

## Course Syllabus of Field training in Hematology

Faculty : Faculty of Medicine and Health Sciences.

Department: Health science.

Program : Bachelor in Medical laboratory

### I. General information about the course instructor :

Name	Dr. Abdulrazzaq Othman Alagbare	Office Hours(3 Hours Weekly )					
Location & phone number	Sanaa 777182124	Sat	Sun	Mon	Tue	Wed	Thu
Email	Alagbariz@yahoo.com	1		1		1	

### II. General information about the course :

1.	Course Title:	Field training in Hematology				
2.	Course Code and Number :	BML485				
3.	Credit Hours	Lecture	Seminar/Tutorial	Practical	Training	Total
				2		2
4.	Study Level and Semester:	4 <sup>th</sup> year/ 2 <sup>nd</sup> semester				
5.	Pre-requisites :	None				
6.	Co-requisites :	None				
7.	Program in which the course is offered	Bachelor in Medical laboratory				
8.	Teaching Language:	English				
9.	Study System :	Semester based				
10.	Prepared by :	Dr.Abdulrazzaq Othman Alagbare				

### III. Course Description :

This field training in hematology provides medical laboratory students training in different hospital's laboratories to provide them training in the different diagnostic test for the different blood diseases and interpretation of results of those diagnostic tests. Also to provide training skills on blood banking and current blood bank practice, preparing reagents, evaluated the laboratory results. In addition allow them to communicate effectively with physicians, other health professionals patients and families as appropriate, across abroad range of socioeconomic and cultural backgrounds. The teaching strategies will include practical demonstrations, log book , small group discussion and assignment. The students will be evaluated through report, written exam and practical exam.

عميد الكلية:  
د. عبد الله المخلافي

رئيس القسم:  
د. عبد الحبيب ردمان

9 of 14

المراجع:  
د. محمد المريش  
د. محاهد نصاب

الموصف:  
د. عبد الرزاق الاعبري

#### IV. Course Aims: This course is aimed to:

1. Provide the students with the essential knowledge about the proper specimen collected, handling and labeling for blood disease investigation
2. Enable the students for preparing solutions for laboratory use
3. Making the student to perform hematological tests with precision, accuracy and reliability, for any tests of blood diseases manually and by blood cells analyzer
4. Practice on the microscope for evaluation of blood cells morphology normally and in diseases
5. Enhance the knowledge of the students about the most important process for blood banking works ,donor selection, tests, blood collection and compatibility tests and reporting of blood transfusion
6. Maintaining health and safety in a laboratory environment
7. Reporting the results properly

#### V. Course Intended Learning Outcomes (CILOs) :

at the end of this course the students must be able to:

1. Underline how specimen collected, handled and labeled properly and know the most important reagents for hematological uses; specimen transporting, handling, storage, holding etc.
2. Review the principles, application, interpretation and limitations of hematological tests in relation to clinical problems.
3. Summarize the most important process for blood banking works ,donor selection, tests, blood collection and compatibility tests and reporting of blood transfusion.
4. Analyze the results of blood tests of anemia, leukemia and coagulopathy.
5. Practice the routine tests for anemia, coagulopathy, and WBC disorders benign and malignant by classical methods investigation, CBC, blood film, cytochemical stains, blood banking process and compatibility tests.
6. Operate clinical/laboratory contact issues in transfusion safety including patient/specimen identification and diagnosis and management of adverse transfusion-related events.
7. Interpret laboratory data and test selection in relation to clinical problems also with laboratory organization and management, safety, equipment selection and maintenance, quality control, assurance and improvement.
8. Work in the automated area under appropriate scientific supervision etc.
9. Manage time efficiently for better achievement and communicate effectively with colleagues, supervisors and other health personnel by oral/written means.

#### VI. Training Course topics and sub-topics (theoretical and practical) with contact hours and alignment to CILOs

No.	Training Course Topics/Units	Sub-topics	No. of Weeks	Contact Hours
1	Reception	How to read orders and manage the patient movements	1	4
2	Blood collection	How collect the appropriate spacemen, using suitable anticoagulant and tubes.	1	4

		carry out bleeding time etc		
3	Blood film preparation and staining Sickling test preparation and evaluation Blood cells manual counting	Prepare blood film, reticulocyte preparation, thick film, thin film and stain its properly prepare some solutions for platelets, WBC, RBC counting uses of count chamber for different cells counting, calculating, and reporting results	2	8
4	Hemoglobin estimation, normal blood film inspection ESR	Hemoglobin estimation by Drabkin, uses a standard methods, uses of spectrophotometer, calculating and reporting the results Blood film inspection only the normal cases to recognize, what is normal cells and how reported as normal Preparing and doing ESR test, reporting result	2	8
5	Pathological blood film inspection and report writing	Inspection for different cases of pathological cases, such as IDA, ACD, sickle cell anemia, Cases of other blood diseases such as leukemia only ALL, AML, CLL, and CML as cells morphology classification and how reported carefully on the blood report	1	4
6	Working by blood cells analyzer Evaluation of parameters and resolve problems	Practice on the Blood cells analyzer, how calibrated and how operated properly during work, Uses of the instruments by running many specimens, observing the result, evaluating all CBC parameters, and discussing with the trainer if their sub steps to do additional tests like blood film or others	2	8
7	<ul style="list-style-type: none"> <li>Blood banking reports and documentation</li> <li>Donor selection</li> <li>Deferrals persons</li> </ul>	<ul style="list-style-type: none"> <li>Recognizing the most important reports and documents uses in the blood bank,</li> <li>How is the registration steps for donors and recipient</li> <li>The blood storage, etc</li> <li>To trained how the donor selected , co-operating with the physician , or others medical staff</li> <li>Observing how the donors managed and directed by the old staff</li> <li>Steps of blood collection, labeling, storage, .....etc</li> </ul>	1	4
8	<ul style="list-style-type: none"> <li>Blood collection steps</li> </ul>	Start... to collect blood from donors, and direct all the blood collection steps under	2	8

	<ul style="list-style-type: none"> <li>• Donors managements</li> <li>• Labeling</li> <li>• Storage of blood</li> </ul>	the observing of the trainer		
9	<ul style="list-style-type: none"> <li>• Donors and recipient tests</li> <li>• Blood cross matching methods <ul style="list-style-type: none"> <li>○ Immediate</li> <li>○ Coombs</li> </ul> </li> <li>• Reporting cross matching</li> <li>• How meet the blood transfusion reaction? <ul style="list-style-type: none"> <li>○ Hemolytic reaction</li> <li>○ Anaphylactic reaction</li> <li>etc</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Start to observe what tests must be do for donors before and post donation of blood</li> <li>• Tests for recipient</li> <li>• Observing and sharing in the blood cross matching tests</li> <li>• learn how to do it?</li> <li>• How reported and registered, all that under the observation of the trainer</li> </ul>	2	8
10	Final Exam		1	4
Total number of weeks and hours			15	60