

Western University  
Faculty of Health Sciences  
**School of Kinesiology**

**KIN 3371A - *Special Topic: Exercise Neuroscience***  
**Fall 2019**

<b>Instructor:</b> Joyla Furlano <b>Office:</b> Health Sciences Building Rm 413 <b>Email:</b> jfurlano@uwo.ca <b>Phone:</b> 519/661-2111 x88284 <b>Office Hrs:</b> By appointment <b>TAs:</b> Diksha Shukla, dshukla2@uwo.ca Benjamin Tari, btari@uwo.ca	<b>Lectures:</b> Mon, Wed, Fri 10:30am-11:30am <b>Room:</b> Somerville House Rm 2355
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**NOTE:** All course information including grades, assignment outlines, deadlines, etc. are available via OWL. Check the website regularly for course announcements.

**Calendar Course Description (including prerequisites/anti-requisites):**

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

**Prerequisite(s):** Completion of second year Kinesiology.

**Extra Information:** 3 lecture hours per week.

*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.*

**NOTE: If you wish to enrol in this course without the stated pre-requisite(s), you must obtain written approval from the course instructor. The approval should then be forwarded to your academic counsellor.**

**Course Description:**

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 Outcomes:**

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

**Required Course Material/Text:**

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. These will be provided so you do not 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.

### **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). You are also encouraged to use the forum on OWL to post questions to your peers and check to see if your question has already been answered! 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:* 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 a quiz/assignment). I also encourage you to view email as your chance to practice your professionalism. Consider that your communication style is a direct reflection of you as a person!

### **Course Evaluation:**

1. Quizzes	40%
2. Assignment #1	10%
3. Assignment #2	10%
4. Assignment #3	25%
5. Group presentation	15%

### ***Course Evaluation Details:***

1. *Quizzes (40%):* We will have in-class quizzes throughout the semester. There will be a total of 9 quizzes, each worth 5% (your lowest quiz mark will automatically be dropped). 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 and group presentations. There will be **NO MAKEUP QUIZZES**. If you receive accommodation, your quiz mark will be re-weighted accordingly.

2. *Assignments (45%):* There are a total of 3 written assignments to be completed during this course. Detailed assignments will be posted on OWL approximately 1-2 weeks 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. Submitting a late assignment without appropriate documentation will result in a zero (0) grade.

3. *Group presentation (15%):* During the first week of classes, you will sign up in groups of 5 for a presentation date on OWL. On your presentation day, you will share details of a scientific research article that your group independently found that relates to the topic of that week. **You must send**

**your research article to the instructor a minimum of one week prior to your presentation for approval.** Together, your group will prepare a powerpoint (or similar) presentation (approx. 15 minutes). 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.

*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.

### **Course/University Policies:**

#### **1. Statement on Use of Personal Response Systems (“Clickers”):**

If Personal Response Systems (“Clickers”) are used in the course, a reference to the Guidelines for their use (Guidelines are shown below). Instructors are to communicate clearly to students information on how clickers are used including: how the student’s privacy will be protected, how clickers may be used by the instructor for data gathering and for evaluating the students, and why they cannot be used by anyone but the student (since the students involved in misuse of a clicker may be charged with a scholastic offence).

**2. Academic 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: [https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/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.

#### **3. Electronic Device Usage:**

**During Quizzes:** Unless you have medical accommodations that require you to do so, or explicit permission from the instructor of the course, you may not use any of the following electronic devices during ANY of the tests, quizzes, midterms, examinations, or other in-class evaluations: cellphones, smart phones, smart watches, smart glasses, audio players or recorders of any sort, video cameras, video games, DVD players, televisions, laptop/notebook/netbook computers, flashlights or laser pointers.

**During Lectures:** Although you are welcome to use a computer during lecture and tutorial periods, you are expected to use the computer for scholastic purposes only, and refrain from engaging in any activities that may distract other students from learning. Please be respectful to your fellow students and turn the sound off. If the professor receives complaints from other students regarding noise or other disruptive behavior (e.g. watching videos on YouTube.com, updating your Facebook status, playing Solitaire), your classroom privileges will be revoked. From time to time, your professor may

ask the class to turn off all computers, to facilitate learning or discussion of the material presented in a particular class. **Unless explicitly noted otherwise, you may not make audio or video recordings of lectures – nor may you edit, re-use, distribute, or re-broadcast any of the material posted to the course website.**

#### 4. **Health and Wellness:**

Information regarding health and wellness-related services available to students may be found at <http://www.health.uwo.ca/>.

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

#### 5. **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 & Wellness* -- <http://www.health.uwo.ca/>
3. *Registrar's Office* -- <http://www.registrar.uwo.ca/>
4. *Ombudsperson Office* -- <http://www.uwo.ca/ombuds/>

#### 6. **Documentation for Academic Accommodation (Illness, Medical/Non-Medical Absences):**

[http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\\_12](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12)

Students who experience an extenuating circumstance (illness, injury, or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

- (i) Submitting a Self-Reported Absence (see below for conditions);
- (ii) For medical absences exceeding 48 hours, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to their Academic Counselling in their Faculty of registration in order to be eligible for Academic Consideration; or
- (iii) For non-medical absences exceeding 48 hours, submitting appropriate documentation (e.g., obituary, police report, accident report, court order, etc.) to Academic Counselling in their Faculty of registration in order to be eligible for academic consideration. Students are encouraged to contact their Academic Counselling unit to clarify what documentation is appropriate.

Students seeking academic consideration **must communicate with their instructors no later than 24 hours** after the end of the period covered by either the self-reported absence or SMC, or immediately upon their return following a documented absence.

#### **The following conditions are in place for self-reporting of medical or extenuating circumstances:**

- a. **A maximum of two self-reported absences** between September and April and one self-reported absence between May and August;
- b. Any absences in excess of the number designated in clause a above will require students to present a Student Medical Certificate (SMC) or appropriate documentation supporting extenuating circumstances to the Academic Counselling unit in their Faculty of registration no later than two business days after the date specified for resuming responsibilities;
- c. The duration of the excused absence will be for a maximum of 48 hours from the time the Self-Reported Absence form is completed through the online portal, or from 8:30 am the following morning if the form is submitted after 4:30 pm;
- d. The duration of the excused absence will terminate prior to the end of the 48 hour period should the student undertake significant academic responsibilities (write a test, submit a paper) during that time;
- e. The duration of an excused absence will terminate at 8:30 am on the day following the last day of classes each semester regardless of how many days of absence have elapsed;
- f. Self-reported absences will not be allowed for scheduled final examinations; for midterm examinations scheduled during the December examination period; or for final lab examinations scheduled during the final week of term;

g. Self-reporting may not be used for assessments (e.g. midterm exams, tests, reports, presentations, or essays) worth more than 30% of any given course.

For medical and non-medical absences that are not eligible for self-reporting Kinesiology students must submit an Academic Consideration Request form found online [https://www.uwo.ca/fhs/kin/undergrad/files/accommodation\\_request.pdf](https://www.uwo.ca/fhs/kin/undergrad/files/accommodation_request.pdf) in addition to an SMC or appropriate documentation in the event of a non-medical absence. 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.

7. **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.

Generally, students can expect some form of feedback on their performance in a course before the drop date.

- November 9th, 2019 (for first term half-courses)
- November 27th, 2019 (for full-year courses)
- March 4th, 2020 (for second term half-or full year courses)

A+	90-100	<i>One could scarcely expect better from a student at this level</i>
A	80-89	<i>Superior work that is clearly above average</i>
B	70-79	<i>Good work, meeting all requirements and eminently</i>
C	60-69	<i>Competent work, meeting requirements</i>
D	50-59	<i>Fair work, minimally acceptable.</i>
F	below 50	<i>Fail</i>

**Rounding of Grades** (for example, bumping a 79 to 80%):

This is a practice some students request. **This practice will not occur here.** The edges of this course are clear and sharp. The mark attained is the mark you achieved and the mark assigned; there is no rounding to the next grade level, or 'giving away' of marks. Please don't ask me to do this for you; the response will be "please review the course outline where this is presented".

8. **Classroom Behaviour:** Class will begin promptly at the time specified at the top of page one of this syllabus. In the event that you must arrive late, please enter the classroom with a minimal disturbance to the class. Please keep all electronic devices on silent and avoid distracting classmates.

9. **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 <https://www.uwo.ca/univsec/pdf/board/code.pdf>

**Tentative Schedule:**

<b>Week</b>	<b>Topics</b>	<b>Activities</b>
Week 1: <i>Sept. 6</i>	<ul style="list-style-type: none"> <li>• Introduction</li> <li>• What is "exercise neuroscience"?</li> </ul>	Form groups of 5 and sign up for presentation on <i>OWL</i>

Week 2: <i>Sept. 9, 11, 13</i>	<ul style="list-style-type: none"> <li>• Cognition &amp; the brain</li> <li>• Neuroimaging basics</li> <li>• How to evaluate scientific literature, presentation skills</li> </ul>	Form groups of 5 and sign up for presentation on <b>OWL due Friday</b>
Week 3: <i>Sept. 16, 18, 20</i>	<ul style="list-style-type: none"> <li>• <i>Week 2 cont.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Quiz #1 Friday</li> <li>• Group #1 Friday</li> </ul>
Week 4: <i>Sept. 23, 25, 27</i>	<ul style="list-style-type: none"> <li>• Acute exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment #1 due Wednesday</li> <li>• Quiz #2 Friday</li> <li>• Group #2 Friday</li> </ul>
Week 5: <i>Sept. 30, Oct. 2, 4</i>	<ul style="list-style-type: none"> <li>• Cross-sectional/longitudinal studies</li> </ul>	<ul style="list-style-type: none"> <li>• Group #3 Wednesday</li> <li>• Quiz #3 Friday</li> <li>• Group #4 Friday</li> </ul>
Week 6: <i>Oct. 7, 9, 11</i>	<ul style="list-style-type: none"> <li>• Exercise interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Group #5 Friday</li> </ul>
Week 7: <i>Oct. 14, 16, 18</i>	<ul style="list-style-type: none"> <li>• Exercise interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Group #6 Wednesday</li> <li>• Group #7 Friday</li> <li>• Quiz #4 Friday</li> </ul>
Week 8: <i>Oct. 21, 23, 25</i>	<ul style="list-style-type: none"> <li>• Clinical populations</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment #2 due Wednesday</li> <li>• Group #8 Friday</li> </ul>
Week 9: <i>Oct. 28, 30, Nov. 1</i>	<ul style="list-style-type: none"> <li>• Clinical populations</li> </ul>	<ul style="list-style-type: none"> <li>• Group #9 Monday</li> <li>• Quiz #5 Wednesday</li> <li>• Group #10 Friday</li> </ul>
Week 10: <i>Nov. 4, 6, 8</i>	<b>NO CLASS</b>	<b>NO CLASS</b>
Week 11: <i>Nov. 11, 13, 15</i>	<ul style="list-style-type: none"> <li>• Physical activity in childhood &amp; adolescence</li> </ul>	<ul style="list-style-type: none"> <li>• Group #11 Monday</li> <li>• Quiz #6 Monday</li> </ul>
Week 12: <i>Nov. 18, 20, 22</i>	<ul style="list-style-type: none"> <li>• Mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Group #12 Wednesday</li> <li>• Quiz #7 Friday</li> <li>• Group #13 Friday</li> </ul>
Week 13: <i>Nov. 25, 27, 29</i>	<ul style="list-style-type: none"> <li>• Cognitive training</li> </ul>	<ul style="list-style-type: none"> <li>• Group #14 Wednesday</li> <li>• Quiz #8 Friday</li> <li>• Group #15 Friday</li> </ul>
Week 14: <i>Dec. 2, 4</i>	<ul style="list-style-type: none"> <li>• Class choice</li> <li>• Wrap up/professional development</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment #3 due Monday</li> <li>• Quiz #9 Wednesday</li> <li>• Group #16 Wednesday</li> </ul>