Form: Course Syllabus	Form Number	EXC-01-02-02A
	Issue Number and Date	2/3/24/2022/2963 05/12/2022
	Number and Date of Revision or Modification	
	Deans Council Approval Decision Number	2/3/24/2023
	The Date of the Deans Council Approval Decision	23/01/2023
	Number of Pages	06

1.	Course Title	Biostratigraphy
2.	Course Number	0305901
3.	Credit Hours(Theory, Practical)	3
	Contact Hours (Theory, Practical)	3 theoretical
4.	Prerequisites/Corequisites	-
5.	Program Title	PhD in Geology
6.	Program Code	0305
7.	School/ Center	Science
8.	Department	Geology
9.	Course Level	
10.	Year of Study and Semester (s)	
11.	Other Department(s) Involved in Teaching the Course	None
12.	Main Learning Language	English
13.	Learning Types	X☐Face to face learning☐Blended☐Fully online
14.	Online Platforms(s)	☐Moodle ☐Microsoft Teams
15.	Issuing Date	24/11/2024
16.	Revision Date	

17. Course Coordinator:

Name: Abdalla Abu Hamad	Contact hours: daily 11-12.0
Office number: 118	Phone number: 00962 787583784
Email:	

18. Other Instructors:

None

19. Course Description:

As stated in the approved study plan.

Introduction to paleontology and stratigraphy and the combination of those into biostratigraphy.Analyses the relationships between Biostratigraphy and Chrono-stratigraphy. The importance of fossils (Foraminifera, Ostracoda, Pollen and Spores) and stratigraphic concepts in the applied geosciences such as in petroleum and groundwater exploration, paleontological aspects and paleoenvironments, type of sedimentation, depths, temperature variations and shoreline boundaries.Application on some rocks in Jordan, comparative worldwide studies with some Jordanian investigations.Visiting exposed stratigraphic sites trying to apply the above topics practically. Under the student's activity section, each student should chose published scientific paper related to one of the topics above (from Jordan if possible) for analyzing and criticization.

20.<u>ProgramStudent Outcomes (SO's)</u>:(To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program)

1. Students will be capable of layout and execute unique studies studies, employing advanced methodologies to generate new understanding in their specialized region of geology.
2. Students will display the potential to seriously evaluate complex geological problems, the usage of analytical and problem-fixing capabilities to develop modern answers and interpretations of their studies.
3. Students will benefit know-how in using cutting-edge gear, techniques, and technology applicable to their geological research, applying these abilities to research and cope with complicated geological phenomena.
4. Students will effectively communicate their studies findings via academic guides, presentations, and conferences, making significant contributions to the scientific network and attractive technical and non-technical audiences.
5. Students will showcase a sturdy dedication to ethical studies practices and apprehend the broader societal and environmental effects of their work, promoting sustainability and integrity within the subject.
6. Students will demonstrate a determination to persistent mastering, actively enticing with rising studies, and professional improvement possibilities to maintain and amplify their know-how throughout their careers.

PILO's	*National Qualifications Framework Descriptors*		
	Competency (C)	Skills (B)	Knowledge (A)
1.		X	X
2.		X	
3.			X
4.		X	
5.	X		
6.	X		X

21. Course Intended Learning Outcomes (CLO's): (Upon completion of the course, the student will be able to achieve the following intended learning outcomes)

1.Know and analyze the relationships between paleontology and biostratigraphy.
2.Know and analyze the relationships between biostratigraphy and chrono-stratigraphy.
3. Understand the overall frame and the application of paleontology, stratigraphy and sedimentary principles.
4.Identify the geological problem and to choose the appropriate bio-stratigraphic solution.
5. Apply some methods in Jordanian material and evaluate the results.
6.Able to write, analyze, propose and share some bio-stratigraphical data with others.

Course CLOs	**The learning levels to be achieved**					
	Remembering	**Understanding**	**Applying**	**Analysing**	**evaluating**	**Creating**
1	**X**	**X**				
2	**X**	**X**				
3	**X**	**X**				
4			**X**	**X**	**X**	**X**
5			X	X	X	X
6			X	X	X	X

22. The matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program:

Program SO's / Course CLO's	SO (1)	SO (2)	SO (3)	SO (4)	SO (5)	SO (6)	Descriptors**		
							A	B	C
CLO (1)	✔	✔	✔	✔	✔		X	X	
CLO (2)	✔	✔	✔	✔	✔		X	X	
CLO (3)	✔	✔	✔	✔	✔				X
CLO (4)	✔	✔	✔	✔	✔		X	X	X
CLO (5)	✔	✔	✔	✔	✔		X	X	
CLO (6)	✔	✔	✔	✔	✔		X	X	X

			✔	✔	✔				
			✔	✔	✔				
					✔				

Introduction to paleontology and stratigraphy and the combination of those into biostratigraphy. Analyses the relationships between Biostratigraphy and Chrono-stratigraphy. The importance of fossils (Foraminifera, Ostracoda, Pollen and Spores) and stratigraphic concepts in the applied geosciences such as in petroleum and groundwater exploration, paleontological aspects and paleoenvironments, type of sedimentation, depths, temperature variations and shoreline boundaries. Application on some rocks in Jordan, comparative worldwide studies with some Jordanian investigations. Visiting exposed stratigraphic sites trying to apply the above topics practically. Under the student's activity section, each student should chose published scientific paper related to one of the topics above (from Jordan if possible) for analyzing and criticization.

23. Topic Outline and Schedule:

Week	Lecture	Topic	CLO/sLinked to the Topic	Learning Types (Face to Face/Blended/ Fully Online)	Platform Used	Synchronous / Asynchronous Lecturing	Evaluation Methods	Learning Resources
1	1.1 1.2 1.3	Introduction to paleontology and stratigraphy and the combination of those into biostratigraphy.	1	Face to face			Problem set	Biostratigraphy, Brian Mc Gowran, 2005
2	2.1 2.2 2.3	Analyses the relationships between Biostratigraphy and Chrono-stratigraphy	2	Face to face				
3	3.1 3.2 3.3	The importance of fossils Foraminifera and stratigraphic concepts in the applied geosciences	3	Face to face			Problem Set	
4	4.1							

	4.2		3	Face to face			Problem Set	Biostratigraphy, Brian Mc Gowran, 2005
	4.3							
5	5.1	The importance of fossils Ostracoda, and stratigraphic concepts in the applied geosciences						
	5.2							
	5.3							
6	6.1							
	6.2							
	6.3							
7	7.1	The importance of fossils Pollen and Spores and stratigraphic concepts in the applied geosciences	3					
	7.2							
	7.3							
8	8.1							
	8.2							
	8.3							
9	9.1	Application on some rocks in Jordan, comparative worldwide studies with some Jordanian investigations.	4	Face to face				
	9.2							
	9.3							
10	10.1							
	10.2							
	10.3							
11	11.1	Visiting exposed stratigraphic sites trying to apply the above topics practically	4					
	11.2							
	11.3							
12	12.1							
	12.2							
	12.3							
13	13.1	analyzing and criticization of published paper related to one of our topics, seminars and presentations.	5				Problem set	Biostratigraphy, Brian Mc Gowran, 2005
	13.2							
	13.3							
14	14.1							
	14.2							
	14.3							
15	15.1							
	15.2							
	15.3							

24. Evaluation Methods:

Opportunities to demonstrate achievement of theCLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic (s)	CLO/s Linked to the Evaluation activity	Period (Week)	Platform
Midterm Exam	25	1-4	1,2,3	End of Seventh week	
Students Activities: Project, problem solve, field application, seminar	50	1-15	1-6	Through the Semester	
Final exam	25	7-13	1-6	End of semester	

25.Course Requirements:

(e.g.: students should have a computer, internet connection, webcam, account on a specific software/platform…etc.):

26. Course Policies:

A- Attendance policies: **University regulation**

B- Absences from exams and submitting assignments on time: **University regulation**

C- Health and safety procedures:

D- Honesty policy regarding cheating, plagiarism, misbehavior: **University regulation**

E- Grading policy: May subjected to changes (depends on the overall results)

60- 64 C

65- 69 C+

70- 74 B-

75- 79 B

80- 84 B+

85- 89 A-

90-100 A

F- Available university services that support achievement in the course:

27. References:

A- Required book(s), assigned reading and audio-visuals:
Biostratigraphy: Microfossils and Geological Time, Brian McGowran, Cambridge University Press, 2005
B- Recommended books, materials,and media:
Biostratigraphy in Production and Development Geology, R. W. Jones, 1999

28. Additional information:

Name of the Instructor or the Course Coordinator: **Prof. Dr. Abdalla Abu Hamad**	Signature: ……..……	Date: ……..……
Name of the Head of Quality Assurance Committee/ Department …….	Signature: ……..……	Date: ……..……
Name of the Head of Department ……**Dr.BetySaqarat**	Signature: ……..……	Date: ……..……
Name of the Head of Quality Assurance Committee/ School ofScience **Prof. Emad A. Abuosba**	Signature: ……..……	Date: ……..……
Name of the Dean or the Director **Prof. Mahmoud I. Jaghoub**	Signature: ……..……	Date: ……..……