

## *Sociobiology*

Short title: Sociobiology

Fall 2021, Thursdays 9th period 4:05 - 4:55 Academic Research Building R5-265

Instructor:

Name: Roger L. Papke, B.A, M.S., Ph.D.

Office: Academic Research Building R5-295

Hours: By appointment

### **Course description**

The Book:

From the publisher: "When this classic work was first published in 1975, it created a new discipline and started a tumultuous round in the age-old nature versus nurture debate.

Although voted by officers and fellows of the international Animal Behavior Society the most important book on animal behavior of all time, Sociobiology is probably more widely known as the object of bitter attacks by social scientists and other scholars who opposed its claim that human social behavior, indeed human nature, has a biological foundation. The controversy surrounding the publication of the book reverberates to the present day. In the introduction to this new edition, Edward O. Wilson shows how research in human genetics and neuroscience has strengthened the case for a biological understanding of human nature. Human sociobiology, now often called evolutionary psychology, has in the last quarter of a century emerged as its own field of study, drawing on theory and data from both biology and the social sciences. For its still fresh and beautifully illustrated descriptions of animal societies, and its importance as a crucial step forward in the understanding of human beings, this anniversary edition of Sociobiology: the new synthesis will be welcomed by a new generation of students and scholars in all branches of learning."

The instructor first studied this book preparing for his Ph.D. qualifying exam in Neurobiology and Behavior at Cornell University. It made a profound impression on him due to the depths of the insights it provided on the biological basis for human behavior and the evolution of human cultures through history. That perspective is complemented by a tremendous variety of pictures drawn from studies of animal social behavior from colonial microorganisms through social insects and all the various vertebrate orders. The book discusses how evolution works on the level of individual and group behaviors, covering basic principles of population biology and roles of communication in both simple and complex societies.

In the first part of the course (weeks 1-4), the instructor will assign readings covering basic principles and provide discussion questions to be reviewed in class. In the second part of the course (weeks 5-9), each student will receive different reading assignments and make summary presentations of those assignments in class. In the final part (weeks 10-13), we will cover in depth the section of the book covering human social behavior with both group discussions and short student presentations.

**Student responsibilities:**

Students will be expected to remain current with the reading assignments and be prepared to discuss the previously assigned questions.

Each week one student will be the designated discussion leader and present the discussion questions to the class along with their ideas to get the discussions started.

Students will prepare presentations on assigned topics and submit outlines on their presentations one week in advance so that the instructor can provide feedback.

Grades will be based on student participation in class (25%), preparedness for discussions (25%), student presentations (40%), and the written outline (10%).

**Outline**

1. August 26 (assigned reading: Chapters 1-4)  
Introduction
2. September 2 (assigned reading: Chapters 5-7)  
Central dogma
3. September 9 (assigned reading: Chapters 8-10)  
Basic concepts
4. September 16 (assigned reading: Chapters 11-13)  
Population biology
5. September 23 (assigned reading: Chapters 14-15)  
Communication
6. September 30 (assigned reading: Chapters 16-17)  
Aggression Dominance and Territories
7. October 7 (assigned reading: Chapters 18-20)  
Sex, parental care, and social symbiosis
8. October 14 (assigned reading: Chapters 21-22)  
Student presentation I: invertebrates
9. October 21 (assigned reading: Chapters 23-25)  
Student presentation II: Cold blooded vertebrates and birds
10. October 28 (assigned reading: Chapter 26)  
Student presentation III: Mammals

11. November 4 (assigned reading: Chapter 27)  
Student presentation IV: Primates

12. November 18  
Human sociobiology I

13. December 2  
Human sociobiology II

**Instructor's Biography:**

The instructor is a Professor of Pharmacology and Neuroscience in the College of Medicine. He has Ph.D. in Neurobiology and Behavior from Cornell University. He also has a B.A. in Classical Civilization from New York University. His professional research has been in molecular neurobiology, primarily focused on the brain receptors for nicotine and the natural neurotransmitter that nicotine mimics, acetylcholine. His work spans the range from the molecular mechanisms of drug action on specific receptor subtypes to pharmacological approaches for the treatment of addiction. He has also written two books on the history of human artifacts and is presently writing a book on the history of the Greco-Roman cultures as told by their coins. He is an avid motorcyclist.

**Thursdays 9th period 4:05 - 4:55**

August 26 - December 9

August 26

Introduction: Papke  
The central dogmas of modern biology

September 2

September 9

September 16

September 23

September 30

October 7

October 14

October 21

October 28

November 4

November 18

December 2

*December 9*

