

School of Kinesiology
Faculty of Health Sciences
Western University

**KIN 3371a – Special Topic: *Exercise Neuroscience*
September to December 2017**

Instructor:	Lindsay Nagamatsu, PhD	Office Hours:	By appointment
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Lectures:	Mon/Wed/Fri 10:30-11:20am	Email:	lindsay.nagamatsu@uwo.ca
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Teaching Assistants:

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Calendar Description: Selected topics in the areas of sport, exercise, play and dance. Topic and course description available in the Undergraduate Program Office.

Introduction: Welcome! This course is intended to provide you with an overview of the field of exercise neuroscience. We will begin with an overview of the fundamental methodologies used in neuroscience (e.g., EEG, MRI) before examining the literature – from classic studies to the newest cutting edge findings – in this exciting field. In this course, you will have the opportunity to refine your critical thinking and interpretation skills. Throughout the course you are expected to participate in meaningful, engaging discussions.

Learning Objectives:

Upon completion of this course you will be able to:

1. Understand the fundamental methodologies used in neuroscience research
2. Critically evaluate and interpret research in the field of exercise neuroscience
3. Communicate (written & oral) effectively
4. Engage in meaningful discussion with peers

Anti-requisite(s)/Pre-requisite(s)/Co-requisite(s):

Prerequisite: Completion of second year Kinesiology

You are responsible for ensuring that you have successfully completed all course pre-requisites, and that you have not taken an anti-requisite course. Unless you have either the requisites for this course or written special permission from your Dean 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.

Course Material: All course information including grades, assignment outlines, deadlines, etc. are available via OWL. There is no textbook for this course. Required readings will be provided in PDF form on OWL one week in advance. Powerpoint slides from lectures will be posted on OWL after class. These will be provided so you don't have to worry about writing down every detail from the slides during class; however, the slides are not a substitution for coming to class – there will be details that you may not understand if you are not present in lecture. Therefore, it is recommended that you attend every lecture. If you are absent, you are encouraged to ask for notes from a peer.

Course Format:

Lecture: Mon/Wed/Fri 10:30-11:20am

Communication:

Office hours & appointments: If you have questions about course material or would like to discuss issues related to the course in more detail, you are always welcome to make an individual appointment with the instructor or TA's, or talk to us before/after class (subject to availability).

EMAIL POLICY

Who to contact for your concerns or questions: If you have a question, please first consult this syllabus and the course website; there is a good chance your question can be answered through these resources, especially regarding course logistics or content (e.g., deadlines, assignments, course materials). If you cannot find an answer to your question on the syllabus or course website, you may contact the instructor or TA's.

Email inquiries to instructor: The instructor will only provide 1-sentence responses via email. If you have a question that cannot be answered in a single sentence or less, please see me right before or after class or make an appointment and I will be happy to discuss it with you. Emails requiring responses longer than 1-sentence will not be answered by the instructor. For all email responses, please permit 24 hours before a response can be expected (i.e., you are unlikely to receive a response the night before an exam/assignment). Emails will rarely be answered over the weekend.

Course Evaluation Summary:

1. Quizzes	45%
2. Assignment #1	10%
3. Assignment #2	10%
4. Assignment #3	20%
5. Group presentation	15%

Course Evaluation Details:

1. *Quizzes (45%)*: We will have a total of 16 in-class quizzes throughout the semester. The purpose of these quizzes is to ensure that you come to class prepared, ready to contribute to an engaging and meaningful discussion about the readings. They may also contain content from previous classes. Each quiz will be worth 3% of your total course mark. Your lowest quiz mark will automatically be dropped. There will be NO MAKEUP QUIZZES. If you receive accommodation for a missed quiz, that quiz will count as your “dropped” quiz. If you receive accommodation for more than one quiz, your quiz mark will be re-weighted accordingly.

2. *Assignments (40%)*: There are a total of 3 written assignments to be completed during this course. Detailed assignments will be posted on OWL a minimum of one week prior to the due date. All assignments must be completed independently. Assignments must be submitted via OWL before the deadline. If you receive accommodation for a missed assignment, a new due date will be decided by the instructor.

3. *Group presentation (15%)*: Each small group will lead the class through the presentation and discussion of 1-2 assigned research paper(s). On your presentation day, your group will be responsible for presenting the article(s) in detail using powerpoint (10-15 minutes) and then leading the discussion on the article(s) in whatever format you choose (~20 minutes). It would be helpful to bring in additional research and literature for background on your topic. Each member of your group must speak during the presentation. Your group will receive a group mark (10% - rubric will be provided in advance) and an individual contribution mark from your group members (5%, anonymous). The instructor reserves the right to re-arrange group assignments if necessary to accommodate certain individuals. If you receive accommodation for a missed presentation, you will receive a new written and oral presentation assignment from the instructor.

Course/University Policies

1. **Lateness/Absences**: Assignments are due at the beginning of class on the assigned due date and will not be accepted late, except under medical or other compassionate circumstances. Electronic submission of assignments will not be accepted (unless otherwise specified) under any circumstances. Submitting a late assignment without appropriate documentation will result in a zero (0) grade. The course policy is not to assign a grade of Incomplete without acceptable and verifiable medical (or equivalent compassionate) reasons. Acceptable reasons might include hospital stays, serious illness, family emergencies (like serious accidents or illness, death) or similar circumstances.

2. **Written documentation**: Students who require academic accommodation should provide notification and documentation in advance of due dates, examinations, etc. stating specific reasons and dates. Students must follow up with their professors and their Academic Counselling office in a timely manner. Documentation for any request for accommodation shall be submitted directly, as soon as possible, to the Kinesiology Undergraduate Office **not** to the instructor, with a request for relief specifying the nature of the accommodation being requested. This documentation should be obtained at the time of the initial consultation with the physician or walk-in clinic. An “Accommodation Consideration Request Form” found online or in the

Kinesiology Undergraduate Office” for **ALL** such accommodation requests must be submitted into the Kinesiology Undergraduate office. These documents will be retained in the student’s file, and will be held in confidence in accordance with the University’s Official Student Record Information Privacy Policy. See <https://studentservices.uwo.ca/secure/index.cfm> for specific policy and forms relating to accommodation.

3. **Grades:** Where possible assignment objectives and rubrics will be posted on OWL. Should you have a concern regarding the grade you received for an assignment or feel that it is unfair in any way, you must wait 24 hours from the receipt of the assignment to approach the instructor or TA. In doing so, please make an appointment and prepare in writing, with evidence, why you feel your grade is inappropriate. Please be aware that in requesting a grade reassessment, your grade could go up/down/or stay the same. Note that calculations errors (which do occur!) should be brought to my attention immediately. **15% of course grades will be posted by the last day to drop a course.**

4. **Scholastic offences:** They 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/scholastic_discipline_undergrad.pdf.

A) Students must write their essays and 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 offence (see Scholastic Offence Policy in the Western Academic Calendar). 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 Western University and Turnitin.com (<http://www.turnitin.com>)

B) 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.

5. **Formatting:** APA style is the approved style of writing for all assignments produced for this course. Please refer to Western University Library webpage for information on citation style and format or consult the APA publication manual: Publication manual of the American Psychological Association (6th ed.). (2009). Washington, DC: American Psychological Association.

6. **Classroom Behaviour:** Class will begin promptly at the time specified at the top of page one of this syllabus. In the event that you arrive late, please enter the classroom with a minimal disturbance to the class. Excessive talking during class time is disruptive and disrespectful; we need to work together to create the best learning environment for all students. Please ensure all cell phones/devices are turned to silent during class.

7. Laptops for the **purpose of typing lecture notes** are permitted in class, but please be respectful to your fellow students and turn the sound off. If I receive complaints from other students regarding noise or other disruptive behaviour (e.g., watching videos on YouTube.com, updating your Facebook status, playing Solitaire), your classroom laptop privileges will be revoked. No electronics are permitted during quizzes.

8. Audio and/or videotaping of lectures is not permitted unless approval has been sought from the instructor in advance.

STUDENT CODE OF CONDUCT

The purpose of the Code of Student Conduct is to define the general standard of conduct expected of students registered at Western University, provide examples of behaviour that constitutes a breach of this standard of conduct, provide examples of sanctions that may be imposed, and set out the disciplinary procedures that the University will follow. For more information, visit: <http://www.uwo.ca/univsec/board/code.pdf>

ENGLISH PROFICIENCY FOR THE ASSIGNMENT OF GRADES

Visit the website <http://www.uwo.ca/univsec/handbook/exam/english.pdf>

SUPPORT SERVICES

There are various support services around campus and these include, but are not limited to:

1. Student Development Centre -- <http://www.sdc.uwo.ca/ssd/>
2. Student Health -- <http://www.shs.uwo.ca/student/studenthealthservices.html>
3. Registrar's Office -- <http://www.registrar.uwo.ca/>
4. Ombuds Office -- <http://www.uwo.ca/ombuds/>

Students who are in emotional/mental distress should refer to Mental Health@Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.

Tentative Schedule:

Week	Topics	Activities
Week 1: <i>Sept. 8</i>	<ul style="list-style-type: none"> • Introduction • What is “exercise neuroscience”? 	Form groups of 5 and sign up for presentation on <i>OWL</i>
Week 2: <i>Sept. 11, 13, 15</i>	<ul style="list-style-type: none"> • Cognition & the brain • Neuroimaging basics • How to evaluate scientific literature, presentation skills 	Form groups of 5 and sign up for presentation on <i>OWL</i> due Friday
Week 3: <i>Sept. 18, 20, 22</i>	• <i>Week 2 cont.</i>	Quiz/Group #1 Wednesday
Week 4: <i>Sept. 25, 27, 29</i>	• Acute exercise	Quiz/Group #2 Monday Quiz/Group #3 Friday
Week 5: <i>Oct. 2, 4, 6</i>	• Cross-sectional/longitudinal studies	Quiz/Group #4 Wednesday Assignment #1 due Friday
Week 6: READING WEEK	NO CLASS	NO CLASS
Week 7: <i>Oct. 16, 18, 20</i>	• Exercise interventions	Quiz/Group #5 Wednesday
Week 8: <i>Oct. 23, 25, 27</i>	• Exercise interventions	Quiz/Group #6 Monday Quiz/Group #7 Friday
Week 9: <i>Oct. 30, Nov. 1, 3</i>	• Clinical populations	Quiz/Group #8 Wednesday
Week 10: <i>Nov. 6, 8, 10</i>	• Clinical populations	Quiz/Group #9 Wednesday Assignment #2 due Friday
Week 11: <i>Nov. 13, 15, 17</i>	• Physical activity in childhood and adolescence	Quiz/Group #10 Monday Quiz/Group #11 Friday
Week 12: <i>Nov. 20, 22, 24</i>	• Mechanisms	Quiz/Group #12 Monday Quiz/Group #13 Friday
Week 13: <i>Nov. 27, 29, Dec. 1</i>	• Cognitive training	Quiz/Group #14 Monday Quiz/Group #15 Friday
Week 14: <i>Dec. 6, 8</i>	<ul style="list-style-type: none"> • Class choice • Wrap up/professional development 	NO CLASS Dec. 4 Quiz/Group #16 Wednesday Assignment #3 due Friday