

BIOD65 Pathologies of the Nervous System (Winter 2018)

Course Syllabus

Instructor: Dr. Tod Thiele

TA: Vernie Aguda



“An intensive examination of selected pathologies affecting the nervous system such as Alzheimer’s and Parkinson’s disease, multiple sclerosis, stroke and others. These pathologies will be examined from an integrative perspective encompassing the pathogenesis, resulting behaviours and current treatments”

Course Aims

1. To understand pathologies, symptoms and treatments of neurological / psychiatric disorders
2. Become adept at reading, understanding and critiquing scientific research articles in a timely fashion
3. Improve (scientific) writing skills
4. Enhance communication and discussion skills
5. To facilitate independent thinking and ideas related to science

Lectures: Thursdays 1 - 3pm, Room BV 355

Prerequisites: BGYB11H or BGYB10Y and one of BIOC32H, NROC61H, NROC64H, NROC69H

Textbook: There is no text book for this course. Course readings will be assigned throughout the course and uploaded onto the course page. Please read these before each class.

Course e-mail: tod.thiele@utoronto.ca

Office hours: Dr Thiele will hold office hours on Mondays from 2-4pm in SW421e.

Teaching Assistant: Vernie Aguda will mark the midterms, critiques, grant proposal and one exam question. Please contact Vernie for questions regarding marking of either of these assignments by email: vernie.aguda@mail.utoronto.ca

Other Contact and Communication Information: Course announcements, communications and lecture outlines will be available on Blackboard. Lectures will be posted the day before lectures. Course readings will be uploaded onto the course page at least one week prior to class. Except on weekends, emails will be answered within 48 hours of receiving them. For questions that require longer answers, please try and attend office hours, or arrange an alternative appointment with Dr. Thiele. When the same questions are asked more than once, these will be posted as frequently asked questions on Blackboard.

Course Outline Summary (Subject to change)

Lecture	Date	Lecture Topic
1	Jan 11th	Course Outline and Parkinson's disease lecture
2	Jan 18th	How to find, present and critique research articles: - Information for student seminar presentations, evaluation of research articles and written assignment
3	Jan 25th	Alzheimer's disease lecture + student seminars
4	Feb 1st	Stroke lecture + student seminars
5	Feb 8th	Documentary on Leukodystrophies and description of written assignment
6	Feb 15th	Prion disease lecture + student seminars
	Feb 22nd	Reading Week
7	Mar 1st	MIDTERM
8	March 8th	Huntington's disease lecture + student seminars
9	March 15th	ALS / motor neuron disease lecture + student seminars
10	March 22nd	Developmental disorders lecture + student seminars
11	March 29th	Psychiatric disorders lecture + student seminars
12	April 5th	Multiple Sclerosis lecture + student seminars (Grant proposal due)

Marking scheme (Detailed information on assignments can be found below)

- Evaluation of Research Articles (15%)
- Seminar (15%)
- Midterm (20%) – 2 hours
- Class participation (5%)
- Written assignment (Grant Proposal) (20%)
- Final exam (25%) - 2.5 hours

Course Assignments

Evaluation of Research Articles (15%): Further instructions for evaluation of research article will be given in week 1. During the course, students are expected to submit 2 summary/critiques of a research article using the template provided by Dr Thiele, which will also be available on the course page. One critique must be submitted by Feb 9th and one by March 31st. Critiques should be a minimum of 2 pages and a maximum of 4 pages, times new roman font, double spaced, size 12 font. Dr Thiele will provide the research articles to be critiqued. A hard copy of each summary and critique must be submitted at the beginning of the lecture on the topic you chose. For example, if you chose to critique a paper on Huntington's disease your critique must be handed in at the beginning of lecture on Feb 16th. Critiques must also be submitted using Turnitin.com in Blackboard.

Seminar (15%): On week 2, Vernie will present a research article in seminar format. This will act as a guide for subsequent student seminar presentations, although creativity and individuality of your presentations is strongly encouraged!

From week 3 onwards, groups of 4 - 5 students (depending on class size) will present a 50 minute seminar on 2 research articles. These research articles have been chosen already by Dr Thiele, and will be uploaded onto the course page under 'Readings'. For each research article presentation, only 5-8 minutes should be spent on the

introduction. Marks will be deducted for lengthy introductions. 10 to 15 minutes will be given for question time after the seminar presentation. Those students that are not presenting seminars are expected to ask questions, as class participation counts (5%) towards your final mark. Information presented in student seminars will be included in the final exam. More information on the format of seminar presentations will be given on weeks 1 and 2.

Class participation (5%): Students are expected to contribute to class discussions, particularly during and following student seminar presentations.

Grant Proposal (20%): Following the documentary on February 8th, information will be given about the written assignment. In order to complete the assignment, students will need to acquire research articles by themselves. How to do this will be covered in this lecture.

Assignments must include a title page, an abstract summarising the proposal, an introduction describing the background, objectives, aims, experimental outlines, expected outcomes, caveats and a reference list.

Articles must be cited throughout the text (e.g. Author 1991; Author et al. 1995; Author and Author 1998). The reference list (bibliography) must be on a separate page and have the following format (e.g. Gamelin FX, Baquet G, Berthoin S, Thevenet D, Nourry C, Nottin S, Bosquet L (2009) Effect of high intensity intermittent training on heart rate variability in prepubescent children. *Eur J Appl Physiol* 105:731-738).

The proposal must be times new roman, double-spaced and 8-10 pages in length (excluding the title page and bibliography).

A hard copy of the assignment must be submitted in class on April 5th. Hard copies must be single-sided with page numbers included on the bottom, stapled in the top left hand corner. Assignments must also be submitted electronically using Turnitin.com on Blackboard.

Midterm (20%):

On March 1st the midterm will be held in class (2 hours). The format of the exam will be one of the following:

1. You will be given a research article minus the abstract and discussion, so you will get the title, methods, results and references. You will be given 2 hours to write the abstract and discussion.
2. Short answer questions. Questions will be based on lectures and research articles covered in weeks 1-7, and also the documentary in Week 5.

Students will be asked to vote to choose their preference of exam format in class on Week 4.

Final Exam (2.5 hours; 25%):

The final exam will be cumulative and consist of written questions with no multiple choice. More information on the format of the exam will be given during the final two lectures.

Absence in exams and other assessments: Failure to attend the final exam or midterm will result in no mark for that portion of the course. Failure to hand in assignments on time will also result in a zero for that given assignment, unless accompanied by a medical certificate. If assignments are to be submitted late, please contact Dr Thiele no more than 24 hours after the deadline for that assignment to let him know of your illness. Late assignments will only be accepted if they are accompanied by a medical certificate. 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.

Other Important Information

Academic Integrity: Please refer to <http://www.governingcouncil.utoronto.ca/policies/behaveac> for the University of Toronto's Code of Behaviour on Academic Matters. Potential offences include, but are not limited to:

In Tests and Exams: to use or possess an unauthorized aid or to look at the answers of another student's exam; misrepresentation of identity.

Medical Notes and other Official Documentation: Falsification or alteration of documentation required by the University.

AccessAbility Information: Please let me and/or AccessAbility services know if you require any accommodations to ensure that you achieve your learning goals in this course. AccessAbility services is located in SW302 (tel: 416-287-7560; email: ability@utsc.utoronto.ca), where you can arrange appointments to assess and accommodate your specific needs. Enquiries are confidential.

Turnitin.com: Normally, students will be required to submit their assignments using Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their assignments 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 website. Turnitin.com is most effective when it is used by all students in a particular course; however, if and when students object to its use on principle, a reasonable offline alternative must be offered. There is a wide variety of non-electronic methods that can be used to deter and detect plagiarism; for example, to require that all rough work is handed in with the paper or that the student include an annotated bibliography of the paper. Instructors may wish to consult with the Centre for Teaching and Learning Support & Innovation when establishing these alternatives.