Course Description

Course meeting times: Mondays 12:20-2:15

Room: Videoconferenced between 241 Rosenau Hall (NUTR Kitchen) in Chapel Hill and 2313 NRI in Kannapolis.

Co-Instructors:

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Prerequisites: Graduate student in NUTR

Credits: 2

Purpose of course: To critically evaluate literature and current concepts in the field of nutrition and cancer and gain skills in presenting and discussing scientific research

Course Goals/Key Learning Objectives:

Upon completion of this course students will be able to:
1. Create and deliver an effective scientific presentation using PowerPoint.
2. Describe study aims and key design elements of a published scientific investigation.
3. Identify how the results from a published manuscript contributes to the greater literature.
4. Describe and interpret scientific results presented in figures and tables.
5. Identify strengths and limitations of research studies related to design, methods and implementation, and evaluate the impact on study results.
6. As an audience member, ask thoughtful questions at a scientific presentation.
7. As a presenter, address and respond to audience questions regarding a scientific presentation.
8. Form a framework to apply critical standards to their own written and oral presentations of research.

Course Resources:
There is no required text for this course. Resources for the course (including handouts, papers to be discussed, course schedule, instructions for course presenters, etc.) will be posted on the NUTR 868 site within Sakai. In addition to class time, this course will require approximately 4 h
out of class student work each week. The format of the course will be “journal club”-style and short seminar discussions led each week by one of the students, including: 25 min general introduction into a topic; 45 min “journal club” paper presentation, plus group discussion.

**Grading Scale:** High Pass/Pass/Low Pass/Fail

**Participation Grade (All students):**
Due to the great need for audience participation in this course, all students are expected to attend each class session. Instructor permission is required if a student misses more than one scheduled class session.

Students should come to class having read the manuscript to be presented and be ready to actively engage in discussion. Gaining practice asking questions about the material and contributing thoughtful feedback is a key goal of this class and is therefore required. The quality and consistency of class participation will contribute to the overall class grade.

**“Journal Club” Presentation**
Each student will create and deliver a presentation using PowerPoint that includes a summary and critique of a published research paper (see document for “Instructions for Presentation and Critique of Research Investigation” for more details), and a Q/A period. Each student will select their topic for their presentation during the first class period.

**Short “Minireview” Seminar Presentation**
Each student will be responsible for presenting one short (20 minute review + 5 minute Q and A) general review (also by PowerPoint presentation) of one of the assigned weekly topics. This will involve a literature review and summary of the key concepts and emerging issues of the selected topic. It should also include a discussion of key gaps in that particular area and recommended approaches to fill those gaps.

**Written Synopsis**
Each student will provide a written synopsis of each topic (key points and lessons learned), based on the short seminar, “journal club” presentation and discussion. This written synopsis should be <250 words and will be due at the beginning of the class period following the presentations on that topic.

**Grading**

**Class participation (10%)**
Each instructor will evaluate each student on their classroom participation on a scale of 1-5 (5=highest), based on the consistency and quality of participation.

**Short Presentation (30%)**
These minireview presentations will be assessed for the quality of the content, the quality of the presentations, and quality of the discussion and response to questions, each evaluated on a scale of 1-5 (5=highest)
“Journal Club” Presentation (40%)

Presentation grades will be based on 6 components:
1. Background, relevance: background information, purpose of study, importance in the field, study question and hypothesis
2. Explanation of methods: study design, target population, exclusion/inclusion criteria, exposure definition, outcomes, statistical analysis, subgroup analysis
3. Summary of results and discussion: results of statistical analysis, summary of discussion and author conclusions
4. Critical evaluation of the manuscript: strengths and limitations of the study (including sample size, study population appropriate for question, quality of measures, potential for bias and generalizability), evaluation of author conclusions, consideration of further studies/next steps, impact of study findings
5. Ability to answer questions: answers logically, demonstrates an understanding of the manuscript, ability to consider extensions of the findings
6. Presentation quality and delivery: presentation is orderly and logical, slides are visually appealing, and talk covers relevant points; talk is delivered with confidence, appropriate rate and volume of speech, and good transitions

Each individual component will be scored on a scale of 1-5.

Weekly Written Synopsis (20%)
This document should be no more 250 words in length, and should include a 2-3 sentence background on the topic, a summary of key concepts that emerged from the presentations, and a 1-2 sentence discussion of key gaps in that particular area and what might be approaches to fill those gaps.

Honor Code:
Students are encouraged to freely discuss their presentations and written synopses with other students and faculty. Course activities follow UNC honor system guidelines and expectations of academic integrity.

Syllabus Changes:
The instructors reserve the right to make changes to the syllabus, including presentation dates when unforeseen circumstances occur. These changes will be announced as early as possible so that the students can adjust their schedules.
Date/Topics

1/23  Introduction to the course and overall topic discussion
1/30  Nutrition and cancer etiology
2/6   Tumor metabolism
2/13  Obesity, systemic metabolism and cancer
2/20  Micronutrients, carcinogenesis and tumor progression
2/27  Oxidative stress and cancer
3/6   Cancer cell invasion and microenvironment
3/13  Spring break
3/20  Cellular nutrient sensing
3/27  Microbiome and cancer
4/3   Alcohol as a cancer risk factor
4/10  Recent Advances in Chemoprevention of Cancer by Dietary Molecules
4/17  Diet-gene interactions and personalized nutrition
4/24  Dietary prevention approaches and public health recommendations