

TRAILBLAZER ADVENTURER
INNOVATOR DEFENDER CHALLENGER
ADVENTURER TRAILBLAZER DEFENDER VISIONARY
VISIONARY ADVENTURER TRAILBLAZER CHALLENGER DEFENDER VISIONARY

Syllabus

HNSC 4122: Senior Thesis

Winter/Spring/Summer 2021

COURSE DETAILS

Course Title & Number: HNSC 4122

Number of Credit Hours: 6.0

Class Times & Days of Week: Not applicable

Location for classes/labs/tutorials: Not applicable

Pre-Requisites: Students must be registered in their final year of Human Nutritional Sciences program. Application required. Enrolment limited. May not be held with HNSC 4120 OR HNSC 4600

Course Permission: To receive permission to register for this course: 1) Complete Appendix I and Appendix II; 2) Print scan copies of Appendix I and Appendix II; and 3) Send electronic copies to the Student Affairs Office (taylor.friesen@umanitoba.ca) and Dr. Aluko (rotimi.aluko@umanitoba.ca). Course Syllabus and Application Form can also be found on the Department of Food & Human Nutritional Sciences website.

Instructor Contact Information

Instructor's Name & Preferred Form of Address:	Dr. Rotimi Aluko
Office Location:	Rm 106 Richardson Centre for Functional Foods & Nutraceuticals; Or Rm W567 Duff Roblin Bldg
Office Hours or Availability:	Open (Call or send email to book an appointment)
Office Phone No.	204-474-8883
Email:	rotimi.aluko@umanitoba.ca Emails and phone calls will be returned within 48 hrs. <i>Note:</i> All email communication must conform to the Communicating with Students university policy.
Contact:	Email (24 hrs) or Phone (Week days 10 am – 6 pm).

Course Description

U of M Course Calendar Description

A research project in any aspect of human nutritional sciences, chosen in consultation with the supervising faculty member and conducted over 2 consecutive terms. A written report and a poster or oral presentation required at the end of the project.

Course Learning Objectives

1. To participate in a research project and to understand various components of the research process, including the literature background, hypothesis and objectives, experimental design and methodology, data collection, analyses and interpretation.
2. To communicate and disseminate research findings through preparation of a final thesis report or manuscript, and an oral or poster presentation.
3. To provide exposure to research activities in Human Nutritional Sciences.

Foundational Knowledge Content Areas for Dietetics Education:

This dietetic education program is an accredited program recognized by the Partnership for Dietetic Education and Practice (PDEP) and prepares students for eligibility for registration with a provincial dietetics regulatory body.

Highest level achieved: 1= demonstrate broad knowledge; 2= demonstrate comprehension; 3 = analyze, interpret and apply knowledge

Content Area	Foundational Knowledge	Cognitive Complexity Level
Communication	Strategies for effective written communication	3
	Strategies for effective oral communication	3
Professional Practice in Dietetics	Appropriate and secure documentation practices	2
	Strategies for assessing and enhancing approaches to practice	1
Research and Evaluation	Theoretical foundations of research	1
	Qualitative, quantitative and mixed methodologies	2
	Ethics in research	2
	Evidence-informed practice	2
	Literature search strategies	2
	Systematic review and critical appraisal of literature	2
	Use of technology to seek and manage information	3

Course Commitment: This is a 6 credit hour research project course for 26 weeks (September to April). The time commitment is based on a course with 3 h/wk lectures and 3h/wk lab plus additional preparation and homework time.

Using Copyrighted Material

Please respect copyright. We will use copyrighted content in this course. 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.

Expectations: I Expect You To

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.

Academic Integrity:

Example: 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. Group projects are subject to the rules of academic dishonesty;
- II. Group members must ensure that a group project adheres to the principles of academic integrity;
- III. Students should also be made aware of any specific instructions concerning study groups and individual assignments;
- IV. The limits of collaboration on assignments should be defined as explicitly as possible; and
- V. All work should be completed independently unless otherwise specified.

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

Expectations: You Can Expect Me To

Assignments will be returned within 2 weeks of submission.

COURSE EVALUATION

Literature Review	(Due: Apr. 16 2021)	25%
Manuscript	(Due: Aug 06 2021)	65%
Presentation (Poster or Oral)	(Due: Aug 06 2021)	10%

- The final grade is an average of the numerical grading from the Student’s Research Advisor and the Course Coordinator.
- Evaluation forms, (**Appendix IV- Literature Review; Appendix V-Manuscript**), are to be provided to the Research Advisor(s) and the Course Coordinator for grading.

Expectations and Guidelines:

Students completing this course should follow the instructions of their Research Advisor. However, the following **general expectations** should be considered:

1. The topic should not be an extension of previous academic assignments or research laboratory that is already “written-up” and contributed to course credit.
2. The topic could be linked to previous work that was conducted in the research laboratory (e.g., a summer research project), however, there must be entirely new data collection, analysis, a manuscript, and oral/poster presentation for the HNSC 4122 Research Project.

Guidelines:

Literature Review:

The literature review is important as it: 1) clarifies/defines the purpose of the area of study; 2) summarizes previously published literature on the topic; and 3) identifies contradictions, gaps, inconsistencies and opportunities in the literature. Provide an in-depth review of the scientific literature pertaining to your research area. This review should include a title page, a summary of pertinent information and references. For this assignment, include a table summarizing key findings of the primary journal articles you review. Do not exceed 25 written pages double-spaced with margins of one inch and a font size not less than 11. The page limit does not include title page, abstract, references or appendices. Please review the evaluation criteria for additional guidelines (Appendix IV).

Manuscript:

For the manuscript, include a copy of the author’s guidelines for the proposed peer-reviewed journal you are following. Document should include the following:

- a. A cover page with title, student name and identification number, course number and advisor
- b. A table of contents
- c. An abstract (250 word limit)
- d. Body of the Paper:
 - i. An introduction

- ii. Hypothesis and Objectives
- iii. Methods
- iv. Results (text, table and figures)
- v. Discussion and Summary
- vi. Implications and future research including “gaps” in the literature
- e. References
 - i. Primary references as the main source of information, secondary references permitted on a smaller scale of contribution. Please format references using a consistent style (i.e., AMA, APA, etc).
- f. Appendices as necessary
- g. Please review the evaluation criteria for specific guidelines (Appendix V).

NOTE: (Only for Option One):

- The in depth literature review should be handled similar to a meta-analysis (although advanced statistical assessment is not required at this level) and thus will include methodology, results and discussion (50 pages in total).

Presentation (Poster or Oral):

- Poster Presentation: Students prepare a poster in the format used at scientific conferences. During the poster session, students give a brief 5 minute presentation summarizing the project and major findings (4 minutes), and answer questions of those in attendance (1 minute).
- Oral Presentation: The PowerPoint presentation is limited to 15 minutes total including discussion; aim for 10 pages over 10 minutes, leaving 5 minutes for questions; this is similar to a mini-symposia format used at scientific conferences.

Important Dates:

Feb. 05, 2021: Submit Appendix I & II to the Course Coordinator and Academic Advisor’s Office

Feb. 19, 2021: Submit Appendix III (Parts A & B) to the Course Coordinator

Grading

Grading Scheme:

- To Be Adhered to By Research Advisor and Course Coordinator

“A+” (90.0 to 100) reflects *truly exceptional work, far beyond the average for the class.* There are very few students whose work merits this grade. A+ should be assigned only in those rare cases when a student has produced work that is truly and consistently exceptional in all of its aspects, from the concepts and ideas to the organization and writing.

”A” (80.0 to 89.9) reflects work that is *excellent work.*

Because it reflects quality that is not typical of the class as a whole, it should not be assigned to the majority of students. An A should reflect consistently excellent work, high quality of organization and

writing, and a degree of insight that places the work well above average but does not reach the exceptional level that is captured by an "A+".

"B+" (75.0 to 79.9) reflects work that is *well above average*.

The writing and organization are good, and the quality of the content is well above-average, but the work does not contain the level or quality of insight that is captured by an "A".

"B" (70 to 74.9) reflects work that is *above average*, but not excellent or exceptional.

It is a good, solid grade that indicates that the student has accomplished the objectives of the assignment or test and has organized her ideas effectively. The writing and organization are good, and the quality of the content is above-average, but the work does not contain the level or quality of insight that is captured by a "B+".

"C" (60 to 64.9; C+ = 65 – 69.9) reflects work at an *average level*.

The work meets the criteria of the assignment and is adequately organized, presented and written. It contains what is necessary to complete the assignment. The work is acceptable, but it does not reflect high-quality writing skills and does not contain any particular insights that place it above the average level of performance required.

"D" (50 to 59.9) reflects poor quality work that is *below average*.

It barely meets the minimum requirements. The student needs to make significant improvements in writing, organization or conceptualization.

"F" (<50) reflects work that is *inadequate*.

It does not meet the minimum requirements. It is incomplete, poorly constructed, poorly written and/or poorly conceptualized. It cannot be considered to have met the criteria of the assignment.

Voluntary Withdrawal

Last day to drop the class and receive 100% refund is January 17 and the last day to withdraw with no refund is March 18 2020. Students who did not drop the course by the deadline would be assigned a final grade. The withdrawal courses will be recorded on official transcript. Please refer to the [Registrar's Office](#) web page for more information. I am willing to discuss your progress and strategies for improvement prior the withdrawal date.

Referencing Style

Assignments should use the APA reference style as outlined in the text: American Psychological Association. (2009). Publication manual of the American Psychological Association (6th ed.). Washington, DC: Author.

Assignment Feedback

Feedback will be provided electronically to students as comments on the marked paper. Graded assignments will be returned within 2 weeks of submission.

Assignment Extension and Late Submission Policy

Clearly describe your policies. How strict is your assignment submission date and time? Is today's date up until midnight? If there is a time, how is it monitored? (i.e., student submits assignments to support staff who date stamp them, UM Learn submission which automatically date stamps them). Can they be late with their assignments? If so, how late is too late? Is there a late penalty? Is it enforceable? Do all assignments need to be submitted to pass the course? Etc.

UNIVERSITY SUPPORT OFFICES & POLICIES

Schedule "A"

Section (a): 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.

Section (b): 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 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 <http://umanitoba.ca/student/health-wellness/welcome.html>

Katie.Kutryk@umanitoba.ca

469 University Centre
(204) 295-9032

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): 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): 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

Student Discipline

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

- 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
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

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

APPENDIX I**Guidelines for Selection of Type and Conduct of Thesis**

Student/Trainee: _____ Date: _____
 Student's Telephone: _____ e-mail: _____
 Advisor's Name: _____ e-mail: _____
 Course Registration: _____ LO1
 Undergraduate Student or Special Student: _____
 Expected Graduation Date: _____
 Topic Title: _____

Please check the box that applies to you:

Option One

I wish to conduct a written thesis based on an in depth comprehensive study of a topic in foods and/or nutrition of interest to myself and I have secured a research advisor.

Option Two

I wish to conduct a laboratory based (biochemical "wet" laboratory or "dry" laboratory of a survey nature) thesis project within foods and/or nutrition of interest to myself and I have secured a research advisor who is willing to fund and supervise my work in the laboratory.

GUIDELINES:

- **Appendix 1 and Appendix II** – Deliver to the Student Advisor's Office and the Course Coordinator. Early submission of these forms will facilitate the registration process.
- **Appendix II** - Research Advisor provides brief letter of support for supervising the student for a specified Senior Thesis project.
- **Appendix III (Parts A & B)** – Deliver to the Course Coordinator. The student (in consultation with the research advisor) provides a summary of the thesis project (limited to one page single-spaced) and a time line for completion of the project during the semester(s) that the work will be accomplished. This could be the fall or winter semester or spread out over both.

APPENDIX II

Letter of Support from Research Advisor(s)

Note: This form must be signed by the Research Advisor before submission to the Student Advisor's Office, Faculty of Agricultural and Food Sciences and the HNSC 4122 Course Coordinator.

Date:

TO: Dr. Rotimi Aluko &
Student Advisor's Office

FROM:

Research Advisor Signature: _____

RE: Senior Thesis Supervision

APPENDIX III – PART A

Summary of the Project and Time Frame for Senior Thesis

- Send an electronic copy to the Course Coordinator (Dr. Aluko).
- The summary of the project is limited to 250 words.

Student/Trainee:

Date:

SUMMARY of THESIS PROJECT

APPENDIX III – PART B
Detailed Time Frame for Senior Thesis

Milestones (over 1 or 2 terms)	Goals	Completed (check box)
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
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		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
Middle of Term	Literature Submission	<input type="checkbox"/>
End of Term	Manuscript Submission	<input type="checkbox"/>
End of Term	Presentation (Poster or Oral Presentation)	<input type="checkbox"/>

APPENDIX IV

Literature Review Evaluation Form

(For use by Research Advisor(s) and Course Coordinator)

Student Name:

Student ID:

Advisor's Name:

Signature: _____

Date:

SECTION	RATING (5=HIGH)
Content	
1) Title of paper reflects content of paper	1 2 3 4 5
2) Abstract concisely summarizes paper	1 2 3 4 5
3) Clear thesis stated to guide paper and reader	1 2 3 4 5
4) Appropriate number of journal articles reviewed	1 2 3 4 5
5) Articles reviewed are current and relevant	1 2 3 4 5
6) Research is adequately reviewed and discussed	1 2 3 4 5
7) Key terms defined in the paper	1 2 3 4 5
8) Table summarizing primary/original research literature is provided	1 2 3 4 5
9) Table is completed thoroughly and accurately	1 2 3 4 5
10) Nutritional implications are discussed	1 2 3 4 5
Organization	
13) Introduction to paper provided	1 2 3 4 5
14) Body of paper divided into relevant required sections	1 2 3 4 5
15) Sections are clearly linked to one another	1 2 3 4 5
16) Paper is appropriate in length (25 pages of text)	1 2 3 4 5
17) Sections are clear and paper easy to follow	1 2 3 4 5
Style	
18) Title page formatted per guidelines (title, author's name, student ID, 250 word abstract and 3-5 key words)	1 2 3 4 5
19) Manuscript formatted correctly (single-sided, double-spaced, left-justified, numbered pages and 1 inch margins) Only tables/figures can be size 10 font and single spaced	1 2 3 4 5
20) References in body of paper formatted correctly	1 2 3 4 5
21) References at end of paper formatted correctly	1 2 3 4 5
22) No more than one spelling mistake per two pages of text	1 2 3 4 5
23) Sentences well formed grammatically	1 2 3 4 5
24) Paragraphs used effectively to organize ideas	1 2 3 4 5
TOTAL (110 points)	

General Comments

APPENDIX V**Manuscript Evaluation Form****(For use by Research Advisor(s) and Course Coordinator)**

Student Name:

Student ID:

Advisor's Name:

Signature: _____

Date:

Section of Manuscript	Comment(s)	Grade
Abstract – consider all critical aspects addressed within word limit, completeness, accuracy of data, appropriate conclusion(s).		/10
Introduction – consider completeness of the review, accurate use of research reports, up-to-date/current, ability to integrate knowledge and formulate objectives and hypotheses.		/20
Methods – consider completeness and clarity. Proper citing of references and methodology. Explains choice of methodology. Statistical approach including sample size as appropriate.		/20
Results – consider presentation in text, tabular or graphic form. Flow of thought from outcome to outcome. Accuracy of data including significant figures (decimal places).		/20
Discussion – consider interpretation relative to what is known, implications, limitations of research, summary/conclusions.		/20
Presentation - including grammar, spelling, style		/10
Total	Overall:	/100