



Course Specifications

Course Title:	General Biology
Course Code:	201102-3
Program:	Bachelor in Computer Science
Department:	Department of Biology
College:	College of Science
Institution:	Taif University

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A. Course Identification

1. Credit hours: 3
2. Course type
a. University <input type="checkbox"/> College <input checked="" type="checkbox"/> Department <input type="checkbox"/> Others <input type="checkbox"/>
b. Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered: 2/1
4. Pre-requisites for this course (if any): NON
5. Co-requisites for this course (if any): NON

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	6	100%
2	Blended	0	0
3	E-learning	0	0
4	Distance learning	0	0
5	Other	0	0

7. Contact Hours (based on academic semester)

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

B. Course Objectives and Learning Outcomes

1. Course 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

2. Course Main Objective

Studying the concepts of ecology and environmental pollution.



3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge and Understanding	
1.1	Define the mean of biology	K1
1.2	Record different forms of cells and types of tissues	K1
1.3	Define the Structure and Function of Biological Molecules	K1
1.4	Define the mean of molecular biology	K1
1.5	Define Nucleic acids, the flow of genetic information, cloning	K1
2	Skills :	
2.1	Compare between different cell types	S1
2.2	summarize topical biotechnological applications in	S1
3	Values:	
3.1	Evaluate biological methods for mutation and cloning	V1
3.2	Demonstrate personal organization	V1
3.3	Show cooperation with others	V2
3.4	Write reports effectively	V3

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. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

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



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.0	Values		
3.1	Evaluate biological methods for mutation and cloning	Practical	exercise
3.2	Demonstrate personal organization	Practical	exercise
3.3	Show cooperation with others	Practical	exercise
3.4	Write reports effectively	Practical	exercise

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes & Home works	2 rd , 4 th , 6 th and 10 th week	20%
2	1 st Exam	4 th week	15%
3	2 nd Exam	9 th week	15%
4	Final exam	12 th week	50%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Academic advising and counseling of students is an important component of teaching; student academic advising is a mandatory requirement of College of Computers and Information Technology (CCIT). Appropriate student advising provides support needed for the student during times of difficulty. In addition, it helps the student to build a close relationship with his/her advisor and to provide student motivation and involvement with the institution.

In addition, since faculty are usually the first to recognize that a student is having difficulty, faculty members play a key role in developing solutions for the students or referring them to appropriate services. Faculty members also participate in the formal student-mentoring program.

Additional counseling is provided by course directors, who provide students with academic reinforcement and assistance and refer “at risk” students to the Vice Dean for Academic Affairs and the Vice Dean for female section.

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	<p>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.</p> <p>Sheeler, P. and Bianchi, D.E. 1981. Cell and Molecular Biology. John Wiley & Sons, Ins., U.S.A.</p> <p>Hartl, D.L. and Jones E.W. 1998. Genetics. Jones and Bartlett Publishers, U.S.A.</p>
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Essential References Materials	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. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Traditional Classrooms
Technology Resources (AV, data show, Smart Board, software, etc.)	White Board, datashow
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	NON

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of Teaching	Students	Students surveys and Students course evaluation
Improvement of Teaching	Course Coordinator	deficiencies based on the student Evaluation, faculty input, course file, and program assessment
Verifying Standards of Student Achievement	Curriculum Committee	<ul style="list-style-type: none"> Review CAF (Course assessment file) Alumni surveys. Periodic exchange and remarking of tests or a sample of assignments with staff at another

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

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

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	CS council
Reference No.	Meeting #12
Date	1443-10-23



