



NUTR*3070: Nutrition and Physical Activity Interventions

Winter 2018 Course Outline

Department of Family Relations and Applied Nutrition University of Guelph

Instructor: Angela Wallac, MSc, RD
Office: MACS 335
Email: angelaw@uoguelph.ca

Office hours: Thursday 2:30-3:30pm or by appointment

Often, your questions about administration matters will be answered by referring to the course outline and/or CourseLink (a website for on-campus courses: <https://courselink.uoguelph.ca/shared/login/login.html>). It is not feasible to discuss course content via email because this discussion often requires considerable time and elaboration.

Course format:

Lecture topics are listed in the course schedule. The course entails lectures, class discussions and activities, small-group written report, individual PSA assignment, and an exam.

Class times: Tuesday and Thursday, 4:00 – 5:20 pm,

Course website:

Announcements, updated schedules, grades, and other information will be posted on CourseLink. I will upload PowerPoint slides (pdf format) from lectures on CourseLink prior to lectures each week.

Course description:

This undergraduate course examines various approaches, theories, and models used in the development, implementation, and evaluation of interventions to improve nutrition, physical activity and sedentary behaviours of people of different ages in various settings.

Prerequisite(s): FRHD*3070 (Research Methods: Family Studies) and NUTR*2050 (Nutrition Through the Life Cycle)

Restriction(s): Restricted to students in B.A.Sc. program

Learning objectives for students:

1. To identify (a) how physical activity, sedentariness, and nutrition for health are conceptualized, (b) the benefits of being physically active and healthy eating (c) how physical activity, sedentary behaviours, and dietary intake are measured, (d) measurement issues common to physical activity, sedentary and nutrition behaviours, and (e) recommendations regarding level of physical activity and sedentary behaviours.
2. To apply exercise and nutrition prescription guidelines during in-class discussions.
3. To apply various approaches, theories, and models used to develop, implement, and evaluate interventions for improving nutrition, physical activity and sedentary behaviours during in-class activities.
4. To effectively communicate about scientific research in practical terms (for the general public). Gain an understanding of the importance of knowledge translation.
5. To develop a theory- and empirical-based intervention framework for improving nutrition, physical activity and sedentary behaviours.

Accessibility:

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual, and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability, should contact Student Accessibility Services (SAS) as soon as possible. For more information, contact SAS at 519-824-4120, ext. 56208 or email csd@uoguelph.ca or refer to the SAS website.

Academic misconduct:

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.

The undergraduate calendar states:

- “Plagiarism is misrepresenting the ideas, expression of ideas or work of others as one's own. It includes reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and representing these as one's own thinking by not acknowledging the appropriate source or by the failure to use appropriate quotation marks.”
- “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.”

The academic misconduct policy is detailed in the undergraduate calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>.

An academic integrity tutorial, which includes a plagiarism module, is available at

<http://www.academicintegrity.uoguelph.ca/>.

Turnitin (message from Associate Vice-President [Academic], University of Guelph, August 10, 2015):

“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.”

Information about Turnitin is uploaded on CourseLink.

Evaluation:

Method	% of final grade	Date	Comment
Exam	30	Thurs. Feb 8	Exam will consist of multiple-choice questions based on the lectures, class discussions and activities, and designated readings (i.e., designated by <input checked="" type="checkbox"/> in the course schedule table), during Jan. 8 to Feb. 6. You need to bring a pencil and eraser to complete the exam.
Written report (in a small group of 4-5 students (see Appendix A)	30	Due Mar. 29	Details are in the course outline. Contact me by Mar. 6 to obtain approval of your topic before you go ahead to write the report.
PSA + write up (see Appendix B)	30	Due Mar. 20	Details are in the syllabus.

Method	% of final grade	Date	Comment
Class Discussions + Reflection	10	Due April. 12	Last part of course involves article critiquing and group discussion. Participation in class discussion will be an expectation of this course. Additionally, you will need to submit a 1-2-page personal reflection that discusses your biggest learning from this course by April.12 th Submit to Dropbox April 12 th by midnight.

Grading system:

The grading system described in the undergraduate calendar will be used. The grading system is as follows:

Letter grade	%	Letter grade	%
A +	90 – 100	C +	67 – 69
A	85 – 89	C	63 – 66
A -	80 – 84	C -	60 – 62
B +	77 – 79	D +	57 – 59
B	73 – 76	D	53 – 56
B -	70 – 72	D -	50 – 52
		F	0 – 49

Protocol:

- It is important that you attend classes regularly and complete the readings to do well in this course. The lectures and readings complement each other, rather than duplicate each other.
- All of us share the responsibility of creating an environment that facilitates class discussions. Your preparation (e.g., completing the readings prior to the classes) and participation in the discussions will contribute to the students' learning and will be appreciated by all.
- Please come to class on time, turn off your cell phone, and refrain from conversations with your classmates during class. These activities (including texting in class) disrupt class, distracting me from teaching and making it difficult for your classmates to focus on the information presented. So please be considerate of others.
- The electronic recording of classes is expressly forbidden without the prior consent of the instructor. This prohibition extends to all components of the course, including but not limited to lectures, whether conducted by the instructor or other designated person. When recordings are permitted, they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.
- I anticipate that the small groups for the written report will function well and that group members will contribute substantially. However, if there are group conflicts that cannot be resolved within the group, then arrange a meeting with me to discuss the matter.

Use Dwyer's (2013) program logic model template to diagrammatically **conceptualize** an intervention, which is based on **integrative model of behavioural prediction**, to improve either physical activity, sedentary, or nutrition behaviours among a specific target group in a specific setting in Ontario. Integrative model of behavioral prediction extends on theory of planned behavior. Your logic model should be based on both theory (i.e., integrative model of behavioral prediction) and empirical literature.

- Select only one of these 3 behavioural outcomes.
- Specific target groups may relate to gender, age group, ethnicity, overweight and obese people, people with specific chronic diseases, etc..
- Specific settings may relate to home, worksite, school, church, community, etc..
- Intervention must not focus on the specific topic covered in the illustration used during the lectures for the logic model and integrative model of behavioral prediction.

The logic model (diagrams / tables) is a stand-alone product that should detail the intervention (so do not attach additional text to conceptualize the intervention).

You should show the logic model as a combination of a summarized general diagram and detailed more-specific tables that represent specific strategies and activities.

Program activities should be a combination of activities that you generated on your own and activities identified in the empirical literature (e.g., research examining the effectiveness of interventions). To differentiate these two sets of activities, you are to provide citations in the logic model (e.g., Sallis et al., 2016) for specific activities identified in the literature.

The University of Wisconsin - Extension provides some good resources about logic models (e.g., illustrations; on-line, self-study module):

<http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html>

Jacqueline Kreller-Vanderkooy, Learning and Curriculum Support Librarian at McLaughlin Library, is available for individual research consultations if you require help finding, using, or evaluating sources for your written report. You can make an appointment by emailing her at jkreller@uoguelph.ca. You can also get help at the library by dropping in, chatting online, or calling. Visit the Ask Us page for more information: <http://www.lib.uoguelph.ca/ask-us>.

Your group is to complete the report independently. Don't collaborate with other groups on the report (it is not an inter-group effort).

The grading rubric for the report is Appendix A.

Use Turnitin to screen your report.

Checklist for the report:

- Should have (a) a separate title page (include your topic), (b) an introduction to discuss the empirical literature to provide rationale as to why the intervention is needed (e.g., why the particular target group and setting are chosen; prevalence of behaviour; etc.) and why it is

important to focus on the constructs in integrative model of behavioral prediction in this situation, (c) a separate page(s) for the reference section, (d) an appendix / appendices for the logic model, and (e) an additional appendix that clearly shows where you obtained program activities identified in the literature (see the grading rubric for details)

- ☑ Use the style in the American Psychological Association's (2010) Publication manual of the American Psychological Association (APA) (6th ed.) for citing and listing references. You don't have to use the APA style for writing other elements of the report
- ☑ **Maximum of 4 pages for the introduction.** If more than 4 pages are submitted, only the first 4 pages will be graded
- ☑ No page limit for the logic model
- ☑ 8.5" x 11" paper
- ☑ Printed on 1 side of page
- ☑ Your name is in the header of the document
- ☑ Double-spaced for the title page and introduction
- ☑ Single-spaced for the reference section and logic model
- ☑ 2.5 cm. margins
- ☑ Times New Roman font and 12-point font size
- ☑ Not stapled (using a paper clip is fine)

Please submit your report by Mar. 29, at midnight. Late submissions have a 10% (out of 100) per day penalty.

- **Upload the electronic copy (Microsoft Word) in Dropbox in CourseLink (don't submit it to my email address).**

2. Knowledge Translation (KTT) – Public Service Announcement

Develop a public service announcement (PSA) or infographic that explains the results/findings of a recent (2007-2017) physical activity or nutrition intervention study. The PSA or infographic should be aimed at the general public.

What is a PSA?

A PSA is a message for the public that is disseminated without charge. The purpose is to raise awareness, change public attitudes or behaviours towards a social issue. In this case you want to disseminate findings that relate a nutrition or physical activity recommendation to the general public. The PSA should be framed with a health behaviour theory in mind.

Your PSA should be in the form of a 1-page poster, infographic, or 30 second – 2-minute video.

In addition, you will submit a 3-4-page report that summarizes the study findings, the important recommendation your PSA is built upon, and what health behaviour theory your PSA considered during development.

The grading rubric can be found in Appendix B.

Please upload your both your PSA and 3-4 page write up on dropbox by midnight Mar. 20, 2018. Late submissions have a 10% (out of 100) per day penalty.

Course schedule

I reserve the right to revise the schedule of classes as needed, as long as you are given adequate notice. If class is cancelled (e.g., bad weather), all remaining lectures and/or student presentations will be shifted (e.g., cancelled presentation will be the next presentation).

☑ = Designated reading that will be used to create part of the exam.

Date	Topic	Required readings
Overview of physical activity and sedentariness:		
Tues. Jan. 9	Overview of the course; conceptualizing physical activity and sedentariness; relationship between physical activity and sedentary behaviours and health	☑ Pettee Gabriel, K. K., Morrow, J. R., & Woolsey, A. T. (2012). Framework for physical activity as a complex and multidimensional behavior. <i>Journal of Physical Activity & Health</i> , 9 Suppl 1, S11-S18.
Thurs. Jan 11	Nutrition trends (2017) in relation to health outcomes	☑ Dinu, M (et al.). (2017). Vegetarian, vegan diets and multiple health outcomes: A systematic review with meta-analysis of observational studies. <i>Critical Reviews in Food Science and Nutrition</i> , 57(17), pp. 3640-3649
Tues. Jan. 16	Measuring physical activity and sedentary behaviours	☑ Sternfeld, B., & Goldman-Rosas, L. (2012). A systematic approach to selecting an appropriate measure of self-reported physical activity or sedentary behavior. <i>Journal of Physical Activity & Health</i> , 9 Suppl 1, S19-S28.
Thurs Jan. 18	Measuring nutrition behaviours	☑ Banna, J. (et al.). (2017). Examining Plausibility of Self-Reported Energy Intake Data: Considerations for Method Selection. <i>Frontiers in Nutrition</i> .
Tues. Jan 23	Recommendations regarding level of physical activity and sedentary behaviours; prevalence of physical activity and sedentariness	☑ Colley, R. C., Garriguet, D., Janssen, I., Craig, C. L., Clarke, J., & Tremblay, M. S. (2011). Physical activity of Canadian adults: Accelerometer results from the 2007 to 2009 Canadian Health Measures Survey. <i>Health Reports</i> , 22(1), 7-14.
Thurs. Jan. 25	Exercise prescription	☑ Johnson, S. T., Cornish, S. M., Lytvyak, E., Taylor, L. M., Bell, G., Vallance, J., Fraser, S., & Murray, T. (2015). Examining the promotion of healthy eating among exercise specialists: A cross-sectional study.

Date	Topic	Required readings
		Canadian Journal of Dietetic Practice and Research, 76(2), 76-80.
Tues. Jan 30	Nutrition Counselling Techniques to promote behaviour change	☑ David, L. (2016). A pilot randomized controlled trial examining the feasibility, acceptability, and efficacy of Adapted Motivational Interviewing for post-operative bariatric surgery patients. <i>Eating Behaviours</i> , 22.
Thurs. Feb 1	Social cognitive theory	☑ Ehlers, D. K., & Huberty, J. L. (2014). Middle-aged women's preferred theory-based features in mobile physical activity applications. <i>Journal of Physical Activity and Health</i> , 11(7), 1379-1385.
Tues. Feb. 6	Integrative model of behavioral prediction (extends on theory of planned behavior)	☑ Patterson, M. S., Umstadd Meyer, M. R., & Beville, J. M. (2015). Potential predictors of college women meeting strength training recommendations: Application of the integrated behavioral model. <i>Journal of Physical Activity and Health</i> , 12(7), 998-1004.
Thurs. Feb. 8	Midterm	<ul style="list-style-type: none"> No readings
Tues. Feb 13	Transtheoretical model	☑ Webb, F. J., Khubchandani, J., Hannah, L., Doldren, M., & Stanford, J. (2016). The perceived and actual physical activity behaviors of African American women. <i>Journal of Community Health</i> , 41(2), 368-375.
Thurs. Feb 15	Overview of literature search and literature review (bring your laptop) <ul style="list-style-type: none"> Jacqueline Kreller-Vanderkooy, Learning and Curriculum Support Librarian 	<ul style="list-style-type: none"> No Readings
Reading Week	Mon Feb 19 th -Fri Feb 23 rd	<ul style="list-style-type: none"> No Readings
Tues. Feb 27	Program logic model	<ul style="list-style-type: none"> Dwyer, J.J.M., Hansen, B., Barrera, M., Allison, K., Ceolin-Celestini, S., Koenig, D., Young, D., Good, M., & Rees, T. (2003). Maximizing children's physical activity: An evaluability assessment to plan a community-based, multi-strategy approach in an ethno-

Date	Topic	Required readings
		<p>racially and socio-economically diverse city. <i>Health Promotion International</i>, 18(3), 199-208.</p> <p>In reference to the footnote in Figure 1 in this article, the more detailed logic model is uploaded on CourseLink.</p> <p>+ group project time</p>
Thurs. Mar 2	Health belief model	<ul style="list-style-type: none"> Wirth, C. K., James, D. C. S., Fafard, M., & Ochipa, K. (2014). Developing weight management messages and interventions for baby boomer men. <i>American Journal of Men's Health</i>, 8(3), 258-266.
Tues. Mar 6	Social ecological model	<ul style="list-style-type: none"> Dunton, G. F., Cousineau, M., & Reynolds, K. D. (2010). The intersection of public policy and health behavior theory in the physical activity arena. <i>Journal of Physical Activity & Health</i>, 7 Suppl 1, S91-S98.
Thurs. Mar 8	Knowledge Translation – why its important	<ul style="list-style-type: none"> Oborn, E., Barrett, M., & Racko, G. (2013). Knowledge translation in healthcare. <i>Journal of Health Organization and Management</i>, 27(4)
Tues. Mar. 13	Self-determination theory	<ul style="list-style-type: none"> Wasserkampf, A., Silva, M. N., Santos, I. C., Carraça, E. V., Meis, J. J. M., Kremers, S. P. J., & Teixeira, P. J. (2014). Short- and long-term theory-based predictors of physical activity in women who participated in a weight-management program. <i>Health Education Research</i>, 29(6), 941-952. <p>+ group project time</p>
Thurs. Mar 15	Intervention mapping (steps such as (a) needs assessment, (b) preparing matrices of change objectives, and (c) selecting theory-informed intervention methods and practical applications)	<ul style="list-style-type: none"> Deforche, B., Van Dyck, D., Deliens, T., & De Bourdeaudhuij, I. (2015, February). Changes in weight, physical activity, sedentary behaviour and dietary intake during the transition to higher education: A prospective study. <i>International Journal of Behavioral Nutrition and Physical Activity</i>,

Date	Topic	Required readings
	+ group project time	12, 16 [10 pages].
Tues. Mar. 20	Practical perspectives from nutrition and PA data collection	<ul style="list-style-type: none"> Westgarth, C., Christley, R. M., & Christian, H. E. (2014, August). How might we increase physical activity through dog walking? A comprehensive review of dog walking correlates. <i>International Journal of Behavioral Nutrition and Physical Activity</i>, 11, 83 [14 pages]. + group project time
Tues. Mar. 20	Guest Speaker – TBD	<ul style="list-style-type: none"> No Readings
Intervention Group Discussions		
Thurs. Mar. 22	Transtheoretical model	<ul style="list-style-type: none"> Kushida, O., & Murayama, N. (2014). Effects of environmental intervention in workplace cafeterias on vegetable consumption by male workers. <i>Journal of Nutrition Education and Behavior</i>, 46(5), 350-358. De Menezes, M. C., Mingoti, S. A., Cardoso, C. S., De Deus Mendonca, R., & Lopes, A. C. S. (2015). Intervention based on transtheoretical model promotes anthropometric and nutritional improvements - A randomized controlled trial. <i>Eating Behaviors</i>, 17, 37-44. Kao, Y., Huang, Y., Chen, P., & Wang, K. (2012). The effects of exercise education intervention on the exercise behaviour, depression, and fatigue status of chronic kidney disease patients. <i>Health Education</i>, 112(6), 472-484. Small-group class activity for 1 reading
Tues. Mar. 27	Office hours in class + group project time	
Thurs. Mar. 29	Self-determination theory	<ul style="list-style-type: none"> Moustaka, F. C., Vlachopoulos, S. P., Kabitsis, C., & Theodorakis, Y. (2012). Effects of an autonomy-supportive exercise instructing style on exercise motivation, psychological well-being, and exercise attendance in middle-age women. <i>Journal of Physical Activity and Health</i>, 9(1), 138-150. Gourlan, M., Sarrazin, P., & Trouilloud, D.

Date	Topic	Required readings
		<p>(2013). Motivational interviewing as a way to promote physical activity in obese adolescents: A randomised-controlled trial using self-determination theory as an explanatory framework. <i>Psychology and Health</i>, 28(11), 1265-1286.</p> <ul style="list-style-type: none"> • Hsu, Y., Buckworth, J., Focht, B. C., & O'Connell, A. A. (2013). Feasibility of a self-determination theory-based exercise intervention promoting healthy at every size with sedentary overweight women: Project CHANGE. <i>Psychology of Sport and Exercise</i>, 14(2), 283-292. <p>Small-group class activity for 1 reading</p>
Tues. April. 3	Health belief model	<ul style="list-style-type: none"> • LaBrosse, L., & Albrecht, J. A. (2013). Pilot intervention with adolescents to increase knowledge and consumption of folate-rich foods based on the health belief model. <i>International Journal of Consumer Studies</i>, 37(3), 271-278. • Huang, C., Su, C., Chien, L., & Guo, J. (2011). The effectiveness of an osteoporosis prevention program among women in Taiwan. <i>Applied Nursing Research</i>, 24(4), e29-e37. • Tariku, B., Whiting, S. J., Muluaem, D., & Singh, P. (2015). Application of the health belief model to teach complementary feeding messages in Ethiopia. <i>Ecology of Food and Nutrition</i>, 54(5), 572-582. <p>Small-group class activity for 1 reading</p>
Thurs. April.5	Social ecological model	<ul style="list-style-type: none"> • Wilcox, S., Parrott, A., Baruth, M., Laken, M., Condrasky, M., Saunders, R., Dowda, M., Evans, R., Addy, C., Warren, T. Y., Kinnard, D., & Zimmerman, L. (2013). The faith, activity, and nutrition program: A randomized controlled trial in African-American churches. <i>American Journal of Preventive Medicine</i>, 44(2), 122-131. • O'Dwyer, M. V., Fairclough, S. J., Knowles, Z., & Stratton, G. (2012, October). Effect of a family focused active play intervention on sedentary time and

Date	Topic	Required readings
		<p>physical activity in preschool children. International Journal of Behavioral Nutrition and Physical Activity, 9, 117 [13 pages].</p> <ul style="list-style-type: none"> • Lemon, S. C., Zapka, J., Li, W., Estabrook, B., Rosal, M., Magner, R., . . . Hale, J. (2010). Step ahead: A worksite obesity prevention trial among hospital employees. American Journal of Preventive Medicine, 38(1), 27-38. <p>Small-group class activity for 1 reading</p>

Appendix A

NUTR*3070 (W17)

Grading Rubric for Small-group Written Report

Component	%
<p>Provide a comprehensive and detailed discussion of the empirical literature to provide rationale as to why the intervention is needed and why it is important to focus on the constructs in integrative model of behavioral prediction in this situation.</p> <ul style="list-style-type: none"> Your writing style, organisation, and grammar; adherence to APA style. 	/ 30
<p>Use Dwyer’s (2013) logic model template to diagrammatically conceptualize the intervention based on integrative model of behavioral prediction. This template consists of: why the program is needed, target group(s), strategies, program activities, desired outcomes (shorter-term; longer-term), and goal.</p> <ul style="list-style-type: none"> Clearly summarize why the program is needed. Operationalize the target group(s). Specify appropriate strategies that fit with integrative model of behavioral prediction and relate well with the program activities. Provide a comprehensive and detailed description of program activities that you (a) generated on your own and (b) identified in the empirical literature (e.g., research examining the effectiveness of interventions). Provide citations in the logic model for specific activities identified in the literature. Provide an additional appendix that clearly shows where you obtained program activities identified in the empirical literature. Specifically, for each of these activities, provide a photocopy of (a) the first page of the journal article and (b) the page(s) that describes the specific activity (highlight with colour or underline this text). Clearly specify desired outcomes that fit with the constructs in integrative model of behavioral prediction and any other relevant constructs. Show a clear and logical relationship between the program activities and desired outcomes. Show a clear and logical relationship among the desired outcomes (e.g., shorter-term and longer-term desired outcomes). Specify an appropriate goal. Your writing style, organisation, and grammar; adherence to APA style. 	/ 70
Total	/ 100%

Appendix B**NUTR*3070 (W17)****Grading Rubric for PSA**

Component	%
Summarize article selection, findings, and development of PSA Mention the theory you are using to help inform your PSA development	/ 20
Explain the rationale for the PSA, why are these findings important to the public and what is the overall recommendation for your PSA	/ 10
PSA (video, poster or infographic) – see further breakdown below	/ 70
Visual presentation	/ 20
Provides a brief, clear summary of the main results/findings	/ 30
Appropriate for general public (clearly translates knowledge)	/ 10
Total	/ 100%