

## SYLLABUS

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| <b>Name of Course:</b>     | Applied Nutrition (ACS-320)  |
| <b>Length of Course:</b>   | 1.5 units, 22 hours (2 hours lecture/week)   |
| <b>Course Description:</b> | This course applies student-centered learning methods to formulate questions of interest, research credible information, and communicate results in nutritional therapies of care. Emphasis is placed on information and technology literacy to support problem-based and evidence-based learning.   |
| <b>Prerequisites:</b>      | CHEM-223, DIAG-226, HC-321   |
| <b>Course Offered By:</b>  | Clinical Sciences Department<br>Deborah Lindemann, BA, DC,<br>Dept Chair, Clinical Science Dept.   |
| <b>Required Text:</b>      | Mahan, Escott-Stump and Raymond, <u>Krause's Food, Nutrition, and Diet Therapy</u> , 13 <sup>th</sup> ed. (Saunders/Elsevier: 2012). [Acronym: <b>ME-SR.</b> ]   |
| <b>Reference Texts:</b>    | Gaby, <u>Nutritional Medicine</u> , (Fritz Perlberg Publishing, Concord NH: 2011).<br><u>Modern Nutrition in Health and Disease</u> , Shils, Shike, Ross, Caballero and Cousins, eds.; 10 <sup>th</sup> ed. (Lippincott Williams & Wilkins: 2006).<br><u>Nutrition in the Prevention and Treatment of Disease</u> , Coulston, Rock and Monsen, eds. (Academic Press: 2001).<br><u>Textbook of Functional Medicine</u> , Jones and Quinn, eds. (The Institute for Functional Medicine: 2005).<br>Vasquez, <u>Foundational Assessments and Wellness Promotion in Integrative Chiropractic and Functional Medicine</u> , (Integrative and Biological Medicine Research and Consulting: 2012).<br>Vasquez, <u>Migraine Headaches, Hypothyroidism and Fibromyalgia</u> , (Integrative and Biological Medicine Research and Consulting: 2011).<br>Vasquez, <u>Chiropractic and Naturopathic mastery of common clinical disorders: Concepts, perspectives, algorithms and protocol</u> , (Integrative and Biological Medicine Research and Consulting: 2009).<br>Vasquez, <u>Musculoskeletal Pain: Expanded clinical strategies</u> , (Institute for Functional Medicine: 2008).<br>Chestnut, <u>The Innate Diet &amp; Natural Hygiene</u> , (The Wellness Practice: 2004).<br>Chestnut, <u>The Innate State of Mind &amp; Emotional Hygiene</u> , (The Wellness Practice: 2005). |

Chestnut, The Wellness & Prevention Paradigm, (The Wellness Practice: 2011).

Snyder and Clum, The Antioxidant Counter, (Ulysses Press: 2011).

Kirschmann, Nutrition Almanac, 6<sup>th</sup> ed. (Nutrition Search, Inc.: 2007).

Murray and Pizzorno, Encyclopedia of Natural Medicine, 2<sup>nd</sup> ed. (Prima Health: 1998).

Escott-Stump, Nutrition and Diagnosis-Related Care, 2<sup>nd</sup> ed. (Lea &Febiger: 1988).

Snetselaar, Nutrition Counseling Skills, 2<sup>nd</sup> ed. (Aspen Publishing: 1989).

Greenhalgh, How to read a paper: The Basis of Evidence-based Medicine, (Wiley-Blackwell: 2010).

Haneline, Evidence-based Chiropractic Practice, (Jones & Bartlett Publishers: 2007).

Hagino, How to Appraise Research: A Guide for Chiropractic Students and Practitioners, (Churchill Livingstone: 2003).

**Materials:** Notes will be provided weekly

**Method of Instruction:** Lecture/discussion; small-group project-based activity in the second hour.

**Evaluation:**

|   |       |                    |  |
|---|-------|--------------------|--|
| A | (4.0) | Superior Work      | 88-100%  |
| B | (3.0) | Above average work | 80-87%   |
| C | (2.0) | Average            | 70-79%   |
| F | (0.0) | Fail               | 0 – 69% student must repeat the entire course. |

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|------------------------------|---------|
| Homework Assignments         | 50 pts  |
| Midterm (x-choice scantron)  | 50 pts  |
| Final (x-choice scantron)    | 100 pts |
| Project presentation & paper | 100 pts |

Grades and the Grading System Final Grades are available online through the CAMS student portal. If there are any questions on grading procedures, computation of grade point average, or the accuracy of the grade report, please contact the Registrar’s Office or the Office of Academic Affairs. Grades will be reported and evaluation will be based on the Academic Policies, Procedures, & Services. Please refer to Evaluation Policy (**Policy ID: OAA.0007**)

In order to maintain **Satisfactory Academic Progress**, a student must maintain a 2.0 or better in each and every course. **Any grade less than a C must be remedied by repeating the class.** Please refer to Satisfactory Academic Progress (**Policy ID: OAA.0006**)

**Presentation/Paper:**

The students will be grouped into 2 or 3 and given a card with some detail of a complex case. The group will then answer the questions and follow the instructions given below.

The class will have the second hour of every class period to work on this project. A paper must be submitted at the time of the presentation.

1. Introduce the patient and discuss the basic science of the patient's condition(s). Provide 2 resources.
2. What technique would you use? Justify your answer using any relevant research or published information.
3. Create a predicted 7 day diet log for the patient. List, for 7 days, what you expect your patient to be currently eating before coming into your office. Discuss why you think the patient would be eating in this manner. Provide 2 resources to validate your reasoning.
4. Discuss what types of physical presentations your patient will exhibit. What vertebrae do you think will be subluxated? Why? If they have had recent blood work what would be the predicted patterns? Provide 2 resources to validate your reasoning.
5. What diet plan would you put the patient on? Provide a 7 day diet plan for your patient and explain your clinical rationale for doing so. Provide all relevant physiological/biochemical information that you would use to explain to the patient exactly why you would want them to be on the plan prescribed. Provide any resources necessary.

Suggest two nutritional products for the case. Include the names of the products, and the ingredients. Discuss the top 2 or 3 ingredients in the products to explain why you chose those particular supplements and how you think this will help your patient.

**Attendance:** Please refer to Attendance Policy (**Policy ID: OAA.0002**)

**Conduct and Responsibilities:** Please refer to the Personal Conduct, Responsibility and Academic Responsibility Policy (**Policy ID: OAA.0003**)

**Make-up Exams:** Please refer to Make-up Assessment Policy (**Policy ID: OAA.0001**)

**Request for Special Testing:** Please refer to Request for Special Testing (**Policy ID: OAA.0004**)

**Accommodation for Students with Disabilities:**

If you have approved accommodations, please make an appointment to meet with your instructor as soon as possible. If you believe you require an accommodation, but do not have an approved accommodation letter, please see the Academic Counselor Lori Pino in the Office of Academic Affairs. Contact info: [Lpino@lifewest.edu](mailto:Lpino@lifewest.edu) or 510-780-4500 ext. 2061. Please refer to Service for Students with Disabilities Policy (**Policy ID: OAA.0005**)

**Electronic Course Management:**

**Canvas** is LCCW's Learning Management System (LMS). Canvas will be used throughout the quarter during this course. Lectures, reminders, and messages will be posted. In addition, documents such as the course syllabus and helpful information about the class project will be posted. Students are expected to check Canvas at least once a week in order to keep updated. The website address for Canvas is <https://lifewest.instructure.com/login/canvas> Please refer to the Educational Technologies Policy (**Policy ID: OAA.0009**)

## Independent Student Work

Presentations and research are to be conducted in teams of two students, i.e. pairs of students. Collaboration is required for the formulation of questions of interests, research for meritorious information, shared responsibilities in preparation and communication of findings.

Exam work **MUST** be the product of each individual student's effort for this class.

## Course Goals

The primary goal of the Applied Nutrition course is to develop skills in the screening and assessment of the nutritional status of individuals, and the application of credible and reliable information regarding nutritional therapies for the management of care of chiropractic patients. To achieve this goal, the course examines the relationship between basic science, dietary recommendations, assessment measures, patient outcomes, and evidence-informed care management. The secondary goal is to develop and expand the information and technology literacy of students for the application of research in the evidence-informed clinical decisions of the chiropractic management of patients.

## Course Objectives & Weekly Schedule:

- Week 1
  - Review syllabus and research project (see below details on the research project)
- Week 2
  - Outline *Anything Can Cause Anything* by Dr. William Harper
- Week 3
  - Discuss/review the book *Gut and Psychology Syndrome* by Dr. Natasha Campbell-McBride
  - Discuss concepts of the gut flora and its presentations in a chiropractic office
- Week 4
  - Discuss/Review endocrine system disorders and related nutritional therapies
- Week 5
  - Discuss the water and fat soluble vitamins
- Week 6
  - Discuss Ketosis and the Ketogenic Diet
- Week 7
  - Discuss pH diet concept
- Week 8
  - China Study and Gary Taubes discussion
    - Discuss selected research from *The China Study*
    - Discuss the book, *The China Study* by Dr. Campbell
- Week 9

- Article Review
- Week 10
  - Class presentations
- Week 11
  - Final Exam

### **Student Learning Outcomes (SLO):**

Upon the successful conclusion of this course, the student should be able to:

1. Demonstrate an understanding of nutritional screening and assessment and their different components. (PLO: 1,2)
2. Apply understanding of injury states to the development of effective dietary and nutritional therapies. (PLO: 1,2)
3. Apply understanding of chronic disease etiologies to the development of effective dietary and nutritional therapies. (PLO: 1,2)
4. Demonstrate information literacy skills in the development of effective nutritional therapies as components to care management plans for conditions common to chiropractic practice. (PLO: 1,2,4, 6)
5. Evaluate and appraise sources of nutritional information. (PLO: 1,4,6)
6. Integrate fundamental nutritional principles, clinical assessment, and nutritional protocols of care in an evidence-informed process of case management. (PLO: 1,2,4,6)

**Program Learning Outcomes (PLO):** Students graduating with a Doctor of Chiropractic degree will be proficient in the following:

1. **ASSESSMENT AND DIAGNOSIS:** An assessment and diagnosis requires developed clinical reasoning skills. Clinical reasoning consists of data gathering and interpretation, hypothesis generation and testing, and critical evaluation of diagnostic strategies. It is a dynamic process that occurs before, during, and after the collection of data through history, physical examination, imaging, laboratory tests and case-related clinical services.
2. **MANAGEMENT PLAN:** Management involves the development, implementation and documentation of a patient care plan for positively impacting a patient's health and well-being, including specific therapeutic goals and prognoses. It may include case follow-up, referral, and/or collaborative care.
3. **HEALTH PROMOTION AND DISEASE PREVENTION:** Health promotion and disease prevention requires an understanding and application of epidemiological principles regarding the nature and identification of health issues in diverse populations and recognizes the impact of biological, chemical, behavioral, structural, psychosocial and environmental factors on general health.
4. **COMMUNICATION AND RECORD KEEPING:** Effective communication includes oral, written and nonverbal skills with appropriate sensitivity, clarity and control for a wide range of healthcare related activities, to include patient care, professional communication, health education, and record keeping and reporting.
5. **PROFESSIONAL ETHICS AND JURISPRUDENCE:** Professionals comply with the law and exhibit ethical behavior.
6. **INFORMATION AND TECHNOLOGY LITERACY:** Information literacy is a set of abilities, including the use of technology, to locate, evaluate and integrate research and other types of evidence to manage patient care.
7. **CHIROPRACTIC ADJUSTMENT/MANIPULATION:** Doctors of chiropractic employ the adjustment/manipulation to address joint and neurophysiologic dysfunction. The adjustment/manipulation is a precise procedure requiring the discrimination and identification of dysfunction, interpretation and application of clinical knowledge; and, the use of cognitive and psychomotor skills.
8. **INTERPROFESSIONAL EDUCATION:** Students have the knowledge, skills and values necessary to function as part of an inter-professional team to provide patient-centered collaborative care. Inter-professional teamwork may be

demonstrated in didactic, clinical or simulated learning environments.

9. **BUSINESS:** Assessing personal skills and attributes, developing leadership skills, leveraging talents and strengths that provide an achievable expectation for graduate success. Adopting a systems-based approach to business operations. Networking with practitioners in associated fields with chiropractic, alternative medicine and allopathic medicine. Experiencing and acquiring the hard business skills required to open and operate an on-going business concern. Participating in practical, real time events that promote business building and quantifiable marketing research outcomes
10. **PHILOSOPHY:** Demonstrates an ability to incorporate a philosophically based Chiropractic paradigm in approach to patient care. Demonstrates an understanding of both traditional and contemporary Chiropractic philosophic concepts and principles. Demonstrates an understanding of the concepts of philosophy, science, and art in chiropractic principles and their importance to chiropractic practice.