



BIOC14H3 - Genes, Environment, and Behavior Winter 2017

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Teaching Assistants: Samantha Lauby, Sameera Abuais, Colleen Gillon and Vernie Aguda
Office Hours: **Tuesdays 10:00 AM – 12:00 PM**

Office hours will be held in the library in room AC254.

If the hours or the location need to be changed during the semester, you will be notified by an announcement on Blackboard.

Please be prepared and consult lecture materials prior to coming to the office. **Appointments outside these hours can be arranged by e-mail.**

Lecture: **Thursday 10:00 AM -12:00 PM**
Room: AA 112

Recommended Textbook: An Introduction to Behavioral Genetics (2008) Terence J. Bazzett, Sinauer Press

The best way to reach me outside the office hours is by e-mail. **Please use your UTSC or UTORONTO e-mail account** and include your course code in the subject. Emails sent from non-university accounts will not be answered.



Lectures:

BIOC14 will provide an overview of the direct and indirect role of various genes in determining behavior and behavioral regulation. We will cover topics that include behavior evaluation methods, genetic effects on behavior in animals and humans, gene environment interactions and specific examples of genes and environment involvement in cognitive / psychiatric disorders. The lectures come from a number of sources including the textbook, primary papers, reviews and other sources.

Video recording of the lectures is not permitted.

Each student is encouraged to ask questions, and participate in class, in tutorials and in office hours. Often times a question can lead to an interesting discussion for all students.

Tutorials:

Attendance in the tutorials is required, except as indicated in the tutorial schedule. Within each tutorial section, students will form a group of 4-5 students who will work together to answer and critique study questions, concepts and recent developments in the field. Some of these tutorial assignments will involve working as a group and some will require you to work individually. Students will be required to submit a written response, a concept map or do a short presentation (details to be provided during first tutorial).

In order to get the tutorial participation grade (see grade distribution), students will need to actively participate in tutorials (e.g. participating in discussions, questions etc.). Attendance will be recorded at the mandatory tutorials and missing a tutorial will lead to forfeit of that mark unless proper documentation is provided.

Accessibility:

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the *AccessAbility* Services Office as soon as possible. I will work with you and *AccessAbility* Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC *AccessAbility* Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability@utsc.utoronto.ca.

Academic integrity/plagiarism:

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) outlines the behaviors that

constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

In papers and assignments: Using someone else's ideas or words without appropriate acknowledgement. Submitting your own work in more than one course without the permission of the instructor. Making up sources or facts. Obtaining or providing unauthorized assistance on any assignment.

On tests and exams: Using or possessing unauthorized aids. Looking at someone else's answers during an exam or test. Misrepresenting your identity.

In academic work: Falsifying institutional documents or grades. Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behavior or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (refer to: <http://www.utoronto.ca/academicintegrity/resourcesforstudents.html>).

Use of Turnitin.com:

"Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site".

If you wish to opt out of Turnitin you must send me an email and then submit an electronic copy to me and your tutorial instructor.

Grade Breakdown:

The grade breakdown for the course will be as listed below. The exams will test the material covered in lectures and tutorials. The exams will consist of multiple-choice questions, fill in the blank(s) and short answer type questions that test your understanding and application of the course material. **If you miss an exam or tutorial for an official reason (e.g. documented family emergency or illness), you must contact me within 48 Hours and provide me with appropriate documentation.** The documents may be verified before you are allowed to write a makeup exam.

- **Exam 1: 20%** **Topics covered before the date of exam** **Date: TBA**
- **Exam 2: 20%** **Topics covered since Exam 1** **Date: TBA**

- **Final Exam: 34%** Cumulative – All topics covered in the course Date: TBA
- **Tutorial participation: 4%**
- **Tutorial attendance: 6%**
- **Tutorial assignments and presentations: 16%**

Tentative Tutorial Schedule:

The tutorials will run according to the following schedule. Depending on the dates of the exams, the tutorial schedule might need to be adjusted slightly. If any changes need to be made due to this or any other unforeseen circumstances, it will be posted on Blackboard. **Attendance in tutorials is mandatory unless specified otherwise.**

Week of:

Jan 2	No tutorial
Jan 9	Tutorial 1 Introductory tutorial, form groups etc.
Jan 16	Tutorial 2
Jan 23	Tutorial 3
Jan 30	Q & A (not mandatory)
Feb 6	No tutorial
Feb 13	Tutorial 4
Feb 20	READING WEEK
Feb 27	Tutorial 5
March 6	Q & A (not mandatory)
March 13	No tutorial
March 20	Tutorial 6
March 27	Q & A, review (not mandatory)

Tentative Lecture Schedule:

More than one topic may be covered in one lecture while some topics will be covered over more than one lecture.

- Topic 1:** Overview of the course; Introduction to Behavioral Genetics
 - Topic 2:** Human Genome Project; Genome Wide Association Studies
 - Topic 3:** Simple Inheritance; Inheritance of Complex Traits
 - Topic 4:** Genes and Environment; Methods in Quantitative Genetics
 - Topic 5:** Genetic Engineering; Linking genetically defined neurons to behavior
 - Topic 6:** Genetic dissection of neural circuits; Behavioral phenotyping strategies
 - Topic 7:** Normal behavioral development; Primary Cognitive Disorders
 - Topic 8:** Psychiatric Disorders; Genetics of Mood, Anxiety and Personality disorders
 - Topic 9:** Environmental epigenetics; Beyond Psychopathology
 - Topic 10:** Genetic Counselling; Applied Pharmacogenomics and Gene Therapy; The future of Behavioral Genetics
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