

## **Biology 4931G: Seminar in Physiology 2011-12**

**Instructor:** Dr. Louise Milligan  
B&G 2070 or WSC 184  
Email: milligan@uwo.ca

**Time:** Wednesdays, 2:30-5:30

**Location:** Talbot College 205

**Antirequisite(s):** Biology 4920F/G, 4930F/G, 4944F/G, 4950F/G, or the former Biology 4932F/G, 4941E, 4943E, 4946E.

**Prerequisite(s):** One of Biology 3601A/B, 3603A/B, 3660A/B or Physiology 3120, or the former Biology 3651A/B; and completion of at least 1.0 additional Biology courses at the 3000-level or above; and registration in Year 4 or an Honors Specialization module offered by the Department of Biology.

### **Syllabus**

We meet for 3 hours, once a week and will use this time for various activities to further explore the broader subject of Physiology and the tools to access, organize and evaluate information. As I am an animal physiologist, my bias is in that direction, however, if you are interested in exploring topics in non-animal physiology, then go for it. The only exclusion I place on topics for discussion are those related to human physiology.

As this is a seminar course, we will engage in reading, writing and talking about primary scientific articles.

### **Course Evaluation**

Critical Analysis of an assigned paper:	10%
Critical Analysis & presentation of a paper of choice:	15%
Peer reviews:	10%
Lay summary of article of choice:	10%
Discussion Lead:	5%
Symposium presentation (collaborative):	20%
Mini-review (collaborative):	20%
Wikipedia update:	10%

## **Tentative time-table**

- January 11: Class orientation  
Integrity of the scientific enterprise  
Publishing a scientific article: what does it take?  
Critical analysis of an article: what does it look like?  
Assignment:  
    Read 2 articles for next week (articles to be assigned)
- January 18: RefWorks tutorial  
Discussion of assigned articles  
Critical analysis of the assigned articles: model  
Come prepared to lead discussion on one of the two assigned articles
- January 25: Written critical analysis of assigned article due  
Literature Search Skills refresher  
Selection of article for second critical analysis  
Discussion of symposium & mini-review  
    Define topics & groups  
Discussion of Peer review
- February 1: Critical analysis of article returned  
Presentation of second article  
Discussion of symposium & mini-review  
    Define topic and groups  
    Peer review
- February 8: Write & Cite workshop  
Presentations of second article  
Discussion of symposium & mini-review
- February 15: Written critical analysis of second article, including peer review due  
Wikipedia ambassador  
Discussion of symposium & mini-review
- February 22: NO CLASS, READING WEEK
- February 29: Symposium 1 & mini-review
- March 7: Symposium 2 & mini-review

March 14: Symposium 3 & mini-review

March 21: Symposium 4 & mini-review

March 28: Symposium 5 & mini-review

April 4: Lay summary, including peer review due  
Wikipedia update due

### **Educational Objectives/Outcomes**

The primary objective of this course is to enhance scientific reading, writing and speaking skills, using topics of interest in physiology as a tool. As science is not a solitary pursuit, neither will your work in this class. Part of the goal, then, is to foster collaborative work, from symposium planning and execution to writing a “mini-review”.

Upon successful completion of this course, students will be able to:

- Critically evaluate primary and secondary literature: this includes analysis of hypotheses, appropriateness of experimental design and methodology for data analysis, presentation and interpretation of the data
- Present a clear and articulate summary of a primary research article, orally and in writing
- Lead, as well as participate in, group discussions on the scientific method of study, including the formation and study of research hypotheses; discuss aspects of the history, philosophy and/or ethics of scientific investigation
- Work collaboratively to organize and execute a “mini-symposium” and write a “mini-review” article, using the appropriate tools (e.g Google Docs, RefWorks).
- Use library databases to access the primary and secondary literature
- Use RefWorks to organize literature and format bibliographies
- Publish an update to an existing Wikipedia article and/or create a new Wikipedia entry.

### **Missing a class because of illness or other circumstances**

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to your Dean's office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. For further information please see

[http://www.uwo.ca/univsec/handbook/appeals/accommodation\\_medical.pdf](http://www.uwo.ca/univsec/handbook/appeals/accommodation_medical.pdf)

A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services. The

form can be found here:

[https://studentservices.uwo.ca/secure/medical\\_document.pdf](https://studentservices.uwo.ca/secure/medical_document.pdf)

### **Academic Integrity**

We take academic integrity seriously at Western. Plagiarism, which may be defined as “The act or an instance of copying or stealing another’s words or ideas and attributing them as one’s own.” (Excerpted from Black’s Law Dictionary, West Group, 1999, 7th ed., p. 1170) is a major academic offence and will be dealt with as such.

This concept applies with equal force to all assignments, including laboratory reports, diagrams, and computer projects.

([www.uwo.ca/univsec/handbook/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_undergrad.pdf))

If you have any doubts regarding what constitutes plagiarism, you are encouraged to clarify matters with your instructor prior to turning in your assignments. For more information please go to

[http://www.uwo.ca/univsec/handbook/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_undergrad.pdf).

*“It takes less time to do a thing right than  
it does to explain why you did it wrong.”*

**Henry Wadsworth Longfellow**

American Poet and Educator

Feb. 27, 1807 - Mar. 24, 1882

<http://ori.hhs.gov/avoiding-plagiarism-self-plagiarism-and-other-questionable-writing-practices-guide-ethical-writing> Accessed January 4, 2012

### **Accessibility Statement**

Please contact the course instructor ([milligan@uwo.ca](mailto:milligan@uwo.ca) or B&G 2070) if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation.