

Food for Thought: A Crash Course in Comparative Neuroanatomy

Syllabus – Fall 2019

Lectures: Thursday 10:40 - 11:30am (Period 4) – Little 117

Instructor: Molly Selba, M.A.
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Office hours: Turlington B375; by appointment

Required Reading:

Thinking Big: How the Evolution of Social Life Shaped the Human Mind

Authors: Clive Gamble, John Gowlett, and Robin Dunbar

ISBN: 9780500293829

Course Description: When considering what makes us human, many people identify our brains as the main thing that makes us unique. Our extremely high brain to body size ratio, our capacity for understanding and creating art, technology, and religion, our implementation of complex social structure—all of these things are seen as being linked directly to our seemingly ‘special’ brain. But how ‘special’ really is our brain? How do we compare to other organisms in terms of our neuroanatomy? At which point did our brains truly become human? Food for Thought: A Crash Course in Comparative Neuroanatomy tackles these big questions and more in a comprehensive look at all things brains.

Course Objectives:

- 1) Become fluent in the use of **anatomical terminology** commonly used to describe the human brain.
- 2) Gain an introductory understanding of **neuroanatomy and its corresponding functionality**.
- 3) Learn about the **neuroanatomical diversity** we see across species, why there is so much neuroanatomical diversity, and how we can quantify it.
- 4) Understand what constitutes “**the human mind**” and consider when this change came about in our evolutionary history.

Grading:

Grades are based on the practical exam, oral presentations, final essay, discussion questions, and class participation.

Practical Exam (25%): This exam will be set up in the style of a traditional anatomical practical. You will have a limited amount of time at each station to answer the question(s) asked. The content of this exam will focus on neuroanatomical structures as well as basic function of those structures.

Oral presentation (25%): You will each create a presentation on comparative neuroanatomy of your choice. Format and expectations will be discussed in class. Images/videos encouraged. This assignment serves to apply concepts that we learned in the first part of the class and demonstrate/apply these concepts across species.

Final essay (35%): Structured in the same way as the midterm presentation. This presentation can only be on material covered since the midterm presentations.

Discussions questions (5%): You will each be responsible for emailing me three questions that you had from the reading before class (only for weeks 10-14). If you do not have any questions, please report three interesting things you have learned from the readings.

Class participation (10%): This subjective grade reflects the importance of participating in our discussions during class.

Communication: Email is the best way to reach Molly (mollyselba@ufl.edu). Please use “Honors Neuro” in the subject line.

Attendance: Each student is expected to both attend and contribute to the class. **Attendance is required.** If you have to miss a class, please make arrangements in advance.

Course Evaluations: This is the first class of its kind in the honors college, and thus your opinions on what works and doesn't work are of great value. Please share your opinions with Molly either in person after class or by email. In addition, students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

University Policy on Accommodating Students with Disabilities: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

University Policy on Academic Misconduct: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

Course Schedule:

Aug 22	Introduction
Aug 29	Human Neuroanatomy: Part 1
Sep 5	Human Neuroanatomy: Part 2
Sep 12	Human Neuroanatomy: Gross Tissues → Field Trip to Communicore Building
Sep 19	PRACTICAL
Sep 26	Intro to Comparative Neuroanatomy
Oct 3	Animal Models Comparative Neuroanatomy and Criminal Behavior

Oct 10	COMPARATIVE NEUROANATOMY PRESENTATIONS: DAY 1
Oct 17	COMPARATIVE NEUROANATOMY PRESENTATIONS: DAY 2
Oct 24	Thinking Big Ch. 1
Oct 31	Thinking Big Ch. 2 and 3 (Ch.3 pages 68-70 and 74-87 only)
Nov 7	Thinking Big Ch. 4 and 5
Nov 14	Thinking Big Ch. 6 and 7 (Ch. 7 pages 208-211 only)
Nov 21	Final Class: Questions/Wrap Up

FINAL ESSAY DUE: **MONDAY, NOVEMBER 25th**

Disclaimer: This syllabus and schedule represent an initial plan for the course. As we go through the semester, this plan may need to change to enhance the class learning opportunity. All changes will be announced in class and on Canvas, and will be made available as promptly as possible.