

SYLLABUS

Name of Course: Basic Nutrition-CHEM 223

Length of Course: 2 units, 33 hours (3 hours lecture/week)

Course Description: This course investigates the philosophy and practice of nutrition in relationship to chiropractic. The biochemistry of nutrients is presented, with special reference to the role of nutritional factors in the etiology of heart disease, hypertension, osteoporosis and cancer. Attention is also given to gastrointestinal function, particularly in relationship to understanding food allergies and the effects of certain foods on hormone balance.

Prerequisites: CHEM-133

Course Offered by: Basic Sciences Department

Recommended Texts: Krause's Food & Nutrition Care Process/[edited by] L. Kathleen Mahan and others. 15th ed. **2021**. (ME-S)

Gaby, Nutritional Medicine, 2nd ed. **2017** (Fritz Perlberg Publishing, Concord NH).

Materials: CANVAS. Class Notes. Classroom activities may require student use of technological devices such as smart phone, tablet or computer interfacing.

Method of Instruction: Lecture, research projects, group & class discussion.
*Active Participation expected & required.

Evaluation Criteria: A = 90-100%; B = 80-89%; C = 70-79%; F < 70%

Assignments: 5 % Nutritional assessment methods/personalized nutrition project

25 % Topical homework assignments

Exams 25% Midterm

40% Final Exam-Cumulative

Participation 5% students must be present during class time to earn participation credit regardless of the reason for the absence including school approved absences.

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**)

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 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**)

Course Goals:

The primary goal of the Basic Nutrition course is to develop skills in the fundamental biochemistry and applied pathophysiology of nutrition as it relates to health. To achieve this goal, the course examines the detailed relationships between basic science, dietary

requirements, patient outcomes and selected topics of 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.

The basic principles of nutrition will be covered. Topics will include: dietary choices and dietary modifications/regimes, influences on eating patterns; integration of nutrition, biochemistry and disease; food intake and satiety; weight management. We will also explore the controversy of balancing Dietary Reference Intakes (RDIs) vs. individual patient biomarkers needs; vitamins & minerals status as it relates to patient's constitutional make-up and genetic predispositions. Finally we will undertake discussions of additional additives and substrates in our food chain created by industrialization and food processing. The relationship between nutrition, symptomatic health changes and chronic disease will be addressed from a functional medicine perspective.

STUDENT LEARNING OUTCOMES:

This course aligns to PLOs: (2 and 4)

Upon successful completion of Basic Nutrition the student should be able to

1. To have acquired the tools to collect information and think through a case or problem pertaining to nutritional status & circumstances of a patient.
2. To learn to research & investigate a health challenge, consider philosophical slant of the patient/family & devise a management plan to suit the patient's decision matrix.
3. To understand, apply, analyze, synthesize and evaluate evidence to make conclusion or come to a nutritional or dietary related diagnosis (or DDxs whichever applies to the patient).
4. To acquire the confidence and competence to reason through a case based on evidence, intuition & skill and to effectively communicate this information back to the patient/family without cultivating fear and offering help, solution or strategy.
5. To develop a management and recommend a care plan that suits the nature of the complaint, honors the time the body will take to adapt and heal & is within the patients realm of possibility (having clearly identified where they are on the decision matrix).
6. Integrate new and evolving information pertaining to food, nutrition and health into a framework and philosophical approach that honors our vitalistic chiropractic philosophy.

Program Learning Outcomes (PLO): Students graduating with a Doctor of Chiropractic degree will be able to:

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, and laboratory tests.
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 and technology literacy are manifested in an ability to locate, evaluate and integrate research and other types of evidence, including clinical experience, to explain and manage health-related issues and use emerging technologies appropriately.
7. **INTELLECTUAL AND PROFESSIONAL DEVELOPMENT:** Intellectual and professional development is characterized by maturing values and skills in clinical practice; the seeking and application of new knowledge; and the ability to adapt to change.
8. **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
9. **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.

Course Objectives by Topic:

- Functional Nutrition Approach
- Assessment of Nutritional Status
- Gut microbiome
- Introduction to environmental toxins that impact human nutrition
- Nutrigenomics Introduction
- Whole Food Nutrition
- Whole Food Supplements: an introduction
- Constructing whole foods personalized nutrition plan
- Introduction to the nutrition based patient interview and counseling
- Nutrition based disease states: Cardiometabolic disorders and Cancer
- Macronutrients: Carbohydrates
- Macronutrients: Lipids
- Macronutrients: Proteins
- Micronutrients: Vitamins
- Micronutrients: Minerals

STUDENT LEARNING OUTCOMES:

Upon successful completion of Basic Nutrition the student should be able to

1. To have acquired the tools to collect information and think through a case or problem pertaining to nutritional status & circumstances of a patient. [PLO: 1,3]
2. To learn to research & investigate a health challenge, consider philosophical slant of the patient/family & devise a management plan to suit the patient's decision matrix [PLO: 2,4]
3. To understand, apply, analyze, synthesize and evaluate evidence to make conclusion or come to a nutritional or dietary related diagnosis (or DDxs whichever applies to the patient) [PLO: 1]
4. To acquire the confidence and competence to reason through a case based on evidence, intuition & skill and to effectively communicate this information back to the patient/family without cultivating fear and offering help, solution or strategy [PLO: 1,3,4]
5. To develop a management and recommend a care plan that suits the nature of the complaint, honors the time the body will take to adapt and heal & is within the patients realm of possibility (having clearly identified where they are on the decision matrix) [PLO: 2,3,4]
6. Integrate new and evolving information pertaining to food, nutrition and health into a framework and philosophical approach that honors our vitalistic chiropractic philosophy. [PLO: 6,4,10]

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.

