

**Department of Family Relations and Applied Nutrition**



**FRAN\*6610: Advances in Clinical Nutrition/Assessment  
Course Outline - Fall 2014**

**Instructor**           Andrea Buchholz, PhD, RD  
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**Class Time**           Mondays, 8:30-11:20AM, MACS 331

**Office Hours**        By appointment

**Course Description**

Welcome to Advances in Clinical Nutrition/Assessment! This is an interactive, skills- and process-based course focused on: integrating nutritional assessment and clinical nutrition; applying theory to practice; and refining critical thinking and oral and written communication skills. A large portion of the course is based on student-driven learning activities and discussion.

**Learning Outcomes**

By the end of this course, successful students will:

- Demonstrate advanced critical thinking, integrative and communication skills in clinical nutrition/assessment by:
  - Researching and writing a systematic literature review OR a PEN (Practice-Based Evidence in Nutrition) pathway suitable for publication.
  - Creating and delivering a 25 to 30 minute BOPPPS-based\* oral presentation using your choice of delivery method. (\*see p. 26)
- Provide formative and constructive feedback on peers' oral and written efforts.

**Prerequisites**

I assume that you are familiar with basic nutritional assessment methods (dietary, clinical, biochemical, anthropometric) and common clinical nutrition issues and interventions in common populations (diabetes, cardiovascular disease, GI, etc.).

## Learning Activities

Choose <u>ONE</u> of the following written assignments	Choose <u>ONE</u> of the following oral presentations, on the same topic as the written assignment. (Independently, or if your topics overlap, with a partner.)
Systematic literature review (SLR)	Critique of an original research article from the topic area
Practice-Based Evidence in Nutrition (PEN) adapted pathway	Present a controversy/debate within the topic area
	Teach a class to dietitians new to this area of practice
	Teach a class to patients diagnosed with the condition associated with your topic

## Evaluation

Component	Weighting	Due
SLR/PEN pathway (15-20 pg)	Your choice (minimum 20% of final grade)*	<ul style="list-style-type: none"> <li>1 pg outline due Mon Oct 20 (not graded)</li> <li>Near-final draft due Mon Nov 24 (for peer review)</li> <li>Final copy due Mon Dec 1</li> </ul>
Oral presentation on a topic related to your SLR/PEN pathway (25-30 minutes)	Your choice (minimum 20% of final grade)*	Throughout
Peer review of a SLR/PEN pathway	15%	Mon Nov 24 (in class, in real time)
Engagement	15%	Throughout. Self-reflection on engagement due Mon Dec 1.
Total	100%	

\*Decide the weighting by your individual consult (Sept 29/Oct 6)

## Schedule\*

Date	Topic/Activity
Sept 8	<ul style="list-style-type: none"> <li>• Course introduction and overview</li> <li>• Dysphagia screening and dietary management (following BOPPPS model)</li> <li>• Readings: (<i>available on CourseLink under "Content"</i>)               <ul style="list-style-type: none"> <li>○ Course outline (p. 1-30)</li> <li>○ Dysphagia screening and dietary management notes</li> <li>○ Optional reading: Dietitians of Canada. The role of the registered dietitian in dysphagia assessment and treatment: A discussion paper. Can J Diet Pract Res. 2005 Summer;66(2):1-8.</li> </ul> </li> </ul>
Sept 15	<ul style="list-style-type: none"> <li>• Practice-Based Evidence in Nutrition (PEN)               <ul style="list-style-type: none"> <li>○ Orientation to PEN and how to write a PEN pathway - Guest speakers: Jane Bellman and Dawna Royall</li> </ul> </li> <li>• Readings:               <ul style="list-style-type: none"> <li>○ Course outline (p. 7-16; 24)</li> <li>○ Browse <a href="http://www.pennutrition.com">www.pennutrition.com</a> to become familiar with PEN prior to class</li> <li>○ Formative vs. summative feedback (<i>available on CourseLink under "Content"</i>)</li> </ul> </li> </ul>
Sept 22	<ul style="list-style-type: none"> <li>• Systematic Literature Reviews               <ul style="list-style-type: none"> <li>○ How to write a systematic literature review (SLR) - Guest speaker: Michelle Edwards, University of Guelph library</li> </ul> </li> <li>• Readings: (<i>available on CourseLink under "Content"</i>)               <ul style="list-style-type: none"> <li>○ Course outline (p. 17-24)</li> <li>○ Edwards M. What is a systematic review? July 2014</li> <li>○ Exemplar: Gough E, Shaikh H, Manges A. Systematic review of intestinal microbiota transplantation (fecal bacteriotherapy) for recurrent <i>Clostridium difficile</i> infection. Clin Infect Dis. 2011;53(10):994-1002.</li> </ul> </li> <li>• Sign up for individual consult (weeks of Sept 29 and Oct 6) and oral presentation</li> </ul>
Sept 29/ Oct 6	<p><i>NO CLASS.</i> Individual 30-minute consults this week re: SLR/PEN pathway and oral presentation. Have chosen topic, weighting, oral presentation date</p>
Oct 13	<p><i>NO CLASS - THANKSGIVING</i></p>
Oct 20	<ul style="list-style-type: none"> <li>• Submit 1 pg SLR/PEN pathway outline for formative feedback (not graded)</li> <li>• Oral presentations</li> </ul>
Oct 27	<ul style="list-style-type: none"> <li>• Oral presentations</li> <li>• Discussion of SLR/PEN pathway outlines – tips for final deliverable</li> </ul>
Nov 3,10,17	<p>Oral presentations</p>

## Schedule\* (cont'd)

Date	Topic/Activity
Nov 24	Submit hard copy of near-final draft of SLR/PEN pathway for peer review. Complete peer review of a SLR/PEN pathway, in class and in real time. Submit two copies of peer review at end of class: one to peer, one to Andrea
Mon Dec 1	<ul style="list-style-type: none"><li>• <i>NO CLASS</i></li><li>• Final SLR/PEN pathway and reflection on participation due, either electronic or hard copy (my office is MACS 324).</li><li>• I will email you your Evaluation of Peer Review of SLR/PEN Pathway (p. 24)</li></ul>

\*I'd like the opportunity to adjust the schedule as needed. I will do so only if I provide the class with adequate notice and rationale.

## Course Readings

There is no course text. Readings are assigned as per above schedule, and are available on CourseLink, under the "Content" tab.

## CourseLink

CourseLink will be used for the gradebook and for helpful resources. It can be accessed at: <https://courselink.uoguelph.ca/shared/login/login.html>

## E-Mail

As per university policy, you are required to check their <uoguelph.ca> email accounts regularly. E-mail is the official route of communication between students and the university.

## Your Role

As with any course, you will get out of Advances in Clinical Nutrition/Assessment what you put into it. I have carefully chosen the readings, learning activities and course requirements to help facilitate your learning; whether you actually do these and learn is up to you. I look forward to your active engagement, including helping to keep class discussions alive and providing peers with constructive feedback on oral and written efforts.

In the words of a famous academic\*: students paddle, the instructor steers.

*\*My husband*

## My Role

As I see it, I'm here to help you help yourself learn. This includes creating a supportive and respectful classroom culture conducive to learning; guiding your learning by posing, and responding to, questions; facilitating class discussions (with your help and engagement); and providing formative and constructive feedback on various learning activities (written, oral and participatory efforts).

## Resources - Clinical

- PEN (Practice-Based Evidence in Nutrition) is easily accessed through the university's library website. All you need is your standard login information. Cut and paste the following url into your browser: [http://primo.tug-libraries.on.ca.subzero.lib.uoguelph.ca/primo\\_library/libweb/action/search.do?vid=GUELPH&reset\\_config=true](http://primo.tug-libraries.on.ca.subzero.lib.uoguelph.ca/primo_library/libweb/action/search.do?vid=GUELPH&reset_config=true). Enter "practice-based evidence in nutrition" in the Primo search field. Then click on the blue "Online resources."
- Also available in Primo is the Academy of Nutrition and Dietetics (formerly American Dietetic Association) nutrition care manual. Enter "ADA nutrition care manual" in the Primo search field. Then click on the blue "Online resources."
  - If you are accessing this resource from off campus, you will need to enter the username ([lday@uoguelph.ca](mailto:lday@uoguelph.ca)) and password (uoguelph).
- Online medical dictionary: <http://www.nlm.nih.gov/medlineplus/mplusdictionary.html>.
- Online pharmacological database: <http://www.nlm.nih.gov/medlineplus/druginformation.html>
- Online Hamilton Health Sciences' Patient Education Library <http://www.hamiltonhealthsciences.ca/body.cfm?xyzpdqabc=0&id=1238&action=tree>

### On Reserve in McLaughlin Library (under NUTR\*4040)

- Gibson RS. Principles of Nutritional Assessment, 2<sup>nd</sup> ed. New York: Oxford University Press, 2005.
- Nelms M, Sucher K, Lacey K, Long Roth S. Nutrition Therapy and Pathophysiology. 2<sup>nd</sup> edition. Wadsworth, Cengage Learning. Belmont CA, 2011.

## Resources - Writing

- Edwards M. What is a Systematic Literature Review? July 2014
- PEN and SLR referencing guidelines are posted to CourseLink
- Use RefWorks to manage references for your SLR/PEN pathway. RefWorks is a web-based database manager and bibliography creation tool. It allows you to collect references from a wide variety of electronic resources (e.g., PubMed) to create your own personal reference database. If you use Microsoft Word, your collected references can be seamlessly integrated into your term paper following APA format for the text of the paper and the reference list. Register for a RefWorks workshop at the Office of Student Affairs website (<http://www.studentaffairs.uoguelph.ca/home/>), under "Current Events".

## Resources – Critiquing a Journal Article

From the University of Guelph library:

[http://www.lib.uoguelph.ca/assistance/writing\\_services/resources/components/documents/scientific\\_review.pdf](http://www.lib.uoguelph.ca/assistance/writing_services/resources/components/documents/scientific_review.pdf)

## Policies

Late Penalty and Missed Work

I recognize that life is busy and that it can be challenging to meet a deadline. That said, your responsibility is to complete the various course requirements on time. **Contact me as soon as you can to let me know of any issues/conflicts with any due dates.** (...cont'd on next page)

#### Late Penalty and Missed Work (cont'd)

- If you cannot make our scheduled **individual consult**, email me (abuchhol@uoguelph.ca) to reschedule. I can accommodate one rescheduled meeting.
- The **1 pg SLR/PEN pathway outline** is due Mon Oct 20. It is not graded, so while if you do not submit it there is no penalty, you won't receive formative feedback. If the outline is submitted late, there is still the opportunity for feedback (not to worry!); you'll just have less time to address/incorporate the feedback into your final SLR/PEN pathway.
- The **oral presentation** schedule is tight. If you are cannot make your scheduled date, there are three options: (1) if you know ahead of time that you won't be able to present on your scheduled date, it is your responsibility to find a classmate willing to switch dates with you; (2) present to me in my office, one-on-one, at a mutually convenient time; (3) If you can think of a third option, run it by me!
- The **near-final draft of your SLR/PEN pathway** is due Mon Nov 24. A classmate will review it *in class, in real time*, and you will do the same for a classmate's work. If you are unable to make it on Mon Nov 24:
  - You can still submit a near-final draft up to and including Wed Nov 26. Your classmate will still do the peer review, but to be fair to his/her schedule, there is no guarantee you will receive the review in time for the final SLR/PEN pathway submission date.
  - You can still provide peer review of a classmate's work, up to and including Wed Nov 26 with a 10% *per day* penalty, unless medical or other suitable documentation is provided. Peer reviews won't be accepted after Wed Nov 26, to give your classmate time to act on feedback prior to the final due date.
- The **final SLR/PEN pathway** is due Mon Dec 1. There is a 10% *per day* penalty for every day that your work is submitted late unless medical or other suitable documentation is provided. SLR/PEN pathways won't be accepted after Fri Dec 5.

#### 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.

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. It is your responsibility to know and abide by rules pertaining to academic misconduct. These rules can be found in the 2014-2015 Graduate Calendar and on the following website: <https://www.uoguelph.ca/graduatestudies/gchandbook/academicmisconduct>

Students who have copied answers from the internet or a published source (i.e., who appear to have engaged in academic misconduct) will be reported to the Chair of Family Relations and Applied Nutrition, who will render a decision, or under certain circumstances, forward a report to the Dean of the College of Social and Applied Human Sciences for a decision. If you're unsure about what constitutes academic misconduct, come talk to me and/or take the Learning Commons' online tutorial on academic integrity, which includes a plagiarism module, at <http://www.academicintegrity.uoguelph.ca/index.cfm>

## Practice-Based Evidence in Nutrition (PEN) Pathway

\*You can choose to write either an adapted PEN pathway or a systematic literature review\*

Practice-based Evidence in Nutrition (PEN, [www.pennutrition.com](http://www.pennutrition.com)) is an evidence-based decision support resource developed by Dietitians of Canada, designed to help dietitians keep pace with food and nutrition research. It provides knowledge pathways on a variety of topics (over 175 and climbing!). PEN pathway authors identify relevant literature from various sources, and then critically appraise, grade and synthesize that literature into key practice points to answer specific practice questions.

Developing a PEN pathway requires excellent literature searching skills and appropriate bounding of the topic, so that the project is neither too small nor too large. To allow for feedback early in the process, submit an outline consisting of the title of your PEN pathway topic, your practice questions, methods for searching, as well as a list of approximately 20 key references (original research articles, meta-analyses, systematic literature reviews, etc.).

### How To Write a PEN Pathway

While a complete PEN pathway contains several components, you will create an adapted PEN pathway and so are only responsible for providing:

- A structured abstract;
- Introduction and background of the topic/condition;
- 2 to 4 practice questions, each accompanied by a series of key practice points, evidence grade and evidence;
- An overall summary/conclusion.

You are **NOT** responsible for the other components of a PEN pathway, including practice guidance summary/toolkit, related tools and resources, or question/pathway key words.

### Possible Topics for PEN Practice Questions

If you are interested in updating practice questions for a topic, visit [www.pennutrition.com](http://www.pennutrition.com) to view the list of published practice questions. Examples include:

- Do pediatric cancer patients with neutropenia who consume a neutropenic diet compared to those who consume a non-neutropenic diet have better clinical outcomes (e.g. fewer infections, fevers, morbidity)? (*last updated in 2010*)
- Is fat-soluble vitamin supplementation necessary/safe for individuals with chronic liver disease? (*last updated in 2008*)
- Are clear fluid diets and full fluid diets required after surgery? (*last updated in 2008*)
- Is a low protein diet effective in delaying disease progression in adults with chronic kidney disease (CKD)? (*last updated in 2009*)

If you are interested in creating new practice questions, visit PEN to confirm that the question has not already been published. Then, create 2 to 4 clearly structured questions using the PICO model. Doing so makes finding evidence easier.

### **Calling all MSc students!**

Perhaps choose practice questions related to your MSc thesis topic – ask your thesis advisor for suggestions. If you do so, feel free to invite your advisor to your presentation.

Or maybe there is a topic from your undergraduate clinical nutrition courses and which niggles (i.e., you wanted to learn more). Now's your chance to un-niggle!

### **Calling all MAN students!**

Perhaps choose practice questions from your placement – ask your preceptor for suggestions. If you do so, feel free to invite your preceptor to your presentation. Alternatively, revisit your learning plan from the recent Clinical Boot Camp. Is there a topic about which you would like to learn more? Now's your chance!

### **Format**

Your adapted PEN pathway should be 15-20 pages, double spaced, 12 pt Times New Roman font, 1" margins. Tables, lists, etc., can be single spaced. The page limit excludes title page, references and appendices (if applicable). Be sure to include both page numbers and line numbers to facilitate peer review. Include a structured abstract; introduction and background; 2-4 practice questions with key practice points, evidence grade and evidence; and, an overall summary/conclusion.

### **Abstract**

Provide a structured abstract (not to exceed 250 words) and which includes an introduction (including clearly articulated practice questions following PICO model), methods, results and conclusion. You'll find an example abstract on the next page.



**Example Abstract (adapted from Nicole Osinga, 2013 MAN graduate - reproduced with permission)**

**Introduction**

Flaxseed has a unique nutrient profile which includes dietary fibre, lignans, and alpha linolenic acid. Lignans have antimitotic, antiangiogenic, antioxidant, antiestrogenic and hypoglycemic effects and therefore may have implications for diabetes, menopause and prostate cancer. A literature review was conducted and used to update flaxseed pathways on the Practice-based Evidence in Nutrition (PEN) database, to answer three practice questions: (1) How does glycemic control of adults with well-controlled Type 2 diabetes differ between those who do vs. do not supplement with flaxseed? (2) Does flaxseed alleviate or reduce menopausal symptoms in women experiencing climacteric symptoms? (3) What is the effect of flaxseed on risk of recurrence of prostate cancer in humans?

**Methods**

Pubmed was used to find articles to answer the three practice questions. Research was appraised and graded using PEN's Critical Appraisal Tool and Evidence Grading Checklist. Evidence was then summarized into Key Practice Points and Evidence Statements.

**Results**

- 1) Glycemic indices of individuals with stable type 2 diabetes may be improved with the addition of supplemental flaxseed.
- 2) Supplemental flax does not appear to improve mild and moderate menopausal symptoms, although the severity of menopausal symptoms may impact results.
- 3) In combination with a low fat diet, flaxseed may reduce the risk of recurrence of prostate cancer in humans, based on surrogate markers.

**Conclusion**

Although no dose recommendations can currently be made for flaxseed consumption with the above conditions, flaxseed appears safe for human consumption. Additional randomized control trials are needed to confirm these results.

***Introduction and Background***

This includes background information about the condition/topic, and should be approximately 3 to 4 pages. It should be sufficiently descriptive so as to provide a practitioner new to the area of practice with the background information needed to understand the context of the practice questions to follow, and may include information such as prevalence, etiology, diagnosis, etc.

The background also includes identifying the PEN practice category (Population Health/Lifecycle; Health Condition/Disease; Food/Nutrients; Professional Practice) to which the pathway belongs, as well as the subcategory (Health Promotion/Prevention; Assessment/Surveillance; Intervention; Evaluation/Outcome Indicators; Education).

### **Practice Questions**

A well written background will set the stage for the 2 to 4 practice questions to follow. Your practice questions should follow the PICO model, described in the table below:

<b>PICO Model for Developing a PEN Practice Question (adapted from PEN Writer's Guide, 2013)</b>	
Population - the relevant patients, clients or groups	<i>Do patients with ileostomies...</i>
Intervention or exposure	<i>who consume a high fibre diet (&gt;20g)...</i>
Comparison or control	<i>compared to those who consume a low fibre diet (5-10g)...</i>
Outcome (what are the patient-, client- or group-relevant consequences of the exposure in which we are interested?)	<i>have a higher incidence of ostomy blockage?</i>

How many practice questions you include depends on how many key practice points are needed to answer each question. If your questions have several accompanying key practice points, then only two questions may be needed. If, on the other hand, your questions have only one practice point, then four questions may be needed. Let the 15 to 20 page limit for this assignment guide you.

### **Key Practice Points**

A key practice point is a statement (typically 1-4 sentences) which directly answers your practice question. It is supported by an evidence grade and is followed by evidence.

### **Grade of Evidence**

Assign each key practice point a grade of evidence, where a grade of A denotes GOOD evidence; B denotes FAIR evidence; and C denotes LIMITED evidence, or expert opinion. A grade of D means that a conclusion is either not possible or is extremely limited because evidence is unavailable and/or of poor quality and/or is contradictory.

See PEN Evidence Grading Checklist posted to CourseLink.

### **Evidence**

This section contains a study-by-study summary of the evidence which supports your key practice point. Each paragraph stands alone and is a short description of the study or meta-analysis or systematic literature review you deemed sufficiently important to help answer your key practice point.

## ***Putting it All Together: How to Present Your Practice Question, Key Practice Point, Grade of Evidence and Evidence***

Practice Question (repeat format for each question, and based on PICO model)

Key Practice Point (repeat format for each practice point)

1.

Grade of Evidence (A, B, C or D)

Evidence

a.

b.....

Key Practice Point

2.

Grade of Evidence (A, B, C or D)

Evidence

a.

b.....

### ***Example Practice Question (adapted from Nicole Osinga, 2013 MAN graduate - reproduced with permission)***

#### ***Practice Question***

How does glycemic control of adults with well-controlled Type 2 diabetes differ between those who do vs. do not supplement with flaxseed?

#### ***Key Practice Point***

1. A daily intake of 10-60 g of whole flaxseed supplemented to the usual diets of well-controlled Type 2 diabetics may improve glycemic indices.

#### ***Evidence Grade: B***

#### ***Evidence***

a. A non-randomized clinical trial of 29 people with stable Type 2 diabetics (22 M and 7 F; ages averaging 56.4 and 57.3 in the control and experimental groups, respectively) who managed their diabetes with either diet alone, medication or insulin, consumed 10 grams of flaxseed powder supplemented at meals daily for one month (1). Supplementation with flaxseed powder reduced fasting blood glucose by 19.7% and glycated hemoglobin by 15.6% (both  $P=0.009$ ) in the experimental group ( $n=18$ ). There were no significant reductions observed in the control group ( $n=11$ ). Limitations of this study include the non-randomization of participants, the lack of blinding, the small sample size, the short duration of the study, the heterogeneity of the sample groups (more participants managed their diabetes by insulin and oral hypoglycemic medications in the experimental group compared to the control group) and the limited generalization of the study, due to the stability of their diabetes. It should also be noted that although the authors state that the participants were told to maintain their current eating and exercise habits, there was no information given about the methods or tools used to monitor and assess diets.

b. ...

#### ***Key Practice Point***

2. ...

### **Summary/Conclusion**

Finish your adapted PEN pathway with a one-paragraph conclusion summarizing your practice questions and key practice points, and providing (an) overall “take away” message(s) for practitioners and recommendations for future research.

### **Referencing (adapted from PEN Style Guide posted to CourseLink)**

Reference numbers in the text should be cited by using numbers in parenthesis at the end of the first sentence that refers to the material cited, before the period, such as (1). Do not use superscript. Multiple sequential referencing should be listed with the first and last number with a hyphen separating the two numbers e.g., (1-3).

### **How to Reference a Journal Article**

French MR, Moore K, Vernace-Inserra F, Hawker GA. Factors that influence adherence to calcium recommendations. *Can J Diet Pract Res.* 2005 Spring;66(1):25-9.

- List all authors when six or fewer; when six or more, list only the first six and add "et al."  
Example: Smith A, Jones B, Smith C, Jones D, Smith E, Jones F, et al.
- Abbreviate periodical titles according to Index Medicus. If a title does not appear in Index Medicus, provide the complete title.

### **Evaluation**

Your work will be graded according to the criteria in the following Evaluation form. This is also the same form that your peer reviewer will use to evaluate your PEN pathway.

The adapted PEN pathway is worth a minimum of 20% of your final grade. Decide on your preferred weighting for the PEN pathway and oral presentation by your individual consult (Sept 29/Oct 6).

# FRAN\*6610 Adapted PEN Pathway - EVALUATION

Adapted from *PEN Writers' Guide Reviewer Checklist*, March 2013, used to evaluate PEN pathways submitted for publication on [www.pennutrition.com](http://www.pennutrition.com).

Name: \_\_\_\_\_ Date: \_\_\_\_\_

*For Instructor Use*

Abstract

= (     x10)/20

=     /10

## Abstract

1. Are the practice questions appropriately stated and supported?

1	2	3	4	5
(no)		(improvement required)		(yes)

2. Are the methods used clearly outlined?

1	2	3	4	5
(no)		(improvement required)		(yes)

3. Are the major results clearly outlined?

1	2	3	4	5
(no)		(improvement required)		(yes)

4. Are the main conclusions and recommendations clearly outlined?

1	2	3	4	5
(no)		(improvement required)		(yes)

Introduction

= (     x15)/10

=     /15

## Introduction/Background

5. Is the background sufficiently descriptive so as to provide a practitioner new to the area of practice with the information needed to understand the context of the practice questions to follow?

1	2	3	4	5
(no)		(improvement required)		(yes)

6. Does the background include the correct PEN practice category and subcategory?

1	2	3	4	5
(no)		(improvement required)		(yes)

Practice Questions = (      x10)/15 =      /10
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**Practice Questions**

7. Are practice questions written in a clear, concise manner consistent with PICO?

1	2	3	4	5
(no)		(improvement required)		(yes)

8. Are they suitable as foreground practice questions rather than general background information?

1	2	3	4	5
(no)		(improvement required)		(yes)

9. Are they relevant to the topic/condition?

1	2	3	4	5
(no)		(improvement required)		(yes)

Key Practice Points = (      x20)/30 =      /20
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**Key Practice Points**

10. Are the key practice points relevant to the practice questions?

1	2	3	4	5
(no)		(improvement required)		(yes)

11. Are they clearly written?

1	2	3	4	5
(no)		(improvement required)		(yes)

12. Are they comprehensive (no other practice points need to be made to answer practice questions)?

1	2	3	4	5
(no)		(improvement required)		(yes)

13. Do they meet V in VIA model: Valid (trustworthy)?

1	2	3	4	5
(no)		(improvement required)		(yes)

14. Do they meet I in VIA model: Important (will make an important difference to practice)?

1	2	3	4	5
(no)		(improvement required)		(yes)

15. Do they meet A in VIA model: Applicable (information can be used in practice setting – consider access, practicality, cost issues, etc.)?

1	2	3	4	5
(no)		(improvement required)		(yes)

Evidence = (      x20)/15 =      /20
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**Evidence Statements Supporting Key Practice Points**

16. Do all important articles appear to have been included as part of the evidence for each key practice point?

1	2	3	4	5
(no)		(improvement required)		(yes)

17. Is the evidence graded appropriately?

1	2	3	4	5
(no)		(improvement required)		(yes)

18. Is the evidence current?

1	2	3	4	5
(no)		(improvement required)		(yes)

Summary/Conc = (      x5)/15 =      /5
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**Summary/Conclusion**

19. Does the summary/conclusion summarize practice questions and key practice points?

1	2	3	4	5
(no)		(improvement required)		(yes)

20. Does it provide helpful “take away” message for practitioners?

1	2	3	4	5
(no)		(improvement required)		(yes)

21. Are future directions for research indicated?

1	2	3	4	5
(no)		(improvement required)		(yes)

References = (      x5)/15 =      /5
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**References**

22. Are the references appropriate in **number**?

1	2	3	4	5
(no)		(improvement required)		(yes)

23. Are the references appropriate in **quality**?

1	2	3	4	5
(no)		(improvement required)		(yes)

24. References (in text and in reference list) are cited appropriately.

1	2	3	4	5
(no)		(improvement required)		(yes)

General considerations = (      x15)/5 =      /15
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**General Considerations**

25. Is the pathway well presented (including the style of writing-spelling grammar, punctuation, follows formatting guidelines)?

1	2	3	4	5
(no)		(improvement required)		(yes)

<b>TOTAL</b> /
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## Systematic Literature Review (SLR)

\*You can choose to write either a systematic literature review or an adapted PEN pathway\*

Developing a systematic literature review requires excellent literature searching skills and appropriate bounding of the topic, so that the project is neither too small nor too large. To allow for feedback early in the process, submit an outline (due Oct 20) consisting of the title of your SLR (your research question), methods for searching (including inclusion criteria and quality review), as well as a list of approximately 20 key primary studies.

### How to Write a SLR

Your systematic literature review should include a structured abstract (not exceeding 250 words), introduction, methods, results, discussion (including limitations and suggestions for future research) and a conclusion.

A “quick n’ dirty” resource is: Edwards M. What is a systematic review? July 2014. A more detailed how-to is: Wright RW et al. How to write a systematic review. Clin Ortho Rel Res. 2007. 455:23-9. *Both resources are available on CourseLink.*

### Possible Topics

- Clinical conditions/populations such as:
  - Renal
  - Critical care/ICU
  - Surgery
  - Inborn errors of metabolism (e.g., phenylketonuria (PKU))
  - Thermal trauma
  - Pre-term birth
  - Failure to thrive (FTT)
  - Organ transplant
  - HIV/AIDS
  - Obesity and mental health
  - Diet and mental health (i.e., food and mood)
- FODMAP (fermentable oligo-di-monosaccharides and polyols)
- Nutrition support (enteral, parenteral)
- Drug-nutrient interactions
- Use of apps in clinical nutrition practice
- ???

### Note

The above list is by no means exhaustive. If no topic catches your eye, suggest an alternative.

Try browsing the Hamilton Health Sciences’ Patient Education Library for ideas:

<http://www.hamiltonhealthsciences.ca/body.cfm?xyzpdqabc=0&id=1238&action=tree>

**The topic you choose should not have had a meta-analysis or Cochrane review completed.**

## **Format**

The SLR should be 15-20 pages, double spaced, 12 pt Times New Roman font, 1" margins. Tables, lists, etc. can be single spaced. The page limit excludes title page, references and appendices (if applicable). Be sure to include both page numbers and line numbers to facilitate peer review.

## **Referencing (adapted from PEN Style Guide posted to CourseLink)**

Reference numbers in the text should be cited by using numbers in parenthesis at the end of the first sentence that refers to the material cited and should be before the period, such as (1). Do not use superscript. Multiple sequential referencing should be listed with the first and last number with a hyphen separating the two numbers e.g., (1-3).

## **How to Reference a Journal Article**

French MR, Moore K, Vernace-Inserra F, Hawker GA. Factors that influence adherence to calcium recommendations. Can J Diet Pract Res. 2005 Spring;66(1):25-9.

- List all authors when six or fewer; when six or more, list only the first six and add "et al." Example: Smith A, Jones B, Smith C, Jones D, Smith E, Jones F, et al.
- Abbreviate periodical titles according to Index Medicus. If a title does not appear in Index Medicus, provide the complete title.

## **Evaluation**

Your work will be graded according to the criteria in the following Evaluation form. This is also the same form that your peer reviewer will use to evaluate your SLR.

The SLR is worth a minimum of 20% of your final grade. Decide on your preferred weighting for the SLR and oral presentation by your individual consult (Sept 29/Oct 6).

# FRAN\*6610 Systematic Literature Review – EVALUATION

Adapted from *Canadian Journal of Public Health*, used to evaluate SLRs submitted for publication.

Author: \_\_\_\_\_

Reviewer: \_\_\_\_\_

*For Instructor Use*  
 Abstract  
 = (      x10)/20  
 =      /10

## Abstract

1. Is the research question clearly stated?

1	2	3	4	5
(no)		(improvement required)		(yes)

2. Are the methods used clearly outlined?

1	2	3	4	5
(no)		(improvement required)		(yes)

3. Are the major results clearly outlined?

1	2	3	4	5
(no)		(improvement required)		(yes)

4. Are the main conclusions and recommendations clearly outlined?

1	2	3	4	5
(no)		(improvement required)		(yes)

Introduction  
 = (      x15)/30  
 =      /15

## Introduction/Background

5. Are the background and context presented?

1	2	3	4	5
(no)		(improvement required)		(yes)

6. Is the research question clearly defined?

1	2	3	4	5
(no)		(improvement required)		(yes)

7. Is the stated research question relevant?

1	2	3	4	5
(no)		(improvement required)		(yes)

8. Are the populations of the studies clearly identified?

1	2	3	4	5
(no)		(improvement required)		(yes)

9. Are the interventions of the studies clearly defined?

1	2	3	4	5
(no)		(improvement required)		(yes)

10. Are the outcomes of the studies clearly described?

1	2	3	4	5
(no)		(improvement required)		(yes)

## Methods

Methods = (      x15)/30 =      /15
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11. Are the search strategies used to identify relevant articles described?

1	2	3	4	5
(no)		(improvement required)		(yes)

12. Are the databases searched presented?

1	2	3	4	5
(no)		(improvement required)		(yes)

13. Are key words listed?

1	2	3	4	5
(no)		(improvement required)		(yes)

14. Are methods to identify other sources of studies described? (e.g., dissertation theses, unpublished studies)

1	2	3	4	5
(no)		(improvement required)		(yes)

15. Is the method described to synthesize the data from included studies appropriate?

1	2	3	4	5
(no)		(improvement required)		(yes)

16. Are the methods for including or excluding articles in the analysis described explicitly?

1	2	3	4	5
(no)		(improvement required)		(yes)

## Results

Synthesis = (      x15)/20 =      /15
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17. Are the results of the search described? (number of studies identified, number included, main reasons for exclusion)

1	2	3	4	5
(no)		(improvement required)		(yes)

18. Is the information from the included studies integrated systematically?

1	2	3	4	5
(no)		(improvement required)		(yes)

19. Is the validity of the included studies assessed according to critical appraisal principles?

1	2	3	4	5
(no)		(improvement required)		(yes)

20. Are variations in the findings explained?

1	2	3	4	5
(no)		(improvement required)		(yes)

## Discussion

Discussion = (      x20)/25 =      /20
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21. Is a summary of the key findings of the systematic review presented?

1	2	3	4	5
(no)		(improvement required)		(yes)

22. Are variations between studies discussed?

1	2	3	4	5
(no)		(improvement required)		(yes)

23. Are the effects of the variations on the final results discussed?

1	2	3	4	5
(no)		(improvement required)		(yes)

24. Are limitations presented?

1	2	3	4	5
(no)		(improvement required)		(yes)

25. Are future directions for research indicated?

1	2	3	4	5
(no)		(improvement required)		(yes)

**Conclusion**

Conclusion = /5
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26. Is the conclusion supported by evidence in the article?

1	2	3	4	5
(no)		(improvement required)		(yes)

**References**

References = ( x5)/15 = /5
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27. Are the references appropriate in **number**?

1	2	3	4	5
(no)		(improvement required)		(yes)

28. Are the references appropriate in **quality**?

1	2	3	4	5
(no)		(improvement required)		(yes)

29. References (in text and in reference list) are cited appropriately.

1	2	3	4	5
(no)		(improvement required)		(yes)

### General Considerations

30. Is the SLR well presented (including the style of writing-spelling, grammar, punctuation, follows formatting guidelines)?

General considerations = (        x15)/5 =        /15
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1	2	3	4	5
(no)		(improvement required)		(yes)

Comments

<b>Total =        /100</b>
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## FRAN\*6610 - Evaluation of Peer Review of SLR/PEN Pathway (15% of final grade)

Your name: \_\_\_\_\_

Name of classmate whose work you reviewed: \_\_\_\_\_

1. Was there sufficient feedback?

1	2	3	4	5
(no)		(improvement required)		(yes)

2. Was the feedback specific, including the what, why and how of what can be improved?

1	2	3	4	5
(no)		(improvement required)		(yes)

3. Were comments structured as questions or suggestions?

1	2	3	4	5
(no)		(improvement required)		(yes)

4. Was the feedback clear and easy to understand?

1	2	3	4	5
(no)		(improvement required)		(yes)

5. Was the feedback at the appropriate level (i.e., neither superficial nor 'nitpicky')

1	2	3	4	5
(no)		(improvement required)		(yes)

**Comments:**

/25 =      /10
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## Oral Presentation

Your oral presentation can be delivered by any one of the methods listed below. Regardless of delivery method:

- The topic should relate in some way to your SLR/PEN pathway topic.
- The presentation should be 25 to 30 minutes, including content delivery, learning activities, discussion, etc.
- The presentation should follow the BOPPPS instructional method (see next page).
- You can, but need not, use PowerPoint.
- You can do this presentation independently or, provided your SLR/PEN pathway topics overlap, with a partner.
- “360° feedback”: Your peers will evaluate your presentation using your choice of feedback form (to be provided). I will use the evaluation on p. 27-28. Then, reflect – in writing or in person with me – on all the feedback you receive. Do you agree/disagree with the various points raised? What will you do the same/change in future presentations? Etc.

## Delivery Methods – Choose One

### ***Critique of an Original Research Article***

Critical appraisal involves identifying strengths and limitations not just of the article itself, but importantly, the design of the study, and the science, on which the article is based. Keep this in mind as you critique each section of an article of your choosing - including the title, abstract, introduction, methods (participants, research design, methodology, data analysis), results, discussion, directions for future research, and conclusion.

The following resource from the University of Guelph library may be helpful:

[http://www.lib.uoguelph.ca/assistance/writing\\_services/resources/components/documents/scientific\\_review.pdf](http://www.lib.uoguelph.ca/assistance/writing_services/resources/components/documents/scientific_review.pdf). *Circulate your research article to the class one week ahead of time.*

### ***Controversy/Debate***

Is there a contentious issue associated with your topic? For example, some hospitals initiate post-operative oral or enteral nutrition in the absence of bowel sounds, whereas other hospitals wait for bowel sounds before initiating feeding. Present both sides of the debate and then include the class in a discussion of pros and cons. Take, and justify, a stand (choose a side).

### ***Teach a Class to Dietitians New to this Area of Practice***

If your topic is novel (e.g., FODMAP), pretend we are a group of dietitians new to this area of practice. You are the content expert here to tell us what we need to know to be involved in the care of patients in this population.

### ***Teach a Class to Patients Newly Diagnosed With a Condition***

Pretend we are patients who have been newly diagnosed with a condition, and who are attending a patient education session led by a registered dietitian. What do we need to know about our condition, from a nutritional perspective? What is the condition? How does it affect our health? What foods should we avoid/ consume? How should we monitor our condition? etc.

## **BOPPPS Instructional Method**

Adapted from Centre for Curriculum, Transfer and Technology. Instructional Skills Workshop Manual. Pat Pattison and Russell Day (Eds). Victoria BC; 2006

Regardless of delivery method, your oral presentation should follow the BOPPPS model.

### **Bridge**

- Introduction, the “hook,” why the topic is important
- Typically short
- Strategies include providing the reason for learning the topic; telling a story related in some way to the topic; referring something about the topic to the class’s experience; posing a question about the topic; offering an unusual fact or surprising statement

### **Objective**

- Learning objective - what will the class “get out” of your presentation?

### **Pre-Test**

- Find out what students know
- Allows the class to add their own experiences to improve participation and engagement
- Strategies include a short quiz; closed- and open-ended questions; brainstorming; gathering collective knowledge of the group around the topic.

### **Participatory Learning**

- This is your main lesson or content delivery, and which incorporates participation and interaction (between you and students and/or between students)
- Try to encourage students to become actively involved in achieving the objective(s)
- Strategies include discussion, debate, problem-solving, reflection through writing or discussion, application tasks, think-pair-share, case studies, scenarios, simulations.

### **Post-Test**

- What did students learn? Were your desired learning objectives accomplished?
- Typically short
- Strategies for post-assessment: a short quiz; one minute-paper; performance or demonstration of a skill; problem-solving; analysis of a scenario

### **Summary**

- Wrap up; summarize content.
- Create closure by relating back to the ideas covered in the Bridge
- Strategies include content review; asking class what they can do with, or how they can apply, the obtained knowledge; individual voice (quick roundtable for each person to have a ‘last word’); revisit the original learning objectives.



**Voice, Language and Mannerisms**

1	2	3	4	5
Hard to hear/too loud. Monotonous voice. Poor pronunciation. Raises voice at end of sentences. Uses “um” and/or “like”. Tense, stiff, and/or displays mannerisms which detract.				Voice can be heard easily. Tone of voice varied. Good diction. Does not raise voice at end of sentences. Relaxed posture, no distracting mannerisms.

**Overall Style and Level of Presentation**

1	2	3	4	5	6	7	8	9	10
Unprofessional. Too informal. Presented at a level too high/too low for this audience. Not confident. Hesitant. Rushed/slow. Visual aids, if used, do not add to the presentation and/or do not help understanding.							Appropriate for audience (professional, “pitched” at suitable level). Relaxed. Confident. Good pace. Visual aids, if used, are effective in enhancing presentation and helping understanding.		

Comments:

<b>TOTAL</b>	<b>/100</b>
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3. In your view, did you provide constructive and helpful feedback to your peers during the semester? This includes feedback on oral and written efforts.

4. What else do you feel should be considered in determining your engagement grade?

**YOUR SELF-ASSIGNED GRADE FOR ENGAGEMENT \_\_\_\_\_ /15**  
*[Your self-assigned grade will be taken into consideration]*