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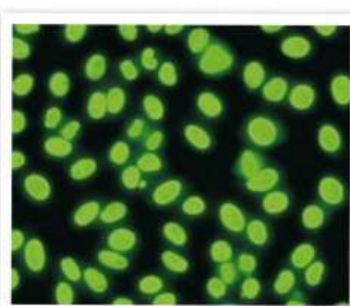
Faculty of Medicine  
Clinical Pathology Department

# Clinical Pathology logbook

For

Candidates of Master Degree  
of Clinical Pathology

2022-2023





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Name.....  
Date of birth.....  
Address.....  
Place of work.....  
Telephones.....  
Mobile phone(s).....  
E mail.....



Name of hospital	Period of work	Hospital director signature

### Academic Information

MBBCh...../...../..... University Grade .....

Grade of Internal Medicine course on graduation .....

Others...../...../..... University

...../...../..... University



### **Aim of the activities book**

To provide one source of evidence for the assessment committee that you attained the desired level of competency required to gain the award.

In this book you will document all practical, academic and other experiences and skills you attained during your training.

### **Sections of the book**

#### **For each module / course / rotation**

You should fill the following sections:-

#### **1- laboratory Skills log**

- 1- You will find a list for required laboratory skills and level of desired performance you should achieve at the end of training.
- 2- You will find empty tables to write down the laboratory skills, your level of participation and date and signature of supervisor.

#### **2- Rotation / attendance proof**

You should have evidence of achievement the required training hours within each module.

**For the whole program fill the following sections.**

#### **1- Academic activities**

- A- Document all academic activities e.g. lecture, journal clubs, workshops, conference, services attended. This documentation should include the level of participation " attendance, preparation, presentation,....."



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## 2- Academic achievements

A- Document all outcomes you achieved in the field of:-

- Audit participation
- Research "clinical trial" participation.
- Evidence- based medicine "generation of guidelines" protocols

## 3- Formative assessment log

This document all types of formative assessment attended e.g.:-

- Mini clinical examination
- Quiseses

### Program aims:

**1/1 To enable candidates to keep with international standards of clinical Pathology** by teaching high level of laboratory skills, in addition to update medical knowledge as well as laboratory experience and competence in the area of clinical chemistry, hematology, immunology, microbiology, blood banking and emergency lab and enabling the candidates of making appropriate referrals to a sub- specialist

**1/2. To help candidates** develop an understanding of the appropriate use and interpretation of patient care tests in four sub-specialty areas of clinical pathology (clinical chemistry, hematology, immunology, and microbiology).

**1/3 To become familiar** with the consultation role of the clinical pathologist in patient care and research.

**1/4To provide candidates** with a glimpse of the current state of the art technology and equipment of laboratory testing in clinical chemistry, hematology, immunology, and microbiology.

**1/5 To introduce candidates** to the basics of scientific medical research.

**1/6 To provide the candidates** with master degree:

- Enabling them to start professional careers as specialists in Egypt.
- Making them recognized as specialists abroad.
- Enabling them to pursue higher studies and subspecialties.
- Enabling them to understand and get the best of published scientific research and do their own.
- Updating their knowledge and self learning.
- Fellow the ethical standard of medical and clinical practice of patient care and research work according to our local Ethical Committee.



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## Curriculum Structure:

Duration of program 36 months divided into

## Program Structure

### Program Time Table

Duration of program 3 years maximally 5 years divided into

#### ✚ Part 1

Program-related basic science courses and ILOs + elective courses

Students are allowed to set the exams of these courses after 18 months from applying to the M Sc degree according to departmental council agreement and rules.

#### ✚ Thesis

For the M Sc thesis;

MSc thesis subject should be officially registered within 6 months from application to the MSc degree, Discussion and acceptance of the thesis should not be set before 18 months from registering the M Sc subject;

It could be discussed and accepted before passing the second part of examination)

#### ✚ Part 2

Program –related speciality courses and ILOs

Students are not allowed to set the exams of these courses before 3 years from applying to the MSc degree.

**N.B. Fulfillment of the requirements in each course as described in the template and registered in the log book is a pre-request for candidates to be assessed and undertake part 1 and part 2 examinations.**



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## Master Degree of Clinical Pathology

### First Part:

Practice with the academic and clinical departments during years 1&2:

- **Course 1: Clinical Parasitology.**
- **Course 2: Principles of General and Clinical Microbiology.**
- **Course 3: Principles of General and Clinical Immunology.**
- **Course 4: Internal medicine.**

### Second Part:

Practice with the Clinical Pathology department during years 1&2&3:

- **Course 5: Clinical Pathology.**

Practice with the Clinical Pathology department in the 4 major modules

- **Clinical Chemistry**
- **Hematology**
- **Clinical Immunology.**
- **Clinical Microbiology.**



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# First Part

Practice with the academic and clinical departments during years 1&2 according to departmental council agreement and rules:

- **Course 1: Clinical Parasitology.**
- **Course 2: Principles of General and Clinical Microbiology.**
- **Course 3: Principles of General and Clinical Immunology.**
- **Course 4: Internal medicine.**





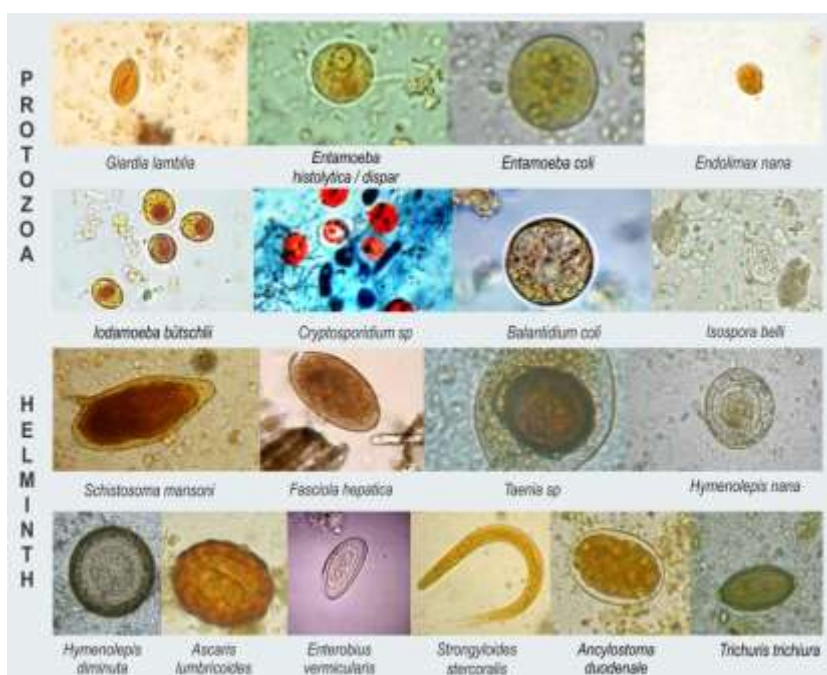
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# Course 1

## Clinical Parasitology



### Requirements

- ✚ Credit points: 2 credit points for didactic (lectures, seminars, tutorial).
- ✚ 2 credit points for clinical training.
- ✚ Minimal requirement: Achievement of at least 80% of didactics and clinical training.



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Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical Parasitology	1 CP Each topic = 0.1CP	Parasitology	<b>10 hours</b> <b>(Life cycle, Pathogenesis, and Laboratory diagnosis of : Helminthiasis)</b> <b>-Class Trematoda 4h</b> <ul style="list-style-type: none"> <li>Liver Flukes</li> <li>Intestinal Flukes</li> <li>Blood Flukes</li> <li>Lung Flukes</li> </ul> <b>- Class Cestoda 4h</b> <ul style="list-style-type: none"> <li>Taenia</li> <li>Echinococcus</li> <li>Hymenolepis</li> <li>Diphyllobothrium latum</li> </ul> <b>- Class Nematoda 2h</b> <ul style="list-style-type: none"> <li>Tissue</li> <li>Intestinal</li> </ul>	<b>50%</b> <b>Each topic represent 10% of didactics</b>
	1 CP Each topic = 0.1 CP		<b>10 hours (1h for each topic)</b> <b>(Life cycle, Pathogenesis, and Laboratory diagnosis of : Protozoa)</b> <ul style="list-style-type: none"> <li>Entamoeba</li> <li>Giardia</li> <li>Trichomonas</li> <li>Trypanosoma</li> <li>Leishmania</li> <li>Plasmodium</li> <li>Toxoplasma</li> <li>Cryptosporidium</li> <li>Balantidium Coli</li> <li>Babesia</li> </ul>	<b>50%</b> <b>10% of didactics for each topic</b>
Student signature			Principle coordinator signature	Head of the department signature

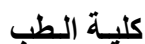


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Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
<b>Clinical training in clinical Parasitology</b>	<b>1 CP</b>	<b>Parasitology</b>	<p>*Attend at parasitology department for at least 30 hours (2h/day) within 2.5 weeks and practice the Laboratory diagnosis of Helminthiasis including;</p> <p><b>-Class Trematoda</b></p> <ul style="list-style-type: none"> <li>• Liver Flukes</li> <li>• Intestinal Flukes</li> <li>• Blood Flukes</li> <li>• Lung Flukes</li> </ul> <p><b>- Class Cestoda</b></p> <ul style="list-style-type: none"> <li>• Taenia</li> <li>• Echinococcus</li> <li>• Hymenolepis</li> <li>• Diphyllbothrium latum</li> </ul> <p><b>- Class Nematoda</b></p> <ul style="list-style-type: none"> <li>• Tissue</li> <li>• Intestinal</li> </ul>	<b>50%</b>
	<b>1 CP</b>		<p>*Attend at parasitology department for at least 30 hours (2h/day) within 2.5 weeks and practice the Laboratory diagnosis of Protozoa including ;</p> <ul style="list-style-type: none"> <li>• Entamoeba</li> <li>• Giardia</li> <li>• Trichomonas</li> <li>• Trypanosoma</li> <li>• Leishmania</li> <li>• Plasmodium</li> <li>• Toxoplasma</li> <li>• Cryptosporidium</li> <li>• Balantidium Coli</li> <li>• Babesia</li> </ul>	<b>50%</b>
Student signature			Principle coordinator signature	Head of the department signature

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## Course 2

# Principles of General and Clinical Microbiology



### Requirements

- ✚ Credit points: 3.5 credit points for didactic (lectures, seminars, tutorial).
- ✚ 1.5 credit points for clinical training.
- ✚ Minimal requirement: Achievement of at least 80% of didactic and clinical training in each year (training should be divided into 2 years for achievement of competency level and skills according to departmental council agreement).



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**Year 1; level I(2.45 credit point for didactics)**

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Principles of General and clinical microbiology	1.75 CP	Clinical Pathology, Microbiology Unit	17.5 hours <b>General microbiology 1.75h for each</b>	50% of didactics course
	0.175		a- Diagnostic techniques in microbiology & Sterilization	5%
	0.175		b- Collection of samples& Transportation of samples	5%
	0.175		c- Processing of samples& Rejection of samples	5%
	0.175		d- Antibiotic groups & drug resistant	5%
	0.175		e- Gram positive cocci and bacilli	5%
	0.175		f- Gram negative cocci, bacilli and coccobacilli	5%
	0.175		g- Anaerobic bacteria	5%
	0.175		h- Mycobacteria	5%
	0.175		i- Fastidious organisms	5%
	0.175		j- Spirochaetes	5%
	0.7 CP		<b>7 hours</b> <b>Medical mycology:1.75h for each</b>	<u>20% of didactics course</u>
	0.175		a- Basic mycology	5%
	0.175		b- Superficial and cutaneous Mycosis	5%
	0.175		c- Subcutaneous mycosis	5%
	0.175		d- Systemic mycosis	5%
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**Year 1; Level I**  
**(0.75 credit point for clinical training)**

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training Principles of General and clinical microbiology	0.45 CP	Clinical Pathology, Microbiology Unit	*Practice with mentioned practical skills below for one month in the Microbiology unit including; ➤ interpretation of test results and related laboratory investigations ➤ Log of practical skills as mentioned below	60% of course training in year 1
	0.225 CP		➤ Attend practical teaching for at least 2 hours /week for 4 weeks	30% of course training in year 1
	0.075 CP		➤ Formative assessment	10% of course training in year 1
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## Microbiology practical skills log in the first year

<b>1- Sampling and Specimen collection:</b> -Blood, Urine, Pus, Sputum, -Stool and biological fluid -Techniques -Precautions - Container	25 each ; i.e. Level C 3 Level B 2 Level A 20	<b>2- Transportation and Processing of Specimens:</b> -Blood, Urine, Pus, Sputum, Stool and biological fluids	25 each; i.e. Level C 3 Level B 2 Level A 20
<b>3-Media preparation</b> -Neutrient -Blood -Chocolate -MacConkey -Manittol- salt -Eosin Methylene Blue	25 each; i.e. Level C 3 Level B 2 Level A 20	<b>4- culture of different Specimens:</b> -Blood -CSF - Wound -Urine -Sputum -Stool -Biological fluid	25 each; i.e. Level C 3 Level B 2 Level A 20
<b>5-Staining procedures:</b> -Gram stain -Ziehl-Neelsen stain	25 each; i.e. Level C 3 Level B 2 Level A 20	<b>6-Isolation and identification of aerobic organisms</b>	30 each; i.e. Level C 3 Level B 2 Level A 25
<b>7- Culture of anaerobes:</b> -Techniques -Precautions - Containers	15 each; i.e. Level C 3 Level B 2 Level A 10	<b>8- Antibigram</b>	30 each; i.e. Level C 3 Level B 2 Level A 25

### \* Level of competency

C- Observation

B- Performance under supervision

A- Independent performance







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**Year 2; Level II**  
**(1.05 credit point for didactic)**

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Principles of General and clinical microbiology	<b><u>1.05 CP</u></b>	Clinical Pathology, Microbiology Unit	10.5 hours	<u>30% of didactics course</u>
	0.1		<b>Medical virology:</b>	
	0.1		a- General properties of viruses	2.86%
	0.1		b- DNA viruses	2.86%
	0.1		c- RNA viruses	2.86%
	0.1		d- Respiratory viruses	2.86%
	0.1		e- CNS viruses	2.86%
	0.1		f- GIT viruses	2.86%
	0.25		g- Hepatitis viruses	7.1%
	0.1		h- Exanthemas	2.86%
	0.1		i- Tumour viruses	2.86%
<b>Student signature</b>			<b>Principle coordinator signature</b>	<b>Head of the department signature</b>



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**Year 2; Level II**  
**(0.75 credit point for clinical training)**

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training of <b>Principles of General and clinical Microbiology</b>	0.45 CP	Clinical Pathology department Microbiology Unit	* Practice with mentioned practical skills below for at least one month in the Microbiology unit including; ➤ Interpretation of test results and related laboratory investigations. ➤ Log of practical skills as mentioned below.	60% of course training in year 2
	0.225 CP		➤ Attend practical teaching for at least 2 hours /week for 4 weeks.	30% of course training in year 2
	0.075 CP		➤ Formative assessment	10% of course training in year 2
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## Microbiology practical skills log in the second year

<b><u>1-Tuberculosis:</u></b> - Direct smear microscopy - Z-N preparation - Culture on L-J - Identification of strains - Interpretation - Drug susceptibility - New methods: PCR	35 each; i.e Level C 3 Level B 2 Level A 30	<b><u>2- Automation in Microbiology:</u></b> - Microscan -Bactic blood culture system	Level C 25 + interpret
<b><u>3-Viable urinary count:</u></b> - Calibrated loop - Pour plate method	25 each; i.e Level C 2 Level B 3 Level A 20	<b><u>4- Urine examination</u></b>	60 times; i.e Level C 5 Level B 5 Level A 50
<b><u>5- Stool examination:</u></b>	60 times; i.e Level C 5 Level B 5 Level A 50	<b><u>6- Mycology</u></b> - Staining - Culture	10; i.e Level A

### \* Level of competency

C- Observation

B- Performance under supervision

A- Independent performance









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## Formative assessment

Exam	Score	Grade*	Date	Signature

### \*Degree

- A- Excellent
- B- Very good
- C- Good
- D- Pass



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## Postgraduate student's program Rotation in training assessment

\* Name:

\* Period of training From:

To:

\* Site:

\*Rotation

General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6) (7)	strongly agree (7)
Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).						
Appraises evidence from scientific studies.						
Conduct epidemiological studies and surveys.						
Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.						



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General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6)	strongly agree (7)
Facilitate learning of students other health care professionals including their evaluation and assessment.						
Maintain therapeutic and ethically sound relationship with patients.						
Elicit information using effective nonverbal, explanatory, questioning, and writing skills.						
Provide information using effective nonverbal, explanatory, questioning, and writing skills.						
Work effectively with others as a member of a health care team or other professional group.						
Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.						
Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices.						



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General skills	could not judge (0)	strongly disagree(1)	(2 )	(3)	(4 )	(5)	(6)	
Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.								
Work effectively in relevant health care delivery settings and systems including good administrative and time management								
Practice cost-effective health care and resource allocation that does not compromise quality of care.								
Assist patients in dealing with system complexities.								



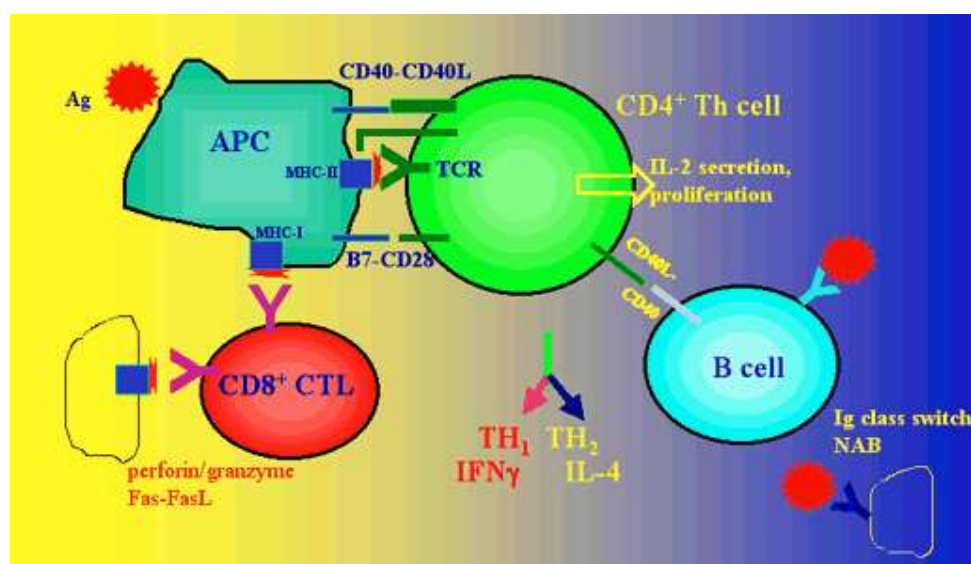
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## Course 3

# Principles of General and Clinical Immunology



## Requirements

- ✚ Credit points: 3.5 credit points for didactic (lectures, seminars, tutorial).
- ✚ 1.5 credit points for clinical training.
- ✚ Minimal requirement: Achievement of at least 80% of didactic and laboratory training in each year. Training should be divided into 2 years for achievement of competency level and skills according to departmental council agreement).



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**Year 1; level I (1.89 credit point for didactic)**

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Principles of General and Clinical Immunology	1.54CP	Clinical Pathology, Immunology unit	<b>15.4 hours</b>	44% of the didactics
	0.14 CP		<b>Basic Immunology:</b> <b>a- Introduction to immune system</b> - Cells of immune system - Antigens and receptors	4%
	0.28CP		<b>b- Innate Immune system</b> - Barrier to infection - cells of innate immune system - Innate immune function	8%
	0.98CP		<b>d- Adaptive Immune system</b> - Molecules of adaptive Immunity - Cells and organs - Lymphocyte Antigen receptor - Lymphocyte development - Lymphocyte Activation - Lymphocyte function - Regulation of Adaptive responses	28%
	0.14CP		<b>e- Immunological tolerance</b>	4%
	0.35CP		<b>3.5 hours</b> <b>Basic Immunology Techniques:</b> a- Safety and sampling b- Precipitation and agglutination c- Labeled Immunoassay d- Molecular diagnostics e- Flow cytometry. f- Automation in Immunology lab	10% of the didactics
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**Year 1; Level I (0.75 credit point for clinical training)**

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training of Principles of General and Clinical Immunology	0.45 CP	Clinical Pathology department Immunology Unit	* Practice with mentioned practical skills below for one month in the Immunology unit including; ➤ interpretation of test results and related laboratory investigations ➤ Log of practical skills as mentioned below	60% of course training in year 1
	0.225 CP		➤ Attend practical teaching for at least 2 hours /week for 4 weeks	30% of course training in year 1
	0.075CP		➤ Formative assessment	10% of course training in year 1
Student signature			Principle coordinator Signature	Head of the department signature



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## Immunology practical skills log in the first year

1- Specimen collection	20 times; i.e. Level C 5 Level B 5 Level A 10	2-Basic Laboratory Techniques: • Liquid handling using Pipettes • Balances • Centrifuges • Microscopy, types of microscopes	20 each; i.e. Level C 5 Level B 5 Level A 10
3- Lab safety: • Specimen Transport • Sample handling and storage in laboratory • Disposal of clinical waste • High Risk Samples	Level C 10 ( number)  Level B 20  Level A 20	4- serological tests by latex: • Widal test • Malta test • RF • ASOT • CRP	15 each; i.e. Level C 5 Level B 10
5- autoantibodies tests • ANA	60 times; i.e. Level C 10 Level B 10 Level A 40	6-auto antibodies • ASMA • AMA	40 each; i.e. Level C 5 Level B 5 Level A 30
7- Virological tests by AxSym or Architect • Anti-HIV • Anti-HCV • HBsAg • Anti-HBsAg(AUSAB) • HBeAg • Anti-HBeAg • Anti-cIgM • Anti-cIgG • HAV-IgM • HAV-IgG	30 runs; i. e. Level C 5 Level B 25	8- Virological tests by AxSym or Architect • Rubella IgM • Rubella IgG • CMV IgM • CMV IgG • Toxoplasma IgM • Toxoplasma IgG	30 runs; i. e. Level C 5 Level B 25
9-Interpretation of lab results mentioned above	200 times		

### \* Level of competency

C- Observation

B- Performance under supervision

A- Independent performance









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**Year 2; Level II**  
**(1.61 credit point for didactic)**

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Principles of General and Clinical Immunology	<b>1.61 CP</b>	Clinical Pathology, Immunology unit	<b>16.1 hours</b>	46% of didactics
	0.91 CP		<b>Clinical Laboratory Immunology:</b> a- Autoimmune diseases - Liver diseases - Endocrine diseases - Connective tissue diseases - Renal disease - Hematological diseases	26%
	0.14CP		b- Immunoproliferative disorders	4%
	0.14CP		c- Immune response, serological and molecular detection of Bacteria	4%
	0.14 CP		d- Immune response, serological detection of Parasitic and spirochete diseases	4%
	0.14 CP		e- Immune response, serological and molecular detection of Viral diseases- Hepatitis-EBV, Cytomegalo, rubella	4%
	0.14 CP		f- HIV disease	4%
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**Year 2; Level II**  
**(0.75 credit point for laboratory training)**

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training of Principles of General and Clinical Immunology	0.45 CP	Clinical Pathology, Immunology Unit	* Practice with mentioned practical skills below for one month in the Immunology unit including; ➤ interpretation of test results and related laboratory investigations ➤ Log of practical skills as mentioned below	60% of course training in year 2
	0.225 CP		➤ Attend practical teaching for at least 2 hours /week for 4 weeks	30% of course training in year 2
	0.075 CP		➤ Formative assessment	10% of course training in year 2
Student signature			Principle coordinator Signature	Head of the department signature



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## Immunology practical skills log in the second year

1- Serological tests by latex: <ul style="list-style-type: none"> <li>Widal test</li> <li>Malta test</li> <li>RF</li> <li>ASOT</li> <li>CRP</li> </ul>	5 times each: Level A	2- serological tests by nephelometry: <ul style="list-style-type: none"> <li>RF</li> <li>ASOT</li> <li>CRP</li> <li>C3, C4</li> <li>IgG, IgM, IgA</li> </ul>	15 each; i.e. Level C 5 Level B 10
3- auto antibodies tests <ul style="list-style-type: none"> <li>ANA</li> </ul>	60 Level A	4-autoantibodies <ul style="list-style-type: none"> <li>ASMA</li> <li>AMA</li> </ul>	30 each Level A
5-Separation of lymphocytes <ul style="list-style-type: none"> <li>Count of T cell</li> <li>Count of B cell</li> </ul>	5 each; i.e. Level C 3 Level B 2	6- Auto antibodies tests by Alegria <ul style="list-style-type: none"> <li>Anti-ds DNA</li> <li>Anti-thyroid antibodies</li> <li>Anti-cardiolipine</li> </ul>	20 each; i.e. Level C 5 Level B 15
7- Immunophenotyping by Flowcytometry	15 times Level C 3 Level B 2	8-Qualitative PCR	5 times Level C 3 Level B 2
9- Virological tests by AxSym or Architect <ul style="list-style-type: none"> <li>Anti-HIV</li> <li>Anti-HCV</li> <li>HBsAg</li> <li>Anti-HBsAg(AUSAB)</li> <li>HBeAg</li> <li>Anti-HBeAg</li> <li>Anti-cIgM</li> <li>Anti-cIgG</li> <li>HAV-IgM</li> <li>HAV-IgG</li> </ul>	30 runs Level B	10- Virological tests by AxSym or Architect <ul style="list-style-type: none"> <li>Rubella IgM</li> <li>Rubella IgG</li> <li>CMV IgM</li> <li>CMV IgG</li> <li>Toxoplasma IgM</li> <li>Toxoplasma IgG</li> </ul>	30 runs Level B
		11- ELISA tests and its types	Level C 2
12-Interpretation of lab results mentioned above	200 times		

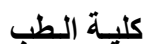
\* Level of competency

C- Observation

B- Performance under supervision

A- Independent performance





## Laboratory skills of log book

[illegible]



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### Formative assessment

Exam	Score	Grade*	Date	Signature

#### \*Degree

- A- Excellent
- B- Very good
- C- Good
- D- Pass





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## Postgraduate student's program Rotation in training assessment

\* Name:

\* Period of training From:

To:

\* Site:

\*Rotation

General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6) (7)	strongly agree (7)
Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).						
Appraises evidence from scientific studies.						
Conduct epidemiological studies and surveys.						
Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.						



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General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6)	strongly agree (7)
Facilitate learning of students other health care professionals including their evaluation and assessment.						
Maintain therapeutic and ethically sound relationship with patients.						
Elicit information using effective nonverbal, explanatory, questioning, and writing skills.						
Provide information using effective nonverbal, explanatory, questioning, and writing skills.						
Work effectively with others as a member of a health care team or other professional group.						
Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.						
Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices.						



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General skills	could not judge (0)	strongly disagree(1)	(2 )	(3)	(4 )	(5)	(6)	strongly agree (7)
Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.								
Work effectively in relevant health care delivery settings and systems including good administrative and time management								
Practice cost-effective health care and resource allocation that does not compromise quality of care.								
Assist patients in dealing with system complexities.								



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# Course 4

## Internal Medicine



### Requirements

- ✚ Credit points: 2 credit points for didactic (lectures, seminars, tutorial).
- ✚ 2 credit points for clinical training.
- ✚ Minimal requirement: Achievement of at least 80% of didactic and clinical training.



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Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Internal Medicine	2 CP	Internal Medicine	20 hours	100%
	0.3 CP		3 hours Kidney diseases: - Glomerulonephritis - Nephrotic Syndrome - Renal failure	15%
	0.1CP		1 hour Electrolyte	5%
	0.1CP		1 hour Acute coronary syndrome	5%
	0.25CP		2.5 hours - Diabetes Mellitus - Diabetes Insipidus	12.5%
	0.25CP		2.5 hours Liver diseases: - Hepatitis - Liver cirrhosis - Markers of HCC	12.5%
	0.75CP		7.5 hours Hematology: - Anemia - Leukemia - Lymphoma	37.5%
	0.25CP		2.5 hours Rheumatology - Systemic Lupus Erythematosus - Rheumatoid Arthritis	12.5%
Student signature			Principle coordinator signature	Head of the department signature



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Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Internal Medicine	2 CP	Internal Medicine	Attend 2 weeks in internal Medicine department	100%
	0.5 CP		15 hours Attend for 3days in nephrology unit , emergency units and practice with cases log as mentioned below 1- Kidney diseases: - Glomerulonephritis - Nephrotic Syndrome - Renal failure 2- Electrolyte. 3-Acute coronary syndrome	25%
	0.5 CP		15 hours Attend for 3days in GIT and hepatology ,and endocrinology units and practice with cases mentioned below - Hepatitis - Liver cirrhosis - Markers of HCC - Diabetes Mellitus - Diabetes Insipidus	25%
	0.75 CP		22.5 hours Attend for 4.5 days in hematology unit and practice with cases mentioned below in Hematology case log: - Anemia - Leukemia - Lymphoma	37.5%
	0.25 CP		7.5 hours Attend for 1.5 days in Rheumatology unit and practice with cases mentioned below in Rheumatology case log - Systemic Lupus - Erythematosis - Rheumatoid Arthritis	12.5%
Student signature			Principle coordinator Signature	Head of the department signature









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# Second Part

## Course 5: Clinical Pathology.

Practice with the Clinical Pathology department in the 4 major modules

- **Module (unit) 1 Clinical Chemistry**
- **Module (unit) 2 Hematology.**
- **Module (unit) 3 Clinical Immunology.**
- **Module (unit) 4 Clinical Microbiology.**



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# Course 5

## Clinical Pathology

### Requirements

- ✚ Credit points: 24 credit points for didactic (lectures, seminars, tutorial), 116 credit points for clinical training.
- ✚ It is divided into 4 modules as follows
  - ✚ Module (unit) 1 Clinical Chemistry
  - ✚ Module (unit) 2 Hematology.
  - ✚ Module (unit) 3 Clinical Immunology.
  - ✚ Module (unit) 4 Clinical Microbiology.
- ✚ Each module has practical and academic activities.
- ✚ N.B. Fulfillment of 80% of requirements in each module as described in the template and registered in the log book is a pre-request for candidates to be assessed and undertake part 2 examinations.



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# Speciality Course

Units' Titles' list	% from total Marks	Level (Year)	Core Credit points		
			Didactic	training	Total
1)Unit 1 "Clinical Chemistry."	35.8 %	1&2&3	11	39	50
2) Unit 2 " Hematology".	35.8 %	1&2&3	11	39	50
3) Unit 3"Clinical Immunology"	14.2%	3	1	19	20
4)Unit 4"Clinical Microbiology"	14.2 %	3	1	19	20
<b>Total No. of Units:</b>	<b>4</b>		<b>24</b>	<b>116</b>	<b>140</b>



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# Unit (Module) 1

## Clinical Chemistry



### Requirements

- ✚ Credit points: 11 credit points for didactic (lectures, seminars, tutorial).
- ✚ 39 credit points for clinical training.
- ✚ Minimal requirement: Achievement of at least 80% of didactic and clinical training in each rotation per year.



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### Year 1(10 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Chemistry unit	4 CP	Clinical Pathology , Chemistry unit	<ul style="list-style-type: none"> <li>➤ Practice with mentioned practical skills below for 2 month in the clinical chemistry unit including interpretation of test results and related laboratory investigations as mentioned below</li> <li>➤ Log of practical skills as mentioned below</li> </ul>	40 % of unit training in year 1
	1 CP		<ul style="list-style-type: none"> <li>➤ Attendance for at least 2 months in the emergency lab.</li> </ul>	10% of unit training in year 1
	0.5 CP		<ul style="list-style-type: none"> <li>➤ Attendance for at least one month in Outpatient clinic in Assuit university hospital or Pediatric or women health hospital)</li> </ul>	5% of unit training in year 1
	3 CP		<ul style="list-style-type: none"> <li>➤ Attend night shift in the emergency lab. (From 2pm to 8am) 4- 6/month for 12 months (according to No. of residents).</li> </ul>	30% of unit training in year 1
	1 CP		<ul style="list-style-type: none"> <li>➤ Attend practical teaching for at least 2 hours /week for 8 weeks</li> </ul>	10% of unit training in year 1
	0.5 CP		<ul style="list-style-type: none"> <li>➤ Formative assessment</li> </ul>	5% of unit training in year 1
Student signature			Principle coordinator Signature	Head of the department signature



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### Chemistry practical skills log in the first year

Practical skill	Number	Practical skill	Number
1- centrifuges -Balances - Pipettes -Spectrophotometry - pH meter	20 times each; <b>i.e</b> Level C 5 Level B 5 Level A 10	2- Quality control	20 times each; <b>i.e</b> Level C 5 Level B 15
3- specimen collection	50 times; <b>i.e.</b> Level C 10 Level B 10 Level A 30	4-Analysis of biological Fluids • Ascetic fluid • Pleural • CSF	50 times ; <b>i.e.</b> Level C 10 Level B 10 Level A 30
5-chemical analysis of • glucose • Urea • Creatinine • Creatinine clearance • Uric acid	100 times each; <b>i.e.</b> Level C 10 Level B 10 Level A 80	6- Automation in clinical chemistry	60 times; <b>i.e.</b> Level C 30 Level B 30
7- Lab safety	50 times; <b>i.e</b> Level C 25 Level B 25	8- Interpretation of lab results	200 times; <b>i.e.</b> Level C 100 Level B 100

#### \* Level of competency

C- Observation

B- Performance under supervision

A- Independent performance



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**Year 2(5.8 credit point for didactic)**

Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical Chemistry	5.8CP	Clinical Pathology, Chemistry unit	Year 2	52.6% of the didactics of Module one
	0.9 CP		9 hours	8.2% of didactics unit
	0.8CP		- Carbohydrates	
	0.4CP		8 hours	7.3% of didactics unit
	0.8CP		- Lipids	
	0.9 CP		4 hours	3.6% of didactics unit
			- Amino acids and proteins	
			8 hours	7.3% of didactics unit
			- Kidney	
			9 hours	8.2% of didactics unit
			- Acid base and electrolyte imbalance	
	0.4CP		4 hours	3.6% of didactics unit
			- Enzymes	
	0.5CP		5 Hours	4.5% of didactics unit
			- Liver	
	0.4CP		4 Hours	3.6% of didactics unit
			- Cardiac diseases and biomarkers	
	0.4 CP		4 hours	3.6% of didactics unit
			- Body fluids	
	0.3 CP		- Formative assessment	2.7% of didactics unit
Student signature			Principle coordinator Signature	Head of the department signature



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## Year 2(14.5 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Chemistry unit	7 CP	Clinical Pathology, Chemistry unit	<ul style="list-style-type: none"> <li>➤ Practice with mentioned practical skills below for 2 month in the clinical chemistry unit including interpretation of test results and related laboratory investigations mentioned below</li> <li>➤ Log of practical skills as mentioned below</li> </ul>	48.3% of unit training in year 2
	3 CP		<ul style="list-style-type: none"> <li>➤ Night shift in the emergency lab. (From 2pm to 8am) 4-6/month for 12 months(according to number. of residents).</li> </ul>	20.7% of unit training in year 2
	1 CP		<ul style="list-style-type: none"> <li>➤ Attendance of 2 month in the emergency lab</li> </ul>	6.9 % of unit training in year 2
	1 CP		<ul style="list-style-type: none"> <li>➤ Attendance of 2 month in the Outpatient clinic or Pediatric or women health hospital)</li> </ul>	6.9% of unit training in year 2
	2 CP		<ul style="list-style-type: none"> <li>➤ Practical teaching 2 hours /week for 8 weeks</li> </ul>	13.7% of unit training in year 2
	0.5 CP		<ul style="list-style-type: none"> <li>➤ Formative assessment</li> </ul>	3.5% of unit training in year 2
Student signature			Principle coordinator Signature	Head of the department signature





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### Chemistry practical skills log in the second year

Practical skill	Number	Practical skill	Number
1-chemical analysis of <ul style="list-style-type: none"> <li>• Na</li> <li>• K</li> <li>• Ca</li> <li>• Ph</li> <li>• Amylase</li> <li>• Lithium</li> <li>• Cl</li> <li>• Mg</li> <li>• Cardiac markers</li> <li>CK,CK-MB</li> <li>LDH</li> <li>Troponin</li> </ul>	100 times each;i.e. Level C 10 Level B 10 Level A 80	2- chemical analysis of <ul style="list-style-type: none"> <li>• Bilirubin (total and direct)</li> <li>• Total proteins</li> <li>• Albumin</li> <li>• ALT</li> <li>• AST</li> <li>• ALP</li> <li>• GGT</li> </ul>	40 times each: ;i.e. Level C 10 Level B 10 Level A 20
3- Automation in clinical chemistry	60 times; i.e. Level B	4-Analysis of biological Fluids <ul style="list-style-type: none"> <li>• Synovial fluid</li> <li>• Unknown body fluid</li> </ul>	50 times: ;i.e. Level C 10 Level B 10 Level A 30
5-Interpretation of lab results	200 times: ;i.e. Level B 100 Level A 100	6-Electrophoresis	20 times: ;i.e. Level C 10 Level B 10
7- Lab safety	50 times: ;i.e. Level B 40 Level A 10	8- Quality control	20 times each: ;i.e. Level B 10 Level A 10

#### \* Level of competency

C- Observation

B- Performance under supervision

A- Independent performance



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Year 3(5.2 credit point for didactic)

Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical Chemistry	5.2 CP	Clinical Pathology, Chemistry Unit	Year 3	47.3% of the didactics of Module one
	0.6 CP		6 hours - Minerals and bone metabolism	5.5% of didactics unit
	1CP		10 hours - Endocrinology	9.1% of didactics unit
	1CP		10 hours - Tumor markers	9.1% of didactics unit
	0.2CP		2 hours - Vitamins and trace elements	1.8% of didactics unit
	0.2CP		2 hours - Hb structure and iron metabolism	1.8% of didactics unit
	0.2CP		2 hours - Quality control	1.8% of didactics unit
	1.7CP		17hours - Instrumentations	15.5% of didactics unit
	0.3 CP		- Formative assessment	2.7 % of didactics unit
Student signature			Principle coordinator Signature	Head of the department signature



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### Year 3(14.5 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Chemistry unit	7 CP	Clinical Pathology, Chemistry unit	<ul style="list-style-type: none"> <li>➤ Practice with practical skills for at least 2 month in the clinical chemistry unit including interpretation of test results and related laboratory investigations as mentioned below.</li> <li>➤ Log of practical skills as mentioned below</li> </ul>	48.3% of unit training in year 3
	3 CP		<ul style="list-style-type: none"> <li>➤ Attend Night shift in the emergency lab. (From 2pm to 8am)4- 6/month for 12 months (according to no. of residents).</li> </ul>	20.7% of unit training in year 3
	1 CP		<ul style="list-style-type: none"> <li>➤ Attendance for at least at least 2 month in the emergency lab</li> </ul>	6.9 % of unit training in year 3
	1 CP		<ul style="list-style-type: none"> <li>➤ Attend of at least 2 month in the Outpatient clinic in Assuit university hospital or Pediatric or women health hospital)</li> </ul>	6.9% of unit training in year 3
	2 CP		<ul style="list-style-type: none"> <li>➤ Attend practical teaching 2 hours /week for at least 8 weeks</li> </ul>	13.7% of unit training in year 3
	0.5 CP		<ul style="list-style-type: none"> <li>➤ Formative assessment</li> </ul>	3.5% of unit training in year 3
Student signature			Principle coordinator Signature	Head of the department signature



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### Chemistry practical skills log in the third year

Practical skill	Number	Practical skill	Number
1- chemical analysis of <ul style="list-style-type: none"> <li>Cholesterol</li> <li>HDL-c</li> <li>LDL-c</li> <li>Triglycerides</li> </ul>	50 times each; i.e. Level C 10 Level B 10 Level A 30	2- Hormonal assay T3, T4 &TSH. Parathyroid hormones Testosterone ACTH,GH, LH, FSH, progesterone, estrogen& prolactin Cortisol, insulin	20 times;i.e. Level C 15 Level B 5
3- Tumor markers <ul style="list-style-type: none"> <li>CEA</li> <li>Free PSA</li> <li><math>\alpha</math>-fetoprotein</li> <li>CA125</li> <li>CA19.9</li> <li>CA15.3</li> <li>Free <math>\beta</math> subunit</li> </ul>	20 times each;i.e. Level C 5 Level B 15	4-Interpretation of lab results	200 times: ;i.e. Level A
		5- Glycated Hb(Hb A <sub>1c</sub> ) Microalbumin	30 times each: ;i.e. Level C 10 Level B 20
6- Automation in clinical chemistry	70 times; i.e. Level B	7-Electrophoresis	20 times: ;i.e. Level A
8- Quality control	20 times: ;i.e. Level A	9- Lab safety	20 times ; i.e. Level A

#### \* Level of competency

C- Observation

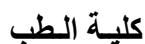
B- Performance under supervision

A- Independent performance





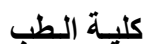




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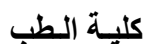


## **Module 1 : Clinical chemistry (Second year)**

### **Laboratory skills of log book**

[illegible]



[illegible]















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### Night Shift at emergency Lab

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		
17			18		
19			20		
21			22		
23			24		
25			26		
27			28		
29			30		
31			32		
33			34		
35			36		
37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at emergency Lab

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		
17			18		
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25			26		
27			28		
29			30		
31			32		
33			34		
35			36		
37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at emergency Lab

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		
17			18		
19			20		
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25			26		
27			28		
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31			32		
33			34		
35			36		
37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at emergency Lab

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		
17			18		
19			20		
21			22		
23			24		
25			26		
27			28		
29			30		
31			32		
33			34		
35			36		
37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at emergency Lab

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		
17			18		
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23			24		
25			26		
27			28		
29			30		
31			32		
33			34		
35			36		
37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at emergency Lab

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
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45			46		
47			48		



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### Formative assessment

Exam	Score	Grade*	Date	Signature

#### \*Degree

- A- Excellent
- B- Very good
- C- Good
- D- Pass



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## Postgraduate student's program Rotation in training assessment

\* Name:

\* Period of training From:

To:

\* Site:

\*Rotation

General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6) (7)	strongly agree (7)
Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).						
Appraises evidence from scientific studies.						
Conduct epidemiological studies and surveys.						
Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.						





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General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6)	strongly agree (7)
Facilitate learning of students other health care professionals including their evaluation and assessment.						
Maintain therapeutic and ethically sound relationship with patients.						
Elicit information using effective nonverbal, explanatory, questioning, and writing skills.						
Provide information using effective nonverbal, explanatory, questioning, and writing skills.						
Work effectively with others as a member of a health care team or other professional group.						
Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.						
Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices.						



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General skills	could not judge (0)	strongly disagree(1)	(2 )	(3)	(4 )	(5)	(6)	strongly agree (7)
Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.								
Work effectively in relevant health care delivery settings and systems including good administrative and time management								
Practice cost-effective health care and resource allocation that does not compromise quality of care.								
Assist patients in dealing with system complexities.								



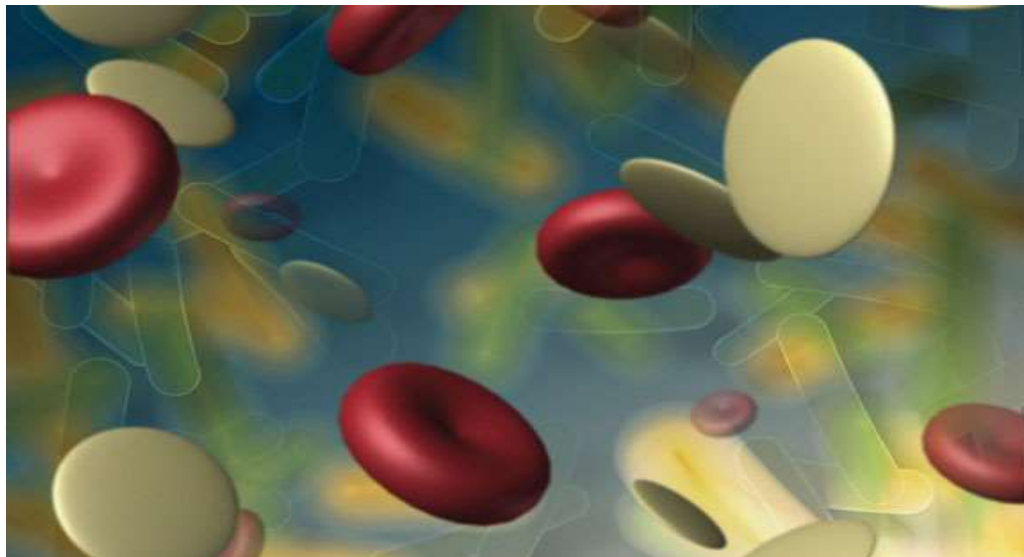
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# Unit (Module) 2

## Hematology



### Requirements

- ✚ Credit points: 11 credit points for didactic (lectures, seminars, tutorial).
- ✚ 39 credit points for clinical training.
- ✚ Minimal requirement: Achievement of at least 80% of didactic and clinical training in each rotation per year.



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**Year 1(0.6 credit point for didactic)**

Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Hematology	0.6 CP	Clinical Pathology, Hematology unit	Year 1	5.4 % of the didactic of unit 2
	0.2 CP 0.2 CP 0.1 CP 0.1 CP		6 hours -CBC report & interpretation - Blood grouping - Serology -Principles of hemostasis (screening tests)	1.8% 1.8% 0.9% 0.9%
Student signature			Principle coordinator Signature	Head of the department signature



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### Year 1 (10 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Hematology unit	4 CP	Clinical Pathology, Hematology unit	<ul style="list-style-type: none"> <li>➤ Practice with practical skills for 2 month in the hematology unit including interpretation of test results and related laboratory investigations as mentioned below</li> <li>➤ Log of practical skills as mentioned below</li> </ul>	40% of unit training in year 1
	1 CP		<ul style="list-style-type: none"> <li>➤ Attend for at least 2 months in the Blood bank</li> </ul>	10% of unit training in year 1
	0.5 CP		<ul style="list-style-type: none"> <li>➤ Attend for at least one month in Outpatient clinic lab in Assuit university hospital or pediatric or women health hospital.</li> </ul>	5% of unit training in year 1
	3 CP		<ul style="list-style-type: none"> <li>➤ Attend night shift in the Blood bank. (From 2pm to 8am) 4-6/month for 12 month (according to No. of residents).</li> </ul>	30% of unit training in year 1
	1 CP		<ul style="list-style-type: none"> <li>➤ Attend practical teaching 2 hours /week for at least 8 weeks</li> </ul>	10% of unit training in year 1
	0.5 CP		<ul style="list-style-type: none"> <li>➤ Formative assessment</li> </ul>	5% of unit training in year 1
Student signature			Principle coordinator Signature	Head of the department signature



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### Hematology practical skills log in the first year

Practical skill	Number	Practical skill	Number
1- Sampling & Blood handling & donation - Techniques - Precautions -Anticoagulants	20 times each; <b>i.e.</b> Level C 5 Level B 5 Level A 10	2- blood banking • ABO grouping • RH typing • Cross matching • Coomb's test	70 times each; <b>i.e.</b> Level C 5 Level B 5 Level A 60
3- Reticulocyte staining & counting	20 times; <b>i.e.</b> Level C 5 Level B 5 Level A 10	4- ESR	20 times; <b>i.e.</b> Level C 5 Level B 5 Level A 10
5- Automated blood counting & Interpretation	30 times; <b>i.e.</b> Level C 5 Level B 5 Level A 20	6- blood parasites	15 times; <b>i.e.</b> Level C 5 Level B 5 Level A 5
7- Investigations of anemia's: 1) Iron profile 2) Osmotic fragility test 3) Screening test for G6PD deficiency 4) Sickling test 5) Hb F & A2 estimation 6) Hb electrophoresis	10 each; <b>i.e.</b> Level C 10	8- screening tests of hemostasis: • Bleeding time • PT& INR • PTT	15 each; <b>i.e.</b> Level C 5 Level B 5 Level A 5
9- Bone marrow - Aspiration	10 times; <b>i.e.</b> Level C 5 Level B 5		

#### \* Level of competency

C- Observation

B- Performance under supervision

A- Independent performance



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### Year 2(6.5 credit point for didactic)

Name of the Unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Hematology	6.5 CP	Clinical Pathology, Hematology unit	Year 2	59.1 % of the didactic of unit 2
	<b>0.9 CP</b>		9 hours <b>General hematology</b>	8.2% of didactics unit
	0.2 CP		-Automated blood counts	
	0.2 CP		-Quality management	
	0.1 CP		-Cell biology	
	0.2 CP		-General aspect of hematological malignancy	
	0.2 CP		-B.M. transplantation	
	<b>2.6 CP</b>		26 hours <b>RBCs disorders</b>	23.6%
	0.6 CP		- Erythropoiesis	
			- Classification of anemia	
			- Disorders of iron metabolism	
			* IDA	
			* Iron overload	
	1.2 CP		- Pathogenesis and Classification of hemolytic anemia	
			- Disorders of RBC membrane	
			- Disorders of RBC metabolism	
			- Disorders of Hb synthesis	
			- Acquired hemolytic anemia	
	0.8 CP		- Macrocytic anemia	
			-Aplastic anemia (inherited and acquired)	
			- Dyserythropoiesis	
			-Anemia of chronic diseases	



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Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Hematology	6.5CP	Clinical Pathology, Hematology unit	Year 2	59.1 % of the didactic of unit 2
	2.6 CP		26 hours <b>WBCs disorders</b>	23.6% of didactics unit
	0.3 CP		- Granulopoiesis and granulocyte non-neoplastic disorders	
	0.3 CP		- Lymphopoiesis and lymphocyte non-neoplastic disorders	
	0.5 CP		- Metabolic disorders * Lysosomal storage disease * Amyloidosis	
	1.5CP		- Disorders of the spleen	
			- Acute leukemia	
			- MDS	
			-MPD	
			- Lymphoproliferative disorders	
			-Plasma cell dyscrasias.	
	0.4 CP		- Formative assessment	3.7%
Student signature			Principle coordinator signature	Head of the department signature





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### Year 2(14.5 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Hematology unit	7 CP	Clinical Pathology, Hematology unit	<ul style="list-style-type: none"> <li>➤ Practice with practical skills for at least 2 months in the Hematology unit including interpretation of test results and related laboratory investigations as mentioned below</li> <li>➤ Log of practical skills as mentioned below</li> </ul>	48.3% of unit training in year 2
	3 CP		<ul style="list-style-type: none"> <li>➤ Attend night shift in the Blood bank (From 2pm to 8am) 4-6/month for 12 months(according to No. of residents).</li> </ul>	20.7% of unit training in year 2
	1 CP		<ul style="list-style-type: none"> <li>➤ Attend for at least 2 months in the Blood bank</li> </ul>	6.9 % of unit training in year 2
	1 CP		<ul style="list-style-type: none"> <li>➤ Attend for at least one month in the Outpatient clinic in Assuit university hospitals or Pediatric or women health hospital)</li> </ul>	6.9% of unit training in year 2
	2 CP		<ul style="list-style-type: none"> <li>➤ Attend practical teaching 2 hours /week for at least 8 weeks</li> </ul>	13.7% of unit training in year 2
	0.5 CP		<ul style="list-style-type: none"> <li>➤ Formative assessment</li> </ul>	3.5% of unit training in year 2
Student signature			Principle coordinator Signature	Head of the department signature



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Hematology practical skills log in the second year			
Practical skill	Number	Practical skill	Number
1- CBC (Manual) Hb estimation, RBC count Hematocrite, T.L.C., Platelets, counts Total differential counts	20 times each; <b>i.e.</b> Level C 5 Level B 5 Level A 10	2-Bone Marrow • Aspiration  • Trephine Biopsy	15 times each; <b>i.e.</b> Level B 5 Level A 10  Level C 15
3- Investigations of anemia's: 1) Iron profile 2) Osmotic fragility test 3) Screening test for G6PD deficiency 4) Sickling test 5) Hb F & A2 estimation 6) Hb electrophoresis	16 times each; <b>i.e.</b> Level B 6 Level A 10	4- blood transfusion 1- Red cell wash 2- Separation of components - Manual - automated	30 times each; <b>i.e.</b> Level C 5 Level B 5 Level A 20
5-screening tests of hemostasis: • Thrombin Time • Fibrinogen assay  • FDP	9 each; <b>i.e.</b> Level C 3 Level B 3 Level A 3  Observe & interpret	6- coagulation factors   - vWF assay	9 times each; <b>i.e.</b> Level C 3 Level B 3 Level A 3  Interpret
7- Automated blood counting & interpretation	30 times each; <b>i.e.</b> Level B 5 Level A 25	8- Blood banking • Ab screening & identification • Storage of blood	20 times each; <b>i.e.</b> Level C 5 Level B 5 Level A 10

\* **Level of competency**

C- Observation

B- Performance under supervision

A- Independent performance



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Year 3(3.9 credit point for didactics)

Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Hematology	3.9 CP	Clinical Pathology, Hematology unit	Year 3	35.5% of the didactics unit 2
	2.6 CP		26 hours	23.6% of the didactics unit
	0.2 CP		<b>Hemostasis</b>	
	1 CP		- Normal hemostasis - diagnostic approach to bleeding disorders	
	0.6 CP		- Quantitative platelet defects (ITP,TTP,HUS) - Qualitative platelet defects (inherited& acquired)	
	0.8 CP		- coagulation bleeding disorders (inherited & acquired)  - Fibrinolysis and its disorders - Vascular bleeding diseases - Thrombophilia -Anticoagulant therapy	
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Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Hematology	3.9 CP	Clinical Pathology, Hematology unit	Year 3	35.5% of the didactic of unit 2
	<u>1.1 CP</u>		<b>11 hours</b>	10% of the didactics unit
	0.6 CP		<b>Blood Bank</b>	
	0.2 CP		- Blood transfusion *Blood donation & collection *Blood component preparation	
	0.2 CP		- Complication of blood Transfusion - Blood component therapy *stem cell transfusion therapy	
	0.1CP		- Therapeutic plasma exchange - Hemolytic disease of newborn	
	0.2 CP		- Formative assessment	1.9%
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Year 3(14.5credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Hematology unit	7 CP	Clinical Pathology, Hematology unit	<ul style="list-style-type: none"> <li>➤ Practice with practical skills for 2 month in the Hematology unit including interpretation of test results and related laboratory investigations as mentioned below.</li> <li>➤ Log of practical skills as mentioned below</li> </ul>	48.3% of unit training in year 3
	3 CP		<ul style="list-style-type: none"> <li>➤ Attend night shift in the Blood bank (From 2pm to 8am) 4-6/month for 12 months (according to No. of residents).</li> </ul>	20.7% of unit training in year 3
	1 CP		<ul style="list-style-type: none"> <li>➤ Attend for at least one month in the Blood bank</li> </ul>	6.9 % of unit training in year 3
	1 CP		<ul style="list-style-type: none"> <li>➤ Attend for at least one month in the Outpatient clinic or Pediatric or women health hospital)</li> </ul>	6.9% of unit training in year 3
	2 CP		<ul style="list-style-type: none"> <li>➤ Attend Practical teaching 2 hours /week for at least 8 weeks</li> </ul>	12.8% of unit training in year 3
	0.5 CP		<ul style="list-style-type: none"> <li>➤ Formative assessment</li> </ul>	3.5% of unit training in year 3
Student signature			Principle coordinator Signature	Head of the department signature



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### Hematology practical skills log in third year

Practical skill	Number	Practical skill	Number
1- CBC (Manual) Hb estimation, RBC count Hematocrite, T.L.C., Platelets, counts Total differential counts , Blood smear staining and examination	20 times each;i.e Level C 5 Level B 5 Level A 10	2- Bone marrow • Trephine biopsy	20 times; i.e. Level C 5 Level B 5 Level A 10
3-Platelet function tests:	Level C 10 & interpret	4- blood transfusion 1- Red cell wash 2- Separation of components - Manual - automated	30 times each;i.e. Level C 5 Level B 5 Level A 20
5- Investigation of thrombophilia	Level C 5 & interpret	6- Case presentation	70 times each;i.e. Level C 5 Level B 5 Level A 60
7- Cytochemical staining: • Myeloperoxidase • Sudan black • PAS • NAP • Acid Phosphatase • Esterase	10 each;i.e. Level C 2 Level B 3 Level A 5	8- Investigations of anemia's: 1) Iron profile 2) Osmotic fragility test 3) Screening test for G6PD deficiency 4) Sickling test 5) Hb F &A2 estimation 6) Hb electrophoresis	16 times each;i.e. Level A 16
9- Advanced techniques - Flow cytometry	Level C 5 + interpret		

#### \* Level of competency

C- Observation

B- Performance under supervision

A- Independent performance







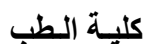










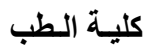


## Module 2 : Hematology (Third year)

### Laboratory skills of log book

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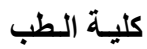
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### Laboratory Rotation, Outpatient clinic, and Night Shift

## Laboratory Rotation

[illegible]





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## Outpatient clinic

[illegible]



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### Night Shift at Blood Bank

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		
17			18		
19			20		
21			22		
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27			28		
29			30		
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35			36		
37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at Blood Bank

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		
17			18		
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25			26		
27			28		
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37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at Blood bank

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
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11			12		
13			14		
15			16		
17			18		
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35			36		
37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at Blood Bank

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
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37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at Blood Bank

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
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9			10		
11			12		
13			14		
15			16		
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37			38		
39			40		
41			42		
43			44		
45			46		
47			48		



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### Night Shift at Blood bank

	Date	Signature of supervisor		Date	Signature of supervisor
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		
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19			20		
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39			40		
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47			48		



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### Formative assessment

Exam	Score	Grade*	Date	Signature

**\*Degree**

- A- Excellent
- B- Very good
- C- Good
- D- Pass





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## Postgraduate student's program Rotation in training assessment

\* Name:

\* Period of training From:

To:

\* Site:

\*Rotation

General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6)	strongly agree (7)
Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).						
Appraises evidence from scientific studies.						
Conduct epidemiological studies and surveys.						
Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.						



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General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6)	strongly agree (7)
Facilitate learning of students other health care professionals including their evaluation and assessment.						
Maintain therapeutic and ethically sound relationship with patients.						
Elicit information using effective nonverbal, explanatory, questioning, and writing skills.						
Provide information using effective nonverbal, explanatory, questioning, and writing skills.						
Work effectively with others as a member of a health care team or other professional group.						
Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.						
Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices.						



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General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)		(4 ) (5)		(6)	strongly agree (7)
			(2 )	(3)	(4 )	(5)	(6)	
Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.								
Work effectively in relevant health care delivery settings and systems including good administrative and time management								
Practice cost-effective health care and resource allocation that does not compromise quality of care.								
Assist patients in dealing with system complexities.								



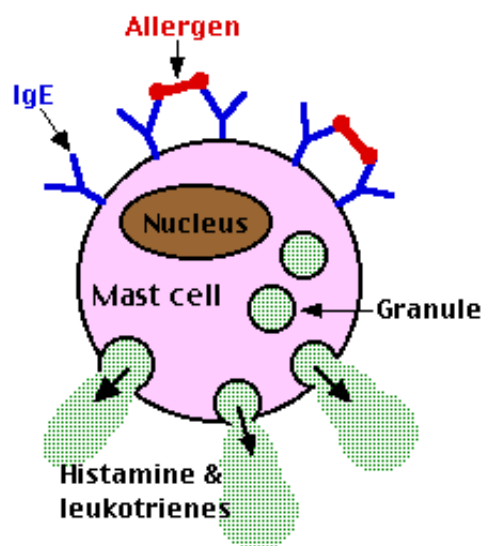
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# Unit (Module) 3

## Clinical Immunology



### Requirements

- ✚ Credit points: 1 credit point for didactic (lectures, seminars, tutorial).
- ✚ 19 credit points for clinical training.
- ✚ Minimal requirement: Achievement of at least 80% of didactics and clinical training.



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**Year 3**  
**(1 credit point for didactic)**

Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
clinical immunology	1 CP	Clinical Pathology, Immunology Unit	10 hours	4.2% of the total didactic course
	0.2		2 Hours - Hypersensitivity and allergy	20% of didactics unit
	0.4		4 Hours - Congenital Immunodeficiency	40% of didactics unit
	0.2		2 Hours - Tumor Immunology	20% of didactics unit
	0.2		2 Hours - Transplantaion Immunology	20% of didactics unit
Student signature			Principle coordinator Signature	Head of the department signature



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### Year 3(19 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Immunology unit	13 CP	Clinical Pathology department Immunology Unit	*Practice with practical skills for at least one month in the Immunology unit including; ➤ interpretation of test results and related laboratory investigations as mentioned below  ➤ Log of practical skills as mentioned below	68.4% of unit training
	4 CP		➤ Attend practical teaching 2 hours /week for at least 4 weeks	21.1% of unit training
	2 CP		➤ Formative assessment	10.5% of unit training
Student signature			Principle coordinator Signature	Head of the department signature



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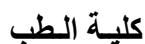
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## Immunology practical skills log in the third year

Practical skill	Number	Practical skill	Number
1-Separation of lymphocytes - Count of T cell - Count of B cell	5 each;i.e. Level B 2 Level A 3	2- Serological test by nephelometry : - C3,C4 - IgM - IgG - IgA	30 each;i.e. Level B 10 Level A 20
3- Immunophenotyping by Flowcytometry	5 each;i.e. Level B 2 Level A 3	4- Qualitative PCR	5 times;i.e. Level C 1 Level B 4
5-Quantitative PCR - Real time PCR	Level C 5	6- Interpretation of lab results	300 times

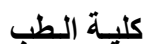
### \* Level of competency

- C- Observation
- B- Performance under supervision
- A- Independent performance

[illegible]







## Laboratory skills of log book

[illegible]



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### Formative assessment

Exam	Score	Grade*	Date	Signature

#### \*Degree

- A- Excellent
- B- Very good
- C- Good
- D- Pass



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## Postgraduate student's program Rotation in training assessment

\* Name:

\* Period of training From:

To:

\* Site:

\*Rotation

General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6)	strongly agree (7)
Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).						
Appraises evidence from scientific studies.						
Conduct epidemiological studies and surveys.						
Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.						



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General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6)	strongly agree (7)
Facilitate learning of students other health care professionals including their evaluation and assessment.						
Maintain therapeutic and ethically sound relationship with patients.						
Elicit information using effective nonverbal, explanatory, questioning, and writing skills.						
Provide information using effective nonverbal, explanatory, questioning, and writing skills.						
Work effectively with others as a member of a health care team or other professional group.						
Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.						
Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices.						



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General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)		(4 ) (5)		(6)	strongly agree (7)
Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.								
Work effectively in relevant health care delivery settings and systems including good administrative and time management								
Practice cost-effective health care and resource allocation that does not compromise quality of care.								
Assist patients in dealing with system complexities.								



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# Unit (Module) 4

## Clinical Microbiology



### Requirements

- + Credit points: 1 credit points for didactic (lectures, seminars, tutorial).
- + 19 credit points for clinical training.
- + Minimal requirement: Achievement of at least 80% of academic activities and requirement.



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Year 3(1 credit point for didactic)

Name of the unit	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical Microbiology	1 CP	Clinical Pathology, Microbiology Unit	Year 3	4.2% of the total Didactic course
	0.125 CP		1.25 hour - yrexia of unknown origin	12.5% of didactic unit
	0.125 CP		1.25 hour - Septicemia and bacteremia	12.5% of didactic unit
	0.25 CP		2.5 hours - upper and lower respiratory. tract infections ,Ear and eye infections	25% of didactic unit
	0.125 CP		1.25 hour - IT infections	12.5% of didactic unit
	0.125 CP		1.25 hour - enitourinary tract infections	12.5% of didactic unit
	0.125 CP		1.25 hour - Sexually transmitted diseases.	12.5% of didactic unit
	0.125 CP		1.25 hour - Nosocomial infection and infection control	12.5% of didactic unit
Student signature			Principle coordinator Signature	Head of the department signature





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### Year 3(19 credit point for clinical training)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Microbiology unit	13 CP	Clinical Pathology department Microbiology Unit	*Practice with practical skills for at least one month in the Microbiology unit including; ➤ interpretation of test results and related laboratory investigations as mentioned below  ➤ Log of practical skills as mentioned below	68.4% of unit training
	4 CP		➤ Attend practical teaching 2 hours /week for at least 4 weeks	21.1% of unit training
	2 CP		➤ Formative assessment	10.5% of unit training
Student signature			Principle coordinator Signature	Head of the department signature



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Clinical Pathology Department

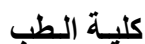
## Microbiology practical skills log in the third year

Practical skills	Number	Practical skills	Number
1- Automation in Microbiology Microscan Bactic blood culture system	35 each; i.e Level B Level B,A	2 -Advanced Techniques : -PCR -PCR- RFLP	Level C 10 + interpret

### \* Level of competency

- C- Observation
- B- Performance under supervision
- A- Independent performance





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## Clinical Microbiology practical teaching (Third year):

[illegible]





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### Formative assessment

Exam	Score	Grade*	Date	Signature

#### \*Degree

- A- Excellent
- B- Very good
- C- Good
- D- Pass



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## Postgraduate student's program Rotation in training assessment

\* Name:

\* Period of training From:

To:

\* Site:

\*Rotation

General skills	could not judge (0)	strongly disagree(1)	(2) (3)	(4) (5)	(6)	strongly agree (7)
Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).						
Appraises evidence from scientific studies.						
Conduct epidemiological studies and surveys.						
Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.						



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General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)	(4 ) (5)	(6) (7)	strongly agree (7)
Facilitate learning of students other health care professionals including their evaluation and assessment.						
Maintain therapeutic and ethically sound relationship with patients.						
Elicit information using effective nonverbal, explanatory, questioning, and writing skills.						
Provide information using effective nonverbal, explanatory, questioning, and writing skills.						
Work effectively with others as a member of a health care team or other professional group.						
Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.						
Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices.						



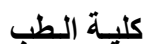


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General skills	could not judge (0)	strongly disagree(1)	(2 ) (3)		(4 ) (5)		(6)	strongly agree (7)
			(2 )	(3)	(4 )	(5)	(6)	
Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.								
Work effectively in relevant health care delivery settings and systems including good administrative and time management								
Practice cost-effective health care and resource allocation that does not compromise quality of care.								
Assist patients in dealing with system complexities.								



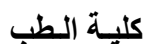
### Other academic activities: Seminars, Conferences, Journal clubs

[illegible]

**\*\* Your role:-**

## A- Attendance

## B- Organization

[illegible]

A- Attendance  
B- Organization



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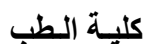
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# Elective Course 1

## Requirements

- + **Credit points:** 2 credit point.
- + Minimal rate of attendance 80% of lectures and 80% of training





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## Elective Course 1 Practical skills

[illegible]



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## الرسالة العلمية

عنوان الرسالة:

عربي : \_\_\_\_\_

انجليزي : \_\_\_\_\_

المشرفون : \_\_\_\_\_

1- \_\_\_\_\_

2- \_\_\_\_\_

3- \_\_\_\_\_

4- \_\_\_\_\_

تاريخ القيد لدرجة : ..... / /

تاريخ التسجيل الموضوع : .....

المتابعة الدورية : .....

التاريخ	ما تم انجازه من بروتوكول البحث	المتبقي	توقيع المشرفين



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Course Structure Mirror	Responsible (Course ) Coordinator Name:	Signature	Date
<b>First Part</b>			
Course 1: Clinical Parasitology			
Course 2: Principles of General and clinical Microbiology			
Course 3: Principles of General and clinical Immunology			
Course 4: Internal medicine			
<b>Second Part</b>			
<b>Course 5: Clinical Pathology</b>			
Unit (Module ) 1: Clinical Chemistry			
Unit (Module ) 2: Hematology			
Unit (Module ) 3: Clinical Immunology			
Unit (Module ) 4: Clinical Microbiology			
- Elective Course(s) Certificate (s) Dates:			
- Master Degree Thesis Acceptance Date:			
- Fulfillment of required credit points prior to final examination			
Clinical Pathology M Sc Degree Principle Coordinator:			
Date approved by Clinical Pathology Department Council:			

يعتمد ،  
رئيس القسم  
أ.د.





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كراسة الأنشطة  
اللازمة لحصول الطبيب المقيم علي درجة الماجستير في  
الباثولوجيا الأكلينيكية  
2012-2013/2013-2014