





# **Course Specifications**

| Course Title:       | Animal behavior              |
|---------------------|------------------------------|
| <b>Course Code:</b> | 424BIO-2                     |
| Program:            | Biology                      |
| Department:         | Biology                      |
| College:            | College of Arts and Sciences |
| Institution:        | Najran University            |

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#### A. Course Identification

| 1.        | Credit hours:2   |  |  |  |  |
|-----------|--|--|--|--|--|
| 2.        | Course type  |  |  |  |  |
| a.        | University College Department X Others                                 |  |  |  |  |
| b.        | Required X Elective  |  |  |  |  |
| 3.        | Level/year at which this course is offered: VIII/ 4 <sup>th</sup> year |  |  |  |  |
| 4.        | Pre-requisites for this course (if any): non                           |  |  |  |  |
|           |  |  |  |  |  |
|           |  |  |  |  |  |
| <b>5.</b> | 5. Co-requisites for this course (if any): non                         |  |  |  |  |
|           |  |  |  |  |  |
|           |  |  |  |  |  |

#### **6. Mode of Instruction** (mark all that apply)

| No | Mode of Instruction   | <b>Contact Hours</b> | Percentage |
|----|-----------------------|----------------------|------------|
| 1  | Traditional classroom | 30                   | 100%       |
| 2  | Blended               | -                    |            |
| 3  | E-learning            | _                    |            |
| 4  | Correspondence        | -                    |            |
| 5  | Other                 | -                    |            |

#### 7. Actual Learning Hours (based on academic semester)

| No    | Activity                        | Learning Hours |  |  |  |
|-------|---------------------------------|----------------|--|--|--|
| Conta | Contact Hours                   |                |  |  |  |
| 1     | Lecture                         | 30             |  |  |  |
| 2     | Laboratory/Studio               | -              |  |  |  |
| 3     | Tutorial                        | -              |  |  |  |
| 4     | Others (specify) E-learning     | -              |  |  |  |
|       | Total                           | 30             |  |  |  |
| Other | Other Learning Hours*           |                |  |  |  |
| 1     | Study                           | 30             |  |  |  |
| 2     | Assignments                     | 3              |  |  |  |
| 3     | Library                         | 15             |  |  |  |
| 4     | Projects/Research Essays/Theses | 2              |  |  |  |
| 5     | Others (specify) Office hours   | 10             |  |  |  |
|       | Total                           | 60             |  |  |  |

<sup>\*</sup> The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

## **B.** Course Objectives and Learning Outcomes

## 1. Course Description

This course is an introduction to the science of ethology (Animal Behavior). The course will examine behavior, physiology of behavior, ecology of behavior, and the evolution of behavior. Assigned readings from the scientific literature, exams, inquiry based activities/assignments,

and online discussions will be used to explore these topics. Plan to spend several hours each week on reading, writing, responding to topic discussions, and participating in activities.

#### 2. Course Main Objective

- 1. Gain familiarity with the study of animal behavior.
- 2. Describe the procedures and techniques used to study of animal behavior.
- 3. Know how behavioral hypotheses are formulated.
- 4. Recognize the four types of questions that may be asked about animal behavior.
- 5. Understand some of the mechanisms involved in the production of a behavioral sequence by an animal.
- 6. Understand the role of natural and sexual selection in the evolution of behavior.
- 7. Explain how these principles can be used to understand human behavior.

#### 3. Course Learning Outcomes

|     | CLOs   |   |  |
|-----|--|---|--|
| 1   | Knowledge:   |   |  |
| 1.1 | Know the procedures and techniques used to study of animal behavior.                             |   |  |
| 1.2 | Know how behavioral hypotheses are formulated.   |   |  |
| 1.3 | 1.3 Recognize the four types of questions that may be asked about animal behavior.               |   |  |
| 2   | Skills:  |   |  |
| 2.1 | Explain some of the mechanisms involved in the production of a behavioral sequence by an animal. |   |  |
| 2.2 | Describe the role of natural and sexual selection in the evolution of behavior.                  |   |  |
| 2.3 | Explain how these principles can be used to understand human behavior.                           |   |  |
| 3   | Competence:  |   |  |
| 3.1 | Work independently and as a team work  |   |  |
| 3.2 | Manage recourses, time and other members of the group  | _ |  |
| 3.3 | Communicate results of work with others  |   |  |

#### C. Course Content

| No | List of Topics   | Contact<br>Hours |  |
|----|--|------------------|--|
| 1  | Introduction to Animal Behavior                              | 2                |  |
| 2  | Behavioral Ecology & the Evolution of Altruism               | 2                |  |
| 3  | The Evolution of Social Behavior                             | 2                |  |
| 4  | The Evolution of Communication                               | 2                |  |
| 5  | Avoiding Predators & Finding Food                            | 2                |  |
| 6  | Evolution of Habitat Selection, Territoriality, & Migration  | 4                |  |
| 7  | Evolution of Reproductive Behavior                           | 2                |  |
| 8  | Evolution of Mating Systems & The Evolution of Parental Care | 2                |  |
| 9  | Proximate & Ultimate Causes of Behavior                      | 2                |  |
| 10 | The Development of Behavior                                  | 2                |  |
| 11 | Evolution, Nervous Systems, and Behavior                     | 2                |  |
| 12 | How Neurons and Hormones Organize Behavior                   | 2                |  |
| 13 | The Evolution of Human Behavior                              | 4                |  |
|    | Total 30   |                  |  |

#### **D.** Teaching and Assessment

## 1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

| Code | Course Learning Outcomes  | Teaching Strategies  | <b>Assessment Methods</b> |
|------|---|----------------------|---------------------------|
| 1.0  | Knowledge:  |                      |                           |
| 1.1  | Describe the procedures and techniques used to study of animal behavior.                            | Lectures             | Final and semester exams  |
| 1.2  | Know how behavioral hypotheses are formulated.  | Lectures             | Final and semester exams  |
| 1.3  | Recognize the four types of questions that may be asked about animal behavior.                      | Lectures             | Final and semester exams  |
| 2.0  | Skills:   |                      |                           |
| 2.1  | Understand some of the mechanisms involved in the production of a behavioral sequence by an animal. | Student negotiations | Class room activity       |
| 2.2  | Understand the role of natural and sexual selection in the evolution of behavior.                   | Student negotiations | Class room activity       |
| 2.3  | Explain how these principles can be used to understand human behavior.                              | Student negotiations | Class room activity       |
| 3.0  | Competence:   |                      |                           |
| 3.1  | Work independently and as a team work   | Student negotiations | Class room activity       |
| 3.2  | Manage recourses, time and other members of the group   | Student negotiations | Class room activity       |
| 3.2  | Communicate results of work with others   | Student negotiations | Class room activity       |

#### 2. Assessment Tasks for Students

| # | Assessment task*           | Week Due   | Percentage of Total<br>Assessment Score |
|---|----------------------------|------------|---|
| 1 | Theoretical First Exam     | 7          | 20%                                     |
| 2 | Theoretical Second Exam    | 12         | 20%                                     |
| 3 | Assays, oral presentations | continuous | 10%                                     |
| 4 | Theoretical Final Exam     | 16         | 50%                                     |

<sup>\*</sup>Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

## E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

- 10 hours per week as office hours
- Academic advisor 10 hours per week

## F. Learning Resources and Facilities

#### **1.Learning Resources**

| <u> </u>                          |   |
|-----------------------------------|---|
| Required Textbooks                | Alcock, J. 2009. Animal Behavior (9th Ed). Sinauer Associates, Inc. Sunderland, MA. 606 pp. ISBN 9780878932252 Additional articles as assigned. Goodenough, J., B McGuire, E Jakob. 2010. Perspectives on Animal Behavior (3rd Ed). John Wiley & Sons. Manning, A, M Dawkins. 2012. An Introduction to Animal Behaviour. Cambridge U Press. |
| Essential References<br>Materials | Breed, MD, J Moore. 2012. Animal Behavior. Acad. Press. Dugatkin, LA. 2009. Principles of Animal Behavior (2nd Ed).   |
| Electronic Materials              | Websites  |
| Other Learning<br>Materials       | Videos and films related to the course topics   |

2. Facilities Required

| Item   | Resources   |
|--|---|
| Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)                       | Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) 40 seats/ class room/ 20 seats/lab Computer access with data show and internet |
| Technology Resources (AV, data show, Smart Board, software,                                    | Data show, Overhead projector   |
| Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements | Models<br>Microscopes   |

## **G.** Course Quality Evaluation

| Evaluation<br>Areas/Issues                                    | Evaluators               | Evaluation Methods |
|---|--------------------------|--------------------|
| Course evaluation   | Student                  | direct             |
| Student-faculty meeting                                       | Faculty, Program Leaders | indirect           |
| Departmental council discussions                              | Staff members            | indirect           |
| Discussion with the group of faculty teaching the same course |                          | indirect           |
| Periodical department revisions                               | Peer Reviewer            | indirect           |

**Evaluation areas** (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

**Evaluators** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify) **Assessment Methods** (Direct, Indirect)

H Specification Approval Data

| H. Specification Approval Data |  |
|--------------------------------|--|
| Council / Committee            |  |
| Reference No.                  |  |
| Date                           |  |