LECTURE TIMES AND LOCATION:

Thursday mornings 9:30am – 12:30pm  UCC-66

Course Coordinator and Instructor:

Susan Hunter  BSc, BScPT, PhD

Contact information:

Susan Hunter
Office: Elborn College (EC), Room 1408
Phone: 661-2111, x88845
Course e-mail: susan.hunter@uwo.ca – preferred method of contact
Office hours: by appointment in EC office

USE your UWO e-mail to communicate. Only student UWO e-mail addresses will be used. Non UWO email addresses received from students will not be opened.

1.0 COURSE INFORMATION:

1.1 Prerequisites:
The former Biology 1222 or 1223 or Physiology 1021 or equivalent; Health Sciences 2300A/B or Kinesiology 2222A/B or Anatomy and Cell Biology 2221; Registration in the Honors Specialization, Major or Minor modules in Rehabilitation Sciences.

It is the student’s responsibility for ensuring that course prerequisites have been successfully completed or special permission from the Dean has been obtained. Unless you have either the requisites for this course or written special permission from your Dean (see your academic counsellor) to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.
1.2 Course Outline

This course will focus on the neuroscience related to major functions that are the focus of rehabilitation practice (e.g. postural control, locomotion, reach to grasp movements) as well as prevalent neurological conditions that are commonly treated by rehabilitation therapists.

The course is broken up into two sections. The first section of the course will cover the relevant anatomy and physiology of the nervous system. This section is supported by opportunities to see prepared specimens of the brain and spinal cord. The second section will focus on neurological diseases and conditions.

The methods of evaluation in this course are described in detail in Section 3.0 below and will include a midterm, anatomy laboratory quizzes, group project and a final exam.

All concerns regarding the course should be directed to the Course Coordinator. Questions regarding specific to content covered in a lecture or a laboratory session should be directed to the instructor who taught the content.

1.3 Neuroanatomy Laboratory Sessions

The laboratory sessions will be 1.5 hours in length and will run twice during the designated course lecture time. The lab sessions will be held in the Anatatorium (HSB 322). For Anatomy Lab 1, half of the class will attend one session (9:30am to 11:00am) and the remaining half will attend the second session (11:00am-12:30pm). You will be randomly assigned by the course coordinator to one of the sessions. These assignments will be posted on WebCT. You must attend the session to which you are assigned. The materials to be used during the lab session are limited and keeping the attendance numbers down will ensure that everyone has equal access to them. In the interest of fairness, the order of groups will be reversed for Anatomy Lab 2.

1.4 Course Objectives

1.4.a. To introduce students to the anatomical and functional arrangements of the nervous system at all levels, from cell to systems.

1.4.b. To introduce the neurophysiological basis for functions that is the main focus of rehabilitation interventions.

1.4.c. To introduce major neurological disorders and diseases commonly treated by rehabilitation therapists with an emphasis on issues related to rehabilitation and recovery.
2.0 COURSE RESOURCES AND MATERIALS

2.1 Required Texts/Readings

2.2 Other Readings:
Other mandatory readings will be put on reserve in the library or will be available electronically through the internet or library internet holdings, or posted on OWL. Students are responsible for acquiring readings either through library or Internet holdings.

2.3 OWL Sakai:
All students need to use OWL to access resources used in this course such as Power Point handouts for lectures, additional handouts and assigned readings. Students are responsible for checking OWL for this course for readings, handouts, lectures, updates or changes to the schedule. Information or materials not posted on OWL 24 hours in advance of class time will be provided by the course instructor in class. Note that the course instructor will not answer email in OWL. Please contact the instructor by email for difficulties accessing OWL.

3.0 METHODS OF EVALUATION

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<tr>
<th>Assessment</th>
<th>Weightage</th>
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<tbody>
<tr>
<td>Mid-term exam</td>
<td>30%</td>
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<tr>
<td>Lab quizzes</td>
<td>10%</td>
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<tr>
<td>Final exam</td>
<td>35%</td>
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<tr>
<td>Group assignment</td>
<td>25%</td>
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NOTE: your final grade will come from the registrar, not the course instructor.

Examinations
In this course there will be one in-class mid-term test and a final exam during the final examination period in April. Questions will consist of computer-marked multiple-choice responses, and/or short answer written responses. These exams are designed to assess your knowledge of all materials and concepts identified and discussed in class including lectures, films, and any guest lecturers and assigned readings.

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

3.1 Midterm Exam (30% of final mark)
The midterm will be 2 hours long and will be held during the regular lecture hours (February 13, 2014, 9:30-11:30am). Please wait outside the classroom (UCC 66)
prior to the exam start time. The instructor will permit entry into the room once it has been set up for the exam. The midterm will cover all lecture, laboratory sessions and reading material up to and including the first neuroanatomy laboratory session on February 6, 2014. The format of the exam will be multiple choice questions, matching questions, diagram labelling and case studies. Electronic devices will not be allowed during the midterm exam. The timing of this exam has been carefully considered with respect to the content and the timing of other evaluations in the course. Due to the fact that the course only runs once a week, there is no flexibility in terms of changing the date of the midterm.

3.2 Neuroanatomy Laboratory Quizzes (10% of final mark)
Following each of the two lab sessions, there will be a time-limited WebCT quiz based upon the knowledge acquired during the lab session. The quiz will be multiple choice format. The quizzes are to be completed by 11pm on the day of the lab session.

3.3 Group Project (25% of final mark)
The assignment requires you to work with classmates in assigned groups. You will be asked to form into groups by January 30, 2014. Then you will be provided with detailed information about the assignment.

The assignment requires you to:
   a) select a health condition NOT covered in the course,
   b) research the health condition,
   c) create a Patient Glossary as an educational tool for a person (or his/her family member) with the selected health condition,
   d) submit your assignment on the last class: March 27, 2014.

3.3.1 What is required
Students will work in groups of 4 or 5. The group will submit a single written report that could be used as an education manual for a person (or his/her family member) with the selected health condition and the role of rehabilitation. The report should be written as though the report will be read by a lay person without a medical background.

3.3.2 Referencing
The references should be in NLM format with Arabic numbers within the text and the list of references at the end of the report in the order they appear within the main text of the report. You can follow the instructions for authors at the Archives of Physical Medicine and Rehabilitation Journal as a guideline (http://www.archives-pmr.org/authorinfo). A minimum of five (5) references must be used. The references can be from primary articles, review articles, textbooks and/or manuals. You may include no more than 1 reputable website as a reference (e.g. Heart and Stroke Foundation of Canada, Rick Hansen Foundation, Society for Neuroscience).
3.3.3 Formatting and Submission
Creativity is acceptable and encouraged! Reports must be typed. It is due at the beginning of class (9:30am) on March 27, 2014. Please submit your report as an electronic file attachment through WebCT.

3.3.4 Evaluation
The report is worth 25% of your final mark. The mark will be composed of the instructor’s evaluation (which will be the same mark for all group members) and a peer evaluation of your contributions to the group (which will be the average of the marks you receive from your group members). The marking scheme for the instructor’s evaluation and peer evaluation will be provided in advance of the due date.

3.3.5 Additional Information
If you require assistance with the research for or writing of this report, please note the following resources available to Western Students. The Student Development Centre offers both one-on-one appointments and drop-in services to assist you with academic writing. You can find out more at http://www.sdc.uwo.ca/writing/. In addition, Western Libraries offer assistance with student research needs. You can find out more about this at http://www.lib.uwo.ca/services/research.html

Late Penalty for Assignment:
A late assignment will be penalized 10% for each day, or part of day, that it is late. For example, an assignment graded as 41/50 will have 5 points deducted from the mark if handed in one day late and will be recorded as 36/50. There will be no exceptions except for valid, extenuating circumstances (death in the family, incapacitating illness etc,) which MUST be verified and documented with a School of Health Studies Academic Counsellor.

3.4 Final Exam (35%) 
The final exam will be held during the final examination period in April 2014. The final exam will consist of computer-marked multiple-choice questions, matching, diagram labeling and/or short answer written responses. Case scenarios or vignettes may be included. The exam will cover all material from lecturers, the assigned readings and the neuroanatomy lab sessions.

4.0 COURSE POLICIES AND PROCEDURES
Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf

CHEATING:
Cheating involves a number of things, including the use of unauthorized material in an exam and divulging exam material to another student.
PLAGIARISM:
Students must write their assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offense (see Scholastic Offence Policy in the Western Academic Calendar). Make sure you ask if you have any doubts about whether or not you may be plagiarizing. Please note that ignorance is not an excuse when it comes to plagiarism. It is your responsibility to check and ask. The University of Western Ontario uses software for plagiarism checking. Students may be required to submit their written work in electronic form for plagiarism checking with Turn-it-in.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

ACCOMMODATION FOR MEDICAL ILLNESS:
The University Policy on Accommodation for Medical Illness can be found at the following website: https://studentservices.uwo.ca/secure/index.cfm. Documentation shall be submitted, as soon as possible, to a School of Health Studies Academic Counsellor, together with a request for relief specifying the nature of the accommodation being requested.

NON-MEDICAL ABSENCE FROM MIDTERM AND FINAL EXAM:
Students must see a School of Health Studies Academic Counsellor if they miss a midterm or final examination for a non-medical reason. Documentation shall be submitted, as soon as possible, to a School of Health Studies Academic Counsellor, together with a request for relief specifying the nature of the accommodation being requested.

5.0 PROFESSIONAL BEHAVIOUR:

Students are expected to attend all classes, arrive on time for class, read assigned readings prior to class, participate in class discussion, make a genuine contribution to any group activities and respect the opinions of others in the learning process.

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect and to refrain from actions disruptive to such a relationship. This professional and courteous behaviour must also be extended to guest lecturers. Moreover, it is the responsibility of the instructor to
maintain an appropriate academic atmosphere in the classroom, and the responsibility of the student to co-operate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class.

**Use of Electronic Devices:**
Electronic devices will not be allowed during tests and examinations.

**Cell phones are to be turned off during scheduled class time.**

**SUPPORT SERVICES FOR STUDENTS:**
Students may find the web sites below to be helpful throughout the academic year:

- Registrarial Services: [http://www.registrar.uwo.ca](http://www.registrar.uwo.ca)
- Student Services: [https://studentservices.uwo.ca](https://studentservices.uwo.ca)
- Student Development Centre: [http://www.sdc.uwo.ca](http://www.sdc.uwo.ca)
SCHEDULE OF KEY DATES AND TOPICS

Each topic has a corresponding reading. Assigned readings are to be read BEFORE class.

6.0 LECTURE SCHEDULE – subject to change

<table>
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<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
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| 1    | January 9, 2014 | Introduction to neuroscience  
Structure of the nervous system  
Neurophysiology of neurons & synapses | Chapter 2 and 3          |
| 2    | January 16, 2014| Peripheral Nervous System  
Autonomic Nervous System  
Spinal Cord                  | Chapter 9, 12, 13        |
| 3    | January 23, 2014| Brainstem  
Cerebellum  
Basal ganglia                | Chapter 11, 15           |
| 4    | January 30, 2014| Cerebrum  
Motor and somatosensory system                      | Chapter 10, 17           |
| 5    | February 6, 2014| Anatomy Lab 1  
9:30am-11:00am Group A  
11:00am-12:30pm Group B       |                          |
| 6    | February 13, 2014| MIDTERM (in class)                                                  |                          |
| 7    | February 20, 2014| READING WEEK                                                      |                          |
| 8    | March 6, 2014   | Executive functions  
Alzheimer Disease                                                    |                          |
| 9    | March 13, 2014  | Acquired Brain Injury                                              |                          |
| 10   | March 20, 2014  | Spinal Cord Injury                                                 |                          |
| 11   | March 27, 2014  | Stroke                                                             |                          |
| 12   | April 4, 2014   | Parkinson’s Disease  
Multiple Sclerosis                                                  |                          |