

نموذج توصيف مقرر
Course Description Form

Name of College\Faculty : Science

Name of Department: Biological Sciences

اسم الكلية: العلوم

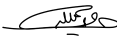
اسم القسم العلمي: العلوم البيولوجية

Course name	Physiology (for Biology Education Students) علم وظائف الأعضاء (لطلبة التربية)	اسم المقرر
Course No.	0493-311	رقم المقرر
No. of Credits	4 credits (4-1-3)	عدد الوحدات
Theoretical Hours	3 Hours	عدد الساعات النظرية
Practical Hours	3 Hours	عدد الساعات العملية
Prerequisites	Biology 3 (0490103) + Biology 2 (0490102)	متطلبات المقرر
Course topics		مواضيع المقرر
A study of the physiological aspects of the following life processes in animal and plant: Nutrition, exchange and transport of gases, transport of substances, elimination of waste materials, accumulation and release of energy, growth, coordination and movement.		
Text book: (Name, Author, Year, Publisher)		عنوان الكتاب: (الاسم، المؤلف، سنة الطبع، دار النشر)
1. D. Shier, J. Butler, R. Lewis, Hole's Essentials of Human Anatomy & Physiology (latest Ed.), Wm. C. Brown Publishers. 2. Lincoln Taiz & Eduardo Zeiger, Plant Physiology (Fourth Edition), Sinauer Associates, Inc.		
References: (Name, Author, Year, Publisher)		عنوان المرجع: (الاسم، المؤلف، سنة الطبع، دار النشر)
Chris Moyes and Trish Schulte, Principles of Animal Physiology. (Second International Edition). Pearson Education Limited. (2013)		

Grading				آلية رصد المقرر
Exams		20%		الاختبارات
Quizzes		10%		امتحانات قصيرة
Lab. Work		30%		المختبر
Final		40%		الاختبار النهائي
100%				

أهداف مخرجات المقرر					
الرقم	أهداف مخرجات المقرر	أمثلة من المقرر لتحقيق هذه الأهداف	المستوى المطلوب من عضو هيئة التدريس لتحقيق الهدف		
			عالي(ع)	متوسط(م)	منخفض(ن)
1					
2					
3					
4					
5					
منسق المقرر (اسم عضو هيئة التدريس المشرف على توصيف المقرر وتوقيعه)					
			الرتبة الأكاديمية		
			تاريخ إعداد النموذج		

Course objectives					
No:	Course Objectives (Learning Outcomes)	Example(s) of relevant (Topics and Activities)	Recommended Level to satisfy the objectives		
			High	Medium	Low
1	Describe the physiology of animal systems and correlate it with its anatomy.	Discuss cardiovascular system structure and function.	H		
2	Identify the function of the parts of each system and how they work together to comprise the overall function of that particular system.	Anatomical structure of the sarcomere facilitates muscle contraction	H		
3	Illustrate the regulation of each system to maintain homeostasis.	The structure of the nephron and the processes of urine formation.	H		

4	Compare and identify the physiological differences and abnormalities in each system, and relate them to the animal environment and habitat.	Hyposecretion of insulin can cause diabetes mellitus		M	
5	Interpret water relations in the cell and between the cell and its environment, and establish how the soil structure affects water movement and transportation.	Differences in osmotic pressure cause water to move to the roots.	H		
6	Illustrate the nutritional needs of plants and the symptoms of deficiency, and how soil factors influence the availability of nutrients.	Nutrient deficiency causes plant disorders.	H		
7	Analyze the molecular mechanisms of transport in living cells and the great variety of membrane transport proteins.	Different types of transport proteins in the plant cells.	H		
8	Explain the role of photosynthesis, the structure of the photosynthetic apparatus, and the processes of light-dependent and light-independent reactions.	Calvin cycle and carbohydrate productivity.	H		
9	Describe the chemical structure and synthesis of auxins. Polar transport and the physiological effects of auxins.	The behavior of plants in relation to the physiological effects of auxins.		M	
Coordinator (Name and Rank):		Dr. Maryam Almohaisen Assistant professor			
Signature:			Date:	9 / 11 / 2025	