

**York University**  
School of Kinesiology and Health Science

**KINE 4130 3.0 Advanced Human Nutrition**  
**Fall Term 2009**

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*This course is designed to provide a detailed analysis of the metabolic, biochemical and physiological processes that occur under health, exercise, altered nutritional status, and disease states.*

**INSTRUCTOR**

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**TEACHING ASSISTANT**

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**PREREQUISITE**

- HH/KINE 4010 3.0 Exercise Physiology
- HH/KINE 4020 3.0 Human Nutrition

**TIME AND LOCATION:**

First class on Thursday, September 10, 2009  
Last class on Tuesday, December 8, 2009  
Please note, there will be no classes between October 10-16, 2009 (York U Fall Reading Week)

Location: ACW 307  
Day of the week: Tuesdays and Thursdays  
Time: 2:30 pm – 4:00 pm

**INSTRUCTORS' STATEMENT**

This course was designed as an advanced nutrition course that builds on the basic nutrition information acquired in HH/KINE 4020 3.00. It is designed to provide an in depth analysis of the pathways that integrate the metabolism of carbohydrates, protein and fat. It also investigates the role of nutrition in the development and exacerbation of chronic diseases, and under different exercise states. It is targeted towards students interested in nutrition/physiology-related careers. This course assumes students are already familiar with basic concepts in nutrition, physiology and biochemistry.

**COURSE DESCRIPTION**

This course investigates the metabolic, biochemical and physiological processes related to nutrition from the cellular to the whole-body. It will address in detail the metabolic fates of carbohydrate, protein and lipid metabolism in vivo, and their inter-relatedness. Special consideration will be given to the metabolic interactions that exist among these macronutrients and the implications for health, altered nutritional states, exercise, and disease.

## **COURSE OBJECTIVES**

This course will allow students to:

- advance their knowledge in nutrition metabolism, building upon the basic knowledge they acquired in HH/KINE 4020.
- understand integrative metabolism of macronutrients (glucose, protein, and lipids) and develop an appreciation for the complex interaction of cell biology, biochemistry, and physiology with nutrition.
- acquire knowledge about current issues in nutrition and understand their metabolic implications.
- understand the metabolic processes underlying diseases affecting nutrition status.
- understand nutrition requirements and nutritional assessment.
- understand the role of nutrition in health and disease, and in different exercise states.

## **COURSE STRUCTURE**

- Lectures led by the instructors.
- Tutorials led by both the instructors and TA. Students will discuss published scientific articles. Students will be required to present a PowerPoint presentation to their peers and to write a paper.

## **REQUIRED TEXTBOOK**

Gropper SS, Smith JL & Groff JL. **Advanced Nutrition and Human Metabolism.** 5<sup>th</sup> Edition. Wadsworth, Cengage Learning. Belmont, CA, USA, 2009.

## **COURSE CONTENT**

Overview of Nutrition and Digestive System: Selected Topics	Chapter 1 & 2
Nutrition and Metabolism of Carbohydrates	Chapter 3
Fiber in Nutrition and Health	Chapter 4
Nutrition and Metabolism of Lipids	Chapter 5
Nutrition and Metabolism of Protein and Amino acids	Chapter 6
Integration and Regulation of Metabolism and The Impact of Physical Activity	Chapter 7
Body Composition, Energy Expenditure, and Energy Balance	Chapter 8

**EVALUATION**

Midterm #1	20%
Midterm #2	20%
Podium Presentation	15%
Final exam (cumulative)	45%

**MIDTERMS AND FINAL EXAM**

The Midterms and Podium Presentations will be held on the following days during regular class hours. The Midterms will include multiple choice, short answers, fill-in-the-blanks, matching, true-or-false, and/or short essays:

Midterm 1:

- Tuesday, October 6, 2009
- Includes material covered between Thursday, September 10, and Thursday, October 1 (inclusive).

Podium Presentation: groups #1-6

- Thursday, October 8, 2009
- Presentations are 10 minutes long.

Midterm 2:

- Tuesday, November 10, 2009
- Includes material covered between Tuesday, October 20, and Thursday, November 5, 2009 (inclusive).

Podium Presentation: groups #7-12

- Thursday, November 12, 2009
- Presentations are 10 minutes long.

Final Exam (cumulative):

- Will be held during the York U official final exam period. Time and location to be determined.

**Please note that there will be NO MAKE-UP exams for Midterms 1 & 2 or the Final Exam.** If, for any reason (medical or other), students fail to write any of the Midterms, the weight of the missed midterm(s) will be added to that of the Final Exam.

If, for any reason (medical or other), students fail to write the Final Exam, students will have to write a **Deferred Exam AFTER** York U's official 'final exam period' for the semester has been completed. To be eligible to sit the Deferred Exam, students are required:

-1- to provide adequate documentation (doctor's note, other proper documentation, etc..) and

-2- to complete the Deferred Exam Form

([http://www.registrar.yorku.ca/pdf/deferred\\_standing\\_agreement.pdf](http://www.registrar.yorku.ca/pdf/deferred_standing_agreement.pdf))

The **Deferred Exam will be cumulative**, i.e. will cover ALL the subjects/topics covered in the course from the first class to the last class, and its weight will be equivalent to the cumulative weight of the Final Exam (and any missed Midterms) that was (were) not written by these specific students.

**Deferred Exam:**

- Proper documentation is required
- Will be held AFTER the final exam period for the semester
- Includes material covered throughout the course, from the first class until the last class (inclusive).
- Evaluation will be equivalent to the total evaluation of the Final Exam (and Midterms) the students failed to write.

***Senate Policy on Grading Scheme and Feedback***

*The following two statements were approved by the Senate to include in the course outline:*

“that, under normal circumstances, graded feedback worth at least 15% of the final grade for Fall, Winter or Summer Term, and 30% for ‘full year’ courses offered in the Fall/Winter Term be received by students in all courses prior to the final withdrawal date from a course without receiving a grade, with the following exceptions

- graduate or upper level undergraduate courses where course work typically, or at the instructor's discretion, consists of a single piece of work and/or is based predominantly (or solely) on student presentations (e.g. honours theses or graduate research papers not due by the drop date, etc.);
- practicum courses;
- ungraded courses;
- courses in Faculties where the drop date occurs within the first 3 weeks of classes;
- courses which run on a compressed schedule ( a course which accomplishes its academic credits of work at a rate of more than one credit hour per two calendar weeks ).

Note: Under unusual and/or unforeseeable circumstances which disrupt the academic norm, instructors are expected to provide grading schemes and academic feedback in the spirit of these regulations, as soon as possible.”

This date is not the "drop and add" date but November 6, 2009, for this Fall term courses (the last day for canceling courses without failure by default), students must be given back work equal to 15% of the grade.

<http://www.yorku.ca/secretariat/policies/document.php?document=86>

**ACADEMIC HONESTY**

The following is an excerpt from York University’s Senate Policy on Academic Honesty:

“Academic honesty requires that persons do not falsely claim credit for the ideas, writing or other intellectual property of others, either by presenting such works as their own or through impersonation. Similarly, academic honesty requires that persons do not cheat (attempt to gain an improper advantage in an academic evaluation), nor attempt or actually alter, suppress, falsify or fabricate any research data or results, official academic record, application or document.”

For more information, please access the following website:

<http://www.yorku.ca/secretariat/policies/document.php?document=69>

**STUDENT CODE OF CONDUCT**

Students are reminded that they should be polite, courteous and civil during their interactions with the course instructor, TA and other students. No abuse, aggression, harassment, intimidation, threats or assault will be tolerated, be it verbal or otherwise. This includes soliciting or “pushing” the instructor or TA for a higher grade.

The following is an excerpt from the Student Code of Conduct, specifically sections 4a and 4b:

“The following behaviours are prohibited. This list is not exhaustive but provides examples of breaches of the standard of conduct. This Code deliberately does not place violations in a hierarchy. The University views all complaints made under the provisions of this Code as serious.

- a. Breaking federal, provincial or municipal law, such as: breaking into University premises; vandalism; trespassing; unauthorized use of keys to space on campus; unauthorized possession or use of firearms, explosives, or incendiary devices; possession or consumption of, or dealing in, illegal drugs; smoking of legal substances outside designated areas; cruelty to animals; theft of University or private property including intellectual property; unauthorized copying of documents; possession of stolen property.
- b. Threats of harm, or actual harm, to a person’s physical or mental wellbeing, such as: assault; verbal and non-verbal aggression; physical abuse; verbal abuse; intimidation; sexual assault; harassment; stalking; hazing.”

For the complete Student Code of Conduct and for more details, please access the following website:  
<http://www.yorku.ca/scdr/StudentConduct.html>

**POLICY REGARDING ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES**

The following is the Policy Statement as approved by the Senate on 1991/06 and revised 2005/02/24:

“York University shall make reasonable and appropriate accommodations and adaptations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs.

The nature and extent of accommodations shall be consistent with and supportive of the integrity of the curriculum and of the academic standards of programs or courses.

Provided that students have given sufficient notice about their accommodation needs, instructors shall take reasonable steps to accommodate these needs in a manner consistent with the guidelines established hereunder.

'Disabilities' shall be defined as those conditions so designated under the Ontario Human Rights Code in force from time to time, and will in any event include physical, medical, learning, and psychiatric disabilities.”

For more information, please access the following website:

<http://www.yorku.ca/secretariat/policies/document.php?document=68>

## **ASSIGNMENT**

### ***Podium Presentation***

Students will work in groups of 2-4, depending on the final student enrolment in this course. Students shall be assigned specific published scientific article to present to their peers. The published articles and topics will be selected by the instructors. The order of presentations will be decided on by a draw during the first class.

For the purpose of the Podium Presentation, the class will be divided into 2 divisions. The first division includes groups #1-6, whereas the second division includes groups #7-12. Students need to respect the following timeline:

Group	Article assigned to students	Students meet with TA to discuss outline	Students submit outline to instructors via email	Students meet with TA to prepare Podium Presentation on PPT	Students submit full copy of PPT Podium Presentation to instructors via email	Students meet with TA to fine tune/finalize Podium Presentation & Summary Sheet	Students present Podium Presentation during class
#1-6	Sept. 10, 2009	Sept. 10-17, 2009	Sept. 17, 2009	Sept. 18-29, 2009	Sept. 29, 2009	Sept. 30-Oct. 7, 2009	Oct. 8, 2009
#7-12	Oct. 15, 2009	Oct. 15-22, 2009	Oct. 22, 2009	Oct. 23–Nov. 3, 2009	Nov. 3, 2009	Nov. 4-11, 2009	Nov. 12, 2009

Please **DO NOT** use Microsoft Office 2007, as York University does not support this version. Please use previous versions of PowerPoint.

For further details/guidelines on presentation structure, please consult the document entitled “*Podium Presentation Outline*”.

### **MOODLE@YORK 2009-2010**

This course is found on Moodle under HH/KINE 4130 Advanced Human Nutrition

To access the central installation of '[Moodle @ York 2009-2010](#)' you will need your Passport York id and password. All students must login to '[Moodle @ York 2009-2010](#)' first, then registered students will be automatically added to their registered courses.

Go to <https://moodle09.yorku.ca/moodle/>

- \* Enter your Passport York id in the username field
- \* Enter your Passport York password in the password field.

For a quick overview of Moodle, there is a block in the upper left hand corner called 'Quickstart Tutorials' that has “Moodle Student Tutorial - a student perspective of the LMS”

If you have any questions or need help to guide through the Moodle framework and philosophies, please consult with the computing center.

**IMPORTANT COURSE INFORMATION FOR STUDENTS**

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage (CCAS) (see Reports, Initiatives, Documents) [http://www.yorku.ca/secretariat/senate\\_cte\\_main\\_pages/ccas.htm](http://www.yorku.ca/secretariat/senate_cte_main_pages/ccas.htm)

- York's Academic Honesty Policy and Procedures/Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation