

COURSE SPECIFICATION
Biosystematic/ Undergraduate Students
 ٢٠١٧-٢٠١٨

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

١. Teaching Institution	University of Baghdad/college of science
٢. University Department/Centre	Department of Biology
٣. Course title/code	Biosystematics
٤. Programme(s) to which it contributes	Bachelor in Biology
٥. Modes of Attendance offered	Teaching Lecture
٦. Semester/Year	٢٠١٧-٢٠١٨
٧. Number of hours tuition (total)	١٥ weeks
٨. Date of production/revision of this specification	١٥/٠٩/٢٠١٧
٩. Aims of the Course	Study of the diversification of living forms in Animals and plants , both past and present, and the relationships among living things through time. Relationships are visualized as evolutionary trees Phylogenies have two components: branching order (showing group relationships) and branch length (showing amount of evolution)

١٠. Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding:

A¹ - is the field that provides scientific names for organisms describes them, preserves collections of them.

A² - provides classifications for the organisms, keys for their identification.

A³ - investigates their evolutionary histories, and considers their environmental adaptations.

A⁴ - classifications of evolutionary and organism histories.

B. Subject-specific skills:

B¹. Including the scientific names of organisms, species descriptions and overviews, taxonomic orders, and classifications of evolutionary and organism histories

B². Studying the diversity of organisms and the differentiation between extinct and living creatures. Biologists study the well-understood relationships by making many different diagrams and "trees" (cladograms, phylogenetic trees, phylogenies, etc.).

B³. Explaining the biodiversity of the planet and its organisms. The systematic study is that of conservation

Teaching and Learning Methods

Preparation of PowerPoint lectures and the use of the presentation screen, using charts of the most prominent information from modern sources

Assessment methods

Weekly, monthly and quarterly tests with reports on related topics

C. Thinking Skills:

C¹ - Developing the student's ability to learn about the diagnosis of living organisms in his environment

C² - prepare the student in a way that qualifies him to deal with living organisms in his environment

Teaching and Learning Methods

By lecturing using the latest methods used in the rugged universities

Assessment methods

1 - Directly: the quarterly and monthly written exams

2. Indirect: oral tests

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

D¹- Providing the student with the special experiences of collecting, describing and classifying the models

D²- provide the students with the scientific methods to perform a research related to taxonomy

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
First week	0h	Introduction: the different between systematics & Biosystematics In plants The important ranks of taxonomic hierarchy Concept of numerical taxonomy	Introduction: the different between systematics & Biosystematics In plants	PowerPoint + L.C.D	
second week	0h	Sources of the evidence & relationship between systematics and other sciences in plants	relationship between systematics and other sciences in plants	PowerPoint + L.C.D	written exam
Third week	0h	Biosystematics & modern plant taxonomy Mechanics of evolution Mondalism concepts Mutation Hybridization	Biosystematics & modern plants taxonomy	PowerPoint + L.C.D	
Fourth week	0h	The concept of the species & speciation (in plant Taxonomy) Isolation Mechanism of isolation Types of isolation	species & speciation (in plants Taxonomy)	PowerPoint + L.C.D	
Fifth week	0h	Variation & Evolution in plant Taxonomy Sources of Variation	Variation in plant Taxonomy	PowerPoint + L.C.D	
Sixth week:	0h	Reproductive (Breeding) system in flowering plants Sexual Reproduction (Amphimixis) out-breeding Heteromorphic self-incompatibility Homomorphic self-incompatibility	Reproductive in plant Taxonomy	PowerPoint + L.C.D	written exam
Seventh week:	0h	Introductory remarks (Definition of Biosystematics) systematics characters, Levels of Taxonomy, classification definitions, Binomial Nomenclature,	Definition of Biosystematics (in zoology)	PowerPoint + L.C.D	
Eighth week	0h	Species Concepts, Types of Speciation,	Species Concepts (in zoology)	PowerPoint + L.C.D	

Ninth week and Tenth week:	h	:Reproductive isolations Prezygotic reproductive isolation ❖ habitat isolation ❖ temporal isolation, ❖ gametic isolation postzygotic reproductive isolation ❖ hybrid breakdown ❖ reduced hybrid fertility	Reproductive isolations (in zoology)	PowerPoint + L.C.D	written exam
Eleventh week	eh	Types in Zoology, Kinds of Types, Taxonomic keys	Types (in zoology)	PowerPoint + L.C.D	
Twelfth week and thirteenth week	h	Variation in Taxonomic and Systematic Characters 1-Geographic, 2-Sexual, 3-Individual Variation I. Age variation II. Social Variations III. Ecological Variations IV. Traumatic Variations Genetic Variation	Variation in Taxonomy (in zoology)	PowerPoint + L.C.D	written exam

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1- Principles of Animal Taxonomy by George Gaylord Simpson. 2- Principles of Systematic Zoology. Ernst Mayr. 3- Methods and Principles of Systematic Zoology. Ernst Mayr 4- Plant Taxonomy and Biosystematics by Clive A. Stace 5- Introduction to the Principles of Plant Taxonomy 2nd Edition by V. V. Sivarajan , &N. K. P. Robson
Special requirements (include for example workshops, periodicals, IT software, websites)	Scholarly articles from journal of taxonomy and biosystematics
Community-based facilities (include for example, guest Lectures , internship , field studies)	(field studies from different environments)

١٣. Admissions	
Pre-requisites	Bachelor in Biology
Minimum number of students	
Maximum number of students	

Dr. Hayder Badry Ali

Dr.....