

Welcome to KIN232: Nutrition, Physical Activity, and Health

(2023/2024)

3 Credits

UBC's Vancouver Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəy̓əm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people, who for millennia have passed on in their culture, history, and traditions from one generation to the next on this site.

Class will be in person from 2 - 3:30 pm every Tuesday and Thursday in the P.A. Woodward Instructional Resources Centre Rm 6 . Note: classes will not be recorded. Occasionally material may be delivered online where guest speakers are not in Vancouver or the material lends itself better to a prerecorded class. Advance notice will be given for these occasions.

Midterm Break is Nov 13th - 15th.

Your Instructor: Dr. Daniel Gamu

Email: daniel.gamu@ubc.ca

Your TAs: Meagan Arbeau (Discussion/Assignment Groups 1-13), Cassandra Kell-Cattrysse (Discussion/Assignment Groups 14-26)

Email: meagan.arbeau@ubc.ca, Ckellcat@student.ubc.ca

Please direct any questions you have to your TA. If necessary they will connect with me.

Office hours: I will be available for in-person office hours every Tuesday from 10 -11am. My office is located in War Memorial Gym, Rm 35 in the sub-basement. You are always welcome to stop by, even if it's just to listen or share something interesting you have read that week.

Who do I contact if I have questions?

Questions should first be directed to the TA and are welcome through email. Questions through email may take up to 48hrs to receive a response. **I do not check email on weekends.** Please include your course number (i.e. KIN232) and your full name and your student ID in the subject line.

You can navigate to specific sections of the syllabus using these links.

[Course Description](#) | [Course Assignments](#) | [Course Schedule](#) | [Due Dates](#)

Instructor Bio

I am a newly appointed faculty member here in the School of Kinesiology, having previously done my postdoctoral training in the Department of Medical Genetics (UBC). My PhD and MSc degrees were completed in the Department of Kinesiology at the University of Waterloo. I am an exercise scientist at heart, with specific interests in cellular mechanisms regulating energy metabolism in skeletal muscle and various kinds of adipose tissues. A major component of my work involves trying to figure out what protects us from, or predisposes us to, weight gain and metabolic disorders like obesity and diabetes. While I am not a dietician or nutrition scientist, I have broad reaching interests in how the foods we eat influence our biology. As an educator, I hope to make this course as interactive as possible. I firmly believe that as students, you should help direct your learning experiences. I am always receptive to constructive and respectful feedback regarding how this course is delivered. As a former undergraduate student, I occasionally feared asking questions that might have been perceived by my peers or teachers as naive, though in retrospect it was always better for my learning to ask right then. With that in mind, I go into every teaching role with the ethos that **no question is too small to ask**. Remember, I am your resource. If I cannot answer your questions right away, I will do my best to point you in the right direction. I very much look forward to meeting you all!

Dan

Course Description

This course offers an introduction to the application of nutrition to physical activity and health. Students will learn about a range of topics including macro- and micronutrient classification and recommended daily intakes, their digestion, absorption, and functions in the body and their role in supporting physical activity. Students will also learn about the implications of nutrient imbalances and the impact of this on physical activity and ultimately health. Emphasis is placed on the Kinesiologists scope of practice in relation to nutrition advice and collaboration with other nutrition professionals.

Rationale

The foods we eat, the nutrients within certain foods and their destiny once they are eaten have remarkable effects on our overall health and well-being throughout life. In recent years, public awareness of the intimate relationship between nutrition and physical activity in improving health and lowering disease risk has greatly increased. Individuals working in the health industry in any capacity should have a basic understanding of this relationship in order to promote overall wellness.

Aims and Course Outcomes

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Students will be confident in their understanding of the fate and functions of macro and micronutrients in human health and subsequent impact on physical activity. Students will also be introduced to dietary assessment and dietary requirements for health and exercise. In addition, nutritional considerations for select populations will be covered.

Educational Outcomes

- Improved awareness of the current landscape of health concerns related to nutrition
- The role nutrition interventions have in improving health including supporting physical activity
- Understand the concept of energy balance to optimize health and well being
- Understand the sources, fates and functions of macro and micro-nutrients upon ingestion and their role in supporting physical activity
- Become familiar with software used when designing nutrition plans
- Appreciate the impact of over- or under- consumption of nutrients on health within specific populations and necessary dietary modifications
- Develop skills required to work as part of a group

It is important for all humans to have fundamental knowledge in the basics of nutrition in order to live a healthy life. In addition, specific education in the area of nutrition is beneficial in a number of occupations including health promotion, nutrition or dietetics, the health and fitness industry, medicine and rehabilitation. Throughout this course, students will be tasked with converting scientific literature into useful, practical, comprehensible changes in order to develop their communication skills. Students will have enhanced awareness of the relationship between nutrition and other areas within the kinesiology field.

Specific Learning Objectives

Upon completion of this course students will be able to:

1. Describe the basic principles of exercise and minimum recommendations for health
2. Summarize principles of energy metabolism and energy systems
3. Identify various classes of nutrients
4. Explain the functions of macro- and micronutrients and their role in supporting physical activity and health
5. List the principle functions of water and electrolytes in the human body
6. Appreciate the challenges faced when designing nutrition plans for the general population and those with special considerations

Course Format

Class will primarily be delivered in person. Occasionally alternate media (i.e., video recording or podcast) will be used in place of a lecture to compliment that weeks topic. It is strongly

encouraged that as part of group work, groups meet outside of class to complete necessary work in a timely manner with a shared workload.

Attendance

Although attendance is not formally taken, regular attendance is strongly encouraged to stay on top of material. You are responsible for all material covered in class and any information given whether in attendance or not. You are also responsible for getting your own notes from class as well as information pertaining to changes in the course outline, readings, assignments, and any tests or exams.

Email

Questions should first be directed to the TA and are welcome through email. Please be aware that I do not check emails over the weekend and during the week, it may take up to 48hrs to respond to your email. It is essential to include your name and course (i.e. KIN232) in the subject line due to the volume of emails from students.

Technology in the Classroom

Electronic devices such as computers (desktop, laptop) or tablets (ipads, etc.) will be needed for this course. These devices create the temptation to surf the web, check email, etc. so please make sure that you are focused on what is happening in the classroom and engaged in the discussion. You may wish to use a productivity extension platform such as StayFocusd to limit the amount of time that you can spend on certain websites.

Other distractions should be minimized during class times as well. For example, cell phones should be muted.

Class Slides

Class notes will be made available in PDF file format through canvas. Please keep in mind that these notes provide an overview of what will be covered and do not contain information related to discussions, in-class assignments, or detailed examples, which will be covered in the lecture.

Learning Materials

Students are responsible for all readings assigned in the course syllabus and during class time. Assigned empirical research and review articles are meant to develop student's understanding and provide examples of concepts discussed in class. Thus, they will not be directly tested, but completion of these readings will enhance knowledge of the course material. Additional readings, information about this course, handouts, and important reminders will be made available in Canvas.

Supporting text: Spano M., Kruskall L., Thomas D.T. *Nutrition for Sport, Exercise and Health*. Champaign, IL: Human Kinetics; 2018

Those who want to further enhance their understanding of nutrition and its role in physical activity will benefit from the following text:

Lanham-New S, Stear S, Shirreffs S, Collins A. *Sport and Exercise Nutrition*. The Nutrition Society Textbook Series: Wiley-Blackwell; 2011.

Course Assignments

This is an overview of the assignments for this course. For more information about each of these assignments, you can check the [Assignments](#) sections in the course menu on the left to read the details and expectations for each assignment.

ASSIGNMENT	WEIGHT
<i>Weekly Quiz</i>	30%
<i>Participation</i>	10%
<i>Group Assignment: Fad Diets</i>	25%
<i>Final Exam</i>	35%

Assignment Details

NOTE: Some links to assignments below may not be accessible earlier in the course as they may be locked.

Weekly Quiz - 30%

Students will complete 7 short online quizzes, but only your highest grade from 6 tests will count towards your overall term grade. Each quiz is worth 5%. Each test will take ~15 minutes to complete and consist of 10 multiple choice questions. These quizzes will not be reopened.

Learning Outcomes: Assess student's retention and comprehension of basic material covered.

Participation - 10%

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I will be assigning tasks related to the material taught to encourage participation and engagement. This may include engagement in class, discussion boards and general sharing of information.

Learning Outcomes: To encourage discussion and retention of information and incorporate knowledge acquired about nutrition into everyday life.

Group Assignment: Fad Diets - 25% (20% for assignment, 5% for peer grade)

Students will be asked to review a dietary trend; answer questions related to the trend and prepare a meal plan for an individual following this diet using a nutrition analysis software program.

Format: Written Submission

Learning Outcomes: This will test the students' ability to critically review emerging dietary trends and evaluate their suitability for use with the general population. It will also be an opportunity to work as a group with other members of the class.

Final Exam - 35%

Questions will be based on material covered throughout the entire term with more critical thought needed to answer topics.

Format: Multiple Choice

Learning Outcomes: Test students understanding of material throughout the course and the ability to link these core concepts together.

Grading

- Weekly class tests will be made available after the topic has been covered. Please see individual due dates for clarity. Only one attempt will be permitted. If a valid reason (i.e. emergency medical or family emergency) is given for missing the test or discussion **at least 1 day prior**, marks will automatically be added to the final exam. Otherwise, failure to complete the test will result in a mark of zero being awarded.
- Group assignment: Extensions will not be provided for any reason as the due date is clearly outlined from the beginning of term and students are expected to make sure they are organized to submit on time. In case of a medical or serious family emergency an appropriate medical certificate must be submitted. Late submission penalties will apply and will be clearly outlined in the assignment.
- Final: Students absent from final examinations held in the official examination period must request academic concession from their specific advising office.
- Students should retain a copy of all submitted assignments (in case of loss) and should also retain all their marked assignments in case they wish to apply for a Review of Assigned Standing.

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- Students have the right to view their marked examinations with their instructors, providing they apply to do so within a month of receiving their final grades. This review is for pedagogic purposes. The examination remains the property of the university.

Policy on Text-Matching Software

UBC subscribes to Turnitin, an online system that compares written material with the Web and with other material submitted to its database. Faculty, staff and students can upload submissions and check for duplication of material in other sources and possible plagiarism.

Course Schedule

Modules, Dates and Chapter of supporting Spano text covered (Ch.)

	MODULE	Ch	KEY TASKS
Week 1	Introduction and Nutrition Landscape	1	Practice Quiz
Week 2	Energy Systems and Carbohydrates	2	Quiz 1
			Discussion Canadas Food Guide
Week 3	Fats	3	Quiz 2
			Carbohydrates and special diets
Week 4	Protein	4	Quiz 3
Week 5	Introduction to Specific Vitamins and assessment	5	Quiz 4
			Week 5 Discussion Protein rich snack
Week 6	Introduction to Specific Minerals and assessment	6 & 7	Quiz 5
			Week 6 Discussion - Micronutrients
			Group Assignment Check in
Week 7	Water and Electrolytes	8	Quiz 6

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Week 8	Changing Body & weight Composition	10 & 13	Quiz 7 Week 8 Discussion Topic - Different views on body composition and health Group Assignment: Fad Diets Fad Diet Peer Evaluation
Week 9	Nutrition for pregnancy, youth athletes and older adults		
Week 10	TBA		
Week 11	Microbiome	14	
Week 12	Current developments in the Microbiome and implications for health		
Week 13	Role of the dietitian in Elite Sport & Review	14	

Additional Materials

Online Communications

In this course, and throughout your program, you are expected to communicate in a respectful and professional manner. You may find it helpful to review [UBC's Distance Learning Communication Online: Netiquette](#) web page.

University Policies

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated, nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available from the [UBC Senate Website](#).

Course Policies

Please make sure you are familiar with the academic policies and procedures.

Academic Integrity

Students are expected to follow UBC policies for academic integrity and academic misconduct, which includes practices around plagiarism, referencing and citation, and copyright. For more see, UBC's [Learning Commons Academic Integrity resources](#).

Accessibility

If you have any challenges accessing materials that will impact your success in this course, UBC's Centre for Accessibility can support your needs by providing appropriate accommodations to support you.

- Web: [UBC's Centre for Accessibility website](#)
- Email: accessibility@ubc.ca

Learning Analytics

Some of the learning technologies used for this course collect data to support the improvement of teaching and learning. This includes the collection of data related to overall class progress to provide personalized feedback, engagement in discussion forums to support the fostering of community within the course, and how resources are being accessed to support improvements to the course design. To learn more about learning analytics at the Faculty of Education and at UBC, see the [What is Learning Analytics?](#) page.