Syllabus PNB 5101- Alternative summer 2015

Course Title: Anatomy and Physiology for Intraoperative Neuromonitoring (PNB 5101)
Program/Department: Physiology and Neurobiology

Program Information

The purpose of this course is to provide to students knowledge of human anatomy and physiology that is necessary for Intraoperative Neuromonitoring. The first part of course will focus on musculoskeletal anatomy, and the second on in-depth anatomy of the nervous system. In the laboratory part of the course students will identify major muscles and bones in human models and cadavers, dissect sheep brain and identify CNS regions in preserved human brains. Preserved human brains are obtained from the University of Connecticut Health Center. Case studies, online material and demonstration videos of dissections of fixed human brains will be used to integrate knowledge about structure and function of brain regions.

Course and Instructor Information

Course Title: Anatomy and Physiology for Intraoperative Neuromonitoring
Credits: 4
Format: Blended
Prerequisites: Bachelor in Science, Biology background
Professor: Radmila Filipovic

Email: radmila.filipovic@uconn.edu
Telephone: 1-860-486-5976
Office Hours/Availability: After class upon appointment

Course Materials

Required course materials should be obtained before the first day of class.

Recommended Books:
Textbooks:
1. Barr’s The Human Nervous system, An anatomical viewpoint. Author: John A. Kiernan, Publisher
2. Photographic Atlas for Anatomy & Physiology, Authors: Hebert, Heinsler, Chinn, Krabbenholtf, Malakhova, Publisher: Pearson

Required Software:
1. Draw it to know it: Please buy license to this software:
   - Go to http://drawittoknowit.com/subscribe.html; choose subscription for minimum of one month ($19 or for longer if you want). When you log out apply code with 20% discount coupon: UCONN2015.
2. VH Dissector
   ➢ Link for purchasing software: [http://www.toltech.net/schools/uconn](http://www.toltech.net/schools/uconn), price $28. That is license for one year

**Course Description**
Anatomy and physiology of the nervous and musculoskeletal systems.

**Course Objectives**

By the end of the semester, students should be able to:
   1. Identify muscles and bones of skull, axial and appendicular skeleton
   2. Describe muscle physiology and major functions
   3. Describe basic structures and functions of major parts of central and peripheral nervous system
   4. Identify spinal nerves that innervate main muscles in human body
   5. Identify cranial nerves and their function
   6. Identify detailed structures and functions of different regions of CNS
   7. Correlate neurological symptoms in patients with lesions of particular brain region

**Course Outline**

**Module 1: Week 1: Musculoskeletal Anatomy; Spinal Cord**
6/1/15 - 6/4/15 (Monday – Thursday, 9:30 am- 1:30 pm)
*Note: on days with laboratory- 9:30am- 2:30 pm.*

Day 1: Lecture: Introduction to the course. Gross anatomy of bones and muscles of skull and axial skeleton. **Lab 1:** students will identify bones and muscles in models

Day 2: Lecture: Gross anatomy of bones and muscles of upper and lower extremities. **Lab 2:** students will identify muscles in human cadavers.

Day 3: Neuroanatomy- Introduction and Spinal Cord; spinal nerves, **CNS Lab 3**
Day 4: **Exam 1**, Spinal cord reflexes and case studies

**Module 2: Week 2: Neuroanatomy: Brain stem, Diencephalon, Cerebellum, Basal Ganglia**
6/8/15 - 6/11/15 (Monday – Thursday, 9:30 am- 1:30 pm)
*Note: on days with laboratory- 9:30am- 2:30 pm.*

Day 5: Neuroanatomy – Brain Stem and Cranial nerves
Day 6: Neuroanatomy - Cranial Nerves; **CNS Lab 4**
Day 7: Neuroanatomy – Diencephalon/ Basal ganglia
Day 8: Neuroanatomy – Cerebellum; **Exam 2**

**Module 3: Week 3: Telencephalon, Motor system, General and special sensory systems**
6/15/15 - 6/18/15 (Monday – Thursday, 9:30 am- 1:30 pm)
*Note: on days with laboratory- 9:30am- 2:30 pm.*
Day 9: Neuroanatomy- Cerebrum and blood supply of nervous system; CNS Lab 5
Day 10: Neuroanatomy-Motor system and General Somatosensory system;
Day 11: Neuroanatomy - Auditory and vestibular system; Visual system
Day 12: Exam 3

Course Requirements and Grading

Summary of Course Grading:

<table>
<thead>
<tr>
<th>Course Components</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>Module 1</td>
<td>33%</td>
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<td>Module 2</td>
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<tr>
<td>Module 3</td>
<td>33%</td>
</tr>
<tr>
<td>Participation</td>
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</tr>
</tbody>
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Module 1: Week 1 – tests (100 points), anatomy portfolio-part 1 (30 points), exam 1 (200 points)

Module 2: Week 2 - tests (100 points), anatomy portfolio-part 2 (30 points), exam 2 (200 points)

Module 3: Week 3 - tests (100 points), anatomy portfolio-part 3 (30 points), exam 3 (200 points)

Participation- 10 points

Grading Scale:

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<tr>
<th>Grade</th>
<th>Letter Grade</th>
<th>GPA</th>
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<tbody>
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<tr>
<td>90-92</td>
<td>A-</td>
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<tr>
<td>87-89</td>
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<td>80-82</td>
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<td>77-79</td>
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Due Dates and Late Policy

All course due dates are identified in the Husky CT. Deadlines are based on Eastern Standard Time; if you are in a different time zone, please adjust your submittal times accordingly. The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.

Late Policy- if you pass due date for quizzes you will receive 0 points for that quiz.

Feedback and Grades

I will make every effort to provide feedback on your email within 24h and exam grades in 48 h. To keep track of your performance in the course, refer to My Grades in HuskyCT.

Student Responsibilities and Resources

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. This section provides a brief overview to important standards, policies and resources.

Student Code

You are responsible for acting in accordance with the University of Connecticut's Student Code Review and become familiar with these expectations. In particular, make sure you have read the section that applies to you on Academic Integrity:

- Academic Integrity in Undergraduate Education and Research
- Academic Integrity in Graduate Education and Research

Cheating and plagiarism are taken very seriously at the University of Connecticut. As a student, it is your responsibility to avoid plagiarism. If you need more information about the subject of plagiarism, use the following resources:

- Plagiarism: How to Recognize it and How to Avoid It
- University of Connecticut Libraries’ Student Instruction (includes research, citing and writing resources)

Copyright

Copyrighted materials within the course are only for the use of students enrolled in the course for purposes associated with this course and may not be retained or further disseminated.

Netiquette and Communication

At all times, course communication with fellow students and the instructor are to be professional and courteous. It is expected that you proofread all your written communication, including discussion posts, assignment submissions, and mail messages. If you are new to
online learning or need a netiquette refresher, please look at this guide titled, The Core Rules of Netiquette.

Adding or Dropping a Course

If you should decide to add or drop a course, there are official procedures to follow:

- Matriculated students should add or drop a course through the Student Administration System.
- Non-degree students should refer to Non-Degree Add/Drop Information located on the registrar’s website.

You must officially drop a course to avoid receiving an "F" on your permanent transcript. Simply discontinuing class or informing the instructor you want to drop does not constitute an official drop of the course. For more information, refer to the:

- Graduate Catalog

Academic Support Resources

Technology and Academic Help provides a guide to technical and academic assistance.

Students with Disabilities

Students needing special accommodations should work with the University's Center for Students with Disabilities (CSD). You may contact CSD by calling (860) 486-2020 or by emailing csd@uconn.edu. If your request for accommodation is approved, CSD will send an accommodation letter directly to your instructor(s) so that special arrangements can be made. (Note: Student requests for accommodation must be filed each semester.)

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from Blackboard's website)

Policy against Discrimination, Harassment and Inappropriate Romantic Relationships

The University is committed to maintaining an environment free of discrimination or discriminatory harassment directed toward any person or group within its community – students, employees, or visitors. Academic and professional excellence can flourish only when each member of our community is assured an atmosphere of mutual respect. All members of the University community are responsible for the maintenance of an academic and work environment in which people are free to learn and work without fear of discrimination or discriminatory harassment. In addition, inappropriate Romantic relationships can undermine the University’s mission when those in positions of authority abuse or appear to abuse their authority. To that end, and in accordance with federal and state law, the University prohibits discrimination and discriminatory harassment, as well as inappropriate Romantic relationships, and such behavior will be met with appropriate disciplinary action, up to and including
dismissal from the University. Refer to the Policy against Discrimination, Harassment and Inappropriate Romantic Relationships for more information.

**Sexual Assault Reporting Policy**

To protect the campus community, all non-confidential University employees (including faculty) are required to report assaults they witness or are told about to the Office of Diversity & Equity under the Sexual Assault Response Policy. The University takes all reports with the utmost seriousness. Please be aware that while the information you provide will remain private, it will not be confidential and will be shared with University officials who can help. Refer to the Sexual Assault Reporting Policy for more information.

**Software Requirements and Technical Help**

- Word processing software
- Adobe Acrobat Reader
- Internet access

This course is completely facilitated online using the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, online students have access to the in person/live person support options available during regular business hours in the Digital Learning Center. Students also have 24x7 Support with access to live chat, phone and support documents.

**Minimum Technical Skills**

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the Computer Technology Competencies page for more information.

**Evaluation of the Course**

Students will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.