

NROC34: Neuroethology

Fall 2018

Instructor: Prof. Tod Thiele

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

Office: SW421E (within the Biological Sciences office)

My office will be moving to SW534 (I will let you know when)

Lectures: Thursdays 3-5 pm

Room: SW319

Office Hours: Wednesdays 2-4 pm or by appointment

TA: Sen Sivalingham

Email: 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.

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 Quercus 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. 3 pm Thursday).** 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!

A rubric for critique grading will be uploaded to Blackboard.

Optional Group Presentation:

Students may work in teams of 3-4 to present a topic in Neuroethology. Presentations (10-15 mins) will occur during the last two weeks of class and will be worth 10% of the final course grade. Some potential presentation topics and papers are provided here on Quercus

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 me with a medical certificate **within two days of the test**. You must also email me **immediately** if you were unable to take the midterm. Certificates will be verified. Students who miss the final exam must petition.

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

Date	Lecture	Topic	Readings
Sept 6	1	Introduction to Neuroethology; Neurophysiology review; Central pattern generation: Stomatogastric ganglion (STG)	Quercus
Sept 13	2	STG II: Modulation / Vision: Pattern learning in bees	-
Sept 20	3	Vision: Pattern II / Motion Vision I	-
Sept 27	4	Vision: Motion Vision II	
Oct 4	5	Birdsong	-
Oct 18	6	Midterm (in class)	-
Oct 25	7	Hearing in insects / Presentation Guidelines	-
Nov 1	8	Chemosensation 1: Olfaction <i>Drosophila</i>	-
Nov 8	9	Chemosensation 2: Chemotaxis in <i>C. elegans</i>	-
Nov 15	10	Prey-Capture / Predator avoidance zebrafish	-
Nov 22	11	TBA / Presentations	-
Nov 29	12	Presentations...	
Dec 7-22		Final Exam Period	

Schedule

(Topics and timing may change)