Please be advised that if you do not obtain permission to register from the instructor prior to registering you will not be permitted to take this course. Requests for permission should be made by email and it is recommended that you make this request in advance of the registration period.

Prerequisite: Basic knowledge of biology and neuroscience recommended. Instructor permission required.

Explores the concept of inheritance and the mechanisms through which inheritance is mediated. Will focus on the generational transmission of physiology and behavior, but will also consider the inheritance of culture and language.


Weekly Schedule & Readings

WEEK 1  Introduction & Overview

WEEK 2  Historical Perspectives/Overview of Genetics

Jablonka & Lamb Chapters 1 & 2


Johannsen W (1911) The genotype concept of heredity. The American Naturalist. 45: 129-159


WEEK 3  Behavior Genetics Journal Presentations


WEEK 4  Induced Variation in Genes

*Jablonska & Lamb* Chapter 3


WEEK 5  Lamarckian Concepts of Inheritance

Chapter from Lamarck's *Philosophie Zoologique*


WEEK 6  Historical Perspectives/Overview of Epigenetics

*Jablonska & Lamb* Chapter 4


WEEK 7  Epigenetics and Behavior Journal Presentations


WEEK 8  MIDTERM EXAM

WEEK 9  SPRING BREAK

WEEK 10  Behavioral Systems of Inheritance and Social Learning

*Jablonska and Lamb* Chapter 5


WEEK 11  Social Learning Journal Presentations


WEEK 12  The Inheritance of Learning and Culture
Jablonka and Lamb Chapter 6


**WEEK 13** Interaction of Inheritance Systems

*Jablonka and Lamb Chapter 7*


**WEEK 14** Culture Journal Presentations

**WEEK 15** Evolving Concepts of Inheritance

*Jablonka and Lamb Chapters 8-11*


**Course requirements**

Each week, students will attend a two-hour seminar. Class time will be devoted to the presentation and discussion of book chapters and journal articles. The readings are intended to provide background knowledge on the relevant topics, to cover current research on those topics, and to serve as a stimulus for discussion. Students will also present journal articles relevant to specified topics within the course. Journal articles will be selected by the students with approval by the instructor. Evaluation of participation is based on class attendance and engagement in class discussions. Evaluation of presentations is based on ratings of the preparedness, clarity, and organization of student seminars.

The students take a written midterm exam with short-answer essay questions covering the material in the textbook, the papers and the class discussions. During the second half of the semester, the students write a term paper. The 8-page paper should address a specific question related to the topics of the seminar.

Grading is allocated as follows:

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<td>Midterm exam</td>
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<tr>
<td>Term paper</td>
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<td>Participation and Presentations</td>
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