

**THE UNIVERSITY OF WESTERN ONTARIO  
SCHOOL OF KINESIOLOGY**

Exercise Physiology: Muscle Function and Metabolism  
**KIN 4430F - 2016**

**Instructors:**  
Dr. Charles Rice

**Office Phone:**  
519-661-1628

**email:**  
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3. Explore and synthesize this information in a research context.
4. Develop skills in the written expression of ideas through analysis of research papers and exams.
5. Further develop abilities of critical reflection on ideas in scientific understanding relating to the above topics, and integration with other courses of the curriculum.

**Course Requirements and Evaluations:**

Term Assignments 30% - Two (15% each) research review papers will be assigned for students to independently read and respond by summarizing the topic to demonstrate an understanding of the question, purpose, methodology and interpretation of the theme of the research.



## **II. MUSCLE METABOLISM (G. Marsh)**

### **Week 9 – starts October 31: Energy systems**

- Energy system interaction during exercise
- AMPK, the intracellular fuel gauge

### **Week 10 – starts November 07: Muscle protein metabolism**

- regulation of muscle protein turnover
- muscle atrophy and hypertrophy

### **Week 11 – starts November 14 Skeletal muscle carbohydrate metabolism**

- glucose and glycogen metabolism during exercise.
- regulation of glucose uptake during exercise
- lactate as a fuel

### **Week 12 – starts November 21: Lipid metabolism, the glucose-fatty acid cycle**

- control of fat metabolism during exercise
- interaction of fat and carbohydrate metabolism

### **Week 13 – starts November 28: Metabolic adaptations to exercise training/sex differences**

- exercise and mitochondrial function
- are females mo82 Tm[(9 )] TJETBTr

in a novel way.

The following statements [as corrected by Senate] on Plagiarism

**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.

**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](http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_undergrad.pdf).

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.

**9. 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**

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