



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.	Seminar.	
		2	2			3
4	Study level/ semester at which this course is offered:	2 th level /1 st 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 learn the students the basic features of general immunology, virology and mycology. The course is designed to learn the students the basic features of 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.

رئيس الجامعة عميدة مركز التطوير وضمان الجودة عميد الكلية رئيس القسم نائب العميد لشؤون الجودة الموصف
 ا.د. القاسم محمد عباس ا.م.د. هدى العماد د.خالد الشوية ا.د. محمود البريهي ا.د. حسن الشماحي



III. 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 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:

الموصف
ا.د. حسن الشماحي

نائب العميد لشؤون الجودة
ا.د. محمود البريهي

رئيس القسم
د. خالد الشوية

عميدة مركز التطوير وضمان الجودة
ا.م.د. هدى العماد

رئيس الجامعة
ا.د. القاسم محمد عباس



(A) Knowledge and Understanding:

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

Program Intended Learning Outcomes (Sub-PILOs) in: Knowledge and Understanding		Course Intended Learning Outcomes (CILOs) in: Knowledge and Understanding	
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.

رئيس الجامعة
ا.د. القاسم محمد عباس

عميدة مركز التطوير وضمان الجودة
ا.م.د. هدى العماد

عميد الكلية
د. خالد الشوية

رئيس القسم

نائب العميد لشؤون الجودة
ا.د. محمود البريهي

الموصف
ا.د. حسن الشماحي



		a8-	Describe the basics of antimicrobial uses
Teaching And Assessment Methods For Achieving Learning Outcomes:			
Alignment Learning Outcomes of Knowledge and Understanding to Teaching and Assessment Methods:			
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 concept 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		

رئيس الجامعة
ا.د. القاسم محمد عباس

عميدة مركز التطوير وضمان الجودة
ا.م.د. هدى العماد

عميد الكلية
د. خالد الشوية

رئيس القسم

نائب العميد لشؤون الجودة
ا.د. محمود البريهي

الموصف
ا.د. حسن الشماحي



(B) Intellectual Skills:			
Alignment Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: Intellectual skills			
Program Intended Learning Outcomes (Sub-PILOs) in Intellectual skills		Course Intended Learning Outcomes (CILOs) of Intellectual Skills	
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 microbiological and immunological
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:			
Course Intended Learning Outcomes (CILOs) in Intellectual Skills. After participating in the course, students would be able to:		Teaching strategies/methods to be used.	Methods of assessment
b1-	Comprehend microbiological and immunological	Lecture Lab seminar	Written Mid & final theoretical exams Mid & final practical exams Quizzes Practical work
b2-	Categorize a microorganism as a virus or fungus according to standard taxonomy.		

الموصف ا.د. حسن الشماحي نائب العميد لشؤون الجودة ا.د. محمود البريهي رئيس القسم عميد الكلية د. خالد الشوية عميدة مركز التطوير وضمان الجودة ا.م.د. هدى العماد رئيس الجامعة ا.د. القاسم محمد عباس



b3-	Correlate according to evidence the causal relationship of microbes and diseases	assignment Attendance
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 radiopharmaceuticals 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
---	--	-----------------------

الموصف
ا.د. حسن الشماحي
نائب العميد لشؤون الجودة
ا.د. محمود البريهي
رئيس القسم
د. خالد الشوية
عميد الكلية
ا.م.د. هدى العماد
عميدة مركز التطوير وضمان الجودة
رئيس الجامعة
ا.د. القاسم محمد عباس



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:

Alignment Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: General and Transferable skills			
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:			

رئيس الجامعة
إ.د. القاسم محمد عباس

عميدة مركز التطوير وضمان الجودة
إ.م.د. هدى العماد

عميد الكلية
د. خالد الشوية

رئيس القسم

نائب العميد لشؤون الجودة
إ.د. محمود البريهي

الموصف
إ.د. حسن الشماحي



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.	Mid Exam			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,	.A few viruses of	1	2
		b2, b3 c2,c3, c4 d1,d2	a. Herpes Virus b. Hepatitis B,C Virus - brief about other types		
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

رئيس الجامعة
إ.د. القاسم محمد عباس

عميدة مركز التطوير وضمان الجودة
إ.م.د. هدى العماد

عميد الكلية
د.خالد الشوية

رئيس القسم

نائب العميد لشؤون الجودة
إ.د. محمود البريهي

الموصف
إ.د. حسن الشماحي



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
Number of Weeks /and Units Per Semester				16	32

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	c1, c3	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

الموصف ا.د. حسن الشماعي نائب العميد لشؤون الجودة ا.د. محمود البريهي رئيس القسم د. خالد الشوية عميدة مركز التطوير وضمان الجودة ا.م.د. هدى العماد رئيس الجامعة ا.د. القاسم محمد عباس



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, d14
3.	Attendance, Practical Reports	All Weeks	15	10%	c1-4
4.	Practical mid-semester exam	9 th	15	10%	c1-4
5.	Theoretical mid-semester exam	7 th	30	20%	a1-8, b1-4
6.	Final Exam (theoretical)	16 th	50	33%	a1-8, b1-4
7.	Final Exam (practical)	16 th	20	13%	c1-4
Total			150	100%	

II. Students' Support:

Office Hours/week	Other Procedures (if any)
Two contact hours per week	None

رئيس الجامعة
أ.د. القاسم محمد عباس

عميدة مركز التطوير وضمان الجودة
أ.م.د. هدى العماد

عميد الكلية
د. خالد الشوية

رئيس القسم

نائب العميد لشؤون الجودة
أ.د. محمود البريهي

الموصف
أ.د. حسن الشماحي



III. Learning Resources:

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

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.

2- Recommended Books and Reference Materials.

Course notes of Department theoretical books and practical manual (lectures and practical) a.
Essentials of microbiology . Oxford Press. By J.Bagg
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.

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

I. Course Policies (To be determined by Faculty Deanship)

Based on university regulations, the following aspects should be figured out:

1. (Class Attendance) :Class Attendance: - Attendance of students is taken at beginning of lecture time. - The allowed absence percentage is 20% without excuse and 30% with acceptable excuse, - When student has been absent for more than 30% of course lectures without acceptable excuse, the student will be prohibited from entering subject the final exam.
2. (Tardy) :If the student came late to class for 15 minutes, he/she is registered absent but he/she allowed to enter the hall to listen lecture presentation.
3. (Exam Attendance/Punctuality) :According to examination roles or policies: - If the student is absent in the year works exams, the decision is referred to the teacher whether to allow or to reject according to the offered excuse. - If the student is absent in the final exam with an acceptable excuse, the student would be attended the re-sit exam as 1st trial. - If the student is absent in the final exam without an acceptable excuse, the student would be attended re-sit exam as 2nd trial.



4.	(Assignments & Projects) :According to examination roles or policies: - The student should be attended the final exam at certain time and according to the accredited exam table. - If the student came late after 15 minutes from the exam beginning, the student would be to attend the exam with oral monition of never repeat. - In case of the repeat, the student prevented from entrance and considered absent.
5.	(Cheating) :According to examination roles or policies: - If the student cheated in the year works exams of the course, the student prohibited from entrance the final exam and given zero degree with prevented him from entrance the re-sit exam of this course. - If the student cheated in the final exam of the course, the student prohibited from the cheated course and the followed course and given zero degree in both courses, and prevented him from entrance the re-sit exams of them. - If the cheated course is the last at the exam table, the student prohibited from the cheated course and the past course and given zero degree in both courses, and prevented him from entrance the re-sit exams of them. - If the cheating is discovered in subsequent time, the cheated student didn't escape from payment and ordinance is referred to precision committee and the final decision is referred to the collage council. - If the cheating is discovered during the correcting the answered books, the corrector has written a report to the chairman of concerned department for taking available procedure. - The faculty council is able to segregate the student for one academic year in 2nd cheating trial and final segregation from the university after accreditation of university council in 3rd cheating trial.
6.	(Plagiarism) :According to examination roles or policies: Plagiarism means a student plagiarizes the personality of another student. Plagiarism for exam purpose: 1- Both students are prohibited from the plagiarized academic year and all results of them are rejected with prohibition of them from entrance the resit exam. 2- If the plagiarized student is from outside the university, the student is referred to the university police. -Plagiarism for other purposes: 1- Both students are warned as segregation. 2- If the plagiarized student is from outside the university, the student is referred to the university police.
7.	(Other policies) :-The student should be followed the instructions for the exam entrance. - The student should be followed all systems & laws of the university.

Course Plan of Pharmaceutical Microbiology I

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

الموصف ا.د. حسن الشماحي	نائب العميد لشؤون الجودة ا.د. محمود البريهي	رئيس القسم د. خالد الشوية	عميد الكلية د. خالد الشوية	عميدة مركز التطوير وضمان الجودة ا.م.د. هدى العماد	رئيس الجامعة ا.د. القاسم محمد عباس
----------------------------	--	------------------------------	-------------------------------	--	---------------------------------------



Name of Faculty Member	Prof Hassan AlShamahy	Office Hours					
Location & Telephone No.		SAT	SUN	MON	TUE	WED	THU
E-mail							

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 th level /1 st 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				

رئيس الجامعة
ا.د. القاسم محمد عباس

عميدة مركز التطوير وضمان الجودة
ا.م.د. هدى العماد

عميد الكلية
د.خالد الشوية

رئيس القسم

نائب العميد لشؤون الجودة
ا.د. محمود البريهي

الموصف
ا.د. حسن الشماحي



III. Course description:

The course is designed to learn the students the basic features of general immunology, virology and mycology. The course is designed to learn the students the basic features of 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 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
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.	Mid Exam			7	2

رئيس الجامعة
ا.د. القاسم محمد عباس

عميدة مركز التطوير وضمان الجودة
ا.م.د. هدى العماد

عميد الكلية
د.خالد الشوية

رئيس القسم

نائب العميد لشؤون الجودة
ا.د. محمود البريهي

الموصف
ا.د. حسن الشماحي



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 j. Brief - Measles and Rubella Virus and 3. Bacteriophage - structure and Significance	11	2
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
-------	--------------------	-----------------	----------	---------------

الموصف ا.د. حسن الشماحي نائب العميد لشؤون الجودة ا.د. محمود البريهي رئيس القسم عميد الكلية د. خالد الشوية عميدة مركز التطوير وضمان الجودة ا.م.د. هدى العماد رئيس الجامعة ا.د. القاسم محمد عباس



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	c1, c3	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	c1, c3	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, d14

رئيس الجامعة
ا.د. القاسم محمد عباس

عميدة مركز التطوير وضمان الجودة
ا.م.د. هدى العماد

عميد الكلية
د.خالد الشوية

رئيس القسم

نائب العميد لشؤون الجودة
ا.د. محمود البريهي

الموصف
ا.د. حسن الشماحي



10.	Attendance, Practical Reports	All Weeks	15	10%	c1-4
11.	Practical mid-semester exam	9 th	15	10%	c1-4
12.	Theoretical mid-semester exam	7 th	30	20%	a1-8, b1-4
13.	Final Exam (theoretical)	16 th	50	33%	a1-8, b1-4
14.	Final Exam (practical)	16 th	20	13%	c1-4
Total			150	100%	

V. Students' Support:

Office Hours/week	Other Procedures (if any)
Two contact hours per week	None

رئيس الجامعة
ا.د. القاسم محمد عباس

عميدة مركز التطوير وضمان الجودة
ا.م.د. هدى العماد

عميد الكلية
د.خالد الشوية

رئيس القسم

نائب العميد لشؤون الجودة
ا.د. محمود البريهي

الموصف
ا.د. حسن الشماعي



VI. Learning Resources:	
1- Required Textbook(s) (maximum two).	
	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.
2- Recommended Books and Reference Materials.	
	Course notes of Department theoretical books and practical manual (lectures and practical) a. Essentials of microbiology . Oxford Press. By J.Bagg b. Microbiology at a Glance c. Immunology at Glance d. Notes in Medical virology Practical book : District Laboratory Practice in Tropical Countries <u>Monica Cheesbrough</u>
3- Electronic Materials and Web Sites etc.	
	als and web sites of Microbiology and Immunology http://www.med-ed-online.org/ , midline Pubmed & Go

II. Course Policies (To be determined by Faculty Deanship)	
Based on university regulations, the following aspects should be figured out:	
8.	(Class Attendance) :Class Attendance: - Attendance of students is taken at beginning of lecture time. - The allowed absence percentage is 20% without excuse and 30% with acceptable excuse, - When student has been absent for more than 30% of course lectures without acceptable excuse, the student will be prohibited from entering subject the final exam.
9.	(Tardy) :If the student came late to class for 15 minutes, he/she is registered absent but he/she allowed to enter the hall to listen lecture presentation.
10.	(Exam Attendance/Punctuality) :According to examination roles or policies: - If the student is absent in the year works exams, the decision is referred to the teacher whether to allow or to reject according to the offered excuse. - If the student is absent in the final exam with an acceptable excuse, the student would be attended the re-sit exam as 1st trial. - If the student is absent in the final exam without an acceptable excuse, the student would be attended re-sit exam as 2nd trial.

الموصف ا.د. حسن الشماحي نائب العميد لشؤون الجودة ا.د. محمد البرهني رئيس القسم عميد الكلية د. خالد الشوية عميدة مركز التطوير وضمان الجودة ا.م.د. هدى العماد رئيس الجامعة ا.د. القاسم محمد عباس



11.	(Assignments & Projects) :According to examination roles or policies: - The student should be attended the final exam at certain time and according to the accredited exam table. - If the student came late after 15 minutes from the exam beginning, the student would be to attend the exam with oral monition of never repeat. - In case of the repeat, the student prevented from entrance and considered absent.
12.	(Cheating) :According to examination roles or policies: - If the student cheated in the year works exams of the course, the student prohibited from entrance the final exam and given zero degree with prevented him from entrance the re-sit exam of this course. - If the student cheated in the final exam of the course, the student prohibited from the cheated course and the followed course and given zero degree in both courses, and prevented him from entrance the re-sit exams of them. - If the cheated course is the last at the exam table, the student prohibited from the cheated course and the past course and given zero degree in both courses, and prevented him from entrance the re-sit exams of them. - If the cheating is discovered in subsequent time, the cheated student didn't escape from payment and ordinance is referred to precision committee and the final decision is referred to the collage council. - If the cheating is discovered during the correcting the answered books, the corrector has written a report to the chairman of concerned department for taking available procedure. - The faculty council is able to segregate the student for one academic year in 2nd cheating trial and final segregation from the university after accreditation of university council in 3rd cheating trial.
13.	(Plagiarism) :According to examination roles or policies: Plagiarism means a student plagiarizes the personality of another student. Plagiarism for exam purpose: 1- Both students are prohibited from the plagiarized academic year and all results of them are rejected with prohibition of them from entrance the resit exam. 2- If the plagiarized student is from outside the university, the student is referred to the university police. -Plagiarism for other purposes: 1- Both students are warned as segregation. 2- If the plagiarized student is from outside the university, the student is referred to the university police.
14.	(Other policies) :-The student should be followed the instructions for the exam entrance. - The student should be followed all systems & laws of the university.