Curriculum Content Report
Anemia
Prepared 8/15/17 by Ken Olive, MD

Year 1	
Course	**Content**
Case Oriented Learning	anemia in end-stage renal disease case
Cellular & Molecular Medicine	hemoglobin structure and sickle cell disease
Genetics	Fanconi anemia as a genetic disease
Medical Physiology	role of GI tract in pernicious anemia, intestinal iron absorption pathways and mechanisms, celiac disease as a clinical condition that can lead to iron deficiency anemia.
Year 2	
Immunology	Blood group antigens, Blood transfusion reactions, Erythroblastosis fetalis/hemolytic disease of the newborn pathophysiology and treatment, Pernicious Anemia pathophysiology and presentation, Intrinsic factor autoantibodies, Cold and warm autoimmune hemolytic anemia, B12 deficiency and anemia subsequent to Crohn's disease.
Medical Microbiology	anemia in intestinal parasitic infections, aplastic anemia induced by viruses
Clinical Neuroscience	pernicious anemia manifesting as neuropathy
Pathology	pernicious anemia associated with gastritis, anemia in end-stage renal disease, extensive coverage of various anemias in hematology section (including red cell terms and morphology; Classification of anemia: microcytic anemia, macrocytic anemia, hypochromic, normochromic, blood loss; Hemolysis: intravascular hemolysis, extravascular hemolysis, splenomegaly, hepatomegaly; Hereditary RBC defects: hereditary spherocytosis, G6PD deficiency, pyruvate kinase deficiency; Hemoglobinopathies: sickle cell trait, sickle cell disease, hand-foot syndrome, sickling

	test, hemoglobin C disease, hemoglobin M, methemoglobin; Thalassemias: alpha thalassemia, hydrops fetalis, beta thalassemia,; Immune disorders: AIHA, Coomb's test, DAT, warm AIHA, cold AIHA, cold agglutinins, cold hemolysins, isoimmune, Rh antigens, ABO antigens, transfusion reactions, delayed hemolytic, febrile nonhemolytic, hemolytic disease of the newborn; Microcytic anemias: iron deficiency, sideroblastic anemia, pyridoxine; Other anemias: PNH, megaloblastic anemia, hypersegmented neutrophils, oval macrocytes, orotic aciduria, aplastic anemia, pure red cell aplasia, myelophthisic anemia, microangiopathic anemia, schistocytes, porphyrias, lead; Polycythemia: relative, absolute, primary (P vera), secondary, appropriate, inappropriate, EPO; myelodysplastic syndromes, Pharmacology – drug induced hemolytic anemias
Practice of Medicine	anemia case (including hemoglobin, hematocrit, reticulocyte, oxygen, microcytic, macrocytic, normocytic, erythropoiesis, erythropoietin, oxy-hemoglobin curve, iron, folate, B12, aplastic anemia, myelodysplasia, hemolytic anemia)
Year 3	
Family Medicine Clerkship	evaluation for anemia
Internal Medicine Clerkship	range of anemias addressed in hematology/oncology didactic conference
Pediatrics Clerkship	Lead toxicity
OB/GYN Clerkship	anemia due to abnormal uterine bleeding
RPCT Clerkship	evaluation and treatment of anemias, anemia in colon cancer
Surgery Clerkship	anemia due to surgical blood loss
Year 4	
Keystone Course	Blood transfusion