



NUTR*3330 Micronutrients, Phytochemicals and Health - DRAFT

Fall 2021
Section(s): C01

Department of Human Health and Nutritional Sciences
Credit Weight: 0.50
Version 1.00 - July 05, 2021

1 Course Details

1.1 Calendar Description

The course emphasizes the biochemical basis for the dietary essentiality of vitamins and minerals. The course extends the fundamentals of nutrition to include conditional essentiality of micronutrients, biochemical individuality and the use of micronutrient supplementation to promote human and animal health. Both plant and animal sources of nutrients are discussed.

Pre-Requisites: NUTR*3210

1.2 Course Description

This course will explore the nutritional and biochemical roles/aspects of micronutrients and phytochemicals. The study of micronutrients will extend beyond the fundamentals of nutrition and will include relevance to human health and disease. The study of phytochemicals will encompass an overview to understand the concepts and processes involved, followed by the study of specific phytochemicals and their relation to human health and disease. The relevant Canadian regulatory arena surrounding micronutrients and phytochemicals will also be discussed. **This course will use ZOOM to enable a synchronous remote experience.**

1.3 Timetable

Tuesdays & Thursdays 1:00-2:20pm by ZOOM

1.4 Final Exam

Date TBD by ZOOM using Respondus software.

2 Instructional Support

2.1 Instructional Support Team

Instructor:	Alison Duncan PhD, RD, FDC
Email:	amduncan@uoguelph.ca
Office:	virtual by ZOOM or phone call
Office Hours:	A weekly ZOOM meeting time will be set to allow anyone to join if they have questions. This time will vary each week and so will be identified in weekly CourseLink news posts. In addition, there will be more frequent ZOOM meeting times available on the days leading up to the midterm and final exams. Phone call and ZOOM individual meetings are also welcome anytime by appointment.

3 Learning Resources

3.1 Required Resources

Course Resources (Website)

This class will use the online CourseLink system where notes and lectures will be posted each week. There is no required text for this class.

3.2 Campus Resources

If you are concerned about any aspect of your academic program:

Make an appointment with a Program Counsellor in your degree program.

If you are struggling to succeed academically:

There are numerous academic resources offered by the Learning Commons including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills. You can also set up individualized appointments with a learning specialist.

If you are struggling with personal or health issues:

Counselling services offers individualized appointments to help students work through personal struggles that may be impacting their academic performance. Student Health Services is located on campus and is available to provide medical attention.

For support related to stress and anxiety, besides Health Services and Counselling Services, Kathy Somers runs training workshops and one-on-one sessions related to stress management and high performance situations.

If you have a documented disability or think you may have a disability:

Student Accessibility Services (SAS) formerly Centre for Students with Disabilities can provide services and support for students with a documented learning or physical disability. They can also provide information about how to be tested for a learning disability.

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Have an extensive understanding of the nutritional and biochemical aspects of vitamins and minerals, as well as their relevance to human health and disease.
2. Have an understanding of what constitutes a phytochemical.
3. Have an extensive understanding of selected phytochemicals covered in class; how they work and their relevance to human health and disease.
4. Be aware of the Canadian regulatory environment as it pertains to micronutrients and phytochemicals.

5 Teaching and Learning Activities

5.1 Lecture

Topics:

Course Content

Tentative Class Schedule (precise content for each class may change):

Week	Class Number	Class Dates	Topics

1	1	Thurs. September 9	Course introduction, mi
2	2	Tues. September 14	B vitamins overview, thi
	3	Thurs. September 16	Biotin and pa
3	4	Tues. September 21	Vitamin B ₆ a
	5	Thurs. September 23	Folate a
4	6	Tues. September 28	Antioxidant r
	7	Thurs. September 30	Vita
5	8	Tues. October 5	Exam 1 (c
	9	Thurs. October 7	Vitamin A a
6	no class	Tues. Oct 12; NO CLASS	Tues Oct.
	10	Thurs. October 14	Vitamin D
7	11	Tues. October 19	Ir
	12	Thurs. October 21	Bariatric surgery
8	13	Tues. October 26	Canadian micronutri
	14	Thurs. October 28	Phytochemicals intro
9	15	Tues. November 2	Chocolate pl
	16	Thurs. November 4	Phyto

10	17 18	Tues. November 9 Thurs. November 11	Exam 2 (cl Canadian phytoch
11	19 20	Tues. November 16 Thurs. November 18	Phytoe Glucos
12	21 22	Tues. November 23 Thurs November 25	Sulfur-containin Resv
13	23 24	Tues. November 30 Thurs. December 2	Antho Selected herbal

6 Assessments

6.1 Marking Schemes & Distributions

Name	Scheme A (%)
Exam 1	30
Exam 2	30
Final Exam	40
Total	100

6.2 Assessment Details

Exam 1 (30%)

Date: Tue, Oct 5, 1:00 PM - 2:20 PM, Virtual by ZOOM using Respondus software.

Learning Outcome: 1

This exam will cover content from classes 1-7. This exam will assess Learning Outcome #1.

Exam 2 (30%)

Date: Tue, Nov 9, 1:00 PM - 2:20 PM, Virtual by ZOOM using Respondus software.

Learning Outcome: 1, 2, 3

This exam will cover content from classes 9-15. This exam will assess Learning Outcomes #1, 2 and 3.

Final Exam (40%)

Date: Date TBD. Virtual by ZOOM using Respondus software.

Learning Outcome: 1, 2, 3, 4

This exam will cover content from all classes but will be weighted 25% on classes 1-7; 30% on classes 9-15; and 45% on classes 16 and 18-24. This exam will assess Learning Outcomes #1, 2, 3 and 4.

7 Course Statements

7.1 Grading

If you are absent for a class, you are expected to make up missed material on your own. Please seek input from fellow classmates on any material you have missed. You can use the class discussion board to interact with your classmates.

8 Department of Human Health and Nutritional Sciences Statements

8.1 Academic Advisors

If you are concerned about any aspect of your academic program:

- Make an appointment with a program counsellor in your degree program. [B.Sc. Academic Advising](#) or [Program Counsellors](#)

8.2 Academic Support

If you are struggling to succeed academically:

- Learning Commons: There are numerous academic resources offered by the Learning Commons including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills. You can also set up individualized appointments with a learning specialist. <http://www.learningcommons.uoguelph.ca/>
- Science Commons: Located in the library, the Science Commons provides support for physics, mathematic/statistics, and chemistry. Details on their hours

of operations can be found at: <http://www.lib.uoguelph.ca/get-assistance/studying/chemistry-physics-help> and <http://www.lib.uoguelph.ca/get-assistance/studying/math-stats-help>

8.3 Wellness

If you are struggling with personal or health issues:

- Counselling services offers individualized appointments to help students work through personal struggles that may be impacting their academic performance. <https://www.uoguelph.ca/counselling/>
- Student Health Services is located on campus and is available to provide medical attention. <https://www.uoguelph.ca/studenthealthservices/clinic>
- For support related to stress and anxiety, besides Health Services and Counselling Services, Kathy Somers runs training workshops and one-on-one sessions related to stress management and high performance situations. <http://www.selfregulationskills.ca/>

8.4 Personal information

Personal information is collected under the authority of the University of Guelph Act (1964), and in accordance with Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) <http://www.e-laws.gov.on.ca/index.html>. This information is used by University officials in order to carry out their authorized academic and administrative responsibilities and also to establish a relationship for alumni and development purposes.

For more information regarding the Collection, Use and Disclosure of Personal Information policies please see the Undergraduate Calendar. (<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/intro/index.shtml>)

8.5 Course Offering Information Disclaimer

Please note that course delivery format (face-to-face vs online) is subject to change up to the first-class day depending on requirements placed on the University and its employees by public health bodies, and local, provincial and federal governments. Any changes to course format prior to the first class will be posted on WebAdvisor/Student Planning as they become available.

9 University Statements

9.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

9.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

9.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

9.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

9.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is

required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

For Guelph students, information can be found on the SAS website
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

9.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community—faculty, staff, and students—to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

9.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

9.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma

programs.

Academic Calendars

<https://www.uoguelph.ca/academics/calendars>

9.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings and academic schedules. Any such changes will be announced via CourseLink and/or class email. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

9.10 Illness

The University will not normally require verification of illness (doctor's notes) for fall 2020 or winter 2021 semester courses. However, requests for Academic Consideration may still require medical documentation as appropriate.
