جامعة المجمعة
Majmaah University

وكالة الجامعة للشؤون التعليمية
إدارة البرامج الدراسية والتطوير

نموذج (5)

مختصر توصيف المقرر

Animal Ecology and Behavior

اسم المقرر:	بيئة وسلوك حيوان
رقم المقرر:	BIOL-345
اسم ورقم المطلب السابق:	علم البيئة BIOL-241
اسم ورقم المطلب المرافق:	-
مستوى المقرر:	المستوي السادس
الساعات المعتمدة:	3ساعات
لغة التدريس	الانجليزية

Module Title:	**Animal Ecology and Behavior**
Module ID:	BIOL-345
Prerequisite (Co-requisite):	Ecology, BIOL-241
Co-requisite :	N/A
Course Level:	6th level
Credit Hours:	3 Hours

معلومات المقرر * (Course Information):

وصف المقرر : Module Description

Animal Ecology and Behavior course look at the responses of animals to their environment from an evolutionary perspective: the course will demonstrate the questions "how did this behavior evolve?" and "how does this behavior contribute to survival and reproduction?". In this course we will consider a wide variety of behaviors (group formation & social behavior, predator-prey interactions, foraging decisions, mate choice, parental care, life history strategies, territoriality, altruism) as the product of evolution.

أهداف المقرر: Module Aims

1	**To appreciate the interplay of genes, the developmental process, the nervous system, and the environment that produces behaviors.**	1
2	**To understand animal behaviors as adaptations that maximize the probability that an individual will survive and reproduce.**	2

3	To apply Tinbergen's "four questions" to a variety of different behaviors.	3
4	To discover the role that behavioral flexibility plays in maximizing individual fitness.	4
5	To investigate hypothesis testing and experimental design in behavioral ecology.	5
6	To use our understanding of behavioral ecology to answer new questions.	6

Learning Outcomes: مخرجات التعليم:

1	Form hypotheses about how and why organisms display particular behaviors.	1
2	Assess the influence of genetics and environment in the development and expression of behavior.	2
3	Make predictions about behavior based on information about an individual's environment.	3
4	Depict the sensory world of a particular animal and explain how that sensory world shapes its behavior.	4
5	Connect the outcomes of particular behaviors with survival and reproduction.	5
6	Describe the experimental approaches and techniques used to study behavior.	6

Course Contents: محتوى المقرر:

ساعات التدريس (Hours)	عدد الأسابيع (Weeks)	قائمة الموضوعات (Subjects)
3	1	Introduction to Animal Ecology and Behavior • Why study Animal Ecology and Behavior?
3	2	The Nervous System • How does the nervous system act to control behavior? • What are some ways that the nervous system can provide information about the environment? • How does the interaction between the nervous system and environmental cues produce behavior?
3	1	Behavioral Motivation and Organization • What factors motivate behavior?

		• How do biological clocks act to organize behavior? • How do environmental cues affect the organization of behavior?
3	1	The Development of Behavior • What role do genes play in determining behavior? • How do internal and external environments interact with genes to create behavior? • How are innate and learned behaviors different?
3	2	Communication and Social Behavior • How do animals share information? • What determines the kind of communication that can occur between individuals? • How does communication increase fitness?
3	2	Foraging Behavior • What decisions do foraging animals make? • How do foraging animals maximize their food intake while minimizing other risks and costs? • How are models used to predict foraging behavior?
3	2	Predator-Prey Behaviors • What behaviors help prey avoid being predated? • What behaviors help predators catch prey? • How have prey and predator behaviors interacted throughout their evolution?
3	2	Reproductive Behavior • How do male and female mating strategies differ? • How do individuals choose their mates? • How does the environment influence the mating system of a particular species?
3	2	Cooperation and Altruism • Why is cooperative behavior an “evolutionary challenge”? • What behavioral adaptations allow for cooperation? • How do we determine whether behaviors are selfish or altruistic?

Textbook and References:

الكتب المقرر والمراجع المساندة:

ISBN	سنة النشر Publishing Year	اسم الناشر Publisher	اسم المؤلف (رئيسي) Author's Name	اسم الكتاب المقرر Textbook title
978-0878939664	2013	Sinauer .Associates, Inc	John Alcock	Animal Behavior: An Evolutionary Approach
	سنة النشر Publishing Year	اسم الناشر Publisher	اسم المؤلف (رئيسي) Author's Name	اسم المرجع Reference
978-0199737598	2013	Oxford University Press	Shawn Nordell	Animal Behavior: Concepts, Methods, and Applications
978-1405114165	2012	Wiley-Blackwell	Nicholas B. Davies	An Introduction to Behavioural Ecology
978-0128015322	2015	Academic Press	Michael D. Breed	Animal Behavior