

Neuroscience 5850 –Introduction to Behavioural Neuroscience

Instructors: Dr. Robbin Gibb, Dr. Nancy Grigg

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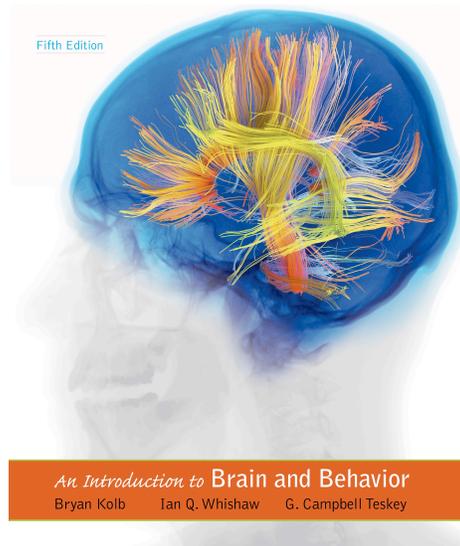
Classroom: AH 177

Office Hours: By appointment

The instructors will be available for discussions related to this course, help with the weekly assignments, and feedback on written assignments, outside of the regularly scheduled times. Arrangements for these meetings can be made by contacting the instructors by e-mail.

Required Texts:

An Introduction to Brain and Behaviour, by Kolb, Whishaw and Teskey, 5th Edition



Course Description:

This course aims to provide an overview of the neuroanatomical features of the brain. We will cover the basics of epigenetics and how experience is capable of altering the brain. Neuroplasticity is a term used to describe the brain's ability to change. This will be the next topic to be discussed. Ultimately, the objective of the course is to provide educators with a firm understanding of the brain anatomy that subserves the cognitive processes of learning and remembering. This course is designed to be highly

interactive and offers a number of readings to supplement student knowledge in the neuroscientific domain as it relates to education. This course offers the students an opportunity to develop neuroscientific expertise that will enable appropriate judgements of what constitutes sound brain-based educational practice.

Course Requirements:

- (1) **Writing.** There will be one 5-page paper due on July 18 on a topic relevant to Neuroscience and Education and pre-approved by the instructor. Pre-approval should be completed by Thursday, July 13th. Paper is due July 24th. Worth 25% of course total grade
- (2) **Quizzes.** There will be 3 in class iclicker quizzes. The quizzes may consist of short answer questions, multiple choice, and/or matching questions (diagrams) and may draw on material discussed at any time prior to the test date. These quizzes will be open book. Each quiz is worth 5% for a cumulative total of 15%
- (3) **Group Presentations.** During the final week on Wednesday and Thursday students working in groups of 3 will present a 30-minute presentation to the class on a topic that integrates neuroscientific principles with classroom practice. The topics will be selected by students and approved by the instructor; this should be done by Thursday July 13th. Worth 25% of course total grade.
- (4) **Class Discussion.** There will be ample opportunities for everyone to ask questions and engage in thoughtful discussion. 10% of course total grade.
- (5) **Online Brain Course.** Students will be required to complete the Brain Certification Course offered by Alberta Family Wellness Initiative. The certificate verifying completion of the course will earn the student 25% of course total grade.

Grading:

Passing Grades: A+ (97+), A (96-93), A- (92-90), B+ (89-87), B (86-83), B- (82-80),

Failing Grades: C+ (79-77), C (76-73), C- (72-70)

Tentative Course Schedule:

Week 1

July 10: Welcome and Introductions. Course outline. Tour of CCBN. The fundamentals of brain anatomy

July 11: Brain Anatomy (Brain Dissection)

July 12: Sex differences and the brain

July 13: Epigenetics and experience.

July 14: Work on Brain Certification (no Neuroscience Class)

Week 2

July 17: Neuroplasticity

July 18: Neuroplasticity Cont'd

July 19: Problem Solving (no Neuroscience Class)

July 20: Learning and Memory

July 21: Work on Brain Certification (no Neuroscience Class)

Week 3

July 24: Paper due. Memory: Types and neuroanatomical systems

July 25: Memory- continued

July 26 Student Presentations (3)

July 27 Student Presentations (3) and Course “Wrap- Up & Debrief”

July 28 Complete Brain Certification (no Neuroscience Class)

This outline should serve as a guide only.

Additional Course Information

Courtesy and Integrity

All participants in this class will treat all others with the utmost courtesy and respect. Electronic distractions should be avoided.

Academic Integrity is expected from all students. Any academic offense will be dealt with as prescribed in the calendar (Pgs 73 &74).

Writing Expectations

APA format should be adhered to for writing purposes. Assignment length does not include the title page (required) or the references. Information regarding APA standards can be obtained from the instructors.