

Course number	Name of the Course			Japanese Name	
HE40131	Clinical Hematology			血液検査学	
Class	Unit	Module	Week	Time	Room
3,4 year	2 unit	Autumn A B	Mon	4&5 hour	4B-116
Instructors (Office・Tel・email・Office hour)					
Haruhiko NINOMIYA, MD, PhD (4B-406) (pm 1:00 - pm 5:00)					
Objectives					
<ul style="list-style-type: none"> ○ To understand the components & physiological function of blood; the mechanism of hematopoiesis and its regulation. ○ To understand the pathophysiology of major hematological disorders. ○ To understand the principles and methods of tests required for diagnosis of hematological disorders. 					
Language: <input checked="" type="checkbox"/> / <input type="checkbox"/> Japanese、 <input checked="" type="checkbox"/> English、 <input type="checkbox"/> Bilingual					
	Date	Name of instructor	Lecture outline		
1	10/1	H. Ninomiya	①Introduction; ②Cellular homeostasis; ③Structure and function of hematopoietic organs		
2	10/9(Tue)	H. Ninomiya	④Hematopoiesis; ⑤The erythrocyte; ⑥Hemoglobin		
3	10/15	H. Ninomiya	⑦Granulocytes and monocytes; ⑧Lymphocytes; ⑨The platelet		
4	10/22	H. Ninomiya	⑩The complete blood count and peripheral blood smear evaluation ⑪ Introduction to anemia ⑫ Anemias of disordered iron metabolism and heme synthesis		
5	10/29	H. Ninomiya	⑬ Hemoglobinopathies: qualitative defects ⑭ Thalassemia ⑮ Megaloblastic and nonmegaloblastic macrocytic anemias		
6	11/12	H. Ninomiya	⑯ Hypoproliferative anemias ⑰ Hemolytic anemia: membrane defects ⑱ Hemolytic anemia: enzyme deficiencies		
7	11/19	H. Ninomiya	⑲ Hemolytic anemia: immune anemias ⑳ Hemolytic anemia: nonimmune defects 21) Nonmalignant disorders of leukocytes: granulocytes and monocytes		
8	11/26	H. Ninomiya	22) Nonmalignant lymphocyte disorders 23) Introduction to hematopoietic neoplasms 24) Myeloproliferative neoplasms		
9	12/3	H. Ninomiya	25) Myelodysplastic syndromes 26) Acute myeloid leukemias 27) Precursor lymphoid neoplasms		
10	12/10	H. Ninomiya	28) Mature lymphoid neoplasms 29) Hematopoietic stem cell transplantation		
Levels for credit needed	moderate				
Text and materials	Clinical Laboratory Hematology (McKenzie & Williams) 3 rd ed. (Pearson)				
Grade evaluation	End-term examination				
Remarks : e-learning assist via "manaba" (https://manaba.tsukuba.ac.jp/) @Auto-video recording system-equipped classroom (4B-209)					