ACKNOWLEDGEMENT

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

COURSE INFORMATION

Course Title	Course Code Number	Credit Value
Nutrition Assessment Across the Lifespan	HUNU 510	3

Time: Tuesdays and Thursdays at 9:30am to 10:50am
Class location: Room B79 of the P. A. Woodward Instructional Resources Centre

PREREQUISITES

Completion of 3-credit

- Introductory Nutrition (e.g., FNH 250, or equivalent), and
- Introductory physiology (e.g., BIOL 155, 153, CAPS 301; or equivalent)

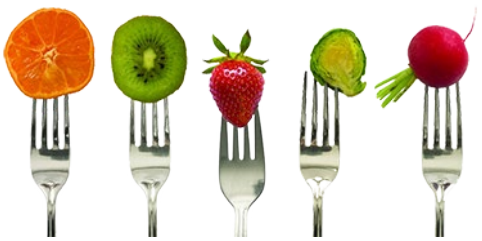
CONTACTS

Course Instructor(s)	Contact Details	Office Location	Office Hours
Yvonne Lamers	Canvas Email	FNH 245	Thursday, 11AM – 12:30PM

COURSE INSTRUCTOR BIOGRAPHICAL STATEMENT

Dr Yvonne Lamers is an Associate Professor in Human Nutrition and an Investigator at the British Columbia Children's Hospital Research Institute. Her research addresses questions around vitamin adequacy across the lifespan with current projects focusing on the impact of early life nutrition on child neurodevelopment including the effect of maternal nutrient intake on brain outcomes in children and how the relationship may be mediated through epigenetic mechanisms, as well as the nutrition-gut microbiome-brain relationship in toddlers. Dr Lamers established and leads the UBC Nutritional Biomarker Laboratory that has attracted numerous local, national, and international collaborations.

Dr Lamers joined UBC after completing her postdoctoral training at the University of Florida in the area of nutritional biochemistry and stable isotope tracer kinetics. She holds a PhD in Human Nutrition and completed her undergraduate and MSc equivalent degrees in Human Nutrition and Home Economics, with training in Dietetics, Clinical Intervention Trials, and Food Chemistry, at the University of Bonn, Germany, and at the University of Otago, New Zealand.



(Photo: https://www.darwindietitians.com.au/nutritional-assessment/)

OTHER INSTRUCTIONAL STAFF

There are no teaching assistants assigned to this course.
There will be guest lectures from experts in the field throughout the term.

LEARNING ACTIVITIES

The format of HUNU 510 will be a combination of:

- Class/guest lectures
- Small group discussions
- Hands-on practice with assessment tools
- Case studies in class and as assignment
- Mid-term examination

LEARNING OUTCOMES

Overall learning objectives

- Compare, contrast, and choose appropriate nutrition assessment methods based on their strengths and limitations for various life stages and conditions of health and disease.
- Interpret and utilize results of anthropometric, biochemical, clinical, and dietary assessment (ABCD) tools to assess an individual's nutrition status.
- Discuss new or emerging indicators of nutrition assessment for individuals and populations.

Upon successful completion of this course, students will be able to:

1. Describe the Nutrition Care Process and relate how nutrition assessment parameters contribute to Medical Nutrition Therapy for individuals and populations. (ICDEP 1.06a/b/c/d)
2. Compare, contrast, and choose appropriate nutrition assessment methods based on their strengths and limitations for various life stages and conditions of health and disease. (ICDEP 1.04a/b/c/d/e, 5.01a/b/c/d/e/f/g/h/i/j/k)
3. Interpret and utilize results of anthropometric, biochemical, clinical, and dietary assessment tools to assess an individual's nutrition status. (ICDEP 1.06a/b/c/d, 1.07a, 5.01a/b/c/d/e/f/g/h/i/j/k, 5.02a/b)
4. Assess and evaluate the dietary intake of individuals at different life stages and recommend appropriate guidance on nutrition-related issues. (ICDEP 2.01a/b/c/d, 5.01b/c, 5.03a/b/c/d/e, 5.04b/c)
5. Discuss new or emerging indicators of nutrition assessment for individuals and populations. (ICDEP 4.03b/d, 4.04a/b)
6. Examine physiological and psychosocial changes over the life span with implications for nutrition, describe how dietary needs and behaviours are affected by these

changes, and integrate these findings into nutrition recommendations. (ICDEP 1.04a/b/c/d/e, 1.05a/b/c/d/e/f/g, 1.06a/b/c/d)

7. Summarize why nutrition requirements change over life for key nutrients (e.g., protein, fat, iron, calcium, vitamin D). (ICDEP 1.04a/b/c/d/e)
8. Explain and justify current dietary guidance, especially for life stages when nutritional status is particularly important (e.g., pregnancy, infant and young child feeding, older adulthood). (ICDEP 1.04a/c, 5.01a)

SCHEDULE OF TOPICS

Overview of weekly topics
Week 1: Introduction; Nutrition Care Process; Dietary guidelines; Sep 6 and 8
Week 2: Dietary assessment methods, Sep 13 and 15 – *Deborah Zibrik*, *Sarah Montgomery RDs*
Week 3: Anthropometric & Clinical assessment methods, Sep 20 and 22
Week 4: Biochemical assessment methods, Sept 27 and 29
Week 5: Pregnancy/Lactation, Oct 4 and 6
Week 6: Infancy and Toddlerhood, Oct 11 and 13 – *Gloria Ho, Clinical Dietitian, BCCH*
Week 7: Childhood, Oct 18 and 20 – *Gloria Ho, Clinical Dietitian, BCCH*
Week 8: Course review, Mid-term Exam, Oct 25 and 27
Week 9: Adolescence, Nov 1 and 3
Week 10/11: Adulthood, Nov 8 and 15 (no class on Nov 10; midterm break Nov 09-11)
Week 11/12: Aging, Palliation, Nov 17 and 22
Week 12: Special topics in Nutrition across the lifespan, Nov 24
Week 13: Student-led Debates, Nov 29 and Dec 01
Week 13/14: Special topics in Nutrition across the lifespan; Course Review; Dec 06

LEARNING MATERIALS

1. **Essential reading material** for each weekly topic will be posted on Canvas, about 2 weeks prior to the scheduled class.
2. **Recommended textbook:** Lee, R.D. and Nieman, D.C. 2019. *Nutritional Assessment*, 7th edition, McGraw-Hill Higher Education Ltd, New York. Available in Woodward Library stacks: Call Number: QU146.1 .N671 2019 Approximately $50 for text or e-book rental; $100 for text or e-book purchase
3. **Dietary Assessment Software:**
   ESHA Food Processor (available through Dr Lamers' research team).
   For personal use/purchase (optional):
   Diet & Wellness Plus – online access (www.cengage.com, approx. $35), or other dietary assessment software (e.g., Keenoa).
4. **Dietitians of Canada Courses**:
   a. WHO Growth Chart Training (5 modules) – no cost
   b. *Optional*: Nutrition Screening (4 modules) – $105 for non-members, $45 student pricing

ASSESSMENTS OF LEARNING

Students will be evaluated using the following assessment metrics:

Assessment Activities	**Final Grade Contribution**
Participation (self-assessed)	5%
Dietary Assessment Assignment (in teams of n=2 students) Evaluation of food records from toddlers (due Week 3: Sept 20)	10%
WHO Growth Chart course completion Dietitians of Canada online; due Week 5: Oct 06)	5%
Midterm Exam (in class, Week 8: Oct 27)	20%
Case Study Assignments (online) 1. Pregnancy (due Week 6: Oct 11) 2. Adolescence (due Week 10: Nov 8) 3. Older adult (due Week 12: Nov 24)	 10% 10% 10%
Paper Review/Summary of Readings One topic per student; topics/dates selected through Canvas	10%
Student-led Discussion/Presentation Written report (due Week 13: Nov 29) Presentation in class (Nov 29/Dec 01), peer-evaluated	 10% 10%

Participation:
Students will be expected to attend all classes and participate in all group activities, including small group discussions and hands-on practice using assessment tools.

Dietary Assessment Assignment:
Students will be assigned into groups of 2 students to practice assessing dietary parameters and to evaluate the data based on dietary and anthropometric information provided from real-life examples. (1) Students will receive instructions on the use of the dietary assessment software ESHA Food Processor on-site in Dr Lamers' laboratory at the BC Children's Hospital Research Institute. Students will enter food records on site, with assistance of team members, and receive results and report cards for their home assignment (i.e., writing of assignment report). (2) Students will evaluate in detail the dietary information they obtained. Assignment reports should include the dietary intake and anthropometric data of the assigned case, a summary of interpretation of the data and implications for dietetic practice, and a discussion of the dietary intake method tool used (e.g., 24h food recall, FFQ, 3-day food record, etc.) – including the strengths and limitations, and what the clinician could do to address limitations. Reports should be no longer than 4 pages, 11-pt font, single spaced, and reference course material. A report

guideline and detailed marking guideline will be available on Canvas. Each team will submit their report on Canvas by the due date Sept 20, 12PM, during Week 5.

WHO Growth Chart Course (Dietitians of Canada): Students will complete the online course developed by Dietitians of Canada (DC) for health care professionals on how to use, interpret, and apply the WHO Growth Charts. There are 5 modules and the expected time is 45-60min for each module. The course is free of charge and publicly available here: https://members.dietitians.ca/DCMember/LearnProduct?id=01tf4000003j6wTAAQ Students will submit their certificate of completion on Canvas by the end of Week 5.

Mid-term Examination: The mid-term exam will be held in class on October 27, 2022. The exam will focus on nutritional assessment methods, their strengths and limitations, and their application in real-word examples. The exam will be a combination of multiple-choice and short-answer questions. Questions will in parts be presented like case studies.

Case Study Assignments: Throughout the term, students will be provided with 4 case studies from different life stages. The case studies will include the case's presentation, anthropometric measures, biochemical, clinical, and dietary information, based on a real scenario a dietitian may encounter in practice. Students will analyze and evaluate the nutritional status and needs of their case patient/client. Students will discuss the strengths and limitations of the assessment methods used for this case report. Students will explain what other information they may need to know to fully assess the case. Students should provide evidence-based guidance on (1) dietary recommendation for their case and (2) suggested next steps for the complete nutritional assessment of the case. Assignment templates will be provided on Canvas. Please limit assignments to 4 pages or less (keep it concise!), 11-pt font, single spaced. Students are expected to complete these assignments individually and submit their assignments online using Canvas by 11:59pm on the specified due date.

Paper Review/Summary of Readings: Students will be asked to select a topic and date from the weekly schedule, with a maximum of 2 students per topic; the instructor will announce when this list will be posted on Canvas. While all students are asked to read the provided list of references, the student(s) in charge of the selected topic will provide an oral summary of the essential reading(s) and facilitate the in-class discussion about the references/papers. The student-led paper reviews and in-class discussions will be peer-evaluated using a defined rubric (to be shared on Canvas).

Student-led Debates: Students are invited to reflect upon the diverse range of questions they may have related to nutrition assessment at various stages of life. Students will select one of their questions or a current 'hot topic' or debate in the field and define a clear and specific question based on the PICOT principles (P=population of interest, I=intervention/issue, C=comparison, O=outcome(s), and T=timeframe). Students will be asked to prepare a concise, evidence-based response to their question based on appropriate papers from the peer-reviewed literature. The response should be drafted in a maximum 3-page report (11-pt font, single spaced) that will be shared with all students. Assignment report and presentation templates as well as marking guidelines will be posted on Canvas. The report and presentation are due on Nov 29. Presentations will be held in class on Nov 29 and Dec 01, in a mini-conference format with 10min presentation plus 5min questions each (6 students in each session). Reports and presentations will be peer-evaluated.

UNIVERSITY POLICIES

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances.

UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.

Details of the policies and how to access support are available on **the UBC Senate website.**

OTHER COURSE POLICIES

Students are expected to attend all lectures and participate in all learning activities in class as they relate to practical assessment methods for dietitians (e.g. dietary assessment activities).

Absentee Policy: We expect you to be present and prepared for all class meetings. In the event that you are unable to attend a scheduled class because of illness or emergency, you are responsible for any material presented in class. See UBC's policy regarding illness and accommodations. You are expected to contact the instructor and submit a medical note/certificate of illness or appropriate documentation for any absence that requires accommodation.

This course, like all required courses in the MND program, contributes to coverage of the Integrated Competencies for Dietetic Education and Practice (ICDEP). All students in the Dietetics Major should refer to the Mapping of Curriculum to ICDEP page on the dietetics website to familiarize themselves with the requirements.

COPYRIGHT

Version 2: amendments/updates by Dr Yvonne Lamers

Version 1: original syllabus prepared by Dr Tamara Cohen and Gilbert Lee

If any changes are made to the course outline, content, or assessment activities, the students will be informed on time through Canvas and in class.