

## ***Psychology 460 – Behavioural Neuroendocrinology***

When: Tuesdays/ Thursdays 9:30-11  
Where: Scarfe 204

Instructor: Liisa Galea, Ph.D.  
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Kristina Uban  
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Tues 11-11:45am

Textbook: An Introduction of Behavioral Endocrinology by Randy Nelson, Third Edition.

Course outlines, lectures available on WEBCT: [www.elearning.ubc.ca](http://www.elearning.ubc.ca)

### **Course description:**

As anyone who has gone through puberty, menopause, pregnancy or andropause knows, hormones play a large role in affecting both brain and body. This course is designed to introduce students to the field of behavioral neuroendocrinology, which is the study of how hormones affect behaviour and brain. Topics will include: effects of stress on brain and behaviour, the effects of hormones on learning and memory, mood and affiliative behaviours.

It is your responsibility to ensure that you have met all prerequisites listed in the UBC Calendar for this course. If you lack any prerequisites for this course, the Department may cancel your registration at any time.

### **Departmental Policy on Missed Tests and Extensions:**

**Course policies:** Classes of this size add certain constraints on the way in which I must teach the course. One such constraint is that there will be no (for emphasis let us repeat the word NO) make up exams in this course. This means that if you miss an exam you will simply lose the number of points associated with it. Your grade will therefore be computed as if that particular entry was a zero. The only exceptions to this are validated medical excuses. Such excuses must be in the form of a written note from your doctor or from student health, attesting to the fact that on the day of the exam you were too ill to be expected to function reasonably. Please note, that although the Student Health Service will provide such validations for December and Final exams, they will not provide these for midterms, hence in the event of a missed midterm your medical excuse must be obtained from a private physician. If you should have a personal or psychological trauma and miss an examination, a written letter of explanation from your psychiatrist, psychologist, or student counsellor must accompany such an excuse. A letter from the attending physician or clergyman must validate exams missed due

to a death in the family. In the absence of such written verification you will not be excused. All medical excuses must be personally presented to the professor as soon as you are able to return to class for a make up to be scheduled. Make-up exams will consist of an oral exam to be conducted in the presence of the professor and the teaching assistant.

If you submit medical documentation make sure it contains the statement "*This student was unable to write the test (or submit term work by the last day of classes, if applicable) on (date) for medical reasons*". If not then marks will be deducted or you will have an assigned mark of zero. You are advised to see your physician within one day of the missed test. Many physicians will not provide documentation retroactively.

#### Evaluation:

Midterm	30%	October 16, 2007
Participation	10%	
Talk	20%	Talks will be scheduled from Oct 23- Nov 30th
Essay	30%	November 15, 2007 @ 11 am
Final Exam-paper	10%	December 7, 2007 or earlier

Material from both the lectures and the textbook will be on the exam. You will be responsible for reading the materials in the articles in the order shown on the schedule that follows. This class is in a discussion seminar format particularly for the second half of the term. You must come to each class prepared to discuss the readings. The readings are assigned below from your textbook for the first half of the course. For the second half, readings will be posted each week outside my door, or emailed to you. Thus you must have done the readings BEFORE the lectures.

Talk + Essay - Each student will be required to give a presentation (15 mins.) and a research paper on the same topic. A list of topics is tentatively listed on the next few pages, we will draw for topics in a random order during the second week of classes. The talks will begin during Oct 23rd and run through to the end of classes in November. Please practice your talks ahead of time (more than once!) as this is essential for determining how long your talk is but better yet is an important factor in creating a good talk. The essays on your topic are due November 15, 2007. The essay should be no more than 10 double-spaced pages in length (Arial 11 pt font), with at least 10 references and will be written on the same topic as your talk. There will be 3-4 talks per class. A marking scheme for the talks and papers will be given by the end of September.

#### TENTATIVE LECTURE TOPICS

<b>Week of:</b>	<b>Topic</b>	<b>Readings</b>
Sept 4	An Introduction and the Endocrine System	Chapter 1 and 2 (skip pp 56-58, 84-87)
Sept 11	Sex Differences in Behaviour: Sex determination and differentiation	Chapter 3 and 4 (skip pp 216-220)
Sept 18	Male and Female Reproductive Behaviour	Chapter 5 and 6 (skip pp 302-end)
Sept 25	Male and Female Reprod Behav cont,	Chapter 7
Oct 2	Parental Behaviour	Chapter 7
Oct 9	Stress	Chapter 11
Oct 16	Midterm	

**No class on October 18<sup>th</sup>!**

Oct 23	Hormones and the Brain: Student talks and discussion	Readings TBA
Oct 30	Early Experience: Student talks and discussion	Readings TBA
Nov 6	Love, Pregnancy: Student talks and discussion	Readings TBA
Nov 13	Neurodegenerative: Student talks and discussion	Readings TBA
Nov 20	Aging, Hormones and the Brain: Student talks and discussion	Readings TBA
Nov 27	Psychiatric Diseases and Hormones: Student talks and discussion	Readings TBA

### Psychology Department's Position on Academic Misconduct

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University, and the Department of Psychology has taken steps to alleviate them. In the first place, the Department has implemented software that, can reliably detect cheating on multiple-choice exams by analyzing the patterns of students' responses. In addition, the Department subscribes to *TurnItIn*--a service designed to detect and deter plagiarism. All materials (term papers, lab reports, etc.) that students submit for grading will be scanned and compared to over 5 billion pages of content located on the Internet or in TurnItIn's own proprietary databases. The results of these comparisons are compiled into customized "Originality Reports" containing several, sensitive measures of plagiarism; instructors receive copies of these reports for every student in their class.

In all cases of suspected academic misconduct, the parties involved will be pursued to the fullest extent dictated by the guidelines of the University. Strong evidence of cheating or plagiarism may result in a zero credit for the work in question. According to the University Act (section 61), the President of UBC has the right to impose harsher penalties including (but not limited to) a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to a student's transcript.

All graded work in this course, unless otherwise specified, is to be original work done independently by individuals. **Do not** use Google/Yahoo/MSN Search/etc. to find articles for assignments in this course. **Do** use any of the indexes and databases listed under Indexes and Databases, Subject Resources, OneSearch or Metasearch on the Library's website at <http://www.library.ubc.ca>. (Not sure which index to use? Click HELP on the library homepage at [www.library.ubc.ca](http://www.library.ubc.ca) or try Subject Resources.)

If you have any questions as to whether or not what you are doing is even a borderline case of academic misconduct, please consult your instructor. For details on pertinent University policies and procedures, please see Chapter 5 in the UBC Calendar (<http://students.ubc.ca/calendar>).

The University accommodates students with disabilities who have registered with the **Disability Resource Centre**. The University accommodates students whose religious obligations conflict with attendance, submitting assignments, or completing scheduled tests and examinations. Please let your instructor know in advance, preferably in the first week of class, if you will require any accommodation on these grounds. Students who plan to be absent for varsity athletics, family obligations, or other similar commitments, cannot assume they will be accommodated, and should discuss their commitments with the instructor before the drop date.

Students have the right to view their marked examinations with their TA, providing they apply to do so within a month of receiving their final grades. This review is for pedagogic purposes. The examination remains the property of the university.

Faculties, departments and schools reserve the right to scale grades in order to maintain equity among sections and conformity to university, faculty, department or school norms. Students should therefore note that an unofficial grade given by an instructor might be changed by the faculty, department or school. Grades are not official until they appear on a student's academic record.

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### **Psychology Department's Policy on Grade Distributions and Scaling**

In order to reduce grade inflation and maintain equity across multiple course sections, all psychology courses are required to comply with departmental norms regarding grade distributions. According to departmental norms, the mean grade in a 300-level class is 70 for a good class, 68 for an average class, and 66 for a weak class, with a standard deviation of 13). The corresponding figures for 100- and 200-level Psychology courses are 67, 65, and 63, with a standard deviation of 14. **Scaling** is likely to be used in order to comply with these norms; grades may be scaled up or down as necessary by the professor or department.

Further information about academic regulations, course withdrawal dates and credits can be found in the University Calendar. You are encouraged to read this material. If you run into trouble and need information about studying, preparing for exams, note taking or time management, free workshops and advice are available from the Student Resources Centre, which can be reached through the School and College Liaison Office at 822-4319 and from Student Success, <http://www.students.ubc.ca/success/>.

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### *TENTATIVE TOPICS FOR STUDENT LECTURES*

Song-learning in birds and associated plasticity in the HVC and RA, relation to hormones  
 Sexual orientation - relation to brain and hormones  
 What can we learn from sex-changing fish (work of Matthew Grober and others)  
 Early influences of maternal behaviour – or blame it on your mom  
 Fetal programming  
 Environmental hormones  
 Pregnancy and motherhood  
 The Neurobiology of Love and Attachment  
 Andropause  
 PMDD – premenstrual disorder  
 Post-partum depression  
 Motherhood and cognitive changes  
 Does Stress damage the brain?  
 Post Traumatic Stress Disorder  
 Biological rhythms  
 Menopause and Hormone replacement therapy and aging in women.  
 Hormones and food intake

Alzheimer Disease and Gender-related issues

Parkinson's Disease – hormones and motor

Effects of stress and cortisol on aging

Eating disorders

The Male Sex Drive: Viagra

Abnormal sexual behaviour

Aphrodisiacs

hormonal control of pain

Epilepsy, Seizures and Hormones

Hormones and Aggression

Depression, Gender and Hormones

Schizophrenia and gender and hormones

Addiction and Gender

Cognition and hormones

Female Sex Drive

Transsexuals – and hormones

Seasonal changes in brain/behaviour as a result of hormones: Tramontin and Brenowitz.

Seasonal plasticity in the adult brain. TINS, 2000; 23, 251-258.

Plasticity of the bulbo cavernous nucleus of the spinal cord and relation to sexual behaviour in the male rat

Genes and hormones: Epigenetics and hormones

Hormones and cell death

Hormones and neurogenesis

How do hormones affect electrophysiology: LTP/LTD

Parkinson's Disease

Neuroprotection

Addiction and Gender

hormones and immune system

