REPUBLIC OF YEMEN
SANA'A UNIVERSITY
Faculty Of Veterinary Medicine
Veterinary Medicine Program

Course Specification of General Bacteria and Fungi

I. Course Identification and General Information:							
1	**Course Title:**	General Bacteria and Fungi					
2	**Course Number & Code:**	MI352					
3	**Credit hours:**	**C.H**				**Total**	
		Theoretical	**Practical**	**Training**	**Seminar**		
		2	**1**	**0**	**0**	**3**	
4	**Study level/ semester at which this course is offered:**	Third year: First Semester					
5	**Pre –requisite (if any):**	PH 242, PH 243					
6	**Co –requisite (if any):**	None					
7	**Program (s) in which the course is offered:**	Bachelor's degree (B. Sc.) Veterinary Medicine					
8	**Language of teaching the course:**	English					
9	**Location of teaching the course:**	Faculty of veterinary medicine					
10	**Prepared by:**	Dr. hamid Alrefaiey					
11	**Date of approval:**						

II. Course description:

The course covers the fundamental principles related to bacteria and fungi mainly of veterinary importance and their reaction with host cells and molecular events during their replication.
The structure of the course is based on presenting the fundamentals of bacteriology and mycology to include cell structure, morphology, physiology(Growth and reproduction), ecology, genetics and classification of bacteria and fungi. Practical section demonstrates methods of bacterial staining, isolation, cultivation, biochemical tests and control.

Prepared by	Quality Assurance Unit	Dean of the Faculty	Academic Development Center & Quality Assurance
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III. Intended learning outcomes (ILOs) of the course:

(A) Knowledge and Understanding:

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

Program Intended Learning Outcomes (Sub-PILOs) in: Knowledge and Understanding		Course Intended Learning Outcomes (CILOs) in: Knowledge and Understanding	
After completing this program, students will be able to:		**After completing this course, students will be able to:**	
A1-	Demonstrate a sound knowledge and understanding of concepts and principles of general culture, basic science, and that support veterinary medicine.	**a1-**	Describe the structure, classification, growth requirements, metabolism , genetics, morphology and cultural characteristics of bacteria.
A3-	Identifies various causes of animal diseases, animal epidemics and how they can be diagnosed; including common and life-threatening diseases of animals, poultry and fish.	**a2-**	Recognize the most important bacteria and fungi of veterinary and human relevance, carry out laboratory examinations in order to identify them

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of Knowledge and Understanding to Teaching and Assessment Methods:

Course Intended Learning Outcomes (CILOs) in Knowledge and Understanding		Teaching strategies/methods to be used	Methods of assessment
completing this course, students will be able to:		▪ Lecture by data show ▪ Dialogue and discuss ▪ Practical practice ▪ self directed learning skills. ▪ Analyze the results and reach specific conclusion. ▪ Writing a review paper to gain the skills of self-learning and	▪ Written examination ▪ Quiz ▪ Oral examination ▪ Practical examination ▪ Activities ▪ Reports evaluation
a1-	Describe the structure, classification, growth requirements, metabolism , genetics, morphology and cultural characteristics of bacteria.		
a2-	Recognize the most important bacteria and fungi of veterinary and human relevance, carry out laboratory examinations in order to identify them		

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		▪ presentation ▪ Sample collection, preservation,examination and identification.	

(B) Intellectual Skills:

Alignment of 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 will be able to:		**After completing this course, students will be able to:**	
B3-	Design appropriate nursing and treatment care plans for different diseases that affect animals, prioritizing treatment.	**b1-**	Select the suitable sample and the suitable laboratory test for diagnosis.
B4-	Determines the appropriate and effective treatment; evaluates all medications used for each condition.	**b2-**	Choose the required measurements for prevention and control of Bacterial and fungal diseases.

Teaching And Assessment Methods For Achieving Learning Outcomes:

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

Course Intended Learning Outcomes (CILOs) in Intellectual Skills.		Teaching strategies/methods to be used	Methods of assessment
After completing this course, students will be able to:		▪ Dialogue and discuss ▪ Lecture ▪ Practical practice ▪ Problem solving ▪ Working in groups ▪ Labor training ▪ Researches and projects	▪ Written examination ▪ Oral examination ▪ Practical examination ▪ Performance notice ▪ Achievement file ▪ Reports evaluation ▪ Proposal evaluation
b1-	Select the suitable sample and the suitable laboratory test for diagnosis.		
b2-	Choose the required measurements for prevention and control of Bacterial and fungal diseases.		

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(C) Professional and Practical Skills:

Alignment of 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 will be able to:		**After completing this course, students will be able to:**	
C1-	Accurately records a comprehensive pathological story of a sick animal including information on healthy behavior and the necessary checks.	**c1-**	Work safely in a medical laboratory; implement disinfection and sterilisation methods.
C3-	Reads the results of laboratory investigations and diagnostic scans and writes reports and prescriptions for all common cases in a proper way.	**c2-**	Prepare different types of culture media, obtain pure culture and describe colonies' morphology.

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of Professional and Practical Skills to Teaching and Assessment Methods:

Course Intended Learning Outcomes (CILOs) in Professional and Practical Skills		Teaching strategies/methods to be used	Methods of assessment
After completing this course, students will be able to:		-Practical practice -Problem solving -Working in groups -Collaborative learning	- Written examinations - Oral examinations - Practical examination - Performance notice - Achievement file - Reports evaluation - Proposal evaluation
c1-	Work safely in a medical laboratory; implement disinfection and sterilisation methods.		
c2-	Prepare different types of culture media, obtain pure culture and describe colonies' morphology.		

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(D) General / Transferable Skills:

Alignment of 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 will be able to:		**After completing this course, students will be able to:**	
D3-	Practices problem-solving, negotiation, supervision and veterinary medical management skills and writing research reports efficiently and professionally.	**d1-**	Working in team (i.e., sharing presentations and discussions and solving problem).
D4	Works in normal conditions, crises and epidemics, alone and effectively within a medical team.	**d2-**	Enhancement of research capability through working in independent projects.

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of 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 completing this course, students will be able to:		▪ Dialogue and discuss ▪ Working in groups ▪ Scientific visits ▪ Researches and projects ▪ Self learning ▪ Problem solving	▪ Achievement file ▪ Reports evaluation ▪ Proposal evaluation ▪ Performance notice ▪ Practical examinations
d1-	Working in team (i.e., sharing presentations and discussions and solving problem).		
d2-	Enhancement of research capability through working in independent projects.		

IV. Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect					
Order	**Topic List / Units**	**CILOs (symbols)**	**Sub-topic List**	**Number of weeks**	**Contact hours**
1	General introduction Historical Background & classification of microorganisms	a1,a2,b1,b2, c1,c2	Definitions -Classifications - prokaryotic & eukaryotic cells	1	2
2	Groups of microorganisms: bacteria ; Structure and Morphology of Bacteria.	a1,a2,b1,b2, c1,c2	-Structure of bacterial cell, general characteristics, morphology, arrangement of cells, flagellation.	3	6
3	Groups of microorganisms: fungi; Structure, growth and Morphology of fungi	a1,a2,b1,b2, c1,c2	Fungi; general characteristics, morphology, types of spores	2	4
4	Growth and reproduction of microorganism: Bacterial growth and factors affecting growth	a1,a2,b1,b2, c1,c2	-Requirements for growth - factors affecting growth - Culture media - Obtaining pure culture - Bacterial growth curve	1	2
5	Fungal reproduction and growth and factors affecting growth	a1,a2,b1,b2, c1,c2	-Requirements for growth - factors affecting microbial growth, growth phases of microorganisms; fungi	1	2
6	Equipment and apparatus in microbiology, Microbial control; Aseptic procedures	a1,a2,b1,b2, c1,c2	-laboratory equipment and apparatus and their uses; types and parts of microscopes. -sterilization procedures: use of direct heat, dry heat, moist heat, irradiation, filtration and chemical sterilization agent	1	2
7	Isolation and culture of microorganisms; bacteria and fungi	a1,a2,b1,b2, c1,c2	-definitions, types of culture media, preparation of culture media, isolation and sub-culturing of bacteria and fungi	1	2
8	Microscopic study of	a1,a2,b1,b2,	definitions, preparation of bacterial	1	2

	microorganisms; bacteria and fungi	c1,c2	smear, staining procedures for bacteria, mounting and staining of fungal specimens, microscopic examination of bacteria, microscopic examination of fungi.		
9	Bacterial genetics	a1,a2,b1,b2, c1,c2	- Mutation and selection - Exchange of genetic Information -Recombinant DNA and gene cloning	1	2
10	Host-parasite relationship, Bacterial virulence	a1,a2,b1,b2, c1,c2	-Types of bacteria; obligate parasitic, commensal and saprophytic microorganism. - Bacterial infection ,Virulence factors ,Host resistance	1	2
11	Methods of preserving microorganisms	a1,a2,b1,b2, c1,c2	agar slant culture,cooling, storage in saline suspension, drying in vacuum, cryo-preservation, freeze dying, use of silica gel.	1	2
Number of Weeks /and Units Per Semester				**14**	**28**

b- Training Aspect (Practical- tutorial):

Order	Training Tasks	CILOs (symbols)	Number of weeks	Contact hours
1	laboratory practices and safety rules, equipments, and apparatus	a1,a2,b1,b2,c1,c2	1	2
2	Aseptic procedures – sterilization of apparatus by direct heat, use of ethanol and sodium hypochlorite, use of autoclave, hot air oven, laminar flow hood,….	a1,a2,b1,b2,c1,c2	1	2
3	Microscopes – types, parts, use and care of microscopes	a1,a2,b1,b2,c1,c2	1	2

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4	Bacterial smear, methods of staining bacteria and observation of bacteria under microscope	a1,a2,b1,b2,c1,c2	1	2
5	Smear preparation for Gram stain and Procedures of Gram stain and observation of bacteria under microscope (classification of bacteria)	a1,a2,b1,b2,c1,c2	1	2
6	Acid-Fast Staining (Ziehl-Neelsen and Kinyoun Procedures),……	a1,a2,b1,b2,c1,c2	1	2
7	Capsule Staining, Spore Staining (Schaeffer-Fulton or Wirtz-Conklin	a1,a2,b1,b2,c1,c2.	1	2
8	Preparation of moist chamber; preparation of temporary wet mount and cotton blue in lactophenol staining for microscopic examination of fungi	a1,a2,b1,b2,c1,c2	1	2
9	Preparation of different types of culture media; preparation of potato dextrose agar (PDA) and nutrient agar (NA) from natural ingredients; preparation of commercial media	a1,a2,b1,b2,c1,c2	1	2
10	Inoculation steps for bacterial culturing, Description of colonial appearance	a1,a2,b1,b2,c1,c2	1	2
11	Isolation of bacteria and fungi from specimens, Preparation of pure cultures of bacteria and fungi	a1,a2,b1,b2,c1,c2	1	2
12	Utilize of Biochemical tests for Recognize of species of bacteria	a1,a2,b1,b2,c1,c2	2	4
13	Antibiotics susceptibility testing	a1,a2,b1,b2,c1,c2	1	2
Number of Weeks /and Units Per Semester			**14**	**28**

V. Teaching strategies of the course:

- Lectures depending on the sharing efforts of the students and supported with macromedia and multimedia aids.
- Training in the laboratory
- Self-learning (Electronic learning, Seminars, scientific search on related websites, international,

national and local journals, related books in faculty library).

- Summer training course.
- Assays and reviews.
- Discussion groups.
- Group work
- Problem Solving
- Assignments
- Brainstorming
- Log book
- Field visits

3-Assessment Methods:

- Written examination: For assessment of knowledge, back calling and Intellectual skills.
- Practical examination: For assessment of practical and professional skill.
- Oral examination: For assessment of knowledge and Intellectual skills.

Student activities: For assessment of knowledge and general and transferable skills.

VI. 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	**Participation, quizzes and assignments**	**2-14**	**10**	**10%**	a1,a2,b1,b2,c1,c2
2	**Mid-Term Exam**	**8**	**10**	**10%**	a1,a2,b1,b2,c1,c2

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3	**Mid-Term Practical Exam**	**8**	**10**	**10%**	a1,a2,b1,b2,c1,c2
4	**Final Practical Exam**	**13**	**10**	**10%**	a1,a2,b1,b2,c1,c2
5	**Oral Exam**	**13**	**5**	**5%**	a1,a2,b1,b2,c1,c2
6	**Final Exam**	**16**	**55**	**55%**	a1,a2,b1,b2,c1,c2
	Total		**100**	**100%**	

VII. Students' Support:

Office Hours/week	Other Procedures (if any)
From Saturday to Wednesday at 8:00 a.m. till 2 p.m.	Student can contact with me via *e*-mail

VIII. Learning Resource (MLA style or APA style)S:

1- Required Textbook(s) (maximum two)

- Veterinary Microbiology and Microbial Diseases, 2002, Quinn etal.
- - Essentials of Veterinary Microbiology, 5th ed.,1995 , Carter etal.

2- Recommended Readings and Reference Materials

1- Veterinary Microbiology. Dwight C. Hirsh Yuan Chung Zee Publish, 1999 by Blackwell Sci Inc.
2- - Diagnostic Microbiology. Betty A. Forbes Daniel F. Sahm Alice S. Weissfeld 1998 by Mosb Inc –
3- Pathogenic Fungi in Humans and Animals. Edited by Pexter H. Howard Arcel dekker Inc Newyork.basl 2003.
4- - Fundamentals of Diagnostic Mycology. Fran fisher, M.Ed., M.t.(ASCP) W.B. SAUNDERS Company 1998.
5- - Bacterial Disease Mechanisms. Wilson M, McNab R and Henderson B (2002). Cambridge: Cambridge University Press.

3- Essential References

-Oanne Willey, Stanley Fischer, and Richard Startz. 2010. Prescott's Microbiology 8th edition.

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	McGraw-Hill Higher Education. -Baxter, A. P and E. Van der Linde (Eds.). 1999. Collecting and preserving fungi: A manual for mycology. ARC – Plant Protection Research Institute, South Africa. Ultra Litho (Pty) Ltd, Heriotda Johannesburg.
4-	**Electronic Materials and Web Sites *etc*.**
	- WWW.PubMed.com - Intrnational of veterinary information services (IVIS) - www.Vet.net.com -http://microbiologyonline.org/ -http://www.microbiologybook.org/
5-	**Other Learning Material:**
	- **Department notes:** available for students to purchase from the department. - White board, overhead projector and data show presentations used during teaching. - Laboratory , apparatus, Chemicals, glasses reagents and media, Kits

X. Course Policies:

1	**Class Attendance:** MANDATORY TO ATTEND ALL COURSE LECTURES
2	**Tardy:** Not allowed at all. Students must be in class 10 minutes prior to the beginning of lectures.
3	**Exam Attendance/Punctuality:** Attendance is mandatory; absence is accepted with valid excuse.
4	**Assignments & Projects:** All assignments and projects are to be submitted on their due date. Any assignment turned in after the due date will not be accepted without valid and reasonable excuse.
5	**Cheating:** Not tolerated and may lead to EXPELLING the student from the program
6	**Plagiarism:** Not tolerated AT ALL and may lead to EXPELLING the student from the program
7	**Other policies:** 1. All devices must be on silent or at least on vibration during lectures/labs.

	2. Before any exam (written, practical, oral) student's identity will be checked (student's card, ID, passport). Without any of these documents, the student will not be allowed in the exam room. 3. Any of type/ form of cheating is not allowed no matter what. 4. Maintain silence during lectures and disturbance is not allowed.

Course Plan of general bacteria and fungi

X. - Information about Faculty Member Responsible for the Course:							
Name of Faculty Member	Hamid A. N. Alrefaiey	**Office Hours**					
Location & Telephone No.	775336921	**SAT**	**SUN**	**MON**	**TUE**	**WED**	**THU**
E-mail	Hamid77Ali@gmail.com,nagihamidali@gmail.com	8am 2pm	8am 2pm	8am 2pm	8am 2pm	8am 2pm	-

XI. Course Identification and General Information:						
1-	**Course Title:**	General Bacteria and Fungi				
2-	**Course Number & Code:**	MI352				
3-	**Credit hours:**	**C.H**				**Total**
		Th.	**Seminar**	**Pr.**	**F. Tr.**	
		3	-	-		3
4-	**Study level/year at which this course is offered:**	Third year: first semester				
5-	**Pre –requisite (if any):**	PH 242,PH 243				
6-	**Co –requisite (if any):**	None				
7-	**Program (s) in which the course is offered**	Bachelor's degree (B. Sc.) Veterinary medicine				
8-	**Language of teaching the course:**	English				
9-	**System of Study:**	Regular / Semester				
10-	**Mode of delivery:**	Lectures and Practical				
11-	**Location of teaching the course:**	Faculty of veterinary medicine				

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II. Course Description:

The course covers the fundamental principles related to bacteria and fungi mainly of veterinary importance and their reaction with host cells and molecular events during their replication.
The structure of the course is based on presenting the fundamentals of bacteriology and mycology to include cell structure, morphology, physiology(Growth and reproduction), ecology, genetics and classification of bacteria and fungi. Practical section demonstrates methods of bacterial staining, isolation, cultivation, biochemical tests and control.

II. Intended learning outcomes (ILOs) of the course:

After completing this course, students will be able to:

a1- Describe the structure, classification, growth requirements, metabolism , genetics, morphology and cultural characteristics of bacteria.
a2- Recognize the most important bacteria and fungi of veterinary and human relevance, carry out laboratory examinations in order to identify them.
b1- Select the suitable sample and the suitable laboratory test for diagnosis.
b2- Choose the required measurements for prevention and control of Bacterial and fungal diseases.
c1- Work safely in a medical laboratory; implement disinfection and sterilisation methods.
c2- Prepare different types of culture media, obtain pure culture and describe colonies' morphology.
d1- Working in team (i.e., sharing presentations and discussions and solving problem).
d2- Enhancement of research capability through working in independent projects.

V. Course Content:

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A – Theoretical Aspect:			
Order	**Topics List**	**Week Due**	**Contact Hours**
1	General introduction Historical Background & classification of microorganisms	1	2
2	Groups of microorganisms: bacteria ; Structure and Morphology of Bacteria	2,3,4	6
3	Groups of microorganisms: fungi ;Structure and Morphology of fungi.	5,6	4
4	Growth and reproduction of microorganism: Bacterial growth and factors affecting growth	7	2
5	Mid exam	8	2
6	Fungal reproduction and growth and factors affecting growth	9	2
7	Equipment and apparatus in microbiology, Microbial control; Aseptic procedures	10	2
8	Isolation and culture of microorganisms; bacteria and fungi	11	2
9	Microscopic study of microorganisms; bacteria and fungi	12	2
10	Bacterial genetics	13	2
11	Host-parasite relationship, Bacterial virulence	14	2
12	Methods of preserving microorganisms	15	2
13	Final exam	16	2
Number of Weeks /and Units Per Semester		**16**	**32**

b- Training Aspect:			
Order	**Training Tasks**	**Week Due**	**Contact hours**

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1	laboratory practices and safety rules, equipments, and apparatus	1	2
2	Aseptic procedures – sterilization of apparatus by direct heat, use of ethanol and sodium hypochlorite, use of autoclave, hot air oven, laminar flow hood,….	2	2
3	Microscopes – types, parts, use and care of microscopes	3	2
4	Bacterial smear, methods of staining bacteria and observation of bacteria under microscope	4	2
5	Smear preparation for Gram stain and Procedures of Gram stain and observation of bacteria under microscope (classification of bacteria)	5	2
6	Acid-Fast Staining (Ziehl-Neelsen and Kinyoun Procedures),……	6	2
7	Capsule Staining, Spore Staining (Schaeffer-Fulton or Wirtz-Conklin	7	2
8	Mid exam	8	2
9	Preparation of moist chamber; preparation of temporary wet mount and cotton blue in lactophenol staining for microscopic examination of fungi	9	2
10	Preparation of different types of culture media; preparation of potato dextrose agar (PDA) and nutrient agar (NA) from natural ingredients; preparation of commercial media	10	2
11	Inoculation steps for bacterial culturing, Description of colonial appearance	11	2
12	Isolation of bacteria and fungi from specimens, Preparation of pure cultures of bacteria and fungi	12	2
13	Utilize of Biochemical tests for Recognize of species of bacteria	13,14	4
14	Antibiotics susceptibility testing	15	2
15	Final exam	16	2
Number of Weeks /and Units Per Semester		**16**	**32**

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V. Teaching strategies of the course:

- Lectures depending on the sharing efforts of the students and supported with macromedia and multimedia aids.
- Training in the laboratory
- Self-learning (Electronic learning, Seminars, scientific search on related websites, international, national and local journals, related books in faculty library).
- Summer training course.
- Assays and reviews.
- Discussion groups.
- Group work
- Problem Solving
- Assignments
- Brainstorming
- Log book

Field visits

VI. Assessment Methods:

- Written examination: For assessment of knowledge, back calling and Intellectual skills.
- Practical examination: For assessment of practical and professional skill.
- Oral examination: For assessment of knowledge and Intellectual skills.

Student activities: For assessment of knowledge and general and transferable skills.

No.	Type of Assessment Tasks	Week Due	Mark	Proportion of Final Assessment
1	**Participation, quizzes and assignments**	**2-14**	**10**	**10%**
2	**Mid-Term Exam**	**8**	**10**	**10%**
3	**Mid-Term Practical Exam**	**8**	**10**	**10%**
4	**Final Practical Exam**	**13**	**10**	**10%**
5	**Oral Exam**	**13**	**5**	**5%**
6	**Final Exam**	**16**	**55**	**55%**
	Total		**100**	**100%**

II. Learning Resources:

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

-Veterinary Microbiology and Microbial Diseases, 2002, Quinn etal.
- Essentials of Veterinary Microbiology, 5th ed.,1995 , Carter etal.

2- Essential References.

-Oanne Willey, Stanley Fischer, and Richard Startz. 2010. Prescott's Microbiology 8th edition. McGraw-Hill Higher Education.
-Baxter, A. P and E. Van der Linde (Eds.). 1999. Collecting and preserving fungi: A manual for mycology. A Plant Protection Research Institute, South Africa. Ultra Litho (Pty) Ltd, Heriotdale, Johannesburg

3- Electronic Materials and Web Sites *etc*.

- WWW.PubMed.com
- Intrnational of veterinary information services (IVIS)
- www.Vet.net.com

-http://microbiologyonline.org/
-http://www.microbiologybook.org/

II. Course Policies:

1	**Class Attendance:** MANDATORY TO ATTEND ALL COURSE LECTURES
2	**Tardy:** Not allowed at all. Students must be in class 10 minutes prior to the beginning of lectures.
3	**Exam Attendance/Punctuality:** Attendance is mandatory; absence is accepted with valid excuse.
4	**Assignments & Projects:** All assignments and projects are to be submitted on their due date. Any assignment turned in after the due date will not be accepted without valid and reasonable excuse.

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5	**Cheating:** Not tolerated and may lead to EXPELLING the student from the program
6	**Plagiarism:** Not tolerated AT ALL and may lead to EXPELLING the student from the program
7	**Other policies:** 5. All devices must be on silent or at least on vibration during lectures/labs. 6. Before any exam (written, practical, oral) student's identity will be checked (student's card, ID, passport). Without any of these documents, the student will not be allowed in the exam room. 7. Any of type/ form of cheating is not allowed no matter what. 8. Maintain silence during lectures and disturbance is not allowed.