

POTH 455 NEUROPHYSIOLOGY

Credits: 3

Prerequisites: PHGY209 Mammalian Physiology 1 – 3 credits and PHGY210 Mammalian Physiology 2 – 3 credits or an equivalent knowledge base as judged by the professors.

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Course Objective: To provide the student with neurophysiological principles, concepts and mechanisms underlying normal and pathological functioning of the individual. These principles will be illustrated by reference to normal brain functions in animals and man as well as through illustrations of the effects of their disruption in diseases and other conditions that compromise the normal functioning of the nervous system. At the end of this course, the student will understand the function of major brain structures and will have learned signs and symptoms of some important neurological disease processes that illustrate principles of brain function.

Course Structure: One three-hour session per week. The course will consist of didactic lectures and sessions that use case histories, student presentations and discussion questions to link neurophysiological principles to neurological conditions.

Student Learning Objectives: Upon completion of this course the students will be able to:

1. **Describe** neurophysiological concepts, principles and mechanisms underlying normal functioning and **explain** their relationships to normal and pathological functioning of the individual.
2. **Identify** key components of the etiology, the epidemiology and the clinical characteristics of common neurological conditions associated with malfunctioning of brain structures and **appreciate** factors leading to a differential diagnosis.

3. **Identify** key components of the medical treatment and surgical interventions associated with common neurological conditions and **understand** the impact of such treatment on the functional outcome of clients.
4. **Organize** available information about the neurological conditions presented and **select** information that is potentially important in regard to their needs as future rehabilitation specialists.
5. **Recognize** the main impairments associated with common neurological conditions and **appreciate** how rehabilitation intervention can address the resulting disabilities.

Required Course Materials:

Purves, D, Augustine G.J., Fitzpatrick D, Hall W.C., Lamantia A-S, McNamara J.O., Williams S.M. (2012) *Neuroscience* (5th ed) Sinauer Associates: Sunderland, MA.

Plus assigned readings.

Copyright of course materials: Instructor generated course materials (e.g., handouts, notes, summaries, exam questions, etc.) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the University under the Code of Student Conduct and Disciplinary Procedures.

Student Assignment and Evaluation:

Assignments	Description	%
1. Midterm Quiz	scheduled very early in the course	15%
2. Final Exam	to be scheduled during exam period	40%
3. Assignments	Preparation for clinical presentations: <ul style="list-style-type: none"> ▪ Online (myCourses) quizzes (10% of final mark) ▪ Self-learning report (10% of final mark) Group project:	45%

	<ul style="list-style-type: none"> ▪ Oral (10% of final mark) ▪ Written(10% of final mark) ▪ Peer Evaluation (5% of final mark) 	
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Special Requirements for Course Completion and Program Continuation:

In order to pass the course, a grade of at least C+ (60%) must be obtained as a total course mark. A supplemental exam is permitted in this course. Please refer to the appropriate section in the Health Sciences Calendar on University regulations regarding final and supplemental examinations. This course falls under the regulations concerning individual and group evaluation. Please refer to the section on marks in the Rules and Regulations for Student Evaluation and Promotion of the Course Guides. The modalities used for remedial work will be determined by the instructors on a per case basis.

Plagiarism/Academic Integrity: McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/students/srr/honest/ for more information.)

L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le site www.mcgill.ca/students/srr/honest/).

Right to submit in English or French written work that is to be graded: In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded, except in courses in which acquiring proficiency in a language is one of the objectives.

Conformément à la Charte des droits de l'étudiant de l'Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté (sauf dans le cas des cours dont l'un des objets est la maîtrise d'une langue).

Attendance: The instructors reserve the right to request attendance in classes where student participation is expected.

Consequences of not completing assignments as requested: Late submissions will be penalized 5% per day, including weekends.

Dress Code: Professionalism with respect to dressing is encouraged throughout the course of the semester. It is each student's responsibility to have appropriate attire during all class assignments and learning activities.

Disability: If you have a disability please contact the instructor to arrange a time to discuss your situation. It would be helpful if you contact the Office for Students with Disabilities at (514) 398-6009 before you do this.

Technology in Class: Your respectful attentive presence is expected, therefore while you are permitted to use your laptop in class, it is understood that you will not be using your laptop or cell-phone for social purposes during class time (e.g. email, msn, sms). Your cell phone should be on silence during class time and phone calls should only take place during the break or after class.

In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.