

نموذج توصيف مقرر
Course Description Form

Name of College\Faculty : Science
Name of Department: Biological Sciences – Animal Biology Program
اسم الكلية: اسم القسم العلمي:

Course Name	Comparative Functional Morphology	اسم المقرر
Course No.	0493 - 411	رقم المقرر
No. of Credits	3	عدد الوحدات
Theoretical Hours	2	عدد الساعات النظرية
Practical Hours	3	عدد الساعات العملية
Course topics	مواضيع المقرر	

Theoretical topics:

- Biological design and approaches to physiology
- Skeletal systems
- Muscle function
- Locomotion
- Circulatory systems
- Respiratory systems
- Digestion and metabolism
- Urogenital system
- Thermal physiology

Text book: (Name, Author , Year , Publisher)

عنوان الكتاب : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)

- Kardong K. V. Vertebrates: Comparative Anatomy, Function, Evolution. Eighth Edition. Mc Graw Hill.

References: (Name , Author , Year . Publisher)

عنوان المرجع : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)

- Christopher D. Moyes and Patricia M. Schulte. Principles of Animal Physiology. Third Edition. Pearson, Toronto.
- Calow P. Invertebrate Biology: A Functional Approach. Springer

Prerequisites			0493-201 / 0493-303			متطلبات المقرر:
Grading	Exams	30	%		الاختبارات	آلية رصد المقرر
	Quizzes	-	%		امتحانات قصيرة	
	H.W.	10	%		واجبات	
	Laboratory	30	%		المختبر	
	Final	30	%		الاختبار النهائي	
	100%					

Course objectives					
No.	Course Objectives (Learning Outcomes)	Example(s) of relevant (Topics and activities)	Recommended Level to satisfy the objectives		
			High	Medium	Low
1	Understand how selective pressures influence the evolution of organ systems	Streamlined bodies in fish enable swimming		x	
2	Differentiate between the biomechanics of different forms of locomotion	Net work in walking animals is zero, while flying and swimming animals must generate work to translocate	x		
3	Learn how physics principles relate to the form and function of different animals	The interaction of body and limb with environmental media (air, water, soil)	x		
4	Understand that all body functions coevolved to ensure fitness of the organism in its environment	Flight in birds is enabled by: hollow bones, enlarged breast muscle, feathered skin, one-way ventilation system, etc.			x
5	Identify how a biological variable can be influenced by the relationship	Blood oxygen levels: Locomotion is a function of	x		



	between different organ systems	musculoskeletal system, it requires energy, energy generation requires oxygen, oxygen is provided by respiratory system, oxygen is delivered by circulatory system, waste is removed by respiratory excretory systems, coordination is achieved by the nervous and endocrine systems.			
Fields					
Skills					
Coordinator (Name and Rank) :	Abdulaziz A. Alawadi (Assistant professor)				
Signature and stamp :					
Date:	28 \ 11 \ 2025				