هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	Graduation Project I
Course Code:	ICHM493-3
Program:	Bachelor of Science in Industrial Chemistry
Department:	Department of Physical Sciences
College:	College of Science
Institution:	Jazan University
Version:	TP-153 (2024)
Last Revision Date:	31 January 2024

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: 3hrs)

2. Course type

A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		

3. Level/year at which this course is offered: (7th Level--- 4th Year.)

4. Course General Description:

Course title	Course code	Contact Hours			Credit Hours	Year	Level	Prerequisite	Corequisite
		Lec	Tut	Lab					
Graduation Project I	ICHM493-3	3	0	0	3	4th	7th	CHEM336-2 ICHM356-3 CHEM312-4	-----

This course aims to develop the student's skills in scientific research in the fields of chemistry independently under the supervision of a staff member, by enabling him to choose the research topic, prepare a review of the literature on the research topic, then prepare and present the research plan in preparation for implementing the research project in the next course (Research Project II).

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

Department Approval

6. Co-requisites for this course (if any):

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7. Course Main Objective(s):

1. Informing the student by the sources of scientific and chemical knowledge.
2. Training the student to use abstracts, indexes, chemical periodicals, and databases.
3. Training the student in scientific thinking and critical analysis.
4. Training the student to write a review of the literature related to his research topic.
5. Training the student to write a research plan and then present it in a short lecture.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	$(3 \times 15) = 45.$	100%
2	E-learning		
3	Hybrid		

No	Mode of Instruction	Contact Hours	Percentage
	• Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	45
2.	**Laboratory/Studio**	
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		45

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;** *Upon completion of the course, students are able to:*			
1.1	***Define the key theories, concepts, and vocabulary of the selected topics. (P)***	**K 1**	***Lect Discussion***	***Exams final report***
1.2	***Describe and explain the procedures, instruments, and techniques used in selected survey/or research (P)***	**K 2**	***Lect Discussion***	***Exams final report***
2.0	**Skills;** *Upon completion of the course, students are able to:*			
2.1	***Demonstrate the ability to think critically, numerically, statistically, and logically, and use graphs and charts to solve problems (in the research topic) (P)***	**S 1**	***Lect Discussion Web-based activities***	***Exams***
2.2	***Use communication and online technology to prepare a report/poster on a selected chemistry research topic (P)***	**S 5**	***Lect Discussion Web-based activities***	***Exams final report***
3.0	**Values, autonomy, and responsibility;** *Upon completion of the course, students are able to:*			

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
3.1	*Act with integrity and good ethics in the chemistry profession and their obligation to society (P)*	V 2	*Lect* *Discussion* *Lect* *Discussion*	*Exams* *final report*

C. Course Content

No	List of Topics	Contact Hours
1.	Sources of scientific and chemical knowledge	9
2.	Choosing a research topic.	9
3.	Skills of searching information sources and writing a literature review.	9
4.	Skills of preparing a research plan.	9
5.	skills of preparing and giving lectures and seminars.	9
Total		45*h*.

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	*Periodic Exams*	*During Semester*	*30%*
2.	*Assignments & Classroom Activities*	*During Semester*	*20%*
6.	*Final Exam*	*16-17*	*50%*
	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	*To be determined by the supervisor from the available source*
Supportive References	*To be determined by the supervisor from available sources*
Electronic Materials	• *The Purpose and Value of Scientific Research, https://study.com/academy/lesson/what-is-scientific-research.html* *Types of Scientific Research, https://innspub.net › types-of-scientific-research* *What is Scientific Research and How Can it be Done,*

	https://www.academia.edu/40888930/What_is_Scientific_Research_and How_Can_it_be_Done
Other Learning Materials	*Platform connecting researchers with protocols and methods.* *Springer Nature Experiments*

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	*1 Lecture room.*
Technology equipment (projector, smart board, software)	*Smartboard, Data show, Blackboard, internet*
Other equipment (depending on the nature of the speciality)	*Saudi Digital Library*

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student	Likert-type Survey CES) Indirect
Effectiveness of Students' assessment	Instructor & Course Coordinator	Classroom evaluation (direct & indirect
Quality of learning resources	Program Coordinator	Indirect
The extent to which CLOs have been achieved	Assessment committee	Indirect
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	Physical Sciences Department Council
REFERENCE NO.	Meeting (3)
DATE	12/03/2024 -02/09/1445