



**NUTR\*4120: Applied Clinical Skills  
Winter 2015  
COURSE OUTLINE**

**Instructor**

Andrea "Dr. B" Buchholz, PhD, RD

**Contact Info**

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**Office Hours**

By appointment

**Course Day, Time and Location**

Mondays, 11:30AM-2:20PM, classroom TBA

**Course Description**

This is a laboratory-based course which will enable you to gain skills in independently completing nutritional assessments and care plans of individuals and groups as you would be expected to do as nutrition professionals. You will comprehensively assess nutritional status (with an emphasis on nutrition-focused physical examination) and apply knowledge of human physiology, pathophysiology, medical terminology and nutritional assessment to diagnose nutritional problems/issues.

**Prerequisites**

NUTR\*4010 (Assessment of Nutritional Status)

NUTR\*4040 (Clinical Nutrition II)

## Learning Outcomes

1. To demonstrate practical clinical skills used in hospital/clinical settings, with an emphasis on patient interaction and nutrition-focused physical examination.
2. To integrate findings from a nutrition-focused physical examination (NFPE) with those from other components of a nutritional assessment.
3. To demonstrate proficiency in medical charting, including appropriate use of medical terminology and short forms/abbreviations.

## Evaluation

Learning activity	Weighting	Date Due
Medical charting assignment	5%	Jan 19
Anthropometry and BIA lab report	20%	Feb 9*
Quizzes (best 3 of 4 counted)	15%	Throughout
NFPE practical exam (in pairs, with a standardized patient)	20%	Mar 23/30
Nutritional assessment integration assignment	25%	Apr 2
Participation	15%	Throughout
Total	100%	

\*Those students who complete the anthropometry and BIA lab on Feb 2 can have an extension on the lab report until Fri Feb 13.

## Resource – Strongly Recommended

NUTR\*4120 course pack, available at campus bookstore.

## Resource - Recommended

Jarvis, C. Physical Examination & Health Assessment, 2nd Canadian Edition. 2014. Saunders Elsevier. Pocket Companion. Available at campus bookstore.

## CourseLink

You will find each unit of this course pack uploaded under the “Content” tab, where you will also find two exemplars of the integration assignment. Other than this, we will use CourseLink mainly for the Grades feature.

## My Responsibilities

I will guide you as skillfully as possible through the practical application of various clinical skills. I will try to promote a positive, respectful and professional student-centered learning environment that will progressively challenge you to develop your clinical skills in a variety of situations. I will continue to try my best to teach you to think like a clinician.

## Your Responsibilities

- This is a hands-on class. It is not a spectator sport. You are therefore invited – and expected – to come to classes and labs prepared to actively participate.
- Professionalism. There are sensitive components to a physical examination. Everyone will have a different comfort level with this process, as patient and also as clinician. No giggling, eye-widening, pointing, quizzical looks, making fun of anyone for any reason, inappropriate comments, etc., while conducting any aspect of any physical exam on anyone. This applies to performing assessments on your NUTR\*4120 peers and simulated patients, and having assessments performed on you.
- Confidentiality. As is expected when working in a clinical setting (i.e., hospital), you are expected to maintain strict confidentiality about your “patients” (i.e., peers and standardized patients). It is unacceptable to tell anyone anything of an intimate nature about any of your peers or simulated patients. (e.g., “I measured Susie’s triceps skinfold thickness in lab today. Wow, is she ever skinny.”). **100% confidentiality is expected 100% of the time. NO PHOTOGRAPHY.**
- Hygiene. Wash your hands thoroughly with warm soapy water before conducting a physical examination. Clean the ear pieces of a stethoscope with an alcohol swab before inserting into your ears (for your protection), and the bell/diaphragm of the stethoscope before touching a patient (for the patient’s protection). No perfume or cologne. The lab, like many hospitals, is a scent-free zone.

## NOTE

Selected units of this course involve nutrition-focused physical examination, including Subjective Global Assessment; skin assessment; anthropometric assessment; dysphagia screening; and abdominal assessment. These units require physical contact between you and your peers as well as simulated patients. Relevant body parts include the arms, waist, hips, legs (knees, ankles, feet), abdomen and face (cheeks).

**IF YOU ARE NOT COMFORTABLE HAVING ANY OF THE ABOVE BODY PARTS TOUCHED, OR TOUCHING THESE BODY PARTS ON ANOTHER PERSON, THIS COURSE IS NOT FOR YOU.**

## **Policies**

### **When You Are Unable to Meet a Course Requirement**

Life happens to all of us! When you find yourself unable to meet a course requirement due to illness or compassionate reasons, please advise me in writing (email is fine). Where possible, this should be done in advance of the missed requirement, but otherwise, just as soon as possible after the due date, and **certainly not longer than one week later**. Appropriate written documentation of your inability to meet the course requirement is required. Otherwise, late assignments will incur a 10% (out of 100) per day (including weekend days) penalty.

### **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. Rules pertaining to academic misconduct can be found in the 2014-2015 Undergraduate Calendar and on the following website:

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

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.

## Schedule

Week	Date	Topic
1	Jan 5	<ul style="list-style-type: none"> <li>• Course introduction and overview</li> <li>• Patient interaction and communication</li> </ul>
2	Jan 12	<ul style="list-style-type: none"> <li>• Quiz on patient interaction and communication</li> <li>• Medical terminology and charting</li> </ul>
3	Jan 19	<ul style="list-style-type: none"> <li>• <b>Medical charting assignment due</b></li> <li>• Quiz on medical terminology and charting</li> <li>• Introduction to nutrition-focused physical examination (NFPE)</li> <li>• Subjective Global Assessment (SGA)</li> </ul>
4	Jan 26	<ul style="list-style-type: none"> <li>• Quiz on NFPE and SGA</li> <li>• Anthropometry and BIA - background</li> <li>• Anthropometry and BIA lab for half the students, in second half of class. Dress comfortably and bring a calculator.</li> </ul>
5	Feb 2	<ul style="list-style-type: none"> <li>• Anthropometry and BIA lab for half the students, in first half of class. Dress comfortably and bring a calculator.</li> <li>• Skin assessment - background</li> </ul>
6	Feb 9	<ul style="list-style-type: none"> <li>• <b>Anthropometry and BIA lab report due (those that do the lab on Feb 2 can have an extension to Fri Feb 13)</b></li> <li>• Quiz on anthropometry and BIA</li> <li>• Skin assessment - SP</li> </ul>
~ READING WEEK ~		
7	Feb 23	<ul style="list-style-type: none"> <li>• Dysphagia screening and dietary management - background</li> </ul>
8	Mar 2	<ul style="list-style-type: none"> <li>• Dysphagia screening - SP</li> <li>• Abdominal assessment - background</li> </ul>
9	Mar 9	<ul style="list-style-type: none"> <li>• Abdominal assessment – SP</li> <li>• Integrating dietary, biochemical, anthropometric, and clinical/physical assessments</li> <li>• Form pairs; NFPE date, time and clinical condition assigned</li> </ul>
10	Mar 16	<ul style="list-style-type: none"> <li>• Time to practice NFPE skills on one another and SP</li> </ul>
11	Mar 23	<b>NFPE practical exam with SP (meet in lab at your team's assigned time)</b>
12	Mar 30	<b>NFPE practical exam with SP (meet in lab at your team's assigned time)</b>
	Th Apr 2	Hard copy of Integration Assignment due in office hour (1:00-2:15PM)

SP = standardized patients

## **Assignments**

Assignments (medical charting; anthropometry and BIA lab report; NFPE practical exam and integration assignment) are described on the following pages of this Course Outline.

Late assignments will incur a 10% (out of 100) per day (including weekend days) penalty, unless accompanied by a medical note.

## **Quizzes (15% of final grade, throughout semester)**

There are a total of 4 equally-weighted quizzes; only 3 will count towards your final grade. That is, the lowest (or a missed) quiz will be dropped from your final grade.

## **Participation (15% of final grade, throughout semester)**

This is a small class. Everyone's participation in class and labs is needed and appreciated to make the course a success. The participation grade is based on the frequency and quality of your oral participation in class (that which is considered "traditional" participation in a university course), as well as your active, professional and respectful participation in lab. The latter includes performing nutrition-based physical exams on your peers and simulated patients, and having nutrition-based physical exams performed on you by your peers. Inappropriate or unprofessional behaviour (i.e., giggling, teasing a peer, etc.) in the lab, and breaches in confidentiality about physical findings of your peers or simulated patients, will be reflected in your participation grade.

If you are absent from a class or lab, I would appreciate knowing why.

Please – just like at the movies – turn your cell phones off in class and in lab. No texting. No Facebooking. No emailing. **No photography.** Thanks.

Look familiar? You may have come across this patient last semester in NUTR\*4040! ☺

## Medical Charting Assignment (5% of final grade, due Jan 19)

### Instructions

On a piece of lined binder paper, write a hand-written note (max 1 pg) for the Nutrition Notes section of the medical chart, based on the following scenario. Your note should follow the SOAP format and the General Guidelines for Medical Charting, and should include medical terminology and abbreviations as appropriate (see Unit 2 of this course pack). Write legibly!

### Scenario

Mrs. Elma P. is a 70 year old woman, married with two grown children. She experienced a myocardial infarction 6 months ago. Three months ago, Mrs. P was referred to you, an outpatient dietitian at Hospital XYZ, to make heart-healthy dietary changes. She has since included more whole grain wheat products, low-fat dairy, and fruits and vegetables in her diet. That's the good news.

Unfortunately, Mrs. P was diagnosed last week with Celiac disease, secondary to symptoms experienced since implementing the post-infarction dietary changes, and has been referred to you once again, this time for dietary management of Celiac disease.

During today's consult, Mrs. P complains of persistent diarrhea (4 to 6 loose stools per day) and fatigue. Your physical exam reveals a three month history of weight loss (from body mass index 30 to 27.5). You note loose skin over the back of her arms and around her jawline, and a raised and red rash on both elbows which looks to you like chicken pox. Your abdominal assessment reveals mild distension and tympanic percussion notes in the lower two quadrants; palpation reveals no areas of tenderness. The food records Mrs. P brought in today suggest an average daily energy intake of ~1200 kcalories (requirements: 1600) and protein intake of ~50 grams (requirements: 70).

Mrs. P would like to learn how to manage her symptoms and diet. As she tearily states, "I'm at my wits' end! I thought I was doing everything you told me!"

Laboratory Data		
Test	Current	Normal range
Albumin (grams/Litre)	25	35-50
Hemoglobin (grams/Litre)	106	110-170
Hematocrit (fraction)	0.3	0.33-0.48

## Anthropometry and BIA Lab Report (20% of final grade, due Feb 9)

### Instructions

- Answer the questions below on 8.5" x 11" paper, 2.5 cm margins, 12 pt font, single-spaced.
- Draw from the literature in your responses. Reference your sources (referencing style is up to you).
- Append the entire "Skills Practice" handout to your lab report, so that we can see the raw data and calculations.
- The answers to all questions below should not exceed 5 pages. The title page, references and Skills Practice handout are not included in this page limit.
- Late lab reports will incur a 10% (out of 100) per day (including weekend days) penalty, unless accompanied by a medical note. If you complete the lab on Feb 2, you can have an extension to Fri Feb 13.

### Questions to Answer in Your Report

1. How well does your knee height estimate your stature? What might account for any differences? What alternative method(s) for estimating stature exist? [10 MARKS]
2. How do your waist circumference values at narrowest waist vs. iliac crest compare? What might account for any differences? Which anatomic location better captures chronic disease risk? Why? [10 MARKS]
3. How do your percent fat mass values calculated by supine BIA (and using the 2002 equation of Chumlea et al) vs. Tanita BIA compare? What might account for any differences? Which do you think is correct? Why? (If your two fat mass values are similar, consider the above questions for someone for whom the values differ). [10 MARKS]
4. Find **TWO (2)** other BIA equations in the literature to calculate your percent fat mass from raw resistance/reactance values from supine BIA. How do the results from the three equations (Chumlea et al plus the two additional equations you find) compare? What might account for any differences? Which equation do you think is most appropriate for you, and why? [10 MARKS]
5. Would you use BIA in clinical practice? Why or why not? What factors would you consider when (i) choosing an equation to calculate percent fat mass for a patient, (ii) measuring a patient using BIA (either supine or standing)? [10 MARKS]

/50 +	/10 (references & presentation including spelling, grammar, punctuation, adherence to instructions)
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<b>Total</b>	<b>/60</b>
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## **NFPE Practical Exam on Standardized Patients (20% of final grade, Mar 23 & 30, in pairs)**

The purpose of the practical exam is to demonstrate **TWO (2)** or more elements of a NFPE for a patient diagnosed with a particular condition. Elements may include SGA, anthropometric assessment, skin assessment, dysphagia screening and/or abdominal assessment. You and a classmate (you choose) will be assigned a standardized patient (SP) with an assigned clinical condition. Possible conditions include:

- Diabetes
- Alzheimer's Disease
- Hepatic disease
- Cerebrovascular accident
- Inflammatory bowel disease
- Renal disease
- Cancer
- Cardiac disease
- HIV
- etc.

### **How to Prepare**

There will be two practical exam days – March 23 and March 30. Clinical conditions, and the date and time of your team's practical exam, will be determined in class ahead of this.

In the weeks leading up to your team's practical exam, you and your team will do some research to learn more about the condition, the body systems the condition may affect, and the associated NFPE appropriate for a patient with the condition. You will have the opportunity to practice on one another and/or on a SP.

### **What To Expect for the Practical Exam**

The format is oral and practical. It will take place in the lab (MINS B41) or classroom; there will be one team in each room. Only your team, a SP and an evaluator (myself or GTA) will be present. **Punctuality is critical.**

### **What To Do During the Practical Exam**

Your team will have 45 to 50 minutes to walk me/the GTA through a consultation session, including NFPE, with a SP diagnosed with the assigned condition. Follow the Calgary-Cambridge Guide to patient communication: Initiate the Session, Gather Information, Physical Examination (\*the focus\*), Explanation and Planning, Close the Session. Decide, and practice ahead of time, who will be doing which steps.

- You will have all NFPE tools available. It is up to you to know why and how these are used.
- Both team members should be able to speak to all aspects of the NFPE for the patient. Be prepared to field questions about what you are doing and why.
- While you can bring and refer to notes and other resources, do not read from notes like a script.

The Practical Exam will be graded using the evaluation on the following page.

# EVALUATION OF NUTRITION-FOCUSED PHYSICAL EXAM (NFPE) PRACTICAL EXAM (20% FINAL GRADE)

Date	Mar 23/30
Team	
Simulated patient	

## Content and Clinical Skills

### Knowledge of Assigned Clinical Condition

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Team demonstrates poor knowledge of condition. Relevant body system not addressed, or body system not likely affect by the condition is discussed. Poor application of knowledge. NFPE not consistent with patient's diagnosis, clinical status and/or presenting complaint. Relevant meds discussed. Poor pronunciation of medical terms.														Team demonstrates excellent grasp of condition, including relevant body systems affected. Evidence of strong clinical knowledge, and excellent application of this knowledge. NFPE consistent with patient's diagnosis, clinical status and presenting complaint. Relevant meds overlooked. Good pronunciation of medical terms.					

### Competence in Conducting NFPE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Team lacks confidence with, and/or competence at, conducting a head-to-toe NFPE. Answers questions poorly. One or more steps of NFPE unclear. NFPE not comprehensive. Team did not justify why some steps of NFPE not applicable to their patient. Poor decision-making skills. Unsure about how to use available equipment.																				Team clearly comfortable with, and competent at, conducting an appropriate head-to-toe NFPE as appropriate for assigned clinical condition. Easily able to answer questions about the process. Demonstrates excellent grasp of the various steps of NFPE. NFPE comprehensive. Team justified why some steps of NFPE not applicable to their patient. Strong decision-making skills demonstrated. Excellent use of available equipment.																													

## “Soft” Skills

### Interaction With Standardized Patient

1	2	3	4	5	6	7	8	9	10	
Unprofessional, disrespectful and/or too informal. Not patient-centred. Hands not washed and/or not warmed prior to touching patient. Stethoscope not warmed prior to touching patient. Medical 'jargon' used when speaking with patient.							Professional and respectful. Patient-centred. Hands washed and warmed prior to touching patient. Stethoscope warmed prior to touching patient. Medical 'jargon' avoided when speaking with patient.			

### Overall Presentation (style, flow, timing) of Session

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Poor flow from step to step of the CCG. One or more steps rushed and/superficial, or alternatively, too much time and/or depth spent on one or more steps. Team clearly uncomfortable. Visibly tense. Lots of reliance on/reading from notes.													Excellent flow from step to step. Appropriate depth and time spent on each step. Team comfortable with process. Relaxed. Minimal reliance on/reading from notes.						

Overall comments:

Team grade	/100
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There are exemplars from W14 posted to CourseLink, under the Content tab!

## **Nutritional Assessment Integration Assignment (25% of final grade, due Apr 2)**

The purpose of the integration assignment is to relate findings of a nutrition-focused physical exam (NFPE) with those of the other components of a nutritional assessment, including dietary, biochemical and clinical assessments.

This is an individual, not a team, effort.

### **What To Do**

Prepare a report, beginning with a brief description (3 to 4 sentences) describing your patient. Then, relate the findings of your NFPE with those you might expect from other components of a nutritional assessment. That is, describe the NFPE findings and identify and explain dietary, biochemical and/or clinical assessment findings which may correlate with NFPE findings.

Not every NFPE finding will be correlated with a dietary, biochemical *and* clinical assessment finding. Make as many connections as make sense for your particular patient.

Below are some examples:

- If your NFPE reveals an elevated waist circumference in a cardiac patient, you might expect a dietary assessment to reveal consumption of energy and/or dietary fat in excess of recommendations. You might expect a biochemical assessment to reveal elevated serum triglycerides and insulin resistance.
- A patient who has suffered a CVA (cerebrovascular accident) may demonstrate poor hand grip strength on the affected side. A clinical assessment may reveal some facial drooping or onset of dysphagia. A dietary assessment may suggest insufficient energy intake secondary to the patient's need for a texture-modified diet.
- An adolescent patient with Cystic Fibrosis may inconsistently take her pancreatic enzymes. Your NFPE may reveal recent weight loss and SGA category B. A clinical assessment may reveal steatorrhea. A biochemical assessment may reveal fat-soluble vitamin deficiency.

### **Subheadings**

Use subheadings to help organize your report. For example:

- Organize by nutritional diagnosis, such as Dehydration, Protein Energy Malnutrition, etc. Under each subheading, describe the NFPE findings and any dietary, biochemical and/or clinical assessment finding(s), to support the diagnosis.

**OR**

- Organize by NFPE element, such as Skin Assessment, Dysphagia Screening, etc. Under each subheading, describe the dietary, biochemical and/or clinical assessment finding(s) you think might accompany the NFPE finding.

## Format

The assignment should:

- Be approximately four to six (4 to 6), double-spaced pages, excluding reference list.
- Be size 12 Times New Roman font, 1" margins.
- Be paginated.
- Be stapled in the top left corner.
- Be accompanied by a title page complete with your name and student number.
- Not include an appendix.
- Use first person (i.e., "I", "me") if you like.
- Use medical terminology and medical short forms/abbreviations as appropriate.

## Resources and Referencing

Try to include a mix of clinical and assessment resources such as your NUTR\*4040 clinical text, NUTR\*4010 text, articles from the scientific literature, etc. Other resources:

- PEN (Practice-Based Evidence in Nutrition) can be 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>
- Use any referencing style you wish, just be consistent throughout. The reference list is not included in the page limit.

## Submission

Submit a hard copy of your assignment in my office (MACS 324) on Thurs Apr 2 (anytime until 4:00PM). If I am not there, slip your assignment under my door and I will email you to confirm receipt. Keep an electronic copy until the original is graded.

Late assignments will incur a 10% (out of 100) per day (including weekend days) penalty, unless accompanied by a medical note.

Your assignment will be evaluated using the rubric on the following page.

# EVALUATION OF NUTRITIONAL ASSESSMENT INTEGRATION ASSIGNMENT (25% FINAL GRADE)

Date	
Name	
Case scenario	

Integration of NFPE with dietary, biochemical and clinical assessment findings (as appropriate)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Patient description is unclear and/or lacks detail. Poorly integrated assessment. Detail lacking or extraneous. Clinical knowledge of condition or accompanying treatment (including medications) is not evident. Not thinking like a clinician.										Patient description is clear and sufficiently detailed. Highly integrated assessment. Comprehensive. Appropriate level of detail. Clinical knowledge of condition and accompanying treatment (including medications) is evident. Thinking like a clinician.														

Presentation, writing (including use of medical terminology and abbreviations), formatting, organization

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Poor spelling, grammar and/or punctuation. Formatting not consistent with instructions. Poorly organized. Poor flow. No or poor subheadings. No medical terminology and/or short forms/abbreviations.					Spelling, grammar, punctuation correct. Correct formatting, as per instructions. Well organized. Excellent flow. Excellent use of subheadings. Excellent use of medical terminology and short forms/abbreviations.									

References

1	2	3	4	5
Poor quality references. Too many/not enough for a report of this length.		Good quality references. Sufficient for a report of this length.		

Grade	/45
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