

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

**KAHS 6392 3.0 Nutrition, Health and Exercise Performance**  
**Fall Term 2012**

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**INSTRUCTOR**

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Office hours: By appointment

**PREREQUISITE**

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

**TIME AND LOCATION**

First class on Thursday, September 6, 2012

Last class on Thursday, November 29, 2012

Please note, there will be no classes between October 31-November 4, 2012 (York U Co-Curricular Days)

Location: 109 Calumet College

Day of the week and time: Thursdays, 2:30 pm – 5:30 pm (3 hours)

**COURSE DESCRIPTION**

**COURE OBJECTIVES**

The course will allow the students to:

- become experts in several areas related to nutrition, health and exercise performance through individual- and group-based (depending on student enrolment) search of the scientific literature, critical thinking, public speaking and writing a research term paper and a critique of a published scientific article (in the form of a Letter-to-the-Editor or an Editorial).
- develop an understanding of the physiologic, cellular, biochemical and genomic mechanisms of action of the chosen nutrition intervention (diet, ergogenic aid)
- become well informed when interpreting information re: nutrition and exercise performance
- familiarize themselves with the different components of and critically evaluate a scientific research article
- sharpen their writing skills through a Letter-to-the-Editor/an Editorial intended for scientific journals
- learn how to design a clinical study and write a study proposal (rationale, objective, hypothesis, methods-subject characteristics, sample size, inclusion/exclusion criteria, biomarkers to be measured and reasons for choosing the specific biomarkers, study design, testing protocol, statistics-, and expected results based on literature search)
- practice public speaking and objectively evaluate, and get evaluated by, their peers

COURSE STRUCTURE

- This is a research-based course.
- Lecturing and teaching by the instructor will be minimal. Students will be guided by the instructor.
- Students will choose topics of interest to them. The topics for the Letter-to-the-Editor, Editorial and Major Research should be decided during the first 2 weeks of class. **All topics must be approved by the instructor.**
- The particular dates for presentations will be assigned by lottery during the first class of the course. If students fail to give their podium presentations on the allotted day and time, they will forfeit 50% of the evaluation for the corresponding presentation. Please prepare your podium presentations on PowerPoint.
- It is preferred that the topics for the Letter-to-the-Editor, Editorial and Major Research be different in order to encourage learning in more than one field. If students fail to submit their Letter-to-the-Editor, Editorial and/or Major Research on the allotted day and time, they will forfeit 50% of the evaluation for the corresponding assignment.

EVALUATION

I.	Article Podium Presentation	15%	by students and instructor
II.	Letter-to-the-Editor/Editorial (based on Article Pres.)	20%	by instructor
III.	Major Research Podium Presentation	20%	by students and instructor
IV.	Major Research Term Paper	30%	by instructor
V.	Attendance and In-class Participation	15%	by instructor

STUDENT RIGHTS AND RESPONSIBILITIES (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 details, please access the following websites:  
Student Conduct and Responsibilities:

[http://www.registrar.yorku.ca/calendars/2012-2013/policies/student\\_conduct/index.htm](http://www.registrar.yorku.ca/calendars/2012-2013/policies/student_conduct/index.htm)

Code of Student Rights and Responsibilities:

<http://www.registrar.yorku.ca/calendars/2012-2013/policies/code/>

Student Rights and Responsibilities:

<http://www.yorku.ca/oscr/pdfs/CodeofRightsandResponsibilities.pdf>

### **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>

### **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>

### **ASSIGNMENTS**

#### ***I. Article Podium Presentation***

Article Podium Presentations will begin the second week of classes. Students who fail to present their Article Podium Presentation on the agreed upon date will receive 0% on this assignment.

The scientific research article should be a ***clinical study*** on nutrition (diet/supplement/ergogenic aid) as it pertains to health and/or exercise performance. Review articles and surveys will not be accepted. Students should receive the instructor's approval of their articles *at least 1 week prior* to their podium presentation.

This can be done in person, by email or by phone. **All articles must be approved by the instructor.** Students will be guided by the instructor.

Students will work individually for this assignment. Students will give a 30- to 40-minute seminar on a published article (preferably published in the last year; articles older than 18 months are not acceptable except if they were significant milestones in the field of nutrition/exercise performance/sport science). The presentation will be followed by 15-20 minutes of class discussion and/or question-answer period. Please prepare your podium presentations on PowerPoint.

## **II. Letter-to-the-Editor or Editorial**

Deadline for submitting the Letter-to-the-Editor or Editorial assignment is 2 weeks after the corresponding article podium presentation day, which is presented by another student. Students will **NOT** submit a Letter-to-the-Editor or an Editorial based on their own Article Podium Presentation, but rather based on an Article Podium Presentation presented by another student.

Students who fail to submit their Letter-to-the-Editor or Editorial assignment by the deadline will lose 50% of the evaluation.

This is an individual-based effort. The Letter-to-the-Editor/Editorial should address the article presented by the students to their peers during the Article Podium Presentation 2 weeks earlier. It should be 3-5 paragraphs in length, **between 600-1000 words** (not including the title page, tables, figures and references). Students should use **between 3-10 references**. The Editorial may include up to two figures/schematics and one table. Students will be guided by the instructor.

**The document should be type written, double spaced, using a 12-point font. Please refer to section on “Referencing” below.**

## **III. Major Research Podium Presentation**

The first Major Research Podium Presentation will be decided during the first class. Students who fail to present their Major Research Podium Presentation on the agreed upon date will receive 0% on this assignment.

Students will work in groups for this assignment if the number of students enrolled is sufficient, otherwise students will work individually. Students will give a 40- to 50-minute seminar on a topic of their interest. **All topics must be approved by the instructor.** The presentations will be followed by 15-30 minutes of class discussion and/or question-answer period. Please prepare your podium presentations on PowerPoint. Students will be guided by the instructor.

Students should search the scientific literature, critically analyze it, base an opinion and further build on it using scientific data and physiological plausibility. In brief, students should consider, albeit not exclusively, the following: what is the diet, supplement or nutrient, and how is it relevant to human biology?; what is it supposed to do?; how does it do it?; does it really work?; current state of knowledge in the scientific field (epidemiological studies, clinical studies, animal studies, *in vitro* studies); It is always helpful to present the data divided into different categories: -a- clinical studies, animal studies, *in vitro* studies, and/or -b- endurance exercise, resistance exercise, and/or -c- exercise bouts, exercise training, etc.. Formulate a table summarizing the studies; past and present controversies; hypotheses/theories related to the effectiveness, or lack thereof, of the diet/supplement/ergogenic aid on measures of health/performance; biochemical pathways in question; any side effects and the related hypotheses/theories and biochemical pathways; could these side effects be mitigated? how?; under what conditions side effects appear; conditions under which the

diet/supplement/ergogenic aid is effective; any contraindication to using the diet or nutritional supplement/aid by Health Canada, USDA-FDA, IOC, ACSM?; etc..

#### **IV. Major Research term paper**

Deadline for submitting the term paper is the last day of class. Students who fail to submit their Major Research Term Paper by the deadline will lose 50% of the evaluation.

This is an individual-based effort. Each student will present his/her own term paper. The paper is on the same topic as the Major Research podium presentation. It should NOT be longer than 10 pages in length (not including title page, abstract, table of contents, tables, figures, proposed study and references).

**The document should be type written, double spaced, using a 12-point font. Margins should not be less than the following: top, 0.75"; left, 0.75"; right, 0.50"; bottom, 0.50". Please refer to section on "Referencing" below.**

The paper should introduce the reader to a topic, summarize the important literature, integrate findings from different studies and highlight key issues which remain unresolved. The paper should contain your own opinions and interpretations based on articles you have read. In other words, tell me what you think and draw on the studies you have read to support your opinion. Students will be guided by the instructor.

#### **REFERENCING (NO FOOTNOTES)**

Please follow these guidelines for all the assignments when you are citing references:

- Cite **original** references when you are reporting facts, results, data, tables, figures, schematics, diagrams etc.. or when you are referring to a hypothesis, mechanism, discovery etc.. made by others. If you do not, then this would constitute plagiarism.

- ***In the text:***

Please use the referencing format followed by The American Journal of Clinical Nutrition (Am J Clin Nutr, [www.ajcn.org](http://www.ajcn.org)). **Number the references** in order of appearance. **Do not** use author names, journal and year of publication in the text. The following is an example extracted from Burke DG, Chilibeck PD, Parise G, Candow DG, Mahoney D, Tarnopolsky M. Effect of creatine and weight training on muscle creatine and performance in vegetarians. Med Sci Sports Exerc 2003;35:1946-55.):

"Ingestion of creatine monohydrate (CM) has been shown to enhance adaptations to resistance training by augmenting changes in lean tissue mass, muscle fiber area, strength, and resistance to fatigue (4, 17, 21, 30-32)."

- ***In the References section:***

Please use the referencing format followed by The American Journal of Clinical Nutrition (Am J Clin Nutr, [www.ajcn.org](http://www.ajcn.org)):

A – For articles:

Please indicate authors, title of manuscript, journal name (abbreviated), year of publication, volume, and pages.

Burke DB, Sliver S, Holt LE, Smith-Palmer T, Culligan CJ, Chilibeck PD. The effect of continuous low dose creatine supplementation on force, power, and total work. Int J Sports Nutr Exerc Metab 2000;10:235-44.

B – For books/book chapters:

Please indicate author of chapter or book, title of chapter in book (or book if there are no chapters), title of book (if there's a chapter title in the book), editors (if the book was compiled by an editor/editors, if not then the author name should only appear in the beginning of the reference), edition #, company name and location, year of publication, and pages.

Bender DA. Protein nutrition and metabolism. In Introduction to nutrition and metabolism. Fourth edition, CRC Press, Boca Raton, FL, 2008, pp. 256-262.

C – For websites:

Please indicate the -1- the institute/author, -2- the complete url of the website, and -3- the date the website was accessed.

Canadian Diabetes Association. [http://www.diabetes.ca/Section\\_About/thefacts.asp](http://www.diabetes.ca/Section_About/thefacts.asp), accessed on April 18, 2009.

• ***In PowerPoint presentation:***

References should be cited below the text (to the right hand side) in the following manner:

Option #1: (*Burke et al, Int J Sports Nutr Exerc Metab 2000*)

Option #2: (*Burke et al, Int J Sports Nutr Exerc Metab 2000;10:235-244*)

*and for website referencing:*

(*Can Diabetes Assoc, [http://www.diabetes.ca/Section\\_About/thefacts.asp](http://www.diabetes.ca/Section_About/thefacts.asp), April 18, 2009*).

• ***Websites:***

Websites can be cited only when they provide factual, scientific data (no referencing of anecdotal, non-scientific websites is allowed). For example, when citing the rate of diabetes in Canada, you can use the information on the Canadian Diabetes Association website, with proper referencing. Proper referencing includes the name of the institution/author, the url of the website page where the information was found, and the date when the student accessed the said website page. For example:

Canadian Diabetes Association, [http://www.diabetes.ca/Section\\_About/thefacts.asp](http://www.diabetes.ca/Section_About/thefacts.asp), accessed on April 18, 2009

## **SUBMITTING ASSIGNMENTS**

• ***For the Letter-to-the-Editor, Editorial and Major Research Term Paper:***

Submit the written assignment as follows:

A – By email to: - Instructor

B – Hard copy to: - Instructor

C – [www.turnitin.com](http://www.turnitin.com): - Follow the procedure outlined on Moodle (the course website).

• ***For the PowerPoint presentations and Summary Sheets:***

Submit the PowerPoint presentations and summary sheets as follows:

A – By email to: - Instructor; ***PRIOR TO*** the corresponding presentation

• **PDF references for all assignments (PowerPoint presentations, Letter-to-the-Editor, Editorial and Major Research Term Paper):**

Submit ALL references used in the assignments in PDF format to the instructor by email or on CD.

**SUBMITTING ASSIGNMENTS TO TURNITIN.COM**

Students are strongly encouraged to submit their written assignments (Letter-to-the-Editor, Editorial, and Major Research Term Paper) to [www.turnitin.com](http://www.turnitin.com) to ensure academic honesty. When submitting to [www.turnitin.com](http://www.turnitin.com), submit the assignments without the references. Please see section on “**Academic Honesty**” above.

*For details, please consult the document entitled “HOW TO ENROL IN TURNITIN.COM FOR KAHS 6392”, which is already posted on Moodle.*

**MOODLE@York University**

This course is found on Moodle under GS/KAHS 6392 – Nutrition, Health and Exercise Performance

To access the central installation of 'Moodle @ York University' you will need your Passport York ID and password. All students must login to 'Moodle @ York University' first, then registered students will be automatically added to their registered courses.

Go to <https://moodle.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