Republic of Iraq

Ministry of Higher Education & Scientific Research Supervision and Scientific Evaluation Directorate Quality Assurance and Academic Accreditation International Accreditation Dept.

Academic Program Specification Form For The Academic

Universitiy:
College :
Number Of Departments In The College
: Date Of Form Completion :

Dean 's Name Date :
/ /
Signature

Dean's Assistant For Scientific Affairs
Date : 12/ 4/ 2022
Signature

The College Quality Assurance And University Performance
Manager
Date : 12 / 4 / Signature

Quality Assurance And University Performance
Manager Date :/ /
Signature

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHEREDUCATIONPERFORMANCEREVIEW:PROGRAMMEREVIEW

PROGRAMME SPECIFICATION

ThisProgrammeSpecificationprovidesaconcisesummaryofthemainfeaturesoftheprogrammeandthelearningoutcomesthatatypicalstudentmightreasonablybeexpectedtoachieveanddemonstrateifhe/shetakesfulladvantageofthelearningopportunitiesthatareprovided.Itissupportedbyaspecificationforeachcoursethatcontributestotheprogramme.

1. Teaching Institution	University of ThiQar
2. University Department/Centre	College of Science/department of applied geology
3. Programme Title	department of applied geology
4. Title of Final Award	BSc. -Geology
5. Modes of Attendance offered	Courses
6. Accreditation	
7. Other external influences	Field visit-field training –summer training
8. Date of production/revision of this specification	25/4/2022
9. Aims of the Programme	
Graduating national geological cadres in the fields of geology with	

scientific knowledge and various mental, technical and professional skills to qualify them to work in the geological sectors.
Preparing geological cadres with experience and know-how in how to use and adapt the latest developments in geology to overcome problems in this field.
Publishing applied scientific research in the areas of applied geology that contribute to scientific progress, solving problems and finding appropriate solutions to them.

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Cognitive goals

A1. Teaching students the theoretical foundations of geological science.

A2. Teaching students the methods used in a way that ensures communication with the global development in technologies and the labor market needs

A3. - Teaching students and guiding them to the educational and behavioral aspects in a way that directs the outputs of the educational institution in building a generation of graduates who carry the principles of noble values that reject the methods of societal corruption of all kinds.

B. The skills goals special to he programme .

B1.Providing the opportunity for practical performance to gain practical skills and experience in field of geology

B2. Training students on the use of various laboratory equipment to ensure the availability of skill in the use of scientific techniques in the geological science

B3. - Ensure that students are trained in methods of communicating with new information in the field of specialization to develop information and skills and the method of communicating information through training in drafting and giving lectures.

B4 Training students to complete the stage of scientific research by applying the paragraphs of the scientific method in research and preparing the student to work in research and development centers or to complete his higher studies in the future

Teaching and Learning Methods

1- using the direct method in teaching through educational lectures, using the blackboard, the data display device, the interactive lecture, and the presentation of the educational video, which provides an opportunity to view field or laboratory operations.

2- The participation of students in obtaining information by asking them to submit scientific reports on specific paragraphs of the curriculum.

3- Training students on the logical discussion method to reach results, as well as the method of conclusion.
4- Training the student on educational commitment in behavior inside the lecture hall, laboratory, in order to ensure the rule of sound behavior in the educational institution and after graduation.
4- Learning through applied field practices and providing an opportunity for students to apply knowledge in the field.

Assessment methods

1-Monthly exams
2-Daily exams (cues)
3- For practical exams
4- The final exam, both theoretical and practical
5- Evaluation through summer training.

C. Affective and value goals

C1. The academic program adopts educational values in dealing with students to instill a desire and interaction among students to seek knowledge and seek to spread scientific benefit to society through workmanship and sincerity in achieving it.

C2. Raising the ambition of students for achievement and excellence.

C3. Spreading the importance of the individual's contribution within the community and not relying on the efforts of others to avoid the emergence of a class of the unemployed .

C4. Spreading the culture of purifying society through society's rejection of the corrupt, deviant behavior and cheating in dealing with them.

Teaching and Learning Methods

1- Conducting educational and counseling seminars
2- Honoring outstanding students to focus light on good models of behavior.
3- Encouraging students to take initiative by presenting ideas and pointing out bad behavior in the academic environment

Assessment methods

1- Conducting questionnaires for students to find out the opinions in the student community
2- Reports of the educational committees during the academic program stages
3- Assessing the frequency of emergence of good behavioral cases in the student community and the frequency of occurrence

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1- Training students on the possibility of accessing sources of knowledge to maintain and develop their information

D 2- Training students on the method of communicating information to others through the formulation and presentation of the lecture

D 3- The skill in formulating scientific research hypotheses to guide scientific research in the service of productive projects.

D4- .follow up on scientific developments.

Teaching and Learning Methods

1-The student is required to submit a seminar in his field of specialization.
2- Field visits and the investment of the summer training period to engage in projects.
3- Students' participation in seminars about problems and obstacles in geological projects.

Assessment Methods

1- The student's discussion in the seminar on a specific topic before a specialized committee.
2- Discussing the students' graduation project by a specialized committee

11. Programme Structure

Level/Year	Course or Module Code	Course or Module Title	Credit Hours	
			Practical	Theoretical
First year/first course		General geology1	2	2
First year/first course		Crystallography	2	2
First year/first course		Chemistry	2	2
First year/first course		Mathematics1	-	2
First year/first		Computer1	2	2

course				
First year/first course		Arabic language	-	2
First year/first course		Human Rights	-	2
First year/second course		General geology2	2	2
First year/second course		Mineralogy	2	2
First year/second course		Physics	2	2
First year/second course		Mathematics2	-	2
First year/second course		Computer2	2	2
First year/second course		English language	-	2
First year/second course		Public freedom	-	2
Second year year/first course		Invertebrate fossils	2	2
Second year year/first course		Optical mineralogy	2	2
Second year year/first course		Sedimentology	2	2
Second year year/first course		Geomorphology	2	2
Second year year/first course		Geology of marshes	-	2

Second year year/first course		Computer1	-	2
Second year year/first course		English language	-	2
Second year year/first course		Statistics 1	-	2
Second year year/second course		Micropaleontology	2	2
Second year year/second course		Chemistry of minerals	2	2
Second year year/second course		Sedimentary petrology	2	2
Second year year/second course		Remote sensing	2	2
Second year year/second course		Computer1	-	2
Second year year/second course		English language	-	2
Second year year/second course		Statistics 1	-	2
Third year year/first course		Structural geology1	2	2
Third year year/first course		Igneous petrology	2	2
Third year year/first course		Stratigraphy	2	2

Third year year/first course		Geophysics 1	2	2
Third year year/first course		Field geology 1	2	2
Third year year/first course		Geochemistry	2	2
Third year year/first course		Computer applications 1	2	-
Third year year/first course		English language1	-	1
Third year year/second course		Structural geology2	2	2
Third year year/second course		Metamorphic petrology	2	2
Third year year/second course		Geotectonic	2	2
Third year year/second course		Geophysics 2	2	2
Third year year/second course		Field geology 2	2	2
Third year year/second course		Environmental geology	2	2
Third year year/second course		Computer applications 2	2	-
Third year year/second course		English language 2	-	1
Four year year/first course		Petroleum geology1	2	2
Four year year/first course		Geology of Iraq	2	2
Four year year/first course		Engineering geology	2	2

Four year year/first course		Geology of ores	2	2
Four year year/first course		Well log1	2	2
Four year year/first course		Soil mechanics	-	2
Four year year/first course		English language 1	-	2
Four year year/first course		Research project 2		
Four year year/second course		Petroleum geology2	2	2
Four year year/second course		Tectonics of the arab world	2	2
Four year year/second course		Hydrology	2	2
Four year year/second course		Industrial rocks	2	2
Four year year/second course		Well log2	2	2
Four year year/second course		Applications in engineering geology	-	2
Four year year/second course		English language 2	-	2
Four year year/second course		Research project 2		

13. Personal Development Planning
1-Teamwork: working within the group effectively and actively, and academic planning to develop the performance of individuals at the level of the teaching and technical staff by joining courses and participating in conferences, scientific seminars and workshops. 2- Developing the level of students' achievement through studying the annual performance of the academic program and overcoming the imbalance in the level of performance. 3-Leadership: The ability to direct and motivate others and follow-up performance after graduation and benefit from the graduates in assessing the level of the curriculum and the usefulness of the labor market from the curriculum components. 4- Independence at work.
14. Admission criteria .
1-Adoption of admission requirements for students in accordance with the regulations of the Ministry of Higher Education and Scientific Research (Central Admission) 2- He must be medically fit for the specialty he is applying for. 3- Choosing the student's desire. 4- The acceptance rate in high school. 5- The absorptive capacity of the scientific department
15. Key sources of information about the programme
1- The website of the college and university 2- University Guide 3- College guide 4- Internet

Curriculum Skills Map

please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed

				Programme Learning Outcomes													
Year / Level	Course Code	Course Title	Core (C) Title or Option (O)	Knowledge and understanding				Subject-specific skills				Thinking Skills				Gene Transferabl Other skill employa personal d	
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2
First year/first course		General geology1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First year/first course		Crystallography	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First year/first course		Chemistry	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First year/first course		Mathematics1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First year/first course		Computer1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First year/first course		Arabic language	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First year/first course		Human Rights	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First year/second course		General geology2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

First year/second course		Mineralogy	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
First year/second course		Physics	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
First year/second course		Mathematics2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
First year/second course		Computer2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
First year/second course		English language	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
First year/second course		Public freedom	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/first course		Invertebrate fossils	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/first course		Optical mineralogy	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/first course		Sedimentology	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/first course		Geomorphology	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/first course		Geology of marshes	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/first course		Computer1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Second year year/first course		English language	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/first course		Statistics 1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/second course		Micropaleontology	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/second course		Chemistry of minerals	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/second course		Sedimentary petrology	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/second course		Remote sensing	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/second course		Computer1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/second course		English language	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second year year/second course		Statistics 1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Third year year/first course		Structural geology1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Third year year/first course		Igneous petrology	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Third year year/first course		Stratigraphy	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Third year year/first		Geophysics 1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

course																		
Third year year/first course		Field geology 1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/first course		Geochemistry	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/first course		Computer applications 1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/first course		English language1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/second course		Structural geology2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/second course		Metamorphic petrology	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/second course		Geotectonic	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/second course		Geophysics 2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/second course		Field geology 2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/second course		Environmental geology	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/second course		Computer applications 2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third year year/second course		English language 2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Four year year/first course		Petroleum geology1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Four year year/first course		Geology of Iraq	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/first course		Engineering geology	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/first course		Geology of ores	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/first course		Well log1	Option (O)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/first course		Soil mechanics	Option (O)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/first course		English language 1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/first course		Research project 1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/second course		Petroleum geology2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/second course		Tectonics of the arab world	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/second course		Hydrology	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/second course		Industrial rocks	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/second course		Well log2	Option (O)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Four year year/second course		Applications in engineering geology	Option (O)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/second course		English language 1	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Four year year/second course		Research project 2	Core (C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

TEMPLATE FOR COURSE SPECIFICATION

HIGHEREDUCATIONPERFORMANCEREVIEW:PROGRAMMEREVIEW

COURSE SPECIFICATION

ThisCourseSpecificationprovidesaconcisesummaryofthemainfeaturesofthecourseandthelearningoutcomesthatatypicalstudentmightreasonablybeexpectedtoachieveanddemonstrateifhe/shetakesfulladvantageofthelearningopportunitiesthatareprovided.Itshouldbecross-referencedwiththeprogrammespecification.

1. Teaching Institution	University of ThiQar
2. University Department/Centre	College of Science/department of applied geology
3. Course title/code	Invertebrate fossils
4. Modes of Attendance offered	
5. Semester/Year	First course/ second year
6. Number of hours tuition (total)	30
7. Date of production/revision of this specification	27/4/2022

8. Aims of the Course
By the end of the course semester, students should be able to identify fossil specimens from the major invertebrate groups, and to use these specimens and identifications to facilitate interpretation of the age and environment in which the organisms originally lived. The students should also have a basic understanding of the mechanisms of evolution and extinction

9·LearningOutcomes,Teaching,LearningandAssessmentMethode

A- Cognitive goals . A1.To familiarize the student with the concept of fossils and importance of studying fossils. A2.knowing how identified fossils A3.enable students to learn how determined geological times by using fossils A4.teaching students to identify the paleecology through fossils
B. The skills goals special to the course. B1. The student is ready to receive new information B2.connecting basics concepts with practical results B3.ability to diagnose and analyze results
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Save the forms 4- Scientific trips
Assessment methods
1- Theoretical tests 2- Practical tests 3- Reports and studies 4 - Daily exams
C. Affective and value goals C1. Asking questions in lectures C2.knowing and classifying fossils C3.ability to diagnose and analyze results C4 The student is ready to receive new information
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Save the forms 4- Scientific trips
Assessment methods
1- Theoretical tests 2- Practical tests 3- Reports and studies 4 - Daily exams

D.Generalandrehabilitativetransferredskills(otherskillsrelevanttoemployabilityandpersonaldevelopment)

D1.learn about new concepts in the study of fossils
D2.the student is ready to receive new information
D3.connecting basic concepts with practical results
D4.learn the basics of studying fossils

10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
Week1	2h	To get to know the student	Introduction, importance of paleontology, how can fossil, use them in determining the relative age	Explanation, presentation and lecture	Test
Week2	2h	To get to know the student	Overview of life on earth, paleontology and evolution	Explanation, presentation and lecture	Test
Week3	2h	To get to know the student	Fossilization, methods of preserving fossils	Explanation, presentation and lecture	Test
Week4	2h	To get to know the student	What is paleontology, what is the paleontological factors affected the distribution of organisms, types of marine environments and types of fauna according to their life style	Explanation, presentation and lecture	Test
Week5	2h	To get to know the student	Phylum Porifera (Spongia) and paleospongia (Archaeocyatha) mode of life types of wall structure, skeleton, classification, paleoecology and geological range	Explanation, presentation and lecture	Test

Week6	2h	To get to know the student	Phylum coelenterata (Cindaria), coral, soft body, skeleton, reproduction, classification, paleoecology and stratigraphic distribution	Explanation, presentation and lecture	Test
Week7	2h		Exam1		
Week8	2h	To get to know the student	Phylum coelenterata part 2	Explanation, presentation and lecture	Test
Week9	2h	To get to know the student	Phylum: Brachiopoda, soft body and life modes, general shape, shell description and orientation, shell composition and structures, classification, ecology and geological distribution.	Explanation, presentation and lecture	Test
Week10	2h	To get to know the student	Phylum: Mollusca, introduction, general characters, anatomy and classification Class: Pelecypoda, anatomy, shell morphology, shell microstructures and mineralogy, mode of life, classification	Explanation, presentation and lecture	Test
Week11	2h	To get to know the student	Phylum: Mollusca, Class: Gastropoda, anatomy, shell morphology, shell microstructures and mineralogy, mode of life, classification	Explanation, presentation and lecture	Test
Week12	2h	To get to know the student	Phylum: Mollusca, Class: Cephalopoda, anatomy, shell morphology, shell microstructures and mineralogy, mode of life, classification	Explanation, presentation and lecture	Test
Week13	2h	To get to know the student	Phylum: Echinodermata, morphology, anatomy, skeleton, classification, class: Echinoidea, classification, mode of life	Explanation, presentation and lecture	Test

Week14	2h	To get to know the student	Phylum: Arthropoda, class: Trilobita, morphology, classification, ecology and geological distribution.	Explanation, presentation and lecture	Test
Week15	2h		Exam2		

11. Infrastructure	
1. Books Required reading:	علم المتحجرات ، جامعة الموصل 1982العمري،فاروق صنع الله و عباوي،طارق صالح ، ص.474 :
2. Main references (sources)	Murray,J.W. et.al. , 1985 ; Atlas Of Invertebrate Macrofossils ,The Palaeontological Association,U.S.,Halsted Press,241p.,95 pl
A- Recommended books and references (scientific journals, reports…).	Iraqi academic scientific journals
B-Electronic references, Internet sites…	

12. The development of the curriculum plan
Adopting modern textbooks and developing the practical curriculum