Course Specification
(Bachelor)

Course Title:	**Graduation Project (Practical)**
Course Code:	**BIOL 472**
Program:	**Bachelor of Science (B.Sc)**
Department:	**Biology Department**
College:	**College of Science**
Institution:	**Majmaah University**
Version:	**Fourth**
Last Revision Date:	**20/10/2025 H**

Table of Contents

A. General information about the course: 3

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods 4

C. Course Content 5

D. Students Assessment Activities 6

E. Learning Resources and Facilities 6

F. Assessment of Course Quality 7

G. Specification Approval 7

A. General information about the course:

1. Course Identification

1. Credit hours: (2 (0+4)					
Equivalent to ECTS Credit Point: 3					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (Level 8)					
4. Course General Description:					
The course deals with a broad understanding of research methodology, including the theory of science and qualitative and quantitative methods, provides the student with skills and methods for designing research experiments, critical reading skills for research literature, methods for collecting data, developing research, and preparing a proposal for a bachelor's degree thesis. project.					
5. Pre-requirements for this course (if any):					
BIOL 471 Graduation Project (Theory)					
6. Co-requisites for this course (if any):					
N/A					
7. Course Main Objective(s):					
This course focus on understanding research methods, conducting laboratory experiments, collecting data, , and writing theses.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	60%
2	E-learning	20	40%
3	Hybrid • Traditional classroom • E-learning		

No	Mode of Instruction	Contact Hours	Percentage
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	5
2.	**Laboratory/Studio**	15
3.	**Field**	5
4.	**Tutorial**	
5.	**Others (specify)**	5
Total		30

Workload (based on the academic semester)

No	Activity	Contact Hours
1.	**Contact hrs**	60
2.	**Self-study hours or Academic learning hours (9Assignment, quizzes, reports, Disscution, Library, Research ...)**	60
	Total Workload	120
Equivalent to ECTS Credit points		3

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

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1				
1.2				
1.3				
2.0	**Skills**			
2.1				
2.2				
2.3	**Explain the research problem and methods.**	**S3**	**Discussion -Training courses or workshops**	**- writing report & meeting -Oral presentation**

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
2.4	Design laboratory experiments Using biological equipment and devices.	S4	Discussion -Training courses or workshop	-Lab work -Oral presentation -Report verification
3.0	**Values, autonomy, and responsibility**			
3.1				
3.2	Prepare the graduation project report and presentation.	V2	Individual and group discussion. Training courses or workshops	-Oral presentation -Oral questions -Thesis submission
...				

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction about – Graduation project (Practical) Discussion about Research ideas	2
2.	Identify the research problem – Research Topic selection	2
3.	Literature collection	2
4.	Preparing a study protocol – (Research plan) for laboratory work proposal registeration.	2
5.	Sample/data collection, Processing, Laboratory work according to research plan /Field, Collection of data, and Analysis of data.	10
6.	Thesis /Poster/writing – correction of thesis	8
7.	Final evaluation by Research supervisor Thesis submission to biology department	2
8.	Final Presentation at department	2
	Total	**30**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Introduction (assignment, report of review of literature)	1 - 10th week	20%
2.	Materials and Methods (assignment, report lab work-sample collection)	1 - 10th week	10%
3.	Results	1 - 10th week	20%
4.	Disscussion	1 - 10th week	20%
5.	References	1 - 10th week	10%
6.	Formatting	11th - 13th week	10%
7.	Presentation evaluation	14th - 15th week	10%
8.	Total		100%

*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	Refer – Thesis which are available from the University Library
Supportive References	Research Methodology in the Medical and Biological Sciences; 1st Edition - September 19, 2007; Editors: Petter Laake, Haakon Benestad, Bjorn Olsen; eBook ISBN: 9780080552897
Electronic Materials	https://pubmed.ncbi.nlm.nih.gov/ https://www.elsevier.com/en-xm https://www.scopus.com/sources.uri?zone=TopNavBar&origin=searchbasic
Other Learning Materials	Electronic materials of Lecture notes and PowerPoints available in 'Black board' database

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	**Equipped Laboratories / Lab technician**
Technology equipment (projector, smart board, software)	**Computers room**
Other equipment (depending on the nature of the specialty)	**Library and seminar room / quit room for study**

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	**Self-evaluation** **Peer Reviewer**	**Indirect** **Direct**
Effectiveness of Students assessment	**Self-evaluation**	**Direct**
Quality of learning resources	**Program Leaders**	**Direct**
The extent to which CLOs have been achieved	**Departmental course committee**	**Direct**
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**Biology Department Council**
REFERENCE NO.	**10**
DATE	**[1447-05-08) 30/10/2025**