

University of Guelph
Department of Family Studies and Applied Nutrition

Final Project in Applied Human Nutrition FRAN*6750 Fall 2012, Winter & Spring 2013

Course Outline

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Course Description

The purpose of this course is to engage the students in a variety of research related activities to foster research mindedness and practice based research skills development.

The course is centered on a project related to an activity during the Practicum in Applied Human Nutrition, a project identified by an AHN faculty member or PEN project pathway. The course will review the research process, including report writing, and provide support for the student participating in an applied research project.

The Final Project

The nature of the project **may vary and can include** the following:

- Quality assurance review
- Research proposal with literature review
- Secondary data analysis
- Resource development and key informant review or pilot testing
- PEN project pathway development
- Manuscript preparation

The size and depth of the project should be carefully examined as the time available to work on the project is constrained by the practicum placement. Students will be expected to dedicate on **average of 3-4 hours a week to the project over the course of 3 consecutive semesters.**

End products of the course include a written project outline, abstract and report as well as an oral and poster presentation of the applied research project before an audience of peers and community members.

The written report includes a literature review, purpose, methodology, results and discussion of a small research project that the student has participated in or where the student completes secondary data analysis. The proposal for a research project includes literature review, purpose, methodology, analysis or analysis plan, a proposed timeline and budget. Students who work on a manuscript for publication will independently write and submit a substantive literature review on the manuscript topic along with a discussion of methodology and data analysis. The appendix of the report must include the manuscript submitted for publication. Although the nature of the project may vary, a literature review, discussion of methodology, design and data analysis or plan for analysis must be included in the final report.

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Student Objectives

To complete this course the student will:

- Identify an applied research project related to dietetic practice, in collaboration with the MAN program coordinator, another AHN faculty and the supervisor of a practicum if appropriate;
- Present an outline for the research project to peers
- Complete an application to the Research Ethics Board, if required
- Implement part, or all, of the applied research project (various options noted above)
- Write a report on the applied research project, including at least a review of the literature, discussion of methodology, design and data analysis. Depending on the nature of the project other elements as noted above in the Final Project section must be included.
- Write abstract of the project in advance of the oral presentation
- Present an oral presentation to peers and invited guests

Proposed Course Timeline

Fall term: class meetings will be on Mondays at 8:30am MACS 331

September:

- Meeting with AHN faculty to discuss available projects
- Matching of MAN students with faculty projects
- Create Gantt chart to document project timeline

October:

- Work on research proposal and literature review
- Attend presentation on research ethics
- Complete TCPS2: CORE Online Tutorial
- Work on activities assigned by project supervisor

November

- Present research proposal with literature review to colleagues
- Work on activities assigned by project supervisor
- Submit updated Gantt chart to advisor and MAN coordinator

Fall Exam Period (December)

- Work on activities assigned by project supervisor

January-March:

- Complete and submit application to U of Guelph REB if required
- Finalize research implementation plans with advisor

Winter Exam Period (April)

- Present research plan update to class
- Work on activities assigned by project supervisor

May-June:

- Conduct research
- Attend presentation on how to create a research abstract and poster (early June)

Mid-July:

- Presentation of research to class. Placement supervisors are invited to attend presentation.
- Actively participate in research poster presentation session
The abstract is due 10 days before the presentation date, so that project titles and descriptions can be distributed to the invited guests.

August (1st week):

- Written research reports are submitted to project supervisor and course instructor.

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Suggested Resources:

Dietitians of Canada: Resources about dietetic research:

<http://www.dietitians.ca/Knowledge-Center/Nutrition-Research-CINDAR.aspx>

Information about proposal and grant writing:

http://www.ryerson.ca/ors/proposal_development/resources/

Journal of American Dietetic Association: Author's Guide:

http://www.elsevier.com/wps/find/journaldescription.cws_home/662173/authorinstructions

McMahan, E., Funk, R. Here's How to Write Well. Toronto, ON: Allyn and Bacon, 1999.

Oliver, P. *Writing Your Thesis*. Thousand Oaks, CA: SAGE Publications Ltd, 2004.

University of Guelph, Office of Research:

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

Walliman, N. *Your Undergraduate Dissertation: The Essential Guide for Success*. Thousand Oaks, CA: SAGE Publications Ltd, 2004.

Writing a Thesis proposal:

<https://mit.imoat.net/handbook/th-pro.htm>

Writing your research proposal: A workbook for first time and inexperienced researchers in the social science and humanities

By: Craig Higson-Smith with contributions from Julie Parle, Lis Lange and Ann Tothill

<http://www.nrf.ac.za/methods/pdf/guide.PDF>

Method of Evaluation

Formal research proposal (8%) and informal update (2%) presentations	10%
Research poster	10%
Research poster presentation	10%
Research presentation (20 m)	20%
Abstract	5%
Written research report	25%
Effort/Progress throughout project (assessed by faculty advisor)	20%

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Research Proposal Presentation Outline

Depending on the type of research you are engaged in this outline may need to change

1. Title
2. Introduction
 - a) Statement of problem
3. Background (review of research relevant to research)
4. Rationale for the research
5. Objectives or hypothesis
6. Methods
 - a) Study design (type, procedures etc)
 - b) Participants (selection, recruitment plans)
 - c) Measurements (describe tools to be used, identify variables)
7. Timeline (Gantt chart)
8. Budget
9. References

Outline for the Research Report

1. Title Page
2. Abstract – (copy of document submitted before presentation)
3. Introduction
 - a) Introduce the scope of the project; provide brief background on the issue(s) at hand
4. Literature Review
 - a) Critical review of the research literature that spawned the research. Materials should be obtained by library research. Original research studies should be the source of information although one or two general or review articles may be used to provide an overview. As a general guide, use a 1:10 ratio of text or review articles to reports of original research.
 - b) Statement of research question and objectives
5. Methods
 - a) Study design (type, procedures etc)
 - b) Participants (selection, success of recruitment plans)
 - c) Measurements (describe tools used, variables)
6. Results (if applicable)
7. Discussion
 - a) Limitations of the research
 - b) Implications for practice
 - c) Recommendations (if applicable)
8. Conclusion
9. Formatting
 - References APA style: In the text, references should be **cited by name**, e.g. (Smith, 1985; or, Smith et al, 1992); and appear in the reference list in alphabetical order in the APA style.
 - Length: the report should be 15 to 20 pages, excluding references and any tables or figures.
 - Formatting: 1.5 spacing and 11 point Arial font, 2.54 cm L & R margins; 2.0 cm top & bottom margins
 - The file naming convention: StudentName_assignment name.pdf- for MAN coordinator

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Research Report Evaluation

Name:

Total: /100

A. Introduction		
5	2.5	1
Introduced the scope of the project; composed of relevant information; grabbed the reader's attention	Provided some idea of the project's scope; Some information presented was not relevant; engaged the reader somewhat	Scope of the project was not well outlined; information presented was not relevant; did not grab reader's attention
Comments:		
B. Study Objective or Hypothesis		
10	5	1
Objective was clearly stated; Aspects of problem were narrow enough for analysis in some depth. Hypothesis had links to the literature and identified at least two measurable variables; was phrased so that it can be refuted	Objective was not stated in terms specific enough to define limits of problem and tended to be somewhat broad. Hypothesis had links to literature that were somewhat clear; second measurable variable not identified	Objective was stated in terms that too broad, abstract or vague and problem was not adequately defined Hypothesis did not link to the literature; variables were not clearly identified; statement could not be refuted
Comments:		
C. Literature Review		
35	17.5	1
Structure of the literature review reflected the scope of the topic; showed some breadth of coverage of the topic as well as depth; assessment of the literature was clear; ideas were well researched, document and argued.	Structured fairly well in relation to the topic; breath of coverage was too great; wandered from the topic or was too narrow in view; assessment of the literature was not always clearly evident; ideas were reasonably well researched, documented and argued	The review was poorly structured in relation to the topic; very little of it related to the objective or purpose; ideas presented are not well researched, documented or argued
Comments:		

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D. Study Design		
15	7.5	1
Demonstrated how the specific aims of study could be met with the design; rationale for the design was clear; subject selection criteria were well thought out and justified	Relationship between study design and objectives was not totally clear; rationale was somewhat supportive of the design; subject selection was fairly well justified	Study design did not support the aims of the study; rationale presented did not support the study design; subject selection was not justified
Comments:		
E. Methodology		
15	7.5	1
Clearly presented, well thought out and researched; supported by the literature; foreseeable problems addressed (i.e. attrition) and analysis of data was justified	Fairly well presented and thought out; had some support from the literature; some potential problems not addressed and analysis of data needed more support	Systematic justification was lacking; potential problems were not addressed and data analysis was not supported by literature
Comments:		
F. Organization and Presentation		
10	5	1
Key terms and acronyms were defined; presentation of information was systematic with subheadings ; clarity of expression-economical use of words, and transitions; graphs, tables and other visuals were easy to read and flowed from the text; no spelling or grammatical errors	Most terms and acronyms were defined; presentation of information was somewhat systematic; clarity of expression-text was comprehensible, needs changes to increase flow and economy of words; presentation of visuals was adequate; some spelling and grammatical errors	Many terms and acronyms were not defined; no clear evidence of a systematic presentation of information; subheadings not used or were not used well; clarity of expression-text was hard to understand, repetitive or unclear; visuals did not connect to text and were not easy to read; several spelling and grammatical errors
Comments:		
G. Referencing		
10	5	1
Studies from the literature were most appropriate to address the problem; were recent and were mostly primary sources and were properly formatted	Studies from the literature were generally satisfactory, but selection could be improved; could make better use of primary sources and formatting was not consistent	Studies from the literature were not the best ones possible; too much dependence on review articles and books and formatting was inconsistent
Comments:		

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Oral Evaluation

Name:

Total: /30

A. Introduction / Background		
5	2.5	1
<p>The speaker:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Gains the audience's attention and interest. <input type="checkbox"/> Clearly states the purpose of presentation <input type="checkbox"/> States the research question <input type="checkbox"/> Presents background literature to support study <input type="checkbox"/> Establishes the significance of topic for the audience 	<ul style="list-style-type: none"> <input type="checkbox"/> The speaker attempts to gain the audience's attention and interest. <input type="checkbox"/> The guiding research question and purpose of presentation are not clearly stated <input type="checkbox"/> Background does not fully support the study <input type="checkbox"/> The speaker does not fully establish the significance of topic for the audience 	<ul style="list-style-type: none"> <input type="checkbox"/> The speaker does not gain the audience's attention and interest. <input type="checkbox"/> The guiding research question and purpose of presentation are not stated <input type="checkbox"/> Background literature not presented/ does not support study <input type="checkbox"/> The significance of topic is not established for the audience
<p>Comments:</p> 		

B. Content, Organization and Timing		
10	5	1
<ul style="list-style-type: none"> <input type="checkbox"/> Clearly presents each step of research process undertaken <input type="checkbox"/> The level of detail is appropriate for the audience <input type="checkbox"/> The speaker uses relevant and specific supporting material to substantiate main points <input type="checkbox"/> The speaker cites the source of the evidence <input type="checkbox"/> The presentation of information is cohesive, logical and sequential <input type="checkbox"/> Uses time appropriately and finishes within time limits 	<ul style="list-style-type: none"> <input type="checkbox"/> Steps of research not clearly presented <input type="checkbox"/> Level of detail was somewhat appropriate for the audience <input type="checkbox"/> The speaker uses somewhat relevant supporting material to substantiate main points <input type="checkbox"/> The speaker does not cite all the source of the evidence <input type="checkbox"/> The presentation of information is not completely cohesive logical and sequential <input type="checkbox"/> Uses time appropriately and finishes < 90 s over time limit 	<ul style="list-style-type: none"> <input type="checkbox"/> Steps of research not presented <input type="checkbox"/> Level of detail was not appropriate for the audience <input type="checkbox"/> The speaker does not use supporting material to substantiate main points <input type="checkbox"/> The speaker does not cite any the source of the evidence <input type="checkbox"/> The presentation is difficult to follow flow of information is not logical <input type="checkbox"/> Did not use time appropriately and finishes > 90 s over time limit
<p>Comments:</p> 		

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C. Conclusion		
5	2.5	1
<input type="checkbox"/> The speaker clearly signals the end of presentation <input type="checkbox"/> The speaker restates the central idea <input type="checkbox"/> The conclusions are stated as a persuasive argument to reinforce the final message <input type="checkbox"/> The conclusions are concise	<input type="checkbox"/> The speaker attempts to signal the end of presentation <input type="checkbox"/> The speaker somewhat restates the central idea <input type="checkbox"/> The conclusions are stated in a way that somewhat reinforces the final message <input type="checkbox"/> The conclusions are relatively concise	<input type="checkbox"/> The speaker did not signal the end of presentation <input type="checkbox"/> The speaker did not restate the central idea <input type="checkbox"/> The conclusions are not stated in a way that reinforces the final message <input type="checkbox"/> The conclusions are not concise
Comments:		

D. Delivery and Visual Aids		
10	5	1
<input type="checkbox"/> The speaker maintains strong eye contact <input type="checkbox"/> The speaker faces the audience while speaking (glances at notes, not at the screen) <input type="checkbox"/> Slide text is concise, having only a phrase or a few words per line and slides did not contain excess text <input type="checkbox"/> The speaker gestures appropriately and varies volume, pitch, and rate of voice <input type="checkbox"/> The speaker provides smooth transitions <input type="checkbox"/> Language is free from unexplained jargon and acronyms <input type="checkbox"/> Zero to minimal use of verbal fillers	<input type="checkbox"/> The speaker did not consistently maintain eye contact. <input type="checkbox"/> The speaker frequently faced the screen while speaking <input type="checkbox"/> Text is somewhat concise, some slides have too much text <input type="checkbox"/> The speaker uses appropriate gestures most of the time and tries to vary volume, pitch, and rate of voice <input type="checkbox"/> The speaker provides some transitions <input type="checkbox"/> Language did have some unexplained jargon and acronyms <input type="checkbox"/> Moderate level of verbal fillers, somewhat distracting	<input type="checkbox"/> The speaker had poor eye contact with audience. <input type="checkbox"/> The speaker consistently faced the screen while speaking <input type="checkbox"/> Text is not concise, most slides contain too much text <input type="checkbox"/> The speaker did not use appropriate gestures or did not use gestures and did not vary volume, pitch, and rate of voice <input type="checkbox"/> The speaker provides no transitions <input type="checkbox"/> Language did contain many unexplained terms and acronyms <input type="checkbox"/> High volume of verbal fillers, distracted from information presented
Comments:		

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Abstract (10 marks)

Title and Team information (2)

Title is clear, informative and not too long

Full names of research team members noted with credentials and work place (not titles needed)

Introduction (2)

Why did you start the project?

Research problem and rationale presented concisely

Key terms defined

Enough background to set the stage for the reader

Methods (2)

What did you do?

Procedures are discussed in an organized and concise manner

Sampling plan and study design are outlined

Results (2)

What did you find?

Clear presentation of data with appropriate statistics (if applicable)

Findings are linked to the purpose of the research

Conclusion (2)

What does it all mean?

Logically connects results into a closing argument/ statement

Suggest further work (if applicable)

Provides meaning to work and a take home message

Research Poster Evaluation Form

Poster Content	Excellent (5)	Good (3)	Improvement Needed (1)
Title reflects content of poster; Includes all key contributors to work			
Research problem/question clearly stated; Importance of research demonstrated			
Clear and concise methods presented			
Key terms defined; Grammar, spelling and punctuation			
Appropriate level of detail			
Poster Display			
Overall balance in composition			
Effective use of empty space			
Font size, style and colour			
Short text segments			
Legible pictures, figures, legends			
Total			

Research Poster Oral Presentation

Presentation Skills	Excellent (5)	Good (3)	Improvement Needed (1)
Speaker presents as confident and enthusiastic			
Presents research poster succinctly			
Answers questions precisely in a professional manor			
Maintains eye contact, uses vocal variety, no use of verbal fillers			
Total			