هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد NCAAA T4 2020

Course Specifications

Course Title:	Clinical Practice Hematology
Course Code:	CLS 484
Program:	Bachelor of Science in Clinical Laboratory Science(BSCLS)
Department:	Clinical Laboratory Science (CLS)
College:	College of Applied Medical Sciences
Institution:	Shaqra University

Table of Contents

A. Course Identification

1. Credit hours:
2. Course type **a.** University ☐ College ☐ Department ✓ Others ☐ **b.** Required ✓ Elective ☐
3. Level/year at which this course is offered: 8th level/4th year
4. Pre-requisites for this course (if any)**:** CLS 352
5. Co-requisites for this course (if any)**:**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	15	33%
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**	30	67%

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	15 hours
2	**Laboratory/Studio**	30 hours
3	**Tutorial**	
4	**Others** (specify)	
	Total	45 hours

B. Course Objectives and Learning Outcomes

1. Course Description

Clinical Practice Hematology intends to orient students of the working system of routine and special hematology laboratory and blood bank, including preparing blood films, examining and understanding diagnostic tests for hematological benign and malignant/disorders and various activities in blood bank.

2. Course MainObjective

Provide knowledge in clinical experience and ethical attitude in Hematology practicing.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Demonstrate sufficient knowledge of etiology, clinical pictures ,diagnosis and differential diagnosis of common disease related to clinical hematology.	K1
1.2	Describe the principles and diagnostic utility of different hematological tests.	K1
1.3	Memorize the reference values of various hematologic parameters .	K1
2	**Skills :**	
2.1	Perform various hematological tests and predict expected results with ability to discuss and interpret results.	S2,S3
2.2	Evaluate errors or discrepancies in results during lab procedures and select corrective actions for problem solving.	S4
2.3	Use quality control and quality assurance measures .	S1
3	**Values:**	
3.1	Providing a comprehensive haematology laboratory service, including investigation and reporting of results.	C2
3.2	Show compliance to ethical and legal rules related to clinical practice.	C3
3.3	Work effectively in teams or groups.	C1

C. Course Content

No	List of Topics (Theory)	Contact Hours
1	Introduction to clinical practice hematology	1
2	Red Cell disorders :Iron deficiency anemia and Anemia of chronic disease	1
3	Red Cell disorders : Macrocytic Anemia and Hemoglobinopathies	1
4	Red Cell disorders : Thalassemias	1
5	Red Cell disorders : Hemolytic anemia	1
6	**Midterm Examination 1**	1
7	Myelodisplastic Syndrome	1
8	Myeloproliferative disorders	1
9	Lympholoproliferative disorders	1
10	Platelet disorders	1
11	Hereditary and acquired coagulation disorders	1
12	**Midterm Examination 2**	1
13	Thrombosis & Antithrombotic Therapy	1
14	Stem cell transplantation .	1
15	Cells in other body fluids. Blood bank overview .	1
16	Final Exam	
Total		15

No	List of Topics (Practical)	Contact Hours
1	Sample collection , processing and storage .	2
2	Complete blood count Principle and interpretation.	2
3	Blood film Staining, Differential Count, , and Interpretation	2
4	Hb electrophoresis	2
5	Osmotic fragility test	2
6	**Midterm Examination 1**	2
7	Bone marrow aspiration	2
8	Cytochemistry	2
9	Platelets aggregation Test	2
10	**Presentation**	2
11	Prothrombin time	2
12	**Midterm Examination 2**	2
13	APTT,TT.	2
14	Fibrin degradation products (FDPs) and D-dimer	2
15	Fibrinogen (Clauss Method)	2
16	Final Exam	
Total		30

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	TeachingStrategies	AssessmentMethods
1.0	**Knowledge and Understanding**		
1.1	Demonstrate sufficient knowledge of etiology, clinical pictures ,diagnosis and differential diagnosis of common disease related to clinical hematology.	▪ Lectures ▪ Class discussion ▪ Practical procedures	▪ Quizzes ▪ Exams ▪ Lab reports
1.2	Describe the principles and diagnostic utility of different hematological tests.	▪ Lectures ▪ Class discussion ▪ Practical procedures	▪ Quizzes ▪ Exams ▪ Lab reports
1.3	Memorize the reference values of various hematologic parameters .	▪ Lectures ▪ Class discussion ▪ Practical procedures	▪ Quizzes ▪ Exams ▪ Lab reports

Code	Course Learning Outcomes	TeachingStrategies	AssessmentMethods
2.0	**Skills**		
2.1	Perform various hematological tests and predict expected results with ability to discuss and interpret results.	Practical procedures (group work)	• Quizzes • Exams • Lab reports • Case studies. • Assignment
2.2	Evaluate errors or discrepancies in results during lab procedures and select corrective actions for problem solving.	▪ Lectures ▪ Practical procedures ▪ **Case studies**	
2.3	Assess laboratory safety measures.	▪ Lectures ▪ Practical procedures	
3.0	**Values**		
3.1	Providing a comprehensive haematology laboratory service, including investigation and reporting of results.	Lab reports	• Oral questions • Evaluation of Presentations
3.2	Show compliance to ethical and legal rules related to clinical practice.	Lab report . Hospital visit	
3.3	Work effectively in teams or groups.	Practical procedures (work group), Group presentation	

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Midterm Exam 1 (Theory & Practical)	6th	20%
2	Midterm Exam 2 (Theory & Practical)	12th week	20%
3	Quizzes	1-15th week	5%
4	Assignment	1-15th week	5%
5	Lab reports	16thweek	5%
6	Presentation	16thweek	5%
7	Final Exam Theory and Practical	16thweek	40%
	Total		100 %

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	- Dacie & Lewis Practical Haematology . - Wintrobe's Clinical Hematology .John P. Greer MD and Daniel A. Arber - Blood Transfusion in Clinical Practice
Essential References Materials	- Clinical Hematology Atlas , Bernadette F. Rodak MS MLS \ -Basic & Applied Concepts of Blood Banking and Transfusion Practices ,Kathy D. Blaney MS BB(ASCP)SBB\ -Williams in Haematology .- Hoffman Haematology Basic Principles &Practice. - Oxford Handbook of Clinical Haematology.
Electronic Materials	- Journal of clinical haematology - Midline Pubmed, Science life,.org
Other Learning Materials	-.http://www.medscape.com - http://www.pubmed.com - http://sciencedirect.com

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Lecture rooms. • Hematology lab.
Technology Resources (AV, data show, Smart Board, software, etc.)	• Computers • Data show
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	• Hematology Analyzer • Electrophoresis instrument • Centrifuge • Hematocrit centrifuge • Coagulometer • Reagents & Chemicals

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Regular evaluation of the theoretical and practical parts of the course to identify the weaknesses areas	Teaching staff	Course report
Confidential completion of standard course evaluation questionnaire	Students	Course Evaluation Template
Regular annual evaluation of the program	Head of the Department Quality Committee	Annual program report

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes,Quality oflearning resources, etc.)
Evaluators (Students,Faculty, Program Leaders,Peer Reviewer, Others (specify)
Assessment Methods(Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department of Clinical Laboratories Council
Reference No.	
Date	15/9/2020