جامعة: المنصـــورة
كـلـيــة: العلـــــــوم
قـســم:علم الحيــوان

توصيف مقرر دراسى

١- بيانات المقرر		
الرمز الكودى: Es303	**إسم المقرر: Fish Biology**	**المستوى: الثالث**
التخصص: علوم البيئة	**عدد الوحدات الدراسية: 3 نظرى 2 تمارين 0 عملى 2**	

٢- هدف المقرر:	For students undertaking this course, the aims are to: 1 – Determine the adfaptations of fishes to aquatic life. 2 – Understand digestion, reproduction and behavior of different fishes.
٣- المستهدف من التدريس المقرر:	
أ- المعلومات والمفاهيم:	a- Knowledge and Understanding : On completing this course, students will be able to: a1. Acquire an understanding of functional adaption to the all systems of fishes. a2. Define the fish behavior in relation to the surrounding ecosystem. a3. Differentiate between the different types of feeding in fishes a4. Outline the feeding requirements of fishes.
ب-المهارات الذهنية	b- Intellectual Skills: On completing this course, students will be able to: b1. Distinguish between the various systems of fishes. b2. Predict the difference in digestive system of fishes. b3. Interpret the behaviour in marine and fresh-water fishes. b4. Discuss reproduction of fishes, their farming and how to use it reasonably.
ج- المهارات المهنية الخاصة بالمقرر:	c-Professional and Practical Skills: On completing this course, students will be able to: c1. Examine different fishes. c2. Differentiate between the different types of alimentary canals. c3. Differentiate between the different types of reproductive systems. c4. Apply specific characters of each fish and comparing between the studied the specimens collected from the field.
د- المهارات العامة :	d-General and Transferable Skills: On completing this course, students will be able to: d1. Use computers and in collecting information. d2. Work effectively (Cooperation and group working or team work).
٤- محتوى المقرر:	Adaptation for aquatic life: Shape size density color variation. Movement fins swim blodder. Respiration. Gills

oxygen concentration, lung fish. Protection scales mucus spines electricity, teeth, color shape photospheres lateral line. Feeding: Planktivore , Herbivore, Carnivores (insectivore piscivore), Detritivore, Omnivore, Food pyramids, Stimuli for feeding, Artificial and Supplementary feeding. Growth, factors, Habitat, Crowding, Food Race, Age determination, Length-weight, Relationship. Digestive system: Type of mouth position, size, teeth, elephant snout fish type of stomach (Herbivore- Carnivore), Intestine length. Schooling behavior migration. Reproduction: Maturity ripeness gono-somatic index induced spawning, Breeding season, Recognition mating migration, Nest building, Parental care. External and internal fertilization.	
4 - Teaching and Learning Methods 4 -١. Lectures. 4 -٢. Practical lessons.	**٥- اساليب التعليم والتعلم:**
As normal students.	**٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة:**

٧- تقويم الطلاب :

أ- الأساليب المستخدمة :

5 - Student Assessment Methods

5-1.	Final exam	to assess	a1,a2,a3,a4 - b1,b2,b3, b4
5-2.	Oral exam	to assess	a1,a2,a3,a4 - b1,b2,b3,b4
5-3.	Practical exam	to assess	c1,c2,c3,c4 - d1,2

ب- التوقيت :

Assessment Schedule

Assessment 1	Week	14
Assessment 2	Week	14
Assessment 3	Week	13

ج- توزيع الدرجات :

Weighting of Assessments

Final-Term Examination	60
Oral Examination	10
Practical Examination	20
Semester work	10
Other types of assessment	0
Total	100

٨- قائمة الكتب الدراسية والمراجع :

Course notes.	**أ- مذكرات:**
	ب- كتب ملزمة
	ج- كتب مقترحة :
Different Web sites.	**د- دوريات علمية أو نشرات..**

مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسى

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
Introduction	١	a1,a2	b1	c1	d2
Adaptation of fishes for aquatic life	٢	a1	b1	c1	d1, d2
Integumentary system of fishes				c1,c4	
Respiratory system and respiration in fishes.	٣	a1	b1	c1	d1
Feeding in fishes	٤	a1,a2,a3	b1,b2	c2	d1, d2
Digestive system	٥	a2,a3	b2	c2	d2
Artificial and Supplementary feeding. Growth of fishes	٦	a4	b2	c2	d2
Age determination, Length-weight, Relationship.	٧	a1,a4	b4	c2	d1,d2
Schooling behavior migration	٨	a1	b3	c1	d1,d2
Reproductive system,	٩	a1	b4	c3	d2
Maturity ripeness gono-somatic index induced spawning, Breeding season, Recognition mating migration, Nest building, Parental care	١٠	a1	b3,b4	c1,c4	d1, d2
Practical Fish biology according to the course content	١١-٢			c1,c2,c3, c4	d1, d2

أستاذ المادة: د. هبه الله عبد المجيد **رئيس مجلس القسم العلمى: أ.د. هناء على حسن**