



## SYLLABUS

Course Code	Course Num.	Course Name	Credit Hours	Lec.	Lab.	Tut.	Private study	Pre-requisites	Course Level	Language
BIO	101	General Biology	4	3	2	0	4-6	none	1	English

### A. Instructor information

Name and E-mail	Office phone	Office location	Office hour
Nourah Mohammed Al-Zahem nmaalzahem@imamu.edu.sa	-	Building: 323 Room: 04-031	Tue: 8- 10 Thur: 11-12

### B. Course Description

This course has titles which will introduce the basic concepts for all courses of biology in all educational levels. So, this course involves a tour in the cell, macromolecules, homeostasis, plant backgrounds, principles of genetics and biodiversity.

The main purpose for this course:

- To introduce students into the long-term key concepts in biology which represents general source for their continuing and completing education.
- To acquire the basic and fundamental knowledge of biological terms.

### C. Course Outcomes At the end of this course the student is able to:

#### Knowledge

- To list basic concepts and principles of general biology.
- To tell an understanding and appreciation of the vast diversity of living things.
- To outline the basic unity of life and the interdependence of the thousands of varieties of living things on the Earth.

#### Cognitive skills

- To present ideas as well as facts by requiring students to read material on ethical probes that have no easy answers.
- To formulate and test hypotheses based on discovery-based activities by the mean of laboratories that emphasize observation and hands-on.
- To promote critical thinking by requiring students to evaluate a body of evidence, separate assumptions form observations, and reach some conclusion based on evidence
- To analyze the results obtained from examination and investigations.

#### Interpersonal Skills & Responsibility

- To participate in class by asking questions and giving answers.
- To communicate effectively with class mates and teaching staff.
- To appraise team work and management of resources and time.
- To use scientific knowledge and interpret case studies.

#### Communication, Information Technology, Numerical

- To operate computer programs for analyzing and processing the experimental data.
- To use mail and Network in communicating with the others and in submitting home works and assignments.

#### Psychomotor

- To employ safety measures during laboratory sessions.
- To operate laboratory instruments and computers.



- To Perform biological experiments and handle various slides during laboratory classes.

#### D. References

- Required Textbook:**
  - Sadava et al. Life, the Science of Biology, 8th Edition. Freeman & Co (2008).
  - Barnhart, M.C. and T.M. Tamme: Laboratory Manual for General Biology
    - Other references:**
      - Saudi Biological Sciences journal.
      - <https://www.dsc.edu>.
  - Course Website:**  
 Google Classroom Webpage: <http://www.imamm.org/>

#### E. Topics Outline

- Lectures

List of Topics	Contact hours
<ul style="list-style-type: none"> <li>A tour in the cell , Cell membrane structure and function</li> <li>The cell cycle. Mitosis, Meiosis.</li> <li>Macromolecules: structure and function</li> </ul>	9
<ul style="list-style-type: none"> <li>Introduction to Animals and Plants Physiology.</li> <li>hemostasis and hormonal regulation</li> </ul>	6
<ul style="list-style-type: none"> <li>Plant structure, growth and development.</li> <li>Cellular energy (Photosynthesis. Cellular respiration).</li> <li>Biodiversity: Bacteria and Archeae, Protista and fungi</li> <li>Plant diversity</li> </ul>	12
<ul style="list-style-type: none"> <li>Animal tissues.</li> <li>Plant tissues.</li> </ul>	3
<ul style="list-style-type: none"> <li>Introduction to Genetics</li> </ul>	3
<ul style="list-style-type: none"> <li>Introduction to animal diversity: Invertebrates, vertebrates</li> </ul>	9
<ul style="list-style-type: none"> <li>Revision.</li> <li>Open session</li> </ul>	3

- Laboratories

Lab No.	Topics	Contact hours
Lab 01	Safety and Laboratory, Introduction to Measurement.	2
Lab 02	Structure and types of Microscopes.	2
Lab 03	Molecular Models, Structure of Animals and Plants Cells.	2
Lab 04	Animal and plant Tissue Slides.	2
Lab 05	Kingdom Fungi Slides.	2
Lab 06	Kingdom Protista Slides.	2
Lab 07	Kingdom Monera.	2
Lab 08	Cell Cycle and Mitosis & Meiosis.	2



Lab 09	Bacteria and Viruses.	2
Lab 10	DNA, Human Organs.	2
Lab 11	Osmosis and Diffusion.	2
Lab 12	Genetics I: Meiosis & Mendelian Genetics.	2
Lab 13,14	Genetics II: Human Genetics.	4
Lab 15	Review	2

### F.Exams & Grading System

The semi-official dates of the exams for this course are:

Assessment task	Week Due	Proportion of Total Assessment
Midterm 1	Around 6 <sup>th</sup> -7 <sup>th</sup> week	15 %
Midterm 2	Around 11 <sup>th</sup> -12 <sup>th</sup> week	15 %
Quizzes( ٣ ), attendance, participation, home works( 2)	All the semester	10 %
lab reports	All the semester	5%
Lab exam.	Around 15 <sup>th</sup> week	15%
Final exam.	Around 15 <sup>th</sup> -16 <sup>th</sup> week	40%
Total		100 %

Your course grade will be based on Final Exam, Midterms, Homework, Quizzes, Participation, Attendance and Project.

The grading distribution (the lowest passing grade is "D")

A+	A	B+	B	C+	C	D+	D	F
[95, 100]	[90, 95)	[85, 90)	[80, 85)	[75, 70)	[70, 65)	[65, 60)	[60, 55)	[55, 50)

### G.Student Workload

#	Teaching/Learning activities	Contact hours	Frequency	Total contact hours	Self-study hours	Total self-study hours	Student learning time
5	Lecture	3	15	45	2	30	75
2	Tutorial	0	0	0	0	0	0
0	Lab\practical	2	15	30	1	15	45
5	Homework	0	4	0	2	8	8
4	Quiz	0.5	2	1	1	2	3
6	Midterm	1.5	2	3	5	10	13
7	Final Exam	2	1	2	12	12	14
<b>Total</b>				<b>81</b>		<b>77</b>	<b>158</b>

The independent self-study is approximately 5 hours per week.



## H. Student Attendance/Absence

Only three situations will be considered as possible excused absences:

- Occurrence of a birth or death in the immediate family will be excused. (“Immediate family” is defined by the University as spouse, grandparents, parents, brother, or sister).
- Severe illness in which a student is under the care of a doctor and physically unable to attend class will be excused. Students are not excused for a doctor’s appointment. Do not make appointments that conflict with rehearsals. Notes from the University Health Center will be accepted.

[Executive Rules for Study Regulations and Exams](https://goo.gl/ykm7t3)  
[goo.gl/ykm7t3](https://goo.gl/ykm7t3)

