

OXFORD COLLEGE  
Spring Semester 2015

**ANTHROPOLOGY 200Q  
NBB 201**

**Foundations of Behavior**

ANTH\_OX200Q 10J (5529) & ANTH\_OX200Q-01J (5530)  
Crosslisted as NBB201

**TuTh 10:00 am – 11:40 pm & TuTh 1:40 pm – 3:20 pm  
Pierce Hall 109**

**Professor: Dr. Aaron Stutz**

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**Office Hours: BY APPOINTMENT ONLY – times available MWF**

**SI: Katie Cooper [katherine.elizabeth.cooper@emory.edu](mailto:katherine.elizabeth.cooper@emory.edu)**

**SI Session Times TBA**

***INQUIRY INTO FOUNDATIONS OF BEHAVIOR***

This course introduces you to scientific inquiry into the biological bases of BEHAVIORAL ADAPTATIONS in humans.

**LEARNING OBJECTIVES**

- Define and understand the very very basic term “behavior”
- Explore how the biological processes of evolution shape behavior
- Investigate how behaviors constantly *shape and are shaped by* the interface between our bodies and our surroundings
- Explain in detail about how human behaviors have an evolutionary and ecological context, which helps us to understand our own bodies, their evolutionary heritage, and their place in nature

The learning objectives in this course have something basic to do with *learning about learning*. How do we inquire scientifically into our bodies as part of the natural world? How do we *figure out* how our bodies got to be that way over very long time periods?

With our learning goals focused on how to ask the right questions about the human body and human behavior—and how to identify and evaluate the right kinds of biological evidence—Anthro 200Q is part of Oxford College's Learning through Inquiry curriculum.

By the end of this course, you should:

- ***Be able to understand and articulate in writing—***
  - ***what scientific theories are***
  - ***how they work as tools to develop new—yet relevant—research questions ...***
  - ***and how they help you to develop reliable observational methods for answering those questions***
- ***Be able to explain how biological adaptations work—***
  - ***together with other adaptations, in an interconnected bodily system***
  - ***which tends to keep the body in a dynamic equilibrium with its surroundings***
  - ***and which tends to keep the whole breeding population in dynamic equilibrium with its ecological surroundings ... or niche***
- ***Be able to explain specifically how—***
  - ***the human body has evolved as a highly resilient adaptive system, well fit to a wide range of terrestrial, heterotrophic, extractive, and intensely social ecological settings ...***
  - ***but human populations have not tended to remain in equilibrium with those settings***
- ***Be able to raise new questions about what it means to have a human body that can contribute to both greater ecological well-being and greater ecological disruption or damage***

We will use written essays, a multimedia project, and a capstone reflective essay to demonstrate and evaluate our joint progress toward these learning goals.

## REQUIRED TEXTS:

***On Fertile Ground: A Natural History of Human Reproduction*** (2001),  
by Peter T. Ellison. Harvard University Press.

- Available at the Oxford College Bookstore

***The Human Strategy: An Evolutionary Perspective on Human Anatomy*** (2005), by John H. Langdon. Oxford University Press.

- Available at the Oxford College Bookstore

## REQUIRED E-COURSE PACK:

Additional REQUIRED Readings will be posted on Anthro 200Q's Blackboard page.

To access the Blackboard course packs:

- go to <http://classes.emory.edu>
- log in and select *Foundations of Behavior* in your course links
- click on the *Course Documents* button on the upper left
- open or right-click on assigned PDF file for download
- the articles are included as PDF files, numbered to correspond with the coursepack readings listed in the syllabus

## SUPPLEMENTAL INSTRUCTOR SESSIONS

1. The once-a-week SI sessions with Katie Cooper will focus on reviewing class material and highlighting
2. Connect learning goal about adaptation (macro) to how adaptations emerge (micro to macro link)

## **COURSE GRADES**

**The exams and assignments will be weighted as follows:**

**In-Class Assignments/Attendance: 15%**

**In-Class Exam: 15%**

**Take-Home Exam: 15%**

**INQ Essay 1: 10%**

**INQ Essay 2: 15%**

**INQ Project: 15%**

**INQ Essay 3 (Final Reflective Essay): 15%**

**Final grades will be calculated on a percentage basis according to the weights shown above. They will then be converted to a +- letter scale.**

**Grades will be assigned as follows:**

<b>A</b>	<b>≥</b>	<b>93</b>
<b>A-</b>	<b>≥</b>	<b>91</b>
<b>B+</b>	<b>≥</b>	<b>89</b>
<b>B</b>	<b>≥</b>	<b>82</b>
<b>B-</b>	<b>≥</b>	<b>80</b>
<b>C+</b>	<b>≥</b>	<b>78</b>
<b>C</b>	<b>≥</b>	<b>72</b>
<b>C-</b>	<b>≥</b>	<b>70</b>
<b>D</b>	<b>≥</b>	<b>62</b>
<b>D-</b>	<b>≥</b>	<b>60</b>
<b>F</b>	<b>&lt;</b>	<b>60</b>

**IMPORTANT: The exams, the INQ essays and the INQ project are MANDATORY. A failure to complete any one of these will result in a failing grade for the course.**

**JUST AS IMPORTANT:** Unless you have a valid excuse that you present to me beforehand, *all exam and due dates must be strictly adhered to*. RARE EXCEPTIONS are granted under the following clear conditions: you have a valid, documented medical or family *emergency*. If you require special arrangements through Disability Services, or if you otherwise know ahead of time that you have a major schedule conflict, contact the professor as soon as possible to schedule an alternative exam. Be prepared to provide documentation.

**ACADEMIC HONESTY:**

All Oxford students are bound by the [Oxford College Honor Code](#). The two most relevant Honor Code violations are cheating on exams and assignments and plagiarism. The standard penalty for a first cheating or plagiarism violation is an F in the course. However, other violations, such as giving false information to an instructor, may also lead to penalties that are just as serious. The [Oxford College Honor Code](#) outlines the details of possible violations; how suspected violations are reported; the procedures of investigation; your rights and responsibilities if you are accused of a violation by the Honor Council investigators; and the consequences of the full Honor Council finding that you have committed an Honor violation.

Moreover, the Honor Code provides a detailed definition of plagiarism. Please read it.

In fewer words: Read the Honor Code, carry out and support honest work by yourself and your classmates, ask the instructor or Honor Council leaders when you are unsure, and do not cheat or plagiarize.

**KEY DATES TO REMEMBER:**

**INQ ESSAY I** – SafeAssign/In-Class Hard Copy, Thu January 29

**In-Class Exam** – Pierce 109, in class, Tue March 3

**Take-Home Exam** – SafeAssign, no later than 9 am, Mon April 6

**INQ ESSAY II** – SafeAssign, no later than 9 am, Mon April 20

**INQ PROJECT** – Lang 211, no later than 5 pm, Fri May 1

**INQ ESSAY III** – SafeAssign, no later than 5 pm, Tue May 5

THIS SYLLABUS IS SUBJECT TO CHANGE AT THE PROFESSOR'S DISCRETION; ANY CHANGES WILL BE ANNOUNCED IN CLASS.

PLEASE READ THROUGH THE READINGS ONCE BEFORE THE CLASS PERIOD FOR WHICH THEY ARE SCHEDULED.

**Anthropology 200Q  
Spring 2015  
Syllabus**

**I. Introduction: The Biological Foundation of Behavior is Evolution**

Tue January 13 - *Introduction: The Behavior of Evolution and the Evolution of Behavior*

Thu January 15 - *Where do Adaptations Come From?*  
TEXT - Langdon - Chapters 1 & 2  
e-Coursepack: 01-Washburn - The New Physical Anthropology

Tue January 20 - *Is it adaptation yet?*  
TEXT: Langdon - Chapter 1  
e-Coursepack: 02-Gould & Lewontin - the Spandrels of San Marco  
03-Mayr - How to Carry Out an Adaptationist Program

Thu January 22 - *Behavior and Niche*  
e-Coursepack: 04-Hutchinson - Homage to Santa Rosalia  
05-Whittaker et al - Niche, Habitat, Ecotope

**IN-CLASS EXERCISE: Niche, Behavior, and Equilibrium**

Tue January 27 - *Building a Niche of Our Own*

web reading: Niche Construction Theory (NCT)

INTRO - <http://lalandlab.st-andrews.ac.uk/niche/index.html>

*Rethinking Adaptation* - <http://lalandlab.st-andrews.ac.uk/niche/Rethinking.html>

Niche Construction and Evolution -

<http://lalandlab.st-andrews.ac.uk/niche/Evolution.html>

Criticisms of NCT - <http://lalandlab.st-andrews.ac.uk/niche/Criticism.html>

**IN-CLASS EXERCISE: How do Adaptations and Niches Co-evolve**

Thu January 29 - What Do We Expect to Learn About the Human Niche?

**INQ ESSAY 1 Due on SafeAssign: The Human Niche: From Definitions and Descriptions to Arguments, Hypotheses, and Explanations**

**IN-CLASS EXERCISE: Discussion of INQ Essay**

## **II. What Behaviors Are Adaptive in the Human Niche, and How Has the Human Body Evolved To Support Those Behaviors?**

Tue February 3 - *Evolution of the Human Niche*

TEXT: Langdon - Chapter 3

e-Coursepack: 06-Leonard - Food For Thought

web reading: What Evolves in Evolution?

<http://bioculturalevolution.net/2013/07/04/what-evolves-in-evolution/>

The Human Niche

<http://bioculturalevolution.net/the-human-niche-an-overview/>

**IN-CLASS EXERCISE: Follow-up Discussion of INQ Essay**

Thu February 5 - *The Biomechanics of the Skull and Teeth*

TEXT: Langdon - Chapters 4 & 5

**IN-CLASS EXERCISE: Co-Evolution of Elements of the Human Niche**

Tue February 10 - *The Biomechanics of the Upper Limb*  
TEXT: Langdon - Chapter 7

Thu February 12 - *The Biomechanics of Bipedalism*  
TEXT: Langdon - Chapters 6, 8, & 9

Tue February 17 - *Homeostasis, PART I: What Does Skin Do?*  
TEXT: Langdon - Chapter 13  
e-Coursepack: 07-Jablonski - Evolution of Hairlessness

Thu February 19 - *Homeostasis, PART II: What do the Respiratory and Circulatory Systems Do?*  
TEXT: Langdon - Chapters 15 & 16

Tue February 24 - *Homeostasis, PART III: Human Endurance*  
TEXT: Langdon - Chapter 17 & 18

**IN CLASS EXERCISE: Review of Anatomical and Physiological Adaptations**

Thu February 26 - *REVIEW: The Human Body in Evolutionary Perspective*

**IN-CLASS EXERCISE: Embodied Behavior in the Niche - An Exploration of Human Niche Construction and Adaptation**

**Tue Mar 3 - Exam I - Covers the Human Niche, Key Behavioral Adaptations, Biomechanics, Chewing, Bipedalism, and Homeostatic Systems, and Terrestrial Endurance**



### III. Why Did We Evolve Big Brains?

Thu March 5 - *Embodied Cognition - Being in the Environment*

e-Coursepack: 08-Humphrey - A History of the Mind  
09-Clark - The Active Body

**Tue March 10 - Thu March 12 - NO CLASS - SPRING BREAK**

Tue March 17 - *Brain Basics*

TEXT: Langdon - Chapter 10  
e-Coursepack: 10-Damasio - Of Appetites and Emotions  
e-Coursepack: 11-Clark - The Negotiable Body

Thu March 19 - *Sensing with our Brains: Seeing, Balancing, and Hearing*

TEXT: Langdon - Chapter 12  
e-Coursepack: 12-Damasio - Feelings

**IN CLASS EXERCISE: Making Sense of the Brain**

Tue March 24 - *Evolving Large Brains*

TEXT: Langdon - Chapter 11  
e-Coursepack: 13-Dunbar - Brains and Group Life  
14-Manhart- Myths in the Brain

Thu March 26 - *Brains, Language, and Tools*

e-Coursepack: 15-Stout et al - Language and Tool Making  
16-Goren-Inbar - Archaeology and Evolution of Cognition

Tue March 31 - *The Brain in the Human Niche*

e-Coursepack: 17-Tomasello - Primate Intentional Communication  
18-Tomasello - Human Cooperative Communication

**IN CLASS EXERCISE: The Social and Embodied Brain**

**Thu April 2 - REVIEW FOR THE TAKE-HOME EXAM**

*Human Cooperation, Culture, and Its  
Ecological Impact*

e-Coursepack: 19-Hill et al. - Cooperation, Culture, and  
the Human Impact  
20-Lieberman - Evolution of Human Brains and  
Bodies

**MONDAY APRIL 6 - TAKE-HOME EXAM Due on SafeAssign by 9 am**

**IV. What is Life History Theory? How Does it Help Us to Understand the  
Human Niche—and Adaptations to It?**

Tue April 7 - *Life History Theory - An Introduction*

e-Coursepack: 21-Ross - Primate Life Histories  
22-Kramer & Ellison - Life Histories and  
Growth

Text: Ellison - Two Births

**IN-CLASS EXERCISE: Transitions and Trade-Offs in Life Histories**

Thu April 9 - *The Big Deal with Lactation*

Text: Ellison - Surviving the First Cut  
- The Elixir of Life

Tue April 14 - *Energy Balance and Energy Flux*

Text: Ellison - Why Grow Up?  
- Balancing Act

**IN-CLASS EXERCISE: Prepare INQ Project - the body and its surroundings -  
in balance?**

Thu April 16 - *Female and Male Reproductive Histories*

Text: Ellison - The Arc of Life  
Ellison - The Body Builders  
- The Journey and the Procession

**IN-CLASS EXERCISE: Prepare INQ Project - the body and its surroundings -  
in balance?**

**MONDAY APRIL 20 - INQ ESSAY 2 Due on SafeAssign by 9 am**

## **VI. Conclusion: Developing an INQ Evolutionary Perspective**

Tue April 21 - Learning about Learning about the  
Foundations of Behavior

**IN-CLASS EXERCISE: Prepare INQ Project - Evaluating Learning Goals - How  
Well Do We Learn About Bodies, Environments, and Evolution?**

Thu April 23 - Final Discussion - Is the Human Body in  
Balance? Is the Niche in Balance?

**IN-CLASS EXERCISE: Prepare INQ Project - Visualizing Issues of Balance**

**Fri May 1 - Turn in INQ Project to Lang 211 by 5 pm**

**Tue May 5 - Turn in INQ Essay 3 on SafeAssign by 5 pm**