

**NROC34: Neuroethology**

Fall 2016

Room: SW143

Instructor: Prof. Tod Thiele

Email: [tod.thiele@utoronto.ca](mailto:tod.thiele@utoronto.ca) (put NROC34 in subject)

Office: SW421E (within the Biological Sciences office)

Lectures: Mondays 10-12am (except September 1<sup>st</sup> 10-12am)Office Hours: Mondays 2-5pm or by appointment (except Tuesday September 6<sup>th</sup> 2-5pm)

TA: Sen Sivalingham

Email: [sen.sivalingham@utoronto.ca](mailto:sen.sivalingham@utoronto.ca)

There is no required textbook for the course. Readings will be assigned weekly and will primarily consist of journal articles. You must be connected to the UofT network to access most of these articles. You can connect to the UofT network from home using UTORvpn: <http://vpn.utoronto.ca/>

**Course Policies:**

You will be evaluated by the following: two reading critiques, midterm exam, final exam and an **optional** group presentation. Grade breakdown without a presentation:

Reading critiques	Midterm Exam	Non-Cumulative Final Exam
10%	40%	50%

Grade breakdown with the optional presentation:

Reading critiques	Midterm Exam	Group Presentation	Non-Cumulative Final Exam
10%	40%	10%	40%

**Questions:**

I will have the policy of not answering questions about course material over email. If you have questions post them to the Blackboard discussion board and I will answer them every Wednesday evening.

**Exams:**

Both exams will cover all lecture material and all assigned readings. The final exam is **non-cumulative**. Exams will be a combination of multiple-choice questions (computer-graded), matching questions, short answer and essay questions. Bring your University ID card and an HB pencil to both tests. UTSC academic ethics/cheating policies will be enforced.

**Reading Critique:**

Twice during the term you will be asked to submit a reading critique. These critiques are meant to ensure that you are thoughtfully reading the assigned material. Students selected to do a critique will be listed in a Blackboard announcement each week after lecture. **You must hand in a hard copy of your critique at the beginning of the next lecture (i.e. 10am Monday).** Late critiques will not be accepted.

**Critique options:**

- 1) Use half a page to critique one of the assigned readings. You can discuss a particular strength or weakness you found in the methods or experimental designs. You can also write about the conclusions the authors make or the types of experiments you would like to see done next. If it is a review paper, summarize the most important concept you took away from the reading.
- 2) Write three questions related to aspects of the paper(s) you are curious about. These can be related to the results (i.e. How does experiment x lead to the authors' conclusion y?). You can also ask about experimental procedures or topics in the discussion.
- 3) Write three exam questions (with answers) related to the readings. Two questions should be multiple-choice (four choices) and one should be a short-answer. Good questions may appear on the tests!

**Optional Group Presentation:**

Students may work in teams of 3-4 to present a topic in Neuroethology. Presentations (10-15mins) will occur during the last two weeks of class (November 21 & 28) and will be worth 10% of the final course grade. Some potential presentation topics and papers are provided here (ignore that the website says "paper"): <http://www.utoronto.ca/biosci/nroc34-paper-topics>

Teams may also choose their own topic with my approval. Due to the limited number of presentation slots, teams will be granted permission on a first-come, first-served basis. Teams must decide to do a presentation **before the midterm.**

**Test Policies:**

A make-up midterm exam will only be administered for students who present a medical certificate within two days of the test. Certificates will be verified. Students who miss the final exam must petition.

**Course materials:**

Lecture slides and required readings will be available on Blackboard. You may record the audio of lectures. Lectures will not be webcast. You are responsible for getting notes for any missed lecture.

**Schedule**  
(Topics and timing may change)

<b>Date</b>	<b>Lecture</b>	<b>Topic</b>	<b>Readings</b>
Sept 1	1	Introduction to Neuroethology; Neurophysiology review; Central pattern generation: Stomatogastric ganglion (STG)	Blackboard
Sept 12	2	STG II: Modulation / Vision: Pattern learning in bees	-
Sept 19	3	Vision: Pattern II / Motion Vision I	-
Sept 26	4	Vision: Motion Vision II	
Oct 3	5	Hearing 1: Communication in insects	-
Oct 17	6	<b>Midterm (in class)</b>	-
Oct 24	7	Hearing 2: Acoustic Parasitism / Presentation Guidelines	-
Oct 31	8	Chemosensation 1: Olfaction <i>Drosophila</i>	-
Nov 7	9	Chemosensation 2: Chemotaxis in <i>C. elegans</i>	-
Nov 14	10	Prey-Capture / Predator avoidance zebrafish	-
Nov 21	11	TBA / Presentations	-
Nov 28	12	Presentations...	
Dec 5-20		Final Exam Period	