



## Course Specification of Pharmaceutical Microbiology I

I. Course Identification and General Information:					
1	Course Title	Pharmaceutical Microbiology I			
2	Course Number & Code:	Ph631			
3	Credit hours:	C.H			Total
		Th.	Pr.	Tr.	
		2	2		
4	Study level/ semester at which this course is offered:	2 <sup>th</sup> level /1 <sup>st</sup> semester			
5	Pre –requisite (if any):				
6	Co –requisite (if any):				
7	Program (s) in which the course is offered:	Bachelor of Pharmacy			
8	Language of teaching the course:	English			
9	Location of teaching the course:	Faculty of Pharmacy- Sana`a university			
10	Prepared by:	Prof Hassan Al-Shamahy			
11	Date of approval:				

## II. Course description:

The course is designed to teach the students the basic features of general immunology, virology and mycology. Theoretical part of this course will be taught, in addition to common infections and general and oral diseases of medical importance, and different laboratory steps for method of diagnosis.



### III. Intended learning outcomes (ILOs) of the course:

**At the end of this course the students should be able to:**

1. Mention general concepts about bacteriology, including classification and structure.
2. Identify the host parasite relationship and microbial pathogens.
3. Describe briefly the physiology of the immune system, its beneficial role.
4. Describe the morphology, culture and antigenic structure of microorganisms of medical importance
5. Describe briefly methods of diagnosis of infections including; specimen selection, handling and processing
6. Mention the most important infectious clinical conditions and outline the diagnosis, treatment, prevention and control of the most likely.
7. Describe the most important methods of decontamination and principles of infection control.
8. Describe the basics of antimicrobial uses
9. **Comprehend microbiological and immunological**
10. **Categorize a microorganism as a bacterium according to standard taxonomy.**
11. **Correlate according to evidence the causal relationship of microbes and diseases**
12. **Predict the danger of handling and use of infectious agents on community and environment as a part of their ethical heritage**
13. **Carry out experiments of important immunological reactions**
14. **Practice Viral diagnosis using Specimen**
15. Perform ELISA technique for diagnosis Hepatitis viruses
16. **Perform hand wash and control of steam sterilization.**
17. **Display the facts using printable sheets in the field of bacteriology and immunology**
18. **Complete a full scientific reports in the field of bacteriology and immunology**
19. **Communicate in groups and team in laboratory experiments**
20. **Follow the computer-based tools and internet to extract information and knowledge**

### IV. Intended learning outcomes (ILOs) of the course:

#### (A) Knowledge and Understanding:

Alignment Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in:  
**Knowledge and Understanding.**

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إ.د. القاسم محمد عباس

مركز التطوير الأكاديمي وضمان الجودة  
إ.د. هدى العماد

عميد الكلية  
إ.د. خالد الشويبه

وحدة ضمان الجودة  
إ.د. محمود البريهي



Program Intended Learning Outcomes (Sub- PILOs) in: <b>Knowledge and Understanding</b>		Course Intended Learning Outcomes (CILOs) in: <b>Knowledge and Understanding</b>	
After completing this program, students would be able to:		After participating in the course, students would be able to:	
A1-	Recognize the principles of physical, chemical, clinical, social, behavioral, health and pharmaceutical sciences.	a1-	Mention general concept about immunology, virology and mycology including classification and structure.
A3-	Describe the general cellular, biochemical and physiological aspects of human body and recognize the pharmacokinetics, pharmacodynamics, disease pathophysiology, and pharmacogenetic of therapeutic agents to provide pharmaceutical care and facilitate management of patient's medication, rationalize drug use and overall health needs.	a2-	Identify the host parasite relationship and microbial pathogens
		a3-	Describe briefly the physiology of the immune system, its beneficial role.
		a4-	Describe the morphology, culture and antigenic structure of microorganisms of medical importance.
		a5-	Describe briefly methods of diagnosis of infections including; specimen selection, handling and processing.
		a6-	Mention the most important infectious clinical conditions and outline the diagnosis, treatment, and prevention and control of the most likely organisms causing such diseases
		a7-	Describe the most important methods of decontamination and principles of infection control.
		a8-	Describe the basics of antimicrobial uses
		<b>Teaching And Assessment Methods For Achieving Learning Outcomes:</b>	
<b>Alignment Learning Outcomes of Knowledge and Understanding to Teaching and Assessment Methods:</b>			



Course Intended Learning Outcomes (CILOs) in Knowledge and Understanding After participating in the course, students would be able to:		Teaching strategies/methods to be used	Methods of assessment
a1-	Mention general concepts about immunology and virology including classification and structure.	Lecture Lab seminar	Written Mid & final theoretical exams Mid & final practical exams Quizzes Practical work assignment Attendance
a2-	Identify the host parasite relationship and microbial pathogens		
a3-	Describe briefly the physiology of the immune system, its beneficial role.		
a4-	Describe the morphology, culture and antigenic structure of microorganisms of medical importance.		
a5-	Describe briefly methods of diagnosis of infections including; specimen selection, handling and processing.		
a6-	Mention the most important infectious clinical conditions and outline the diagnosis, treatment, and prevention and control of the most likely organisms causing such diseases		
a7-	Describe the most important methods of decontamination and principles of infection control.		
a8-	Describe the basics of antimicrobial uses		

## (B) Intellectual Skills:

Alignment Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: <b>Intellectual skills</b>	
<b>Program Intended Learning Outcomes (Sub-PILOs) in Intellectual skills</b>	<b>Course Intended Learning Outcomes (CILOs) of Intellectual Skills</b>



After completing this program, students would be able to:		After participating in the course, students would be able to:	
B1-	Consolidate the chemical, biochemical and physiological principles to construct the pharmacophores of the structure and their effect on the stability, pharmacokinetic and pharmacodynamic profiles of the drug	b1-	Comprehend microbiology and immunology
B5-	Interpret the prescriptions, patient and clinical data, Analysis all the encountered pharmaceutical problems and plan the strategies for their solution, to develop the health care.	b2-	Categorize a microorganism as a virus or fungus according to standard taxonomy.
		b3-	Correlate according to evidence the causal relationship of microbes and diseases
		b4-	Predict the danger of handling and use of infectious agents on community and environment as a part of their ethical heritage

### Teaching And Assessment Methods For Achieving Learning Outcomes:

#### Alignment Learning Outcomes of Intellectual Skills to Teaching Methods and Assessment Methods:

<i>Course Intended Learning Outcomes (CILOs) in Intellectual Skills.</i>		Teaching strategies/methods to be used.	<i>Methods of assessment</i>
After participating in the course, students would be able to:			
b1-	Comprehend microbiology and immunology	Lecture Lab seminar	Written Mid & final theoretical exams Mid & final practical exams Quizzes Practical work assignment Attendance
b2-	Categorize a microorganism as a virus or fungus according to standard taxonomy.		
b3-	Correlate according to evidence the causal relationship of microbes and diseases		
b4-	Predict the danger of handling and use of infectious agents on community and environment as a part of their ethical heritage		

### (C) Professional and Practical Skills.



Alignment Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: Professional and Practical Skills			
Program Intended Learning Outcomes (Sub- PILOs) in Professional and Practical Skills		Course Intended Learning Outcomes (CILOs) in Professional and Practical Skills	
After completing this program, students would be able to:		After participating in the course, students would be able to:	
C2-	Handle and dispose chemicals and pharmaceutical preparations including radio-pharmaceuticals safely and effectively.	c1-	Carry out experiments of important immunological reactions
C5-	Conduct research studies and utilize the results in different pharmaceutical fields.	c2-	Practice Viral diagnosis using Specimen
		c3-	Perform ELISA technique for diagnosis Hepatitis viruses
		c4-	Perform hand wash and control of steam sterilization.
Teaching And Assessment Methods For Achieving Learning Outcomes:			
Alignment Learning Outcomes of Professional and Practical Skills to Teaching and Assessment Methods:			
Course Intended Learning Outcomes (CILOs) in Professional and Practical Skills After participating in the course, students would be able to:		Teaching strategies/methods to be used	Methods of assessment
c1-	Carry out experiments of important immunological reactions	Lecture Lab seminar	Written Mid & final theoretical exams Mid & final practical exams Quizzes Practical work assignment Attendance
c2-	Practice Viral diagnosis using Specimen		
c3-	Perform ELISA technique for diagnosis Hepatitis viruses		
c4-	Perform hand wash and control of steam sterilization.		

### (D) General / Transferable Skills:

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عميد الكلية  
ا.د. خالد الشويبه

وحدة ضمان الجودة  
ا.د. محمود البريهي



Alignment Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: <b>General and Transferable skills</b>			
Program Intended Learning Outcomes (PILOs) in General / Transferable skills		Course Intended Learning Outcomes (CILOs) in General / Transferable skills	
After completing this program, students would be able to:		After participating in the course, students would be able to:	
D2-	Employ proper documentation and filing systems in different pharmaceutical fields	d1-	Display the facts using printable sheets in the field of bacteriology and immunology
D5-	Apply information and communication technology and working effectively in a team.	d2-	Complete a full scientific reports in the field of bacteriology and immunology.
		d3-	Communicate in groups and team in laboratory experiments.
		d4-	Follow the computer-based tools and internet to extract information and knowledge
Teaching And Assessment Methods For Achieving Learning Outcomes:			
Alignment Learning Outcomes of General and Transferable skills to Teaching and Assessment Methods.			
Course Intended Learning Outcomes (CILOs) in General and Transferable Skills		Teaching strategies/methods to be used.	Methods of assessment
After participating in the course, students would be able to:			
d1-	Display the facts using printable sheets in the field of bacteriology and immunology	Lecture Lab seminar	Written Mid & final theoretical exams Mid & final practical exams Quizzes Practical work assignment Attendance
d2-	Complete a full scientific reports in the field of bacteriology and immunology.		
d3-	Communicate in groups and team in laboratory experiments.		
d4-	Follow the computer-based tools and internet to extract information and knowledge		
V. Course Content:			
1 – Course Topics/Items:			



### a – Theoretical Aspect

Order	Topic List / Units	CILOs (symbols)	Sub-topic List	Number of weeks	Contact hours
1.	Immunology	a1, a2, a3, a4, b1 c1,c4 d1,d2	Intruduction, Infection and Immunity	1	2
2.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Antigen and antibodies: General structure and the role played in defense mechanism of the body,	1	2
3.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Immuno deficiency disorders, Autoimmune disorders and	1	2
4.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Immune response and Antigen - Antibody reactions	1	2
5.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Immunology of Transplantation and Malignancy	1	2
6.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Immunosuppressive Drugs, mechanisms of actions	1	2
7.	<b>Mid Exam</b>			1	2
8.	Virology	a1, a2, a3, a4, b1, b2, b3 c2,c3, c4 d1,d2	Introduction: General characteristics and classification, Viral	1	2
9.	Virology	a1, a2, a3, a4, b1, b2, b3 c2,c3, c4 d1,d2	Replication , Viral genetics cultivation of viruses and their laboratory diagnosis,	1	2
10.	Virology	a1, a2, a3, a4, b1, b2, b3 c2,c3, c4 d1,d2	.A few viruses of a. Herpes Virus b. Hepatitis B,C Virus - brief about other types	1	2





11.	Virology	a1, a2, a3, a4, b1, b2, b3 c1,c3 d1,d2	c. (HIV) d. Mumps Virus e. Brief - Measles and Rubella Virus and 3. Bacteriophage - structure and Significance	1	2
12.	Virology	a1, a2, a3, a4, b1, b2, b3 c1,c3 d1,d2	Antiviral agents, Pathogenesis of viral infections and Immunity to viral infections	1	2
13.	Fungi	a1, a2, a3, a4, b1, b2, b3 c4, d1,d2	General Characteristics, Classification, Agents of superficial Infections,	2	4
14.	Review			1	2
15.	Final Exam			1	2
<b>Number of Weeks /and Units Per Semester</b>				<b>16</b>	<b>32</b>

### b - Practical Aspect

Order	Tasks/ Experiments	CILOs (symbols)	Number of Weeks	Contact Hours
1)	Immunological reactions	a1, a2, a3, a4, b1, b2, b3	4	8
2)	Specimen for Viral diagnosis	a1, a2, a3, a4, b1, b2, b3 c1,c3 d1,d2	4	8
3)	Mid-Exam	<b>c1, c3</b>	1	2
4)	ELISA technique for diagnosis Hepatitis viruses	a1, a2, a3, a4, b1, b2, b3 c1,c3 d1,d2	4	8
5)	Review		2	4



6)	Final Exam	c1, c3	1	2
Number of Weeks /and Units Per Semester			16	32

#### VI. Teaching strategies of the course:

Lecture  
Lab  
Seminar

#### I. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes (CILOs symbols)
1.	Attendance, Participation and quizzes	All Weeks	10	7%	a1-8,b1-b4, c1-4
2.	Oral Tests and Homework-assignments	Sporadic through the semester	10	7%	a1,a3, a5, b1-4, c1-4, d1-4
3.	Attendance, Practical Reports	All Weeks	15	10%	c1-4
4.	Practical mid-semester exam	9 <sup>th</sup>	15	10%	c1-4
5.	Theoretical mid-semester exam	7 <sup>th</sup>	30	20%	a1-8, b1-4
6.	Final Exam (theoretical)	16 <sup>th</sup>	50	33%	a1-8, b1-4
7.	Final Exam (practical)	16 <sup>th</sup>	20	13%	c1-4
<b>Total</b>			<b>150</b>	<b>100%</b>	



II. Students' Support:	
Office Hours/week	Other Procedures (if any)
Two contact hours per week	None

III. Learning Resources:	
<b>1- Required Textbook(s) ( maximum two ).</b>	
	There is a long list of anatomy books present in the faculty library for the student to choose from. Course notes done by teaching staff.
<b>2- Recommended Books and Reference Materials.</b>	
	Course notes of Department theoretical books and practical manual (lectures and practical) a. J.Bagg . Essentials of Microbiology . Oxford Press. b. Microbiology at a Glance c. Immunology at Glance d. Notes in Medical virology  Practical book : District Laboratory Practice in Tropical Countries <a href="#">Monica Cheesbrough</a>
<b>3- Electronic Materials and Web Sites etc.</b>	
	Web sites of Microbiology and Immunology <a href="http://www.med-ed-online.org/">http://www.med-ed-online.org/</a> , midline Pubmed & Google

VIII. Course Policies: (including plagiarism, academic honesty, attendance etc)	
The University Regulations on academic misconduct will be strictly enforced. Please refer to -----	
1	<b>Class Attendance:</b> <ul style="list-style-type: none"> <li>Attendance of all lectures and practical sessions is required. Unexcused absence exceeding 25% of the lectures or practical sessions will disqualify the student from entering the final exam.</li> </ul>
2	<b>Tardy:</b> <ul style="list-style-type: none"> <li>- Roll will be called in the very beginning of each lecture and practical class. Retardation for more than three weeks without a reasonable excursion, the student involved shall not be allowed to attend the class any longer and consequently shall be considered to be absent.</li> </ul>



3	<b>Exam Attendance/Punctuality:</b> <ul style="list-style-type: none"> <li>Exam attendance is obligatory unless being excused by the department and faculty.</li> <li>Absence from assignments or exams will be dealt with according to the general policy of the university.</li> </ul>
4	<b>Assignments &amp; Projects:</b> <ul style="list-style-type: none"> <li>Assignments: Written and oral; Laboratory logbook signed by the responsible demonstrator.</li> <li>Projects: Not applicable.</li> </ul>
5	<b>Cheating:</b> <ul style="list-style-type: none"> <li>Punishment of cheating will be according to the general policy of the university in this respect.</li> </ul>
6	<b>Plagiarism:</b> <ul style="list-style-type: none"> <li>Plagiarism in written essays, reports, etc. is not accepted, and students who plagiarize the works of others will be punished according to the general policy of the university.</li> </ul>
7	<b>Other policies:</b> <ul style="list-style-type: none"> <li>General policies of the Students' Affairs of the University and the Quality Assurance Unit.</li> </ul>

## Course Plan of Pharmaceutical Microbiology I

### I. - Information about Faculty Member Responsible for the Course:

<b>Name of Faculty Member</b>	Prof Hassan Al-Shamahy	<b>Office Hours</b>					
<b>Location &amp; Telephone No.</b>		<b>SAT</b>	<b>SUN</b>	<b>MON</b>	<b>TUE</b>	<b>WED</b>	<b>THU</b>
<b>E-mail</b>							



II. Course Identification and General Information:						
1-	Course Title:	Pharmaceutical Microbiology I				
2-	Course Number & Code:	Ph631				
3-	Credit hours: 1hrs	C.H				Total
		Th.	Seminar	Pr.	F. Tr.	
		2	-	2		3
4-	Study level/year at which this course is offered:	2 <sup>nd</sup> Level / 1 <sup>st</sup> Semester				
5-	Pre –requisite (if any):					
6-	Co –requisite (if any):					
7-	Program (s) in which the course is offered	Bachelor of Pharmacy				
8-	Language of teaching the course:	English				
9-	System of Study:	Semesters				
10-	Mode of delivery:	Regular				
11-	Location of teaching the course:	Faculty of Pharmacy-Sana'a University				

### III. Course description:

The course is designed to teach the students the basic features of general immunology, virology and mycology. Theoretical part will be taught, in addition to common infections and general and oral diseases of medical importance, and different laboratory steps for method of diagnosis.

### IV. Intended Learning Outcomes (ILOs) of the Course:



**At the end of this course the students should be able to:**

1. Mention general concept about bacteriology, including classification and structure.
2. Identify the host parasite relationship and microbial pathogens.
3. Describe briefly the physiology of the immune system, its beneficial role.
4. Describe the morphology, culture and antigenic structure of microorganisms of medical importance
5. Describe briefly methods of diagnosis of infections including; specimen selection, handling and processing
6. Mention the most important infectious clinical conditions and outline the diagnosis, treatment, prevention and control of the most likely.
7. Describe the most important methods of decontamination and principles of infection control.
8. Describe the basics of antimicrobial uses
9. **Comprehend microbiological and immunological**
10. **Categorize a microorganism as a bacterium according to standard taxonomy.**
11. **Correlate according to evidence the causal relationship of microbes and diseases**
12. **Predict the danger of handling and use of infectious agents on community and environment as a part of their ethical heritage**
13. **Carry out experiments of important immunological reactions**
14. **Practice Viral diagnosis using Specimen**
15. Perform ELISA technique for diagnosis Hepatitis viruses
16. **Perform hand wash and control of steam sterilization.**
17. **Display the facts using printable sheets in the field of bacteriology and immunology**
18. **Complete a full scientific reports in the field of bacteriology and immunology**
19. **Communicate in groups and team in laboratory experiments**
20. **Follow the computer-based tools and internet to extract information and knowledge**

## V. Course Content:

### 1 – Course Topics/Items:

#### a – Theoretical Aspect

Order	Topic List / Units	CILOs (symbols)	Sub-topic List	Week Due	Contact hours
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16.	Immunology	a1, a2, a3, a4, b1 c1,c4 d1,d2	Intruduction, Infection and Immunity	1	2
17.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Antigen and antibodies: General structure and the role played in defense mechanism of the body,	2	2
18.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Immuno deficiency disorders, Autoimmune disorders and	3	2
19.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Immune response and Antigen - Antibody reactions	4	2
20.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Immunology of Transplantation and Malignancy	5	2
21.	Immunology	a1, a2, a3, a4, b1, b2, b3 c1,c4 d1,d2	Immunosuppressive Drugs, mechanisms of actions	6	2
22.	<b>Mid Exam</b>			7	2
23.	Virology	a1, a2, a3, a4, b1, b2, b3 c2,c3, c4 d1,d2	Introduction: General characteristics and classification, Viral	8	2
24.	Virology	a1, a2, a3, a4, b1, b2, b3 c2,c3, c4 d1,d2	Replication , Viral genetics cultivation of viruses and their laboratory diagnosis,	9	2
25.	Virology	a1, a2, a3, a4, b1, b2, b3 c2,c3, c4 d1,d2	.A few viruses of f. Herpes Virus g. Hepatitis B,C Virus - brief about other types	10	2
26.	Virology	a1, a2, a3, a4, b1, b2, b3 c1,c3 d1,d2	h. (HIV) i. Mumps Virus	11	2



			j. Brief - Measles and Rubella Virus and 3. Bacteriophage - structure and Significance		
27.	Virology	a1, a2, a3, a4, b1, b2, b3 c1,c3 d1,d2	Antiviral agents, Pathogenesis of viral infections and Immunity to viral infections	12	2
28.	Fungi	a1, a2, a3, a4, b1, b2, b3 c4, d1,d2	General Characteristics, Classification, Agents of superficial Infections,	13,14	4
29.	Review			15,16	2
30.	Final Exam			16	2
Number of Weeks /and Units Per Semester				16	32

b - Practical Aspect				
Order	Tasks/ Experiments	CILOs (symbols)	Week Due	Contact Hours
7)	Immunological reactions	a1, a2, a3, a4, b1, b2, b3	1-4	8
8)	Specimen for Viral diagnosis	a1, a2, a3, a4, b1, b2, b3 c1,c3 d1,d2	5-8	8
9)	Mid-Exam	<b>c1, c3</b>	9	2
10)	ELISA technique for diagnosis Hepatitis viruses	a1, a2, a3, a4, b1, b2, b3 c1,c3 d1,d2	10-13	8
11)	Review		14,15	4
12)	Final Exam	<b>c1, c3</b>	16	2
Number of Weeks /and Units Per Semester			16	32





#### VI. Teaching strategies of the course:

Lecture  
Lab  
Seminar

#### IV. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes (CILOs symbols)
8.	Attendance, Participation and quizzes	All Weeks	10	7%	a1-8,b1-b4, c1-4
9.	Oral Tests and Homework-assignments	Sporadic through the semester	10	7%	a1,a3, a5, b1-4, c1-4, d1-4
10	Attendance, Practical Reports	All Weeks	15	10%	c1-4
11	Practical mid-semester exam	9 <sup>th</sup>	15	10%	c1-4
12	Theoretical mid-semester exam	7 <sup>th</sup>	30	20%	a1-8, b1-4
13	Final Exam (theoretical)	16 <sup>th</sup>	50	33%	a1-8, b1-4
14	Final Exam (practical)	16 <sup>th</sup>	20	13%	c1-4
<b>Total</b>			<b>150</b>	<b>100%</b>	

#### V. Students' Support:

Office Hours/week	Other Procedures (if any)
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Two contact hours per week	None
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## VI. Learning Resources:

### 1- Required Textbook(s) ( maximum two ).

There is a long list of Pharmaceutical Microbiology books available in the faculty library for the student to choose from.  
Course notes done by teaching staff.

### 2- Recommended Books and Reference Materials.

Course notes of Department theoretical books and practical manual (lectures and practical)  
a. J.Bagg. Essentials of microbiology . Oxford Press.  
b. Microbiology at a Glance  
c. Immunology at Glance  
d. Notes in Medical virology  
Practical book :  
District Laboratory Practice in Tropical Countries [Monica Cheesbrough](#)

### 3- Electronic Materials and Web Sites etc.

Web sites of Microbiology and Immunology <http://www.med-ed-online.org/>, midline Pubmed & Google

## IX. Course Policies: (including plagiarism, academic honesty, attendance etc)

The University Regulations on academic misconduct will be strictly enforced. Please refer to -----

1	<b>Class Attendance:</b> <ul style="list-style-type: none"> <li>Attendance of all lectures and practical sessions is required. Unexcused absence exceeding 25% of the lectures or practical sessions will disqualify the student from entering the final exam.</li> </ul>
2	<b>Tardy:</b> <ul style="list-style-type: none"> <li>Roll will be called in the very beginning of each lecture and practical class. Retardation for more than three weeks without a reasonable excursion, the student involved shall not be allowed to attend the class any longer and consequently shall be considered to be absent.</li> </ul>
3	<b>Exam Attendance/Punctuality:</b> <ul style="list-style-type: none"> <li>Exam attendance is obligatory unless being excused by the department and faculty.</li> </ul>



	<ul style="list-style-type: none"><li>Absence from assignments or exams will be dealt with according to the general policy of the university.</li></ul>
4	<b>Assignments &amp; Projects:</b> <ul style="list-style-type: none"><li>Assignments: Written and oral; Laboratory logbook signed by the responsible demonstrator.</li><li>Projects: Not applicable.</li></ul>
5	<b>Cheating:</b> <ul style="list-style-type: none"><li>Punishment of cheating will be according to the general policy of the university in this respect.</li></ul>
6	<b>Plagiarism:</b> <ul style="list-style-type: none"><li>Plagiarism in written essays, reports, etc. is not accepted, and students who plagiarize the works of others will be punished according to the general policy of the university.</li></ul>
7	<b>Other policies:</b> <ul style="list-style-type: none"><li>General policies of the Students' Affairs of the University and the Quality Assurance Unit.</li></ul>

Republic of Yemen  
Ministry of Higher  
Education and Scientific  
Research  
Sana'a University  
Faculty of Pharmacy  
Quality Assurance Unit



الجمهورية اليمنية  
وزارة التعليم العالي والبحث العلمي  
جامعة - صنعاء  
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