



## Course Specification of Biology

I. Course Identification and General Information:						
1	<b>Course Title:</b>	Biology				
2	<b>Course Number &amp; Code:</b>	FR112				
3	<b>Credit hours:</b>	C.H				Total
		Theoretical	Practical	Training	Seminar	
		2	-	1	-	3
4	<b>Study level/ semester at which this course is offered:</b>	First Year - First Semester				
5	<b>Pre –requisite (if any):</b>	None				
6	<b>Co –requisite (if any):</b>	None				
7	<b>Program (s) in which the course is offered:</b>	Bachelor of Veterinary Medicine				
8	<b>Language of teaching the course:</b>	English language				
9	<b>Location of teaching the course:</b>	Faculty of Veterinary Medicine Building				
10	<b>Prepared by:</b>	Dr. Basheer Ahmed Mufreh				
11	<b>Date of approval:</b>					

### II. Course description:

Biology is a Faculty required course, This course provides a student by basic and advanced skills for understand Biology at studying environment, and at home. It presents the knowledge of basic Biology concepts. The course provides the knowledge needed to operate and utilize the operating system and office software package, and to use the. Biology and further develops students' communication skills in design, describe, Draw and using a moderately advanced materials. It also provides the students with a wide range of basic concept and develops their use Experience of medical Biology, and processes to investigate the effect of varying resistance on the Science of Biology in the environment, solve simple problems on the cost of using Science of Biology appliances, using machines and Networks.

Prepared by  
Dr. Basheer Mufreh

Quality Assurance Unit  
Dr. Abdulraqeb Alshami

Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
Ass. Prof. Dr. Huda Al-  
Emad

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Prof. Dr. Al-Qassim Mohammed Abbas



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

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:	
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.	a1-	Describe how arrangement of the components of an e Biology system affects the outputs of the system.
A4-	Describes the foundations and procedural steps for treating all diseases that affect different animals, highlighting the medical conditions that need surgical interventions.	a2-	Distinguish what is meant by Biology , relate it to an output of an Biology system

**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:		Lectures Investigation Explanation Open question Demonstration Presentation Observation. Cooperative learning workshops Pair work Group work	Home Work Class Work Class Active Case Studies Research Papers Group Projects Watch Video Collect sample Mid-semester exam Final exam Cooperative learning
a1-	Describe how arrangement of the components of an e Biology system affects the outputs of the system.		
a2-	Distinguish what is meant by Biology , relate it to an output of an Biology system		

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Quality Assurance Unit  
Dr. Abdulraqeb Alshami

Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
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Emad

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**(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:	
<b>B2-</b>	Predicts an appropriate medical diagnosis for the most common disease states through analysis of clinical story data and the results of medical examinations of sick animal.	<b>b1-</b>	Analyze Science of Biology system.
<b>B3-</b>	Design appropriate nursing and treatment care plans for different animal diseases and determine prioritizing of therapeutic.	<b>b2-</b>	Explain the design of biological Organization

**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:			
<b>b1-</b>	Analyze Science of Biology system.	Lectures Investigation Feedback Open question Demonstration Observation. Cooperative learning workshops Pair work Group work	Home Work Class Work Class Active Case Studies Research Papers Group Projects Watch Video Mid-semester exam Final exam Cooperative learning
<b>b2-</b>	Explain the design of biological Organization		

**(C) Professional and Practical Skills:**

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: **Professional and**

Prepared by  
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Quality Assurance Unit  
Dr. Abdulraqueb Alshami

Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
Ass. Prof. Dr. Huda Al-  
Emad

Rector of Sana'a University  
Prof. Dr. Al-Qassim Mohammed Abbas



Practical Skills			
Program Intended Learning Outcomes (Sub-PIOs) in Professional and Practical Skills		Course Intended Learning Outcomes (CIOs) in Professional and Practical Skills	
After completing this program, students will be able to:		After completing this course, students will be able to:	
C2-	Practicing 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, taking into account the ethics of the profession.	c1-	Use the microscope in diagnose the bacteria and parasites.
C3-	Reads the results of laboratory investigations and diagnostic scans and writes reports and prescriptions for all common cases in a proper way.	c2-	Perform calculations on Biology
<b>Teaching And Assessment Methods For Achieving Learning Outcomes:</b>			
Alignment of Learning Outcomes of Professional and Practical Skills to Teaching and Assessment Methods:			
Course Intended Learning Outcomes (CIOs) in Professional and Practical Skills		Teaching strategies/methods to be used	Methods of assessment
After completing this course, students will be able to:		Lectures Investigation Explanation Feedback Open question Demonstration Presentation	Home Work Class Work Class Active Case Studies Research Papers Group Projects Watch Video
c1-	Use the microscope in diagnose the bacteria and parasites.		
c2-	Perform calculations on Biology		

**(D) General / Transferable Skills:**

Alignment of Course Intended Learning Outcomes (CIOs) to Program Intended Learning Outcomes (PIOs) in: General and Transferable skills	
Program Intended Learning Outcomes (PIOs) in General / Transferable skills	Course Intended Learning Outcomes (CIOs) in General / Transferable skills
After completing this program, students will be able to:	After completing this course, students will be able to:

Prepared by  
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Quality Assurance Unit  
Dr. Abdulraqeb Alshami

Dean of the Faculty  
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Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
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Emad

Rector of Sana'a University  
Prof. Dr. Al-Qassim Mohammed Abbas



<b>D2-</b>	Develops his scientific, professional and research capabilities and follow what is emerging in his field of specialization and using computer applications and information and communication technology.	<b>d1-</b>	Calculate the value of pressure in Biology
<b>D3-</b>	Practices problem-solving, negotiation, supervision and veterinary medical management skills and writing research reports efficiently and professionally.	<b>d2-</b>	Draw Type of living tissues

**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:		Investigation Open question Presentation Observation. Pair work Group work	Class Active Research Papers Group Projects Watch Video Mid-semester exam Final exam
<b>d1-</b>	Calculate the value of pressure in Biology		
<b>d2</b>	Draw Type of living tissues		

**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	Introduction of Biology	a1, a2, b1, c2, d1, d2	Biology Zoology Botany Ecology Biotechnology	1	2

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Quality Assurance Unit  
Dr. Abdulraqeb Alshami

Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
Ass. Prof. Dr. Huda Al-  
Emad

Rector of Sana'a University  
Prof. Dr. Al-Qassim Mohammed Abbas



2	The cell		The cells structure composition and function	1	2
3	Prokaryote	a1, a2, b1, c2, d1, d2	Desin probability Description kind of p origin Observation sample of origin origin properties	1	2
4	Kingdom	a1, a2, b1, c2, d1, d2	Data the kingdom distributions. kingdom properties Identify kingdom continuous kingdom.	1	2
5	Phylum	a1, a2, b1, c2, d1, d2	Protozoa Platyhelminthes Nemathelminthes Arthropoda Chordata	3	6
6	Comparison between Prokaryote and Eukaryote cells			1	2
7	Mitosis	a1, a2, b1, c2, d1, d2	Replication of Eukaryote cells Reduction division and Gametogenesis	1	2
8	Types of living tissues	a1, a2, b1, c2, d1, d2		1	2
9	Stem of cells	a1, a2, b1, c2, d1, d2	Cell cell properties drawing cell	1	2
10	Blood composition and function	a1, a2, b1, c2, d1, d2		1	2

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Quality Assurance Unit  
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Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
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Emad

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Prof. Dr. Al-Qassim Mohammed Abbas



11	General characteristic of Bacteria			1	2
12	General characteristic of virus	a1, a2, b1, c2, d1, d2		1	2
<b>Number of Weeks /and Units Per Semester</b>				<b>14</b>	<b>28</b>

### b- Training Aspect:

Order	Training Tasks	CILOs (symbols)	Number of weeks	Contact hours
1	The microscope and The cell	c1, c2, d1, d2	1	2
2	Prokaryote and Eukaryote cells	c1, c2, d1, d2	1	2
3	Mitosis	c1, c2, d1, d2	1	2
4	Types of tissues	c1, c2, d1, d2	1	2
5	Protozoa: Mastigophora, Sarcodena, Ciliphora, Sporozoa	c1, c2, d1, d2	2	4
6	Nematoda: Ascaris, Ancylostoma	c1, c2, d1, d2	1	2
7	Trematoda: Fasciola, Schistosoma	c1, c2, d1, d2	2	2
8	Cestoda: Taenia	c1, c2, d1, d2	1	2
9	Mosquitoes	c1, c2, d1, d2	1	2
10	Organismal	c1, c2, d1, d2	1	2
11	Draw and design	c1, c2, d1, d2	2	4
<b>Number of Weeks /and Units Per Semester</b>			<b>14</b>	<b>28</b>

### V. Teaching strategies of the course:

Prepared by  
Dr. Basheer Mufreh

Quality Assurance Unit  
Dr. Abdurraqeb Alshami

Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
Ass. Prof. Dr. Huda Al-  
Emad

Rector of Sana'a University  
Prof. Dr. Al-Qassim Mohammed Abbas



- Brainstorming
- Teacher explanation
- Directed reading
- Silent Reading
- Self-learning
- Problem solving
- Cooperative learning
- Group work
- Pair work
- Listening to short dialogues

**3-Assessment Methods:**

Home Active  
 Home Work  
 Class Work  
 Research Papers  
 Watch Video  
 Note sample  
 Abstract

**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)
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 Dr. Basheer Mufreh

Quality Assurance Unit  
 Dr. Abdulraqeb Alshami

Dean of the Faculty  
 Ass. Prof. Dr. Abdu Alraoof  
 Al-Shawkany

Academic Development  
 Center & Quality  
 Assurance  
 Ass. Prof. Dr. Huda Al-  
 Emad

Rector of Sana'a University  
 Prof. Dr. Al-Qassim Mohammed Abbas





					symbols)
1	Participation, quizzes and assignments	2-14	10	10%	a1, a2, b1, b2, c1, c2,d1
2	Mid-Term Exam	8	10	10%	a1, a2, b1, b2, c1, c2
3	Mid-Term Practical Exam	8	10	10%	a1, a2, b1, b2, c1, c2
4	Final Practical Exam	15	10	10%	a1, a2, b1, b2, c1, c2
5	Oral Exam	16	5	5%	a1, a2, b1, b2, c1, c2,d1
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)
Every sun day	Non

VIII. Learning Resource (MLA style or APA style)S:
1- Required Textbook(s) ( maximum two )
<ul style="list-style-type: none"> <li>Morris Mano, " Biology 3 ", by Prentice – Hall 2011 ISBN. 1995</li> </ul>
2- Recommended Readings and Reference Materials
<ul style="list-style-type: none"> <li>R. A. Serway and J. S. Faughn, General Biology , 2006, Holt, USA.</li> <li>John F.Warryly, " General Biology ", Pearson Education ,Russia</li> </ul>
3- Essential References
Richards, Jack C., Hull, Jonathan and Proctor, Susan. (2008).Biology-o. Third edition, New York: Cambridge University Press <a href="http://www.ph.utexas.edu/~">http://www.ph.utexas.edu/~</a> General Biology /resources/resources.html
4- Electronic Materials and Web Sites etc.

Prepared by  
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Quality Assurance Unit  
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Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
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Emad

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Prof. Dr. Al-Qassim Mohammed Abbas



- <http://mastersin.esl.com/2012/40-best-sites-for-esl-study-materials-textbooks-and-software/>
- <http://learnenglishteens.britishcouncil.org/skills/listening-skills-practice>
- [http://www.everythingsl.net/in-services/elementary\\_sites\\_ells\\_71638.php](http://www.everythingsl.net/in-services/elementary_sites_ells_71638.php)
- [http://www.everythingsl.net/in-services/elementary\\_sites\\_ells\\_71638.php](http://www.everythingsl.net/in-services/elementary_sites_ells_71638.php)
- <http://www.5minuteenglish.com/the-fun-of-learning-english.htm>
- <http://www.funbrain.com/cgi-bin/gg.cgi?A1=m&A2=0&A3=0&AFUNCT=1&ALEVEL=0>
- <http://classroom.jc-schools.net/basic/la-grammar.html>
- <http://classroom-aid.com/2012/08/28/25-online-games-for-english-language-learners/>
- <https://www.vocabulary.co.il/>
- <http://www.talkenglish.com/listening/listenintermediate.aspx>
- <https://learnenglish.britishcouncil.org/en/english-grammar/clause-phrase-and-sentence/sentence-structure>
- <http://classroom.jc-schools.net/basic/la-grammar.html>
- <http://www.factmonster.com/homework/writingskills1.html>

5- Other Learning Material:

**I. Course Policies: (including plagiarism, academic honesty, attendance etc)**

<b>1</b>	<p><b>Class Attendance:</b></p> <ul style="list-style-type: none"> <li>- Attendance in all lectures and practical classes are required, except in very emergency circumstances, such as serious illness or death in the family with providing an acceptable documentation approved by the university and forwarded by the chairman of the department. Otherwise the absence shall be considered unexcused.</li> <li>- In accordance with the university rules, if the percentage of student's absence exceeds 25 % of the total lectures or practical classes, the student involved shall be disqualified in the final written and practical examination of the course and shall be deemed to have failed in the course.</li> </ul>
<b>2</b>	<p><b>Tardy:</b></p> <p>Roll will be called in the very beginning of each lecture and practical class. Retardation for more than three weeks without a reasonable cause, the student involved shall not be allowed to attend the class any longer and consequently shall be considered to be absent.</p>
<b>3</b>	<p><b>Exam Attendance/Punctuality:</b></p> <ul style="list-style-type: none"> <li>▪ It is incumbent on student to report at the examination hall for checking in and rolls calling at least 15 minutes before the commencement of examination.</li> <li>▪ A student is not allowed to submit answer booklet and leave the examination hall only on or after</li> </ul>

Prepared by  
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Quality Assurance Unit  
Dr. Abdulraqeb Alshami

Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
Ass. Prof. Dr. Huda Al-  
Emad

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Prof. Dr. Al-Qassim Mohammed Abbas



	<p>the passage of the half examination duration.</p> <ul style="list-style-type: none"> <li>A student who comes late shall not be admitted to the examination hall, only within the first 30 minutes of the examination. After this time, the student will be considered to be missed in the examination and shall be deemed to have failed in the course.</li> <li>When a student misses the final examination due to a legitimate medical problems or death in the family, an acceptable documentation approved by the university medical unit for the excused absence must be provided no later than three weeks and consequently the student shall be disqualified in the examination but with the excused absence.</li> </ul>
4	<p><b>Assignments &amp; Projects:</b></p> <ul style="list-style-type: none"> <li>Assignments and practical reports must be submitted for assessment on or before the due date.</li> <li>The submission date extension will not be granted only by the consent of the faculty member concerned.</li> <li>In the case of late submission, the student must provide a reasonable explanation to the faculty member. Otherwise, 1% of the obtained marks will be subtracted for each late day, including weekends and holidays.</li> </ul>
5	<p><b>Cheating:</b></p> <ul style="list-style-type: none"> <li>If a student is found cheating in examination (midterm or final or quizzes) (copying from unauthorized materials and another students' work or allowing other students to copy from his/her own work), the student involved shall be disqualified in the examination and shall be deemed to have failed in the course and also suspended from examinations of two more courses.</li> <li>If a student is found engaging in any unauthorized communications (oral, sign, call, etc.), while the examination is in progress or in possessing of any authorized materials or electronic devices before the distribution of examination papers , the student involved shall be disqualified in the examination and shall be deemed to have failed the course.</li> </ul>
6	<p><b>Plagiarism:</b></p> <ul style="list-style-type: none"> <li>Plagiarism is the presentation of any material (text, data or figures) from any other source in preparation of assignments or practical reports without clear and adequate acknowledgement of the source.</li> <li>Plagiarism is also the use or copy of other students' work (with, or without payment) to prepare all or part of undertaken assignments or practical reports of work submitted for assessment.</li> <li>All types of plagiarism are unacceptable and are considered dishonest practices. If a student is found plagiarism, the student involved shall be subjected to the same penalties as in the case of cheating as already mentioned in the sub-section (5) of the course policies.</li> </ul>
7	<p><b>Other policies:</b></p> <ul style="list-style-type: none"> <li>Students must switch off their mobile phones, laptops, electronic devices etc. before entering lecture room or lab. If a student is found using these devices while the lecture or practical work is in</li> </ul>

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Quality Assurance Unit  
Dr. Abdulraqeb Alshami

Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
Ass. Prof. Dr. Huda Al-  
Emad

Rector of Sana'a University  
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	progress, the student involved shall be expelled out of the class and shall be considered to be absent.
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Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
Ass. Prof. Dr. Huda Al-  
Emad

Rector of Sana'a University  
Prof. Dr. Al-Qassim Mohammed Abbas



## Course Plan of Biology

X. - Information about Faculty Member Responsible for the Course:						
Name of Faculty Member		<b>Office Hours</b>				
Location & Telephone No.		SAT	SUN	MON	TUE	WED
E-mail						

IX. Course Identification and General Information:						
1	<b>Course Title:</b>	Biology				
2	<b>Course Number &amp; Code:</b>	FR114				
3	<b>Credit hours:</b>	<b>C.H</b>			<b>Total</b>	
		Theoretical	Practical	Training		Seminar
		2	-	1	-	3
4	<b>Study level/ semester at which this course is offered:</b>	First Year - First Semester				
5	<b>Pre –requisite (if any):</b>	None				
6	<b>Co –requisite (if any):</b>	None				
7	<b>Program (s) in which the course is offered:</b>	Bachelor of Veterinary Medicine				
8	<b>Language of teaching the course:</b>	English language				
9	<b>Location of teaching the course:</b>	Regular/ Semester				
10	<b>Mode of delivery:</b>	Lectures and Practical				
11	<b>Location of teaching the course:</b>	Faculty of Veterinary Medicine Building				
<b>X. Course description:</b>						

Prepared by  
Dr. Basheer Mufreh

Quality Assurance Unit  
Dr. Abdulraqeb Alshami

Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
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Emad

Rector of Sana'a University  
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**I. Intended learning outcomes (ILOs) of the course:**

**After completing this course, students will be able to:**

- a1- Describe how arrangement of the components of an e Biology system affects the outputs of the system.
- a2- Distinguish what is meant by Biology , relate it to an output of an Biology system
- b1- Analyze Science of Biology system.
- b2- Explain the design of biological Organization
- c1- Use the microscope in diagnose the bacteria and parasites.
- c2- Perform calculations on Biology.
- d1- Calcute the value of pressure in Biology.
- d2 Draw Type of living tissues.

**I. Course Content:**

**A – Theoretical Aspect:**

Order	Topics List	Week Due	Contact Hours
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Prepared by  
Dr. Basheer Mufreh

Quality Assurance Unit  
Dr. Abdulraqeb Alshami

Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

Academic Development  
Center & Quality  
Assurance  
Ass. Prof. Dr. Huda Al-  
Emad

Rector of Sana'a University  
Prof. Dr. Al-Qassim Mohammed Abbas



1	Introduction of Biology	1	2
2	The cell	2	2
3	Prokaryote	3	2
4	Kingdom	4	2
5	Phylum	5,6,7	6
6	<b>Mid-Term Exam</b>	8	2
7	Comparison between Prokaryote and Eukaryote cells	9	2
8	Mitosis	10	2
9	Types of living tissues	11	2
10	Stem of cells	12	2
11	Blood composition and function	13	2
12	General characteristic of Bacteria	14	2
13	General characteristic of virus	15	2
14	<b>Final Exam</b>	16	2
<b>Number of Weeks /and Units Per Semester</b>		<b>16</b>	<b>32</b>

### b- Training Aspect:

Order	Training Tasks	Week Due	Contact hours
1	The microscope and The cell	1	2
2	Prokaryote and Eukaryote cells	2	2
3	Mitosis	3	2
4	Types of tissues	4	2
5	Protozoa: Mastigophora, Sarcodena, Ciliphora, Sporozoa	5,6	4

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Al-Shawkany

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Emad



	Nematoda: Ascaris, Ancylostoma	7	2
	<b>Mid-Term Exam</b>	8	2
	Trematoda: Fasciola, Schistosoma	9,10	4
	Cestoda: Taenia	11	2
	Mosquitoes	12	2
	Organismal	13	2
	Draw and design	14,15	4
<b>6</b>	<b>Final Exam</b>	16	2
<b>Number of Weeks /and Units Per Semester</b>		<b>16</b>	<b>32</b>

**I. Teaching strategies of the course:**

- Brainstorming
- Teacher explanation
- Directed reading
- Silent Reading
- Self-learning
- Problem solving
- Cooperative learning
- Group work
- Pair work
- Listening to short dialogues

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Quality Assurance Unit  
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Dean of the Faculty  
Ass. Prof. Dr. Abdu Alraoof  
Al-Shawkany

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Center & Quality  
Assurance  
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Emad





### 3-Assessment Methods:

Home Active  
 Home Work  
 Class Work  
 Research Papers  
 Group Projects  
 Watch Video  
 Note sample  
 Abstract

No.	Assessment Method	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	15	10	10%
5	Oral Exam	16	5	5%
6	Final Exam	16	55	55%
<b>Total</b>			<b>100</b>	<b>100%</b>

### II. Students' Support:

Office Hours/week	Other Procedures (if any)
Every sun day	Non

Prepared by  
 Dr. Basheer Mufreh

Quality Assurance Unit  
 Dr. Abdulraqeb Alshami

Dean of the Faculty  
 Ass. Prof. Dr. Abdu Alraoof  
 Al-Shawkany

Academic Development  
 Center & Quality  
 Assurance  
 Ass. Prof. Dr. Huda Al-  
 Emad

Rector of Sana'a University  
 Prof. Dr. Al-Qassim Mohammed Abbas





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

<b>1</b>	<p><b>Class Attendance:</b></p> <ul style="list-style-type: none"> <li>- Attendance in all lectures and practical classes are required, except in very emergency circumstances, such as serious illness or death in the family with providing an acceptable documentation approved by the university and forwarded by the chairman of the department. Otherwise the absence shall be considered unexcused.</li> <li>- In accordance with the university rules, if the percentage of student's absence exceeds 25 % of the total lectures or practical classes, the student involved shall be disqualified in the final written and practical examination of the course and shall be deemed to have failed in the course.</li> </ul>
<b>2</b>	<p><b>Tardy:</b></p> <p>Roll will be called in the very beginning of each lecture and practical class. Retardation for more than three weeks without a reasonable cause, the student involved shall not be allowed to attend the class any longer and consequently shall be considered to be absent.</p>
<b>3</b>	<p><b>Exam Attendance/Punctuality:</b></p> <ul style="list-style-type: none"> <li>▪ It is incumbent on student to report at the examination hall for checking in and rolls calling at least 15 minutes before the commencement of examination.</li> <li>▪ A student is not allowed to submit answer booklet and leave the examination hall only on or after the passage of the half examination duration.</li> <li>▪ A student who comes late shall not be admitted to the examination hall, only within the first 30 minutes of the examination. After this time, the student will be considered to be missed in the examination and shall be deemed to have failed in the course.</li> <li>▪ When a student misses the final examination due to a legitimate medical problems or death in the family, an acceptable documentation approved by the university medical unit for the excused absence must be provided no later than three weeks and consequently the student shall be disqualified in the examination but with the excused absence.</li> </ul>
<b>4</b>	<p><b>Assignments &amp; Projects:</b></p> <ul style="list-style-type: none"> <li>▪ Assignments and practical reports must be submitted for assessment on or before the due date.</li> <li>▪ The submission date extension will not be granted only by the consent of the faculty member concerned.</li> <li>▪ In the case of late submission, the student must provide a reasonable explanation to the faculty member. Otherwise, 1% of the obtained marks will be subtracted for each late day, including</li> </ul>

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	weekends and holidays.
5	<p><b>Cheating:</b></p> <ul style="list-style-type: none"> <li>▪ If a student is found cheating in examination (midterm or final or quizzes) (copying from unauthorized materials and another students' work or allowing other students to copy from his/her own work), the student involved shall be disqualified in the examination and shall be deemed to have failed in the course and also suspended from examinations of two more courses.</li> <li>▪ If a student is found engaging in any unauthorized communications (oral, sign, call, etc.), while the examination is in progress or in possessing of any authorized materials or electronic devices before the distribution of examination papers , the student involved shall be disqualified in the examination and shall be deemed to have failed the course.</li> </ul>
6	<p><b>Plagiarism:</b></p> <ul style="list-style-type: none"> <li>▪ Plagiarism is the presentation of any material (text, data or figures) from any other source in preparation of assignments or practical reports without clear and adequate acknowledgement of the source.</li> <li>▪ Plagiarism is also the use or copy of other students' work (with, or without payment) to prepare all or part of undertaken assignments or practical reports of work submitted for assessment.</li> <li>▪ All types of plagiarism are unacceptable and are considered dishonest practices. If a student is found plagiarism, the student involved shall be subjected to the same penalties as in the case of cheating as already mentioned in the sub-section (5) of the course policies.</li> </ul>
7	<p><b>Other policies:</b></p> <ul style="list-style-type: none"> <li>▪ Students must switch off their mobile phones, laptops, electronic devices etc. before entering lecture room or lab. If a student is found using these devices while the lecture or practical work is in progress, the student involved shall be expelled out of the class and shall be considered to be absent.</li> </ul>

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