



2020-21 Ewha Online International Winter College

Course Syllabus

[Course Title]

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Description:

[This course is an introduction to the study of animal behavior. The unifying theme of this course is evolutionary, examining how behavior contributes to the survival and reproduction of organisms through evolution by means of natural and sexual selection. This course will focus on ultimate explanations of animal behavior with some attention to proximate mechanisms. The ultimate explanations typically concern “why animals behave the way they do,” whereas the proximate mechanisms examine “how animals behave the way they do.” The key topics covered in this course include natural selection and evolution, genes and the environment, animal learning, foraging behavior, predatory-prey interactions, evolution of sex, sexual selection, mating systems, animal communication, habitat selection and migration, social behaviors, and finally human behaviors. Students in this course are exposed to the process of scientific study through the field of animal behavior and to reading the primary literature of animal behavior.

My teaching approach consists of introduction to a topic with relevant examples, basic theories, and recent developments within this topic. I like to approach a topic that I am going to teach by first introducing examples relevant to the topic. I try to draw examples that are familiar, interesting, sometimes crazy, using multi-media. Then I present basic theories behind both the examples and the topic that I am going to teach. I also cover classical papers on the topic. Finally, I provide recent developments in the primary literature on the topic and try to connect other conceptual issues.

This course is designed for upper-level undergraduate students who want to better understand the mechanisms and evolution of animal behavior. Students who are taking this course should have completed the introductory biology courses. Through the readings, videos, discussions, assignments, students in this course will have opportunities to develop content knowledge about animal behavior.]

Objective:

[These objectives of this course are for you to:

- understand evolution by natural selection and how selection has shaped the behavior of animals
- understand the scientific methods for research in animal behavior, including formulating hypotheses, experiments, and interpretation of data.

Upon completing this course, students should be able to

- comprehend the key theories of evolution by natural selection
- demonstrate current knowledge of major concepts in animal behavior
- develop the ability of applying the scientific method to investigating animal behavior

Prerequisite::	● critically evaluate research studies in animal behavior.]
	[Alcock, John. Animal Behavior. 9th ed. Sinauer. Sunderland, Massachusetts. USA.
	Dugatkin, Lee Alan. Principles of Animal Behavior. 2nd ed. W. W. Norton & Company. USA.]
	[Taking a General Biology course at a college level would be very helpful, but is not required]
	[Materials needed: None]

Credits	3	Contact Hours	45
Week 1	1/20(Wed)	[01 Introduction to the Class] [02 What is behavior?]	
	1/21(Thu)	[03 Scientific Approach] [04 Evolution by natural selection]	
	1/22(Fri)	[05 Adaptationist hypotheses] [06 Development of Behavior]	
Week 2	1/25(Mon)	[07 Learning] [08 Cultural transmission]	
	1/26(Tue)	[09 Foraging] [10 Anti-predator behavior]	
	1/27(Wed)	[11 Animal Communication] Real-time session: 09:30-10:45 January 27, 2021 [12 Evolution of communication] Real-time session: 11:00-12:10 January 27, 2021	
	1/28(Thu)	[13 Habitat selection] [14 Orientation]	
	1/29(Fri)	[Mid-term exam]	
Week 3	2/1(Mon)	[15 Game theory] [16 Evolution of sex]	
	2/2(Tue)	[17 Sexual Selection] [18 Intrasexual Selection]	
	2/3(Wed)	[19 Intersexual selection] [20 Mating systems]	
	2/4(Thu)	[21 Human mating strategies] [22 Kin selection]	
	2/5(Fri)	[23 Eusociality]	

		[24 Reciprocal Altruism]
Week 4	2/8(Mon)	[25 Play] [26 Animal Personality]
	2/9(Tue)	[Final exam]

Evaluation(%)	Midterm	Final	Attendance	Assignments	Participation	Etc.
	45	45	10	0	0	

※ Any student who misses 1/3 or more of the class hours will automatically fail the course.

※ The course will be graded on a P/F basis.