



Course Specification

— (Bachelor)

Course Title: **General Biology**

Course Code: **201102-3**

Program: **Bachelor in Computer Science**

Department: **Department of Computer Science**

College: **Computers and Information Technology**

Institution: **Taif University**

Version: **V1.2024**

Last Revision Date: **01/02/2024**



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A. General information about the course:

1. Course Identification

1. Credit hours: (3)

2. Course type

A. University College Department Track Others
 B. Required Elective

3. Level/year at which this course is offered: (2/1)

4. Course general Description:

Studying the concepts of ecology and environmental pollution. Also this course discusses the principles and commercial applications of biotechnology to environmental problems. The course is structured to promote self-learning and students' development of Biotech solutions to real-life problems. Biotechnology is not just genes! Individual subject areas include the use of biotechnology to clean up or 'bioremediation' polluted environments as well as the economic recovery of important minerals and precious metals. Furthermore, the application of biological systems in preventing pollution by supporting our planet's sustainable development is also explored in subject areas such as biofuels. The controversial issues of agricultural biotechnology are also examined in this course

5. Pre-requirements for this course (if any):

None

6. Pre-requirements for this course (if any):

None

7. Course Main Objective(s):

Studying the concepts of ecology and environmental pollution.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	3	100%
2	E-learning	0	0
3	Hybrid <ul style="list-style-type: none"> • Traditional classroom • E-learning 	0	0



No	Mode of Instruction	Contact Hours	Percentage
4	Distance learning	0	0

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	30
3.	Field	0
4.	Tutorial	0
5.	Others (specify)	0
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Define the mean of biology	K1	Lecture	MID and Final
1.2	Record different forms of cells and types of tissues	K1	Lecture	MID and Final
1.3	Define the Structure and Function of Biological Molecules	K1	Lecture	MID and Final
1.4	Define the mean of molecular biology	K1	Lecture	MID and Final
1.5	Define Nucleic acids, the flow of genetic information, cloning	K1	Lecture	MID and Final
2.0	Skills			
2.1	Compare between different cell types	S1	Lecture LAB	practical
2.2	summarize topical biotechnological applications in	S1	Lecture	practical



Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
2.3	Write reports effectively	S3	Lecture LAB	practical
3.0 Values, autonomy, and responsibility				
3.1	Evaluate biological methods for mutation and cloning	V1	Practical	exercise
3.2	Demonstrate personal organization	V1	Practical	exercise
3.3	Show cooperation with others	V2	Practical	exercise

C. Course Content

No	List of Topics	Contact Hours
1	Themes in the study of biology	6
2	Evolution, the core of biology, the Process of science	12
3	The Cell, plant tissues	12
4	Properties of water , Biological molecules	6
5	Molecular Biology , DNA structure	6
6	The flow of genetic information	6
7	Genetic code , Mutations	6
8	Cloning, Genetically modified organisms	6
Total		60

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1	Quizzes & Home works	2 rd , 4 th , 6 th and 10 th week	20%
2	1 st Exam	6 th week	15%
3	2 nd Exam	12 th week	15%
4	Final exam	16 th week	50%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).





E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Campbell, N. A., Reece, IB, Urry, L.A., Cain, M.L., Wasserman, S.A., Minorsky, P.V. and Jackson, R.B. 2008, Biology . 9th ed. Pearson Benjamin Cummings. U.S.A. Sheeler, P. and Bianchi, D.E. 1981. Cell and Molecular Biology . John Wiley & Sons, Ins., U.S.A. Hartl, D.L. and Jones E.W. 1998. Genetics . Jones and Bartlett Publishers, U.S.A.
Supportive References	Papers in International Journals such as Biology – Biological Control – Biodiversity- molecular biology
Electronic Materials	http://www.course-notes.org/biology/slides/campbells_biology_8th_edition
Other Learning Materials	NON

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	<ul style="list-style-type: none"> Traditional Classrooms
Technology equipment (projector, smart board, software)	<ul style="list-style-type: none"> White Board, datashow
Other equipment (depending on the nature of the specialty)	<ul style="list-style-type: none"> NON

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees 	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
Effectiveness of Students assessment	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees 	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council



Assessment Areas/Issues	Assessor	Assessment Methods
		Feedback from Curriculum Committees
Quality of learning resources	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
The extent to which CLOs have been achieved	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	CS COUNCIL
REFERENCE NO.	MEETING #11
DATE	07/03/2024