checkbox"/> One	<input type="checkbox"/> Two	<input type="checkbox"/> Other:	
<b>Faculty Evaluator(s)</b>	Evelyn Lockhart, MD			
<b>Prerequisites</b>	<input checked="" type="checkbox"/> All Phase II Clerkships	<input type="checkbox"/> Department specific clerkship/rotation:	<input type="checkbox"/> Other:	
<b>Visiting Students Accepted</b>	<input checked="" type="checkbox"/> Domestic MD	<input checked="" type="checkbox"/> Domestic DO	<input type="checkbox"/> International	<input type="checkbox"/> None
<b>Accept Students Off-Cycle</b>	<input checked="" type="checkbox"/> Yes – with department permission	<input type="checkbox"/> No		
<b>Add/Drop Policy</b>	ADD: 30 days	DROP: 30 days	Other:	
<b>Clerkship Contact(s)</b>	Rebecca Sulyma	<a href="mailto:rsulyma@salud.unm.edu">rsulyma@salud.unm.edu</a>	505-272-5873	

**Goals and Unique Aspects:**

This course will provide senior medical students with a foundation in clinical and laboratory transfusion medicine and coagulation. The intent of the course is to prepare the student for residency responsibilities in transfusion, focusing on practical topics including 1) understanding appropriate therapeutic use of blood components for different patient populations, 2) necessary steps in ordering and administering blood components, 3) recognizing the risks and benefits of transfusion, and 4) recognizing, diagnosing, and managing adverse events related to transfusion. The student will also have the opportunity to participate in the Therapeutic Apheresis service, learning about apheresis technology and use of therapeutic apheresis in a variety of clinical settings. This rotation provides a foundation in transfusion and hemostasis necessary for virtually all specialties, but will be of particular interest for those students interested in anesthesia, hematology/oncology, surgery, obstetrics, or pathology.

**Objectives:**

1. Describe the steps for routine pre-transfusion compatibility testing, including ABO/Rh typing, RBC crossmatching, RBC antibody screens and antibody identification (assessment: direct observation, written reports, directed discussion).
2. Identify the composition and transfusion indications for the following four blood components: RBCs, plasma, platelets and cryoprecipitate (assessment: direct observation, directed discussion).
3. Specify the indications for the following blood component modifications: leukoreduction, irradiation, washing, and volume reduction (assessment: direct observation, directed discussion).
4. Interpret the results of the following coagulation screening tests, and discuss potential transfusion therapies based on their results: prothrombin time, partial thromboplastin time, platelet count, fibrinogen levels, ROTEM (assessment: direct observation, written reports, directed discussion).
5. Identify the presentation of acute transfusion reactions, and be able to distinguish between these causes based on clinical presentation and laboratory evaluation (assessment: direct observation, written reports, directed discussion).
6. Summarize the principles of apheresis technology, including anticoagulation, centrifugation, and appropriate fluid replacement for various clinical indications.
6. Demonstrate knowledge of indications for therapeutic apheresis.

**Responsibilities:**

Students will perform as junior housestaff on this rotation, with duties to include real-time consultation for blood component approval, clinical and laboratory evaluation of transfusion reactions, coagulation consultation for massive transfusion protocols, and report generation for immunohematology studies and ROTEM panels which will be entered in the patient's record. The student will also be provided with opportunities to perform histories and physical examinations on therapeutic apheresis patients and develop therapeutic plans for these patients (including writing progress notes, ordering and interpreting laboratory studies). According to student interest and abilities, there is additional opportunity for participation in the Special Coagulation laboratory at Tricore, which would involve evaluation of coagulation test utilization, test interpretation and report generation, and clinicopathologic correlation

of laboratory findings with the patient's history and presentation. At the end of the rotation, the student will deliver a 30 minute presentation on either a review of a current topic in transfusion/hemostasis/apheresis or an in depth patient history review.

**Supervision and Teaching:**

Medical students will be on service with an attending transfusion service physician, who will provide direct supervision. In most rotations, the student will often be on service with residents and/or a transfusion medicine fellow as well. The attending transfusion medicine physician will review and edit the student's diagnostic reports and patient progress notes for accuracy.

**Evaluation:**

The students will be assessed according to the following criteria:

1. 50%: Direct observation and evaluation of written service reports presented to the attending transfusion service physician.
2. 25%: Directed discussion during transfusion medicine attending didactic sessions.
3. 25%: Final rotation presentation.

**Additional Information:**

Specific resources will be provided to assure that the student meets the learning objectives. These resources include a transfusion medicine reference library, selected relevant literature and guideline statements in transfusion medicine/apheresis/hemostasis, and didactic lectures provided by the transfusion service attendings.