



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

Course Specification of Veterinary Laboratory Diagnosis

I. Course Identification and General Information:						
1	Course Title	Veterinary Laboratory Diagnosis				
2	Course Number & Code:	IM568				
3	Credit hours:	C.H				Total
		Theoretical	Practical	Training	Seminar	
		1	2	0	0	3
4	Study level/ semester at which this course is offered:	Second Semester of Fifth Year				
5	Pre –requisite (if any):	MI353, MI355, MI357				
6	Co –requisite (if any):					
7	Program (s) in which the course is offered:	Veterinary Medicine				
8	Language of teaching the course:	English				
9	Location of teaching the course:	Faculty of Veterinary Medicine Building				
10	Prepared by:	Dr. Hussein Abdulhadi Nasser Al-Wadei				
11	Date of approval:					

II. Course description:

عميد مركز التطوير

عميد الكلية

نائب العميد لشئون الجودة

الموصف

رئيس الجامعة

وضمن الجودة
أ.د. هدى العماد

د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي

د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

This course is designed to provide students with necessary background to perform basic veterinary clinical or laboratory procedures such as examination of blood and urine for diagnostic and prognostic purposes. Along with examination of blood and urine, students will learn to perform several tests including blood counts, serological tests, and complete urinalyses. Furthermore, will know how to perform milk analysis, skin scraping, and practice on how to do an x-ray film process. Theories of tests, methodology for care, relevance of quality laboratory results in the evaluation of the health of animals, and maintenance of veterinary laboratory equipment will be covered in lecture periods.

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-	Explain concepts/procedures related to laboratory tests: sampling and transport of biological/infectious materials, biosafety, biohazard classifications, quality control for laboratory techniques and analyses in order to perform a proper risk assessment and plan for containment and transport.
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-	Identify the terminology, epidemiology, laboratory diagnosis, control and prevention of infectious and non-infectious diseases of animals

عميد مركز التطوير

عميد الكلية

نائب العميد لشئون الجودة

الموصف

وضمن الجودة
أ.د. هدى العماد

د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي

د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

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
<p>completing this course, students will be able to:</p> <p>a1- Understand and explain concepts/procedures related to laboratory tests: sampling and transport of biological/infectious materials, biosafety, biohazard classifications, quality control for laboratory techniques and analyses in order to perform a proper risk assessment and plan for containment and transport</p> <p>a2- Identify the terminology, epidemiology, laboratory diagnosis, control and prevention of infectious and non-infectious diseases of animals</p>	<ul style="list-style-type: none"> Lectures Dialogue and discussion Practical application (Labs) Scientific trips Field and clinical training Simulation and demos Brainstorming Self -education 	<ul style="list-style-type: none"> -The written test (Monthly, Midterm, Final) -Short tests (Quizzes) -Oral tests -Practical tests (Lab Test) -Evaluation of reports -Assignments (Homeworks) -Projects -Presentations

(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) in Intellectual Skills
<p>After completing this program, students will be able to:</p> <p>B1- Competently practices analytical and critical thinking skills in studying and assessing health problems and reading the results of animal medical examinations that is related to sciences.</p>	<p>After completing this course, students will be able to:</p> <p>b1- Appraise molecular (PCR) and serological (ELISA) pathogen detection tests in order to identify an appropriate diagnostic strategy for specified pathogen infection</p>

عميد مركز التطوير

عميد الكلية

نائب العميد لشئون الجودة

الموصف

وضمن الجودة
أ.د. هدى العماد

د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي

د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

B2-	Predicts an appropriate medical diagnosis for the most common disease states through analysis of clinical story data and the results of medical examinations of a sick animal.	b2-	Analyze information from a variety of sources to diagnose and prognose a disease.
------------	--	------------	---

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:			
b1-	Appraise molecular (PCR) and serological (ELISA) pathogen detection tests in order to identify an appropriate diagnostic strategy for a specified pathogen infection	<ul style="list-style-type: none"> Dialogue and discussion Lectures Practical application (Labs) Problem Solving Cooperative learning and working groups Scientific trips Field and clinical training Simulation and demos Research costs and projects 	<ul style="list-style-type: none"> The written test Oral tests Practical tests Note the performance (Accomplishment) Evaluation of reports Evaluating student presentations
b2-	Analyze information from a variety of sources to diagnose and prognose a disease.		

(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:	
C2-	Practices practical, diagnostic, clinical and research skills, including the collection of samples in various fields of veterinary medicine and related sciences, in a safe and effective manner, considering the ethics of the profession.	c1-	Perform a complete blood count, including microscopic examination of a blood film, slide preparation techniques, staining techniques

عميد مركز التطوير

عميد الكلية

نائب العميد لشئون الجودة

الموصف

و ضمان الجودة
أ.د. هدى العماد

د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي

د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

C3-	Reads the results of laboratory investigations and diagnostic scans and writes reports and prescriptions for all common cases in a proper way.	c2-	Identify commonly used laboratory instruments and equipment, and describe proper procedures for their operation, care, and maintenance
-----	--	-----	--

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:		<ul style="list-style-type: none"> Practical application (Labs) Problem Solving Cooperative learning and working groups Scientific trips Case Study Field and clinical training Simulation and practical presentations Research costs and projects 	<ul style="list-style-type: none"> Practical tests Note the performance The written test Oral tests Achievement file Evaluation of reports Evaluating student presentation
c1-	Perform a complete blood count, including microscopic examination of a blood film, slide preparation techniques, staining techniques		
c2-	Identify commonly used laboratory instruments and equipment, and describe proper procedures for their operation, care, and maintenance		

(D) General / Transferable Skills:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: **General / 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:	
D1-	Communicates effectively with other fellow professions and animal owners and expresses his ideas clearly and objectively.	d1-	Demonstrate the ability to work as part of a team through the collection and presentation of information

عميد مركز التطوير

عميد الكلية

نائب العميد لشئون الجودة

الموصف

وضمن الجودة
أ.د. هدى العماد

د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي

د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

D2-	Develops his scientific, professional, research capabilities on his own, and follows what is emerging in his field of specialization, including computer applications and information and communication technology.	d2	Practice safety in the laboratory while working with others, during a clinical procedure handling hazardous objects
------------	---	-----------	---

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:		<ul style="list-style-type: none"> Dialogue and discussion Cooperative learning and working groups Scientific trips Research costs and projects Self education Demo and practical presentations Problem Solving 	<ul style="list-style-type: none"> Achievement Evaluation Evaluating presentation Note the performance Practical test (Test)
d1-	Demonstrate the ability to work as part of a team through the collection and presentation of information		
d2-	Practice safety in the laboratory while working with others, during a clinical procedure and while handling hazardous objects		

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	-Syllabus Reading & Knowing each other -Collection of Samples	a1, a2, d2	Blood, Urine, Faeces, Milk, GIT, Abortion Cases, Nasal discharge, Saliva & Tears, Eye, Skin, Body	1	1

عميد مركز التطوير

و.ضمان الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

			Fluids, Gastric Juice & Ruminant Fluid, Abscess		
2	Clinical Hematology	c1, c2, d2	Erythrocytes Count Leukocytes Count Reticulocytes Count Thrombocytes Count Hemoglobin Determination Hemostasis & Coagulating of blood	1	1
3	Bone Marrow Examination	a2. b1, b2	Examination of bone marrow film Cell identification	1	1
4	Clinical Biochemistry	a2. c1, c2	Preparation of Solutions Equipments of Biochemical Analyses	1	1
5	Urinalysis	a2. b2	Macroscopic & Microscopic Examination of the Urine Urine Culture Kidney Function Tests I	1	1
6	Clinical Parasitology	a2, a2, b1	Coprolological Examination Blood Examination- Blood Protozoa Miscellaneous Parasitic Examination Diagnosis of External Parasites	1	1
7	Rumen Fluid Examination	b1, c1, d2	Examination of Fluid Examination of Protozoa Examination of Bacteria	1	1
8	Milk Examination	b1, c1, d2	Physical (Strip-Cup test)	1	1

عميد مركز التطوير

وضمن الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

			Chemical Examination Indirect Leukocyte Count Direct Leukocyte Count Hotis Test		
9	Clinical Microbiology	a1, a2. b1, b2	Clinical Microbiology Clinical Virology Clinical Mycology	1	1
10	Serology	a1, a2, b1, b2	Agglutination Test Hemagglutination Test Precipitation Complement Fixation Test ELISA Test Immunofluorescence	1	1
11	Polymerase Chain Reaction	b1, b2,	Materials in PCR technique Procedure of PCR technique	1	1
12	General Examination of Animals	a2, d2, c2	<ul style="list-style-type: none">Palpation and AuscultationHeartbeatsRespiratory RateRumen MovementsPulsation	1	1
13	Examination of Skin & Appendages	a1, d1	<ul style="list-style-type: none">Abnormalities in skin coatElasticity of SkinSkin Lesions	1	1
14	Examination of Eyes & Ears Examination of Skin Scrapings	a1, a2, c2	Eyes <ul style="list-style-type: none">Diseases of eyesTesting of eye function Ear <ul style="list-style-type: none">Diseases of ear	1	1

عميد مركز التطوير

وضمن الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

			<ul style="list-style-type: none"> • Ear Function Test • General considerations • Examination of skin scrapings for management • Examination of skin scrapings for fungi • Lice, mites, ticks & fleas 		
Number of Weeks /and Units Per Semester				14	14

b- Training Aspect:				
Order	Training Tasks	CILOs (symbols)	Number of weeks	Contact hours
1	Collection of blood sample	a2, c1	1	2
2	Chemical analysis of blood samples (site, size of needles, sterilization...etc.)	a1, a2, c2	2	2
3	Taking and reading x-ray film results	a2, c2	3	2
4	Protein, lipid, carbohydrate analysis	a1, c2	4	2
5	Practical Exam 1	a-d	5	2
6	Macroscopic & Microscopic Examination of the Urine	a2, c1, c2	6	2
7	Parasitic and Protozoal Examination	a1, b1, c1	7	2
8	Rumen Fluid Examination	a2, c1, c2	8	2
9	Macroscopic and microscopic examination of Milk	a2, c1, c2	9	2

عميد مركز التطوير

وضمن الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

10	Practical Exam 2	a-d	10	2
11	Proper ways of Bacterial, Viral and Fungal Examination	a2, c1, c2	11	2
12	-Determination of Blood Type -Determination of Coagulant Agents	a2, c1, c2	12	2
13	Understanding of Genetic Molecular Analysis (PCR, R-PCR, Q-PCR)	a2, c1, c2	13	2
14	Physical Examination of Animals for General Health Signs Performing Skin Scraping	a2, c1, c2 a2, c1, c2	14	2
Number of Weeks /and Units Per Semester			14	28

V. Teaching strategies of the course:
<ul style="list-style-type: none">• Lectures• Group discussions• Literature Review• Brainstorming• Practical Seminars• Individual assignments
3-Assessment Methods:
<ul style="list-style-type: none">• The written test• Short tests (Quizzes)• Oral tests• Evaluation of reports• Assignments (Homeworks)• Projects• Presentations
Grading Scale: Grades are awarded on a scale from A to F, where A is the best grade (90-100) and F is a fail (<50).

عميد مركز التطوير

وضمن الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

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%	a-d
2	Mid-semester exam	8	10	10%	a-d
3	Mid-Term Practical Exam	8	10	10%	a-d
4	Final Practical Exam	16	10	10%	a-d
5	Final Oral Exam	16	5	5%	a-d
6	Final Written Exam	16	55	55%	a-d
Total			100	100%	

VII. Students' Support:	
Office Hours/week	Other Procedures (if any)
Saturday-Wednesday from 8:00 a.m.-2 p.m.	Student can contact me via email

VIII. Learning Resource (MLA style or APA style)s:
1- Required Textbook(s) (maximum two)
1. Veterinary Clinical Diagnostic Procedures for Fourth Year Students. Collected by Prof. Dr. Samih H. Arsalan, Assit. Prof Dr. Maab I. Al-Farwachi... etal
2. Textbook of Veterinary Clinical & Laboratory Diagnosis, Second Ed. RS Chauhan, DK Agarwal
2- Recommended Readings and Reference Materials
3- Essential References
4- Electronic Materials and Web Sites etc.

عميد مركز التطوير

عميد الكلية

نائب العميد لشئون الجودة

الموصف

وضمن الجودة
أ.د. هدى العماد

د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي

د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

1. https://www.researchgate.net/publication/324731675_Veterinary_Clinical_Diagnostic_Procedures_for_Fourth_Year_Students
2. https://vetbooks.ir/textbook-of-veterinary-clinical-and-laboratory-diagnosis-2nd-edition/
5- Other Learning Material:
-

X. Course Policies:	
1	Class Attendance: MANDATORY TO ATTEND ALL COURSE LECTURES AND LABS
2	Tardiness: Not allowed at all. Students must be in class or in the practical session 10 minutes prior to the beginning of lectures or practical session
3	Exam Attendance/Punctuality: Attendance is mandatory; absence is accepted with valid excuse. Students must be on time for each exam, tardiness is not permissible
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: <ol style="list-style-type: none">All devices must be on silent or at least on vibration during lectures/labsBefore any exam (written, oral) we must check student's identity (student's card, ID, passport). Without any of these documents, the student will not be allowed in the exam room.Any of type/ form of cheating is not allowed no matter what.

عميد مركز التطوير

عميد الكلية

نائب العميد لشئون الجودة

الموصف

وضمن الجودة
أ.د. هدى العماد

د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي

د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

4. Maintain silence during lectures/exam and disturbance is not allowed. For any questions students should raise their hand and wait for permission to talk.

Course Plan of Veterinary Laboratory Diagnosis

X. - Information about Faculty Member Responsible for the Course:							
Name of Faculty Member	Dr. Hussein Abdulhadi Al-Wadei	Office Hours					
Location & Telephone No.	Faculty of Veterinary Medicine Building	SAT	SUN	MON	TUE	WED	THU
E-mail	haalwadei@gmail.com	8am 2pm	8am 2pm	8am 2pm	8am 2pm	8am 2pm	

XI. Course Identification and General Information:						
1-	Course Title:	Veterinary Laboratory Diagnosis				
2-	Course Number & Code:	IM568				
3-	Credit hours:	C.H				
		Th.	Seminar	Pr.	F. Tr.	Total
		1	-	2	-	3
4-	Study level/year at which this course is offered:	Second Semester Fifth Year				
5-	Pre –requisite (if any):	MI353, MI355, MI357				
6-	Co –requisite (if any):	None				
7-	Program (s) in which the course is offered	Veterinary Medicine				
8-	Language of teaching the course:	English				
9-	System of Study:	Regular / Semester				
10-	Mode of delivery:	Lectures and Practical				

عميد مركز التطوير

وضمن الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

11-	Location of teaching the course:	Faculty of Veterinary Medicine Building
-----	---	--

II. Course Description:

This course is designed to provide students with necessary background to perform basic veterinary clinical or laboratory procedures such as examination of blood and urine for diagnostic and prognostic purposes. Along with examination of blood and urine, students will learn to perform several tests including blood counts, serological tests, and complete urinalyses. Furthermore, students will know how to perform milk analysis, skin scraping, and practice on how to do an x-ray film process. Theories of tests, methodology for care, relevance of quality laboratory results in the evaluation of the health of animals, and maintenance of veterinary laboratory equipment will be covered in lecture periods.

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

عميد مركز التطوير

و ضمان الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

After completing this course, students will be able to:

- a1- Explain concepts/procedures related to laboratory tests: sampling and transport of biological/infectious materials, biosafety, biohazard classifications, quality control for laboratory techniques and analyses in order to perform a proper risk assessment and plan for containment and transport.
- a2- Identify the terminology, epidemiology, laboratory diagnosis, control and prevention of infectious and non-infectious diseases of animals
- b1- Appraise molecular (PCR) and serological (ELISA) pathogen detection tests in order to identify an appropriate diagnostic strategy for a specified pathogen infection
- b2- Analyze information from a variety of sources to diagnose and prognose a disease.
- c1- Perform a complete blood count, including microscopic examination of a blood film, slide preparation techniques, staining techniques
- c2- Identify commonly used laboratory instruments and equipment, and describe proper procedures for their operation, care, and maintenance
- d1- Demonstrate the ability to work as part of a team through the collection and presentation of information
- d2- Practice safety in the laboratory while working with others, during a clinical procedure and while handling hazards objects

V. Course Content:

A – Theoretical Aspect:

Order	Topics List	Week Due	Contact Hours
1	Collection of Samples	1	1
2	Clinical Hematology	2	1
3	Bone Marrow Examination	3	1
4	Clinical Biochemistry	4	1
5	Urinalysis	5	1
6	Clinical Parasitology	6	1
7	Rumen Fluid Examination Milk Examination	7	1

عميد مركز التطوير

وضمن الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

8	Midterm Exam	8	1
9	Clinical Microbiology	9	1
10	Serology	10	1
11	Polymerase Chain Reaction	11	1
12	Examination of Skin Appendages	12	1
13	Examination of Musculoskeletal System	13	1
14	Examination of Eyes & Ears	14	1
15	Examination of Skin Scrapings	15	1
16	Final Exam	16	1
Number of Weeks /and Units Per Semester		16	16

b- Training Aspect:			
Order	Training Tasks	Week Due	Contact hours
1	Collection of blood sample	1	2
2	Chemical analysis of blood samples (site, size of needles, sterilization...etc.)	2	2
3	Taking and reading x-ray film results	3	2
4	Protein, lipid, carbohydrate analysis	4	2
5	Practical Exam 1	5	2
6	Macroscopic & Microscopic Examination of the Urine	6	2
7	Parasitic and Protozoal Examination Rumen Fluid Examination	7	2
8	Midterm Exam	8	2
9	Macroscopic and microscopic examination of Milk	9	2
10	Practical Exam 2	10	2
11	Proper ways of Bacterial, Viral and Fungal Examination	11	2
12	Determination of Blood Type	12	2

عميد مركز التطوير

وضمن الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

	-Determination of Coagulant Agents		
13	Understanding of Genetic Molecular Analysis (PCR, R-PCR, Q-PCR)	13	2
14	Physical Examination of Animals for General Health Signs	14	2
15	Performing Skin Scraping	15	2
16	Final Exam	16	2
Number of Weeks /and Units Per Semester		16	32

V. Teaching strategies of the course:
<ul style="list-style-type: none">• Lectures• Group discussions• Literature Review• Brainstorming• Practical Seminars• Individual assignments
VI. Assessment Methods:
<ul style="list-style-type: none">• The written test• Short tests (Quizzes)• Oral tests• Evaluation of reports• Assignments (Homeworks)• Projects• Presentations <p>Grading Scale: Grades are awarded on a scale from A to F, where A is the best grade (91-100) and F is a fail (<50).</p> <p>N.B.:</p>

عميد مركز التطوير

عميد الكلية

نائب العميد لشئون الجودة

الموصف

وضمن الجودة
أ.د. هدى العماد

د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي

د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

1. Any student who pass the 25% of the class attendance will not be allowed for the final exam.
2. Students are advised to study hard in the class during the semester.
3. Retaking an exam is not allowed without valid excuse.

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

II. Learning Resources:

1.

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

2- Essential References.

3- Electronic Materials and Web Sites etc.

PubMed <https://www.ncbi.nlm.nih.gov/pubmed/>

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 or labs.

عميد مركز التطوير

عميد الكلية

نائب العميد لشئون الجودة

الموصف

وضمن الجودة
أ.د. هدى العماد

د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي

د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة صنعاء
كلية الطب البيطري

3	Exam Attendance/Punctuality: Attendance is mandatory; absence is accepted with valid excuse. Students must be on time for each exam, tardiness is not permissible
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: <ol style="list-style-type: none">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.

عميد مركز التطوير

و ضمان الجودة
أ.د. هدى العماد

عميد الكلية

د. عبدالرؤف الشوكاني

نائب العميد لشئون الجودة

د. عبدالرقيب الشامي

الموصف

رئيس الجامعة
د. عبدالرقيب الشامي

أ.د. القاسم محمد عباس