



**UM** | Faculty of Agricultural  
and Food Sciences

# Syllabus

HNSC 7110: Advanced problems in nutrition  
(Fall 2020)



## TABLE OF CONTENTS

<b>COURSE DETAILS.....</b>	<b>3</b>
<b>INSTRUCTOR CONTACT INFORMATION.....</b>	<b>3</b>
<b>COURSE DESCRIPTION .....</b>	<b>3</b>
<b>COURSE GOALS.....</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
<b>COURSE LEARNING OBJECTIVES.....</b>	<b>3</b>
<b>TEXTBOOK, READINGS, AND COURSE MATERIALS.....</b>	<b>3</b>
<b>USING COPYRIGHTED MATERIAL.....</b>	<b>4</b>
<b>COURSE TECHNOLOGY.....</b>	<b>4</b>
<b>EXPECTATIONS: I EXPECT YOU TO.....</b>	<b>5</b>
<b>EXPECTATIONS: YOU CAN EXPECT ME TO.....</b>	<b>6</b>
<b>CLASS SCHEDULE AND COURSE EVALUATION.....</b>	<b>6</b>
<b>LAB EXPECTATIONS.....</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
<b>LAB SCHEDULE.....</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
<b>GRADING.....</b>	<b>6</b>
<b>VOLUNTARY WITHDRAWAL.....</b>	<b>6</b>
<b>ASSIGNMENT DESCRIPTIONS.....</b>	<b>7</b>
<b>REFERENCING STYLE.....</b>	<b>9</b>
<b>ASSIGNMENT FEEDBACK.....</b>	<b>9</b>
<b>ASSIGNMENT EXTENSION AND LATE SUBMISSION POLICY.....</b>	<b>9</b>
<b>UNIVERSITY SUPPORT OFFICES &amp; POLICIES.....</b>	<b>9</b>

---

## COURSE DETAILS

---

<b>Course Title &amp; Number:</b>	HNSC 7110
<b>Number of Credit Hours:</b>	3
<b>Class Times &amp; Days of Week:</b>	Thursdays from 1:00 – 3:45 pm
<b>Location for classes/labs/tutorials:</b>	Remote Learning via UM Learn
<b>Pre-Requisites:</b>	No Pre-Requisites, Open to all Registered Graduate Students

---

## Instructor Contact Information

---

<b>Instructor(s) Name &amp; Preferred Form of Address:</b>	Dr. Michel Aliani
<b>Office Location:</b>	R2034 St. Boniface Research Centre
<b>Office Hours or Availability:</b>	Immediately following class (time permitting) and by appointment (arrange a time by email)
<b>Office Phone No.</b>	204-235-3048
<b>Email:</b>	<a href="mailto:Michel.Aliani@umanitoba.ca">Michel.Aliani@umanitoba.ca</a> <i>Note: All email communication must conform to the <a href="#">Communicating with Students</a> university policy.</i>
<b>Contact:</b>	By Email

---

## Course Description

---

### U of M Course Calendar Description

Lectures and critical reviews will be used to discuss recent/significant research advances in the field of mineral nutrition and metabolism, pertinent to mammalian physiology.

---

## Course Learning Objectives

---

To understand the similarities and differences in absorption, transport, metabolism, and excretion among key minerals and trace elements.

- To discuss recent research advances in the field of mineral and trace element nutrition and metabolism, pertinent to mammalian physiology.
- To explore controversies in the mineral and trace element field.
- To understand experimental approaches and analytical techniques for research on minerals and trace elements.

### **Class Format**

---

The first 3 classes will use lecture material and key papers to discuss and identify key concepts for mineral and trace element nutrition and metabolism. In the last 3 classes, students will critique existing knowledge and apply the research process to a topic in the area of mineral and trace element nutrition by doing a presentation and research grant assignment. Each student will work on a different mineral or trace element (as chosen by random draw for order of selection).

Students are expected to attend and participate in all virtual classes. Classes are on six Thursdays, Oct 29, Nov 05, (no class on Nov 12 due to Fall Break), 19, 26, Dec 03, and 10.

### **Textbook, Readings, and Course Materials**

---

**Required textbook** – *Advanced Nutrition and Human Metabolism* (7<sup>th</sup> edition). 2020. SS Gropper, JL Smith. Wadsworth Cengage Publishing, Belmont, CA.

**Supplementary readings** – Research and review papers

### **Using Copyrighted Material**

---

Please respect copyright. We will use copyrighted content in this course. I have ensured that the content I use is appropriately acknowledged and is copied in accordance with copyright laws and university guidelines. Copyrighted works, including those created by me, are made available for private study and research and must not be distributed in any format without permission. Do not upload copyrighted works to a learning management system (such as UM Learn), or any website, unless an exception to the *Copyright Act* applies or written permission has been confirmed. For more information, see the University's Copyright Office website at <http://umanitoba.ca/copyright/> or contact [um\\_copyright@umanitoba.ca](mailto:um_copyright@umanitoba.ca).

### **Course Technology**

---

Your course (online or blended delivery) is offered through [UM Learn](#) and employs a number of different technologies that require a modern computer and internet access. Verify that you can meet these technical requirements prior to course registration:

- Access to [UM Learn](#)
- Computer with Windows 8, 10, or Mac OS 10.11+
  - Latest version of either Firefox, Chrome, Safari, or Edge web browsers.
  - JavaScript and cookies enabled.
  - Adobe Flash Player version 26 or greater installed.
- [Run a system check](#) at to verify that you system is configured properly.
- Must be able to install and run [Respondus Lockdown Browser](#) – used for secure online testing, in some courses.
- Broadband internet access (minimum bandwidth of 512 Kbps)
- [Student Connectivity Recommendations \(.PDF\)](#)
- Speakers or headphones.

- Microphone.
- Some courses require the use of a printer and scanner for assessments.

### **Expectations: I Expect You To**

---

- I will treat you with respect and would appreciate the same courtesy in return. See [Respectful Work and Learning Environment Policy](#).
- You are expected to attend all live lectures and to actively participate in all scientific discussions.
- Please don't interrupt others, you may raise your hand and wait for the instructor's permission to participate.
- At the end of this section, the policies and services students are expected to follow/utilize need to be included ([Section 2.5 ROASS](#)).
- I expect you to follow these policies around Class Communication, Academic Integrity, and Recording Class Lectures.

#### **Class Communication:**

You are required to obtain and use your University of Manitoba email account for all communication between yourself and the university. All communication must comply with the Electronic Communication with Student Policy:

[http://umanitoba.ca/admin/governance/governing\\_documents/community/electronic\\_communication\\_with\\_students\\_policy.html](http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html).

#### **Academic Integrity:**

Each student in this course is expected to abide by the University of Manitoba [Academic Integrity principles](#). Always remember to reference the work of others that you have used. Also be advised that you are required to complete your assignments independently unless otherwise specified. If you are encouraged to work in a team, ensure that your project complies with the academic integrity regulations. You must do your own work during exams. Inappropriate collaborative behavior and violation of other Academic Integrity principles, will lead to the serious [disciplinary action](#). Visit the [Academic Calendar](#), [Student Advocacy](#), and [Academic Integrity](#) web pages for more information and support.

Refer to specific course requirements for academic integrity for individual and group work such as:

- I. All work should be completed independently unless otherwise specified.

#### **Recording Class Lectures:**

No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part without permission of Dr. Michel Aliani. Course materials (both paper and digital) are for the participant's private study and research.

#### **Student Accessibility Services:**

The University of Manitoba is committed to providing an accessible academic community. [Students Accessibility Services \(SAS\)](#) offers academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.

Student Accessibility Services

520 University Centre

Phone: (204) 474-7423

Email: [Student\\_accessibility@umanitoba.ca](mailto:Student_accessibility@umanitoba.ca)

### Expectations: You Can Expect Me To

I will be in available immediately following class (time permitting) to discuss any questions or comments you may have.

### CLASS SCHEDULE AND COURSE EVALUATION

This schedule is subject to change at the discretion of the instructor and/or based on the learning needs of the students but such changes are subject to [Section 2.8 of ROASS](#).

<b>Evaluation:</b>	Presentation of Research Topic and Proposed Research Study scheduled on Nov 26, Dec 3 and Dec 10 [3-4 presentations/ day]	35%
	Research Grant Assignment Letter of Intent (due Monday, Nov 23 at 12 noon, submitted via UM Learn)	10%
	Grant Proposal (due Fri, Dec 18 at 12 noon, submitted via UM Learn)	35%
	Class participation (class discussion; questions, feedback and evaluation of presentations; 2 students will be assigned as the lead discussants and the evaluators for each presentation; the instructor will evaluate all presentations)	20%

Note that the Presentation and Research Grant Assignment are done individually.

### Grading

Indicate your grading scale. A sample is given below that you can adjust to your course expectations.

Letter Grade	Percentage out of 100	Grade Point Range	Final Grade Point
A+	90.0 -100	4.25-4.5	4.5
A	80-89.9	3.75-4.24	4.0
B+	75.0-79.9	3.25-3.74	3.5
B	70.0-74.9	2.75-3.24	3.0
C+	65.0-69.9	2.25-2.74	2.5
C	60.0-64.9	2.0-2.24	2.0
D	50.0-59.9	Less than 2.0	1.0
F	Less than 50		0

### Voluntary Withdrawal

The Voluntary Withdrawal (VW) deadline is November 23, 2020 Refer to the [Registrar's Office](#) web page for more information.

---

## ASSIGNMENT DESCRIPTIONS

---

### ***COURSE ASSIGNMENT AND PRESENTATION INSTRUCTIONS:***

#### ***Stage 1: Letter of Intent***

##### ***Submission via UM Learn before noon on Friday, November 20.***

▪Students will choose their topic, with the mineral or trace element of focus chosen by random draw, and write a Letter of Intent (1 page, 12 point font, single-spaced, minimum 2 cm margins) as if they were applying to a granting agency.

▪The Letter of Intent will have a Title and the following subheadings:

Rationale [can include key references e.g. put (Author et al 2007 J Nutr 100:1333) within a sentence to maximize space for text],

Hypothesis,

Objective(s),

Experimental Approach, and

Significance of the Research.

▪The research project must investigate at least one mineral or trace element (or a combination of related minerals or trace elements), and can use cultured cells, animal models, humans or agricultural animals as the experimental system. Limit the research proposal to one main question that could be addressed in a single animal or human trial, or a distinct set of cell culture experiments, and probably done within one year [i.e don't make the project too big]. The hypothesis must be testable, and the objectives and experimental approach must provide appropriate conditions for testing the hypothesis. The experimental design and analyses must be sufficient to address the research question. Students can assume that all the necessary research equipment and facilities are available.

▪Students can vet their research idea with the instructor before submitting the Letter of Intent.

▪The Letter of Intent will be evaluated for its content, solidness of the approach, originality, etc and according to its components (total of 20 marks divided as follows):

Rationale (4 marks),

Hypothesis and Objective(s)(4 marks)

Experimental Approach (4 marks),

Significance of the Research (4 marks), and

A general presentation including clarity, grammar, spelling, etc. (4 marks).

▪Students will receive feedback on the Letter of Intent which can be considered for the Research Proposal.

#### ***Stage 2: Research Proposal***

##### ***Submission via UM Learn by Friday, Dec 18 at 4:30 pm.***

▪The Letter of Intent will be developed into a full Research Proposal as if this were an application to a granting agency.

▪Format: maximum 5 pages not counting the title page with Abstract and the Reference list; 12 point font, single-spaced, minimum 2 cm margin.

- The Research Proposal will have a Title page with Abstract (maximum 300 words), and the following subheadings within the grant proposal:
  - Introduction (summarizing the research question and why the topic is important),
  - Literature Background (with subheadings as appropriate, and concluding with a summary of the current state of knowledge and the gap in knowledge which will be addressed),
  - Hypothesis,
  - Objective(s),
  - Experimental Approach and Methodology (with subheadings as appropriate; include statistical analyses),
  - Anticipated Findings
  - Potential Pitfalls (i.e. what might not work according to plan and how will you deal with it), and
  - Significance of the Research
  - Reference section (will follow the grant proposal and students can choose the referencing style; students are encouraged to use a reference management system that is available for free through the University of Manitoba Libraries or other programs that can be purchased).
  
- The Research Proposal will be evaluated for its components (as described in the previous section) including content, solidness of the approach, originality, plus general presentation using the following marking scheme (total of 50 marks):

**Content**

Title page & Abstract (max 300 words) **(4 marks)**

Introduction & Literature Review (current state of knowledge; why the question is important) **(8 marks)**

Hypothesis & Objective(s) **(4 marks)**

Experimental Approach & Methodology **(8 marks)**

Anticipated Findings **(2 marks)**

Potential Pitfalls **(4 marks)**

Significance of the Research **(4 marks)**

Overall impressions, solidness of approach, originality, appropriate links/connections, etc. **(8 marks)**

**General presentation (8 marks)**

Clarity, grammar, spelling

Appropriate referencing

Following specifications for margins, font size, page length

***Stage 3: Presentation of the Research Topic and Research Proposal***

***Presentations will be scheduled in class on Nov 26, Dec 3 and Dec 10.***

- Each student will give a 25-30 min presentation of their research topic and proposal following the same major categories as the written proposal. The Introduction will give sufficient background on your mineral/trace element for your classmates to have a good foundation for understanding your research topic. This will be followed by a 10-15 min discussion period.
  
- The presentation will be evaluated for content, delivery, and answering questions. The marking scheme will be
  - Content (20 marks)**



**Delivery (10 marks)**

Answering questions and discussion (10 marks)

▪All presentations will be done using the share screen system on the Webex. Please make sure to familiarize yourself with Webex on UM Learn before your presentation.

---

**Referencing Style**

The reference section will follow the grant proposal and students can choose the referencing style; students are encouraged to use a reference management system which is available for free through the University of Manitoba Libraries or other programs that can be purchased.

---

**Assignment Feedback**

The final grades will be delivered electronically (Aurora).

---

**Assignment Extension and Late Submission Policy**

***Letter of Intent: Submission via UM Learn by Friday, November 20 at 4:30 pm.***

***Research proposal: Submission via UM Learn by Friday, December 18 at 4:30 pm.***

The letter of intent and research proposal **MUST** be submitted by the above deadlines. Late submissions will be penalized by deduction of 5% (per day) from the earned mark. No submission will be accepted beyond November 25 and December 23.

---

**UNIVERSITY SUPPORT OFFICES & POLICIES**

Instructors shall provide to every student the information on university support offices and policies in [Schedule "A"](#) within the first week of classes, either through a paper copy and/or via the university's student information system (i.e., Aurora, UM Learn, or such other university information system as may be approved by the university from time to time).

**Schedule "A"**

**Section (a) sample** re: A list of academic supports available to students, such as the Academic Learning Centre, Libraries, and other supports as may be appropriate:

**Writing and Learning Support**

The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.

You can also meet one-to-one with a writing tutor who can give you feedback at any stage of the writing process, whether you are just beginning to work on a written assignment or already have a

draft. If you are interested in meeting with a writing tutor, reserve your appointment two to three days in advance of the time you would like to meet. Also, plan to meet with a writing tutor a few days before your paper is due so that you have time to work with the tutor's feedback.

These Academic Learning Centre services are free for U of M students. For more information, please visit the Academic Learning Centre website at: <http://umanitoba.ca/student/academiclearning/>

You can also contact the Academic Learning Centre by calling 204-480-1481 or by visiting 205 Tier Building.

### **University of Manitoba Libraries (UML)**

As the primary contact for all research needs, your liaison librarian can play a vital role when completing academic papers and assignments. Liaisons can answer questions about managing citations, or locating appropriate resources, and will address any other concerns you may have, regarding the research process. Liaisons can be contacted by email or phone, and are also available to meet with you in-person. A complete list of liaison librarians can be found by subject: <http://bit.ly/WcEbA1> or name: <http://bit.ly/1tJ0bB4>. In addition, general library assistance is provided in person at 19 University Libraries, located on both the Fort Garry and Bannatyne campuses, as well as in many Winnipeg hospitals. For a listing of all libraries, please consult the following: <http://bit.ly/1sXe6RA>. When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the Libraries' homepage: [www.umanitoba.ca/libraries](http://www.umanitoba.ca/libraries).

**Section (b) sample:** re: A statement regarding mental health that includes referral information:

**For 24/7 mental health support, contact the Mobile Crisis Service at 204-940-1781.**

#### **Student Counselling Centre**

Contact SCC if you are concerned about any aspect of your mental health, including anxiety, stress, or depression, or for help with relationships or other life concerns. SCC offers crisis services as well as individual, couple, and group counselling. *Student Counselling Centre:* <http://umanitoba.ca/student/counselling/index.html>  
474 University Centre or S207 Medical Services  
(204) 474-8592

#### **Student Support Case Management**

Contact the Student Support Case Management team if you are concerned about yourself or another student and don't know where to turn. SSCM helps connect students with on and off campus resources, provides safety planning, and offers other supports, including consultation, educational workshops, and referral to the STATIS threat assessment team.  
*Student Support Intake Assistant* <http://umanitoba.ca/student/case-manager/index.html>  
520 University Centre  
(204) 474-7423

#### **University Health Service**

Contact UHS for any medical concerns, including mental health problems. UHS offers a full range of medical services to students, including psychiatric consultation.

University Health Service <http://umanitoba.ca/student/health/>

104 University Centre, Fort Garry Campus

(204) 474-8411 (Business hours or after hours/urgent calls)

### Health and Wellness

Contact our Health and Wellness Educator if you are interested in [peer support from Healthy U](#) or information on a broad range of health topics, including physical and mental health concerns, alcohol and substance use harms, and sexual assault.

Health and Wellness Educator <https://umanitoba.ca/student/health-wellness/welcome-about.html>

[britt.harvey@umanitoba.ca](mailto:britt.harvey@umanitoba.ca)

### Live Well @ UofM

For comprehensive information about the full range of health and wellness resources available on campus, visit the Live Well @ UofM site:

<http://umanitoba.ca/student/livewell/index.html>

**Section (c) sample:** re: A notice with respect to copyright:

All students are required to respect copyright as per Canada's *Copyright Act*. Staff and students play a key role in the University's copyright compliance as we balance user rights for educational purposes with the rights of content creators from around the world. The Copyright Office provides copyright resources and support for all members of the University of Manitoba community. Visit <http://umanitoba.ca/copyright> for more information.

**Section (d) sample:** re: A statement directing the student to University and Unit policies, procedures, and supplemental information available on-line:

#### Your rights and responsibilities

As a student of the University of Manitoba you have rights and responsibilities. It is important for you to know what you can expect from the University as a student and to understand what the University expects from you. Become familiar with the policies and procedures of the University and the regulations that are specific to your faculty, college or school.

The [Academic Calendar](http://umanitoba.ca/student/records/academiccalendar.html) <http://umanitoba.ca/student/records/academiccalendar.html> is one important source of information. View the sections *University Policies and Procedures* and *General Academic Regulations*.

While all of the information contained in these two sections is important, the following information is highlighted.

- If you have questions about your grades, talk to your instructor. There is a process for term work and final **grade appeals**. Note that you have the right to access your final examination scripts. See the Registrar's Office website for more information including

appeal deadline dates and the appeal form <http://umanitoba.ca/registrar/>

- You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the **Academic Integrity** regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic integrity in your academic work. Visit the Academic Integrity Site for tools and support <http://umanitoba.ca/academicintegrity/>. View the **Student Academic Misconduct** procedure for more information.
- The University is committed to a respectful work and learning environment. You have the right to be treated with respect and you are expected to conduct yourself in an appropriate respectful manner. Policies governing behavior include the:

### **Respectful Work and Learning Environment**

[http://umanitoba.ca/admin/governance/governing\\_documents/community/230.html](http://umanitoba.ca/admin/governance/governing_documents/community/230.html)

### **Student Discipline**

[http://umanitoba.ca/admin/governance/governing\\_documents/students/student\\_discipline.html](http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html) and,

### **Violent or Threatening Behaviour**

[http://umanitoba.ca/admin/governance/governing\\_documents/community/669.html](http://umanitoba.ca/admin/governance/governing_documents/community/669.html)

- If you experience **Sexual Assault** or know a member of the University community who has, it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting. The **Sexual Assault** policy may be found at:  
[http://umanitoba.ca/admin/governance/governing\\_documents/community/230.html](http://umanitoba.ca/admin/governance/governing_documents/community/230.html)  
More information and resources can be found by reviewing the Sexual Assault site <http://umanitoba.ca/student/sexual-assault/>
- For information about rights and responsibilities regarding **Intellectual Property** view the policy [http://umanitoba.ca/admin/governance/media/Intellectual\\_Property\\_Policy\\_-\\_2013\\_10\\_01.pdf](http://umanitoba.ca/admin/governance/media/Intellectual_Property_Policy_-_2013_10_01.pdf)

For information on regulations that are specific to your academic program, read the section in the Academic Calendar and on the respective faculty/college/school web site

<http://umanitoba.ca/faculties/>

Contact an **Academic Advisor** within our faculty/college or school for questions about your academic program and regulations <http://umanitoba.ca/academic-advisors/>

### **Student Advocacy**

Contact Student Advocacy if you want to know more about your rights and responsibilities as a student, have questions about policies and procedures, and/or want support in dealing with academic or discipline concerns.

<http://umanitoba.ca/student/advocacy/>

520 University Centre

204 474 7423

[student\\_advocacy@umanitoba.ca](mailto:student_advocacy@umanitoba.ca)