



## COLLEGE of SOCIAL AND APPLIED HUMAN SCIENCES

DEPARTMENT OF FAMILY RELATIONS  
AND APPLIED NUTRITION

### NUTR\*3090 Clinical Nutrition I COURSE OUTLINE – WINTER 2023

#### 1. CALENDAR DESCRIPTION

The epidemiology, pathophysiology, and role of nutrition will be considered in the prevention and management of several major chronic conditions including cardiovascular diseases, disorders of energy balance and diabetes mellitus. There is an emphasis on developing the skills for high-risk individual management approaches.

**Credit Weight:** 1.0 credits

**Course Hours:** 3-3 (3 lecture; 3 lab/seminar)

**Pre-Requisite(s):** (BIOM\*2000 or BIOM\*3200), FRHD\*3070, NUTR\*2050, (NUTR\*3190 or NUTR\*3210), STAT\*2090

**Co-Requisites(s):** FRHD\*3400

**Restriction(s):** NUTR\*3040. Registration is limited to students registered in the B.A.Sc.AHN major.

#### 2. COURSE DESCRIPTION

The epidemiology, pathophysiology, and role of nutrition will be considered in the prevention and management of several major chronic conditions including cardiovascular diseases, disorders of energy balance and diabetes mellitus. There is an emphasis on developing the skills for high-risk individual management approaches.

#### 3. TIMETABLE

**Lecture:** Tues and Thurs 17:30-18:50 AM **Location:** MCKN 029

**Location:** Thurs 19:00-21:50 AM **Location:** MCKN 029

**Final Exam:** Mon 4/24/2022 8:30-10:30 AM **Location:** TBD

#### 4. INSTRUCTIONAL SUPPORT

**Course Instructor:** Aiyu Liu, MSc RD PhD(c)

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## **5. LEARNING RESOURCES**

### **Required Resource(s):**

In this course, we use many resources in different formats. Many of those references and resources are listed in the course's schedule and are available on Courselink.

### **Recommended Resource(s):**

Raymond JL, Morrow K. Krause and Mahan's Food and the Nutrition Care Process (15<sup>th</sup> ed). Elsevier Canada, 2020. Also, on Reserve at the library.

## **6. LEARNING OUTCOMES**

At the completion of the course, successful students will be able to:

1. Demonstrate knowledge of the epidemiology (who gets it), etiology (causes), pathophysiology (what happens to their bodies when people get it), natural history, current prevention and treatment methods (medical, behavioural and nutritional) of the conditions in Canada.
2. Demonstrate oral and written skills in the nutrition care process for individuals by conducting and evaluating: A. nutrition assessment, B. making a nutrition diagnosis, C. planning and executing nutrition interventions (counselling or nutrition education), D. monitoring progress and E. documentation.
3. Demonstrate knowledge of the basic organization of the Canadian health care system and federal legislation, regulations and policies applicable to applied nutrition practice.
4. Demonstrate knowledge of current systems for creating and translating evidence into practice as it relates to provision of nutrition services to prevent and treat the conditions under study.
5. Demonstrate skills in finding and evaluating evidence to support or change nutrition services for the conditions under study.
6. Demonstrate skills in combining evidence, reflection and consultation in developing nutrition care

plans.

7. Demonstrate beginning skills in self-reflection, self-directed learning, teamwork and assessment of others' learning and professional practice skills to improve practice.

## 7. TEACHING AND LEARNING ACTIVITIES

Week	Topics	Assigned Readings & Guest Speakers	Notes & Due Dates
1	Introduction, nutrition assessment overview, explanatory and process models for health behavior change	See detailed schedule	Read articles
2	Diabetes Diet and Physical activity assessment		Read articles
3	Diabetes An introduction to sensory evaluation		Read articles
4	Finish Diabetes Introduction to CVD Interpret assessment data against population standards Plan diets using Beyond the Basics		Read articles
5	Dyslipidemia An indigenous lens on dietetics		Read articles  Groups work on diabetes case study for next week  Work on patient scenario due Feb 25
6	Dyslipidemia Diabetes case study		<b>Midterm to end of Diabetes – Feb 14</b>  Submit patient scenario to Courselink and send to counsellor by Feb 24

<b>7</b>	Hypertension Day 1 of Counselling		Patient to collect 3-day diet record
<b>8</b>	Clinical CVD Energy regulation Complete assessment and teaching plan		<p>Patient submits 3-day record to Counselink AND sends to counsellor by Mar 7</p> <p>Observer submits CC guide 1 to Counselink and sends to counsellor by Mar 7</p> <p>Counsellor analyses assessment and develops initial teaching plan - submit to Counselink by Mar 10</p>
<b>9</b>	Excess weight management Day 2 of Counselling		<p><b>Midterm to end of CVD – Mar 14</b></p> <p>Observer submits CC guide 2 to Counselink and sends to counsellor by Mar 18</p>
<b>10</b>	Adult and pediatric obesity Day 3 of Counselling		Groups work on case study
<b>11</b>	Underweight/eating disorders Nutrition in older adults Dyslipidemia case study		Groups work on case study
<b>12</b>	Putting it Together Metabolic syndrome case study		<p>Counsellor submits ADIME chart notes by Apr 8</p> <p>Counsellor submits reflection by Apr 8</p> <p>Patient submits reflection by Apr 8</p> <p>Each group submits their</p>

			recorded sessions by Apr 8
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**Note:** This is a tentative schedule; however, due to various unknown factors there may be changes. Any changes will be announced during class and an announcement will be posted on the CourseLink site.

## 8. ASSESSMENT DETAILS

Assessment	LOs Addressed	Due Date	% of Final
Midterm 1	Assessment and DM (multiple choice and short answer questions)	Feb 14 (class time)	10
Midterm 2	CVD (multiple choice and short answer questions)	Mar 14 (class time)	15
Final	Cumulative (multiple choice and short answer questions)	Apr 24 (8:30-10:30 AM)	25
Group Case Studies In lab	3 discussions (first session Feb 16 is practice)	In class assessment of participation Feb 16, Mar 30, Apr 6	6
<b>Counselling Assignment</b>	<b>Practice Counselling</b>		
Patient scenario	Create a realistic scenario from template	Feb 24	5
Patient 3-day food record	Complete	Mar 7	5
Patient reflection on counselling	Written reflection on experience	Apr 8	4
Counsellor nutrition Assessment, initial teaching plan and BTB plan	Based on Day 1 visit and patient record	Mar 10	10
ADIME counsellor chart notes		Apr 8	10
Counsellor reflection		Apr 8	4
Observer reflections x 2	Using CC guide	Mar 8, Mar 18	6
<b>Total:</b>			<b>100%</b>

## 9. COURSE STATEMENTS

### Course Website:

There is a course website at <http://courselink.uoguelph.ca>. All components of this course will be housed on the CourseLink site including this course outline, assignments, and links to further resources. Your

assignments will be submitted through the Dropbox function. Marks and feedback will also be released on the site. Please familiarize yourself with this website as soon as possible and visit it regularly throughout the semester.

**Late Assignments:**

Late assignments will be accepted up to 5 days following the due date and will receive a penalty of 10% per day EXCEPT under documented grounds for compassionate consideration. Assignments submitted more than one week late without documented grounds will receive a grade of zero. If you are going to hand an assignment in late, you must contact your course instructor to inform them when you will be submitting your assignment.

**Receipt of Grades:**

After you receive a grade on CourseLink, please review your feedback. Any inquiry or dispute over the grade must be made within two weeks from the date they are posted. If you fail to protest any grade during this time limit, changes to the grade will not be considered. [Grades will be based on the Grading Procedures outlined in the Undergraduate Calendar.](#)

**Turnitin Software:**

In this course, your instructor will be using Turnitin, integrated with the CourseLink Dropbox tool, to detect possible plagiarism, unauthorized collaboration or copying as part of the ongoing efforts to maintain academic integrity at the University of Guelph.

All submitted assignments will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site.

A major benefit of using Turnitin is that students will be able to educate and empower themselves in preventing academic misconduct. In this course, you may screen your own assignments through Turnitin as many times as you wish before the due date. You will be able to see and print reports that show you exactly where you have properly and improperly referenced the outside sources and materials in your assignment.

## **10.UNIVERSITY STATEMENTS**

**E-mail communication:**

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

**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. See the Undergraduate Calendar for information on regulations and procedures for [Academic Consideration](#).

**Drop date:**

Courses that are one semester long must be dropped by the end of the last day of classes; two-semester courses must be dropped by the last day of classes in the second semester. The regulations and procedures for [Dropping Courses](#) are available in the Undergraduate Calendar.

**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.

**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 make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

More information: [www.uoguelph.ca/sas](http://www.uoguelph.ca/sas)

**Academic misconduct:**

The [Academic Misconduct Policy](#) is outlined in the Undergraduate Calendar.

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 discourages misconduct. 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.

Instructors **shall not** determine if academic misconduct has occurred. This is up to the Associate Dean Academic's office. Instructors shall not assign a grade of zero even if they believe that the student has committed some form of academic misconduct (e.g., copied material from a website like CourseHero) on an assignment or exam.

Instructors **can** determine if a student has poorly paraphrased and/or improperly cited material and can provide a grade accordingly as long as this is clearly identified as part of the assessment criteria via a rubric or other assessment tools.

For more information about Academic Integrity resources and how to prevent Academic Misconduct see: <https://csahs.uoguelph.ca/faculty-research/hub-teaching-learning-excellence/academic-integrity>

### **Recording of materials:**

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

### **Resources:**

The [Academic Calendars](#) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

### **Disclaimer:**

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via Courselink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

### **Illness:**

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).

### **COVID-19 Safety Protocols:**

For information on current safety protocols, follow these links:

- <https://news.uoguelph.ca/return-to-campus/how-u-of-g-is-preparing-for-your-safe-return/>
- <https://news.uoguelph.ca/return-to-campus/spaces/#ClassroomSpaces>



Please note, that these guidelines may be updated as required in response to evolving University, Public Health or government directives.

#### **Appendix:**

For those students enrolled in the Area of Emphasis in Dietetics: The Integrated Competencies for Dietetic Education and Practice (2013; <http://www.pdep.ca/>):

*Foundational Knowledge Specifications (FKS) that are met by this course:*

<b>CONTENT AREA</b>	<b>COGNITIVE COMPLEXITY LEVEL</b>
<b>1. Anatomy and Physiology</b>	
a) Structure of the human body at the macro and cellular level	1
b) Role, function and regulation of the integumentary, musculoskeletal, nervous, endocrine, cardio---respiratory, urinary, lymphatic and digestive systems in health and disease	2
<b>2. Biochemistry</b>	
b) Major metabolic pathways	2
d) Mechanisms of metabolic regulation	1
<b>3. Communication</b>	
b) Communication channels and techniques, and their appropriate usage	1
c) Strategies for effective written communication	3
d) Strategies for effective oral communication	3
e) Strategies for effective interpersonal communication	3
f) Medical and dietetics---related terminology	2
<b>4. Counselling</b>	
a) Counselling theories	2
b) Counselling strategies and techniques	2
c) Counselling processes	2
<b>5. Food</b>	
e) Application of dietary requirements, guidelines, and guidance tools to food planning	3
f) Food modification to address therapeutic, textural or other needs	2
h) Religious and cultural food practices	2
i) Food labeling	3
Sensory Evaluation of Food	3

CONTENT AREA	COGNITIVE COMPLEXITY LEVEL
<b>7. Health System in Canada</b>	
a) Organization and delivery of care	1
b) Issues and trends	1
c) Political influence.	1
<b>8. Human Nutrition across the Lifespan</b>	
a) Ingestion, digestion, absorption, metabolism and excretion of nutrients	1
c) Nutrient and energy requirements	3
d) Physical activity and energy balance	2
e) Nutrition recommendations and guidelines	3
f) Effect of deficiencies and toxicities of nutrients	2
g) Food sources of nutrients and dietary supplements	3
h) Role of nutrients and other food components in health	3
i) Dietary practices	2
<b>9. Interprofessional Collaboration</b>	
b) Patient / client / family /community---centered care	3
c) Interprofessional role clarification, including the role of the dietitian	1
d) Team functioning	3
e) Collaborative leadership	3
<b>12. Nutrition Assessment</b>	
a) Food and nutrient intake of individuals and populations	3
b) Environmental and individual factors affecting food intake	3
c) Anthropometric data collection and interpretation	3
d) Biochemical parameter interpretation	2
e) Clinical data collection and interpretation	3
<b>13. Nutrition Care Process and Medical Nutrition Therapy</b>	
a) Etiology and pathophysiology of nutrition---related diseases	3
b) Nutrition---related disease management strategies	3
c) Use of assessment, diagnosis, intervention, monitoring, evaluation (ADIME) in medical nutrition therapy	3
d) Calculation of energy and nutrient requirements for conditions/diseases	3
e) Goal setting and outcome measurement in nutrition therapy	3
h) Complementary and alternative nutrition therapies	1
<b>14. Pharmacology</b>	
a) Drug classifications relevant to nutrition and their modes of action	1
b) Common medication side effects and contraindications relevant to nutrition	1
c) Drug---nutrient interactions	2

d) Nutrients and nutraceuticals as pharmacological agents	2
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CONTENT AREA	COGNITIVE COMPLEXITY LEVEL
e) Natural health products	1

CONTENT AREA	COGNITIVE COMPLEXITY LEVEL
<b>16. Professional Practice in Dietetics</b>	
d) Reflective practice	2
f) Decision making	2
g) Time and workload management	2
<b>17. Population and Public Health</b>	
a) Frameworks for population and public health	1
d) Values and philosophy of public and population health	1
f) The determinants of health	1
<b>18. Research and Evaluation</b>	
a) Theoretical foundations of research	3
d) Evidence---informed practice	3
f) Systematic review and critical appraisal of literature	2
g) Use of technology to seek and manage information	3

CONTENT AREA	COGNITIVE COMPLEXITY LEVEL
<b>19. Social and Psychological Foundations</b>	
a) Behavioural theories relevant to eating and food choice	2
b) Social and psychological aspects of eating and food choice, in health and disease	2
e) Cultural competence	2
<b>20. Teaching and Learning</b>	
a) Theories of teaching and learning	2
b) Strategies to assess teaching and learning needs	2
c) Development and assessment of learning outcomes	2
d) Strategies to address the teaching and learning needs of individuals and populations	2
e) Learning resource selection and development	1

*Performance Indicators (PI) that are met by this course:*

Practice Competencies (PCs)		Performance Indicators (PIs)	3090 Activities
<b>1. Professional Practice</b>			
1.04	Practice within limits of individual level of professional knowledge and skills.		
	b	Reflect upon and articulate individual level of professional knowledge and skills.	Students, as "counsellors" self-reflect on their performance as part of the counselling assignment
1.06	Use a systematic approach to decision making.		
	e	Obtain and interpret evidence.	Guided process for case studies review process and Counselling assignment practice
1.09	Use technologies to support practice.		
	b	Use technology to communicate.	Use of nutrition assessment technologies and equipment. Use of video to record counselling. Use of course management software.
	d	Use technology to seek and manage information.	
1.1	Ensure appropriate and secure documentation.		
	a	Demonstrate knowledge of documentation principles.	Students write a medical chart note, in ADIME format
1.11	Assess and enhance approaches to dietetic practice.		
	a	Demonstrate knowledge of the role of evidence, self reflection, and consultation in assessing effectiveness of approaches to practice.	There is a self-reflection component of the video counselling assignment. As well, a student observer provides feedback to the counsellor, based on the Calgary Cambridge Guide. They do this exercise twice.
	e	Seek new knowledge that may support or enhance practice activities.	Students consult the course text book, practice guidelines and current readings (including systematic reviews) to develop teaching plans for their counselling assignment.
<b>2. Communication and Collaboration</b>			
2.01	Select appropriate communication approaches.		

	c	Demonstrate knowledge of practice-setting-related terminology.	Students practice communicating orally for case studies, and practice working with the Calgary Cambridge Guide counselling structure in the video counselling
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			assignment. There is also the written portion of the video counselling assignment.
		e	Demonstrate knowledge of medical and dietetics-related terminology. Students develop their medical and dietetics terminology through the creation of PES statements, in their written reports, and in the midterm and final exam during which they are tested on terminology.
2.02	Use effective written communication skills.		
	c	Edit written material for style, spelling and grammar.	Written communication in several assignments for counselling assignment
	d	Write clearly and concisely, in a manner responsive to the needs of the reader(s).	
	e	Write in an organized and logical fashion.	
	f	Provide accurate and relevant information in written material.	
	g	Ensure that written material facilitates communication.	
2.03	Use effective oral communication skills.		
	b	Speak clearly and concisely, in a manner responsive to the needs of the listener(s).	Will get feedback on oral communication in counselling assignment. Also, will be asked in class to address issues in Case Study reviews
	d	Use appropriate tone of voice and body language.	
	e	Recognize and respond appropriately to non-verbal communication.	Part of interviewing skills being assessed in counselling assignment
2.04	Use effective interpersonal skills.		
	a	Demonstrate knowledge of principles of active listening	All addressed in observer notes on counsellor skills in counselling assignment.
	b	Utilize active listening.	
	d	Communicate in a respectful manner.	
	f	Demonstrate empathy.	
	h	Establish rapport.	
	j	Apply counselling principles.	
	n	Seek, respond to and provide feedback.	
2.05	Contribute to the learning of others.		

	a	Recognize common opportunities in practice to contribute to the learning of others.	Oral case studies, for which students can complement the responses of their team-mates during the oral presentation of the case. Students also provide feedback to their classmate on the video counselling assignment.
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	d	Demonstrate knowledge of educational strategies relevant to practice, and their appropriate uses.	Students complete a teaching plan to teach to their classmate (mock patient) as part of the video counselling assignment
	f	Demonstrate knowledge of learning resources, and their appropriate use in practice.	Video counselling assignment for which students select and teach various education resources specific to the client's case
	j	Demonstrate knowledge of ways to establish and assess learning outcomes.	Group discussion during case studies, and during which students compare and contrast various counselling approaches for the same patient, and learn how different strategies can be appropriate for different clients in different contexts
2.06	Contribute productively to teamwork and collaborative processes.		
	a	Group discussion during case studies, and during which students compare and contrast various counselling approaches for the same patient, and learn how different strategies can be appropriate for different clients in different contexts	This is imbedded throughout the course, and assessed in various learning activities including case studies, the midterm and final exam. Students are asked to identify whether nutrition is core to, or an adjunct of, the treatment of a particular condition.
	i	Facilitate interactions and discussions among team members.	Students work in teams on the counselling assignment and case studies. They also contribute to learning of peers through group discussion
<b>3. Nutrition Care</b>			
3.01	Assess nutrition-related risks and needs.		
	a	Demonstrate knowledge of principles for selection and use of common nutrition risk screening strategies.	Midterm and final exam, and oral case studies.
	c	Demonstrate knowledge of ways to identify relevant data to perform a nutrition assessment.	Midterm and final exam, and oral case studies, and video counselling assignment
	e	Demonstrate knowledge of methods to obtain perspective of client, family and / or relevant others.	
	g	Demonstrate knowledge of principles for obtaining and interpreting a medical history.	

	h	Identify principles for selection of relevant medical information.	
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	j	Demonstrate knowledge of ways to obtain and interpret demographic, psycho-social and health behaviour history.	
	k	Demonstrate knowledge of principles for selection of relevant demographic, psycho-social and health behaviour data.	
	m	Demonstrate knowledge of principles for obtaining and interpreting food and nutrient intake data.	
	o	Demonstrate knowledge of principles to identify food and nutrition related learning needs of clients.	
	q	Demonstrate knowledge of principles for obtaining and interpreting anthropometric data.	
	s	Demonstrate knowledge of ways to obtain and interpret biochemical and medical test / procedure data.	
	dd	Demonstrate knowledge of selection and use of methods used to determine energy, protein, fluid, macronutrient, micronutrient, electrolyte and trace element requirements.	
	ee	Perform calculations to determine nutritional requirements.	
	gg	Identify methods to integrate assessment findings and identify nutrition problems.	
	hh	Integrate assessment findings to Identify nutrition problem(s).	
3.02	Develop nutrition care plans.		
	a	Demonstrate knowledge of principles for prioritization of nutrition care goals based on risk and available resources.	Counselling assignment and case studies
	c	Demonstrate knowledge of ways to identify and select appropriate nutrition interventions.	
	g	Demonstrate knowledge of principles for development and modification of meal plans.	
	s	Demonstrate knowledge of principles for development of a client support plan.	
3.03	Manage implementation of nutrition care plans.		
	a	Identify ways to implement nutrition interventions.	Case studies and Counselling assignment
	d	Identify strategies to communicate nutrition care plan with client, interprofessional team and relevant others.	Counselling assignment and do ADIME notes
3.04	Evaluate and modify nutrition care plan as appropriate.		
	c	Identify necessary changes to nutrition care plan.	Counselling assignment

	3	Identify necessary changes to nutrition care plan.	Counselling assignment
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		Public Health DEPARTMENT OF FAMILY RELATIONS AND APPLIED NUTRITION	
4.01		Assess food and nutrition related issues of groups, communities and populations.	
	g	Demonstrate knowledge of sources of and methods to obtain health status data.	Students compare various pieces of personal data (e.g., anthropometric values, serum glucose, etc.) to the Canadian Health Measures Survey data. Therefore students compare themselves to the larger Canadian population.