

# CLINICAL NUTRITION 300 HOUR PROGRAM

## COURSE SYLLABUS

**OVERVIEW:** This course is intended to provide participants with postgraduate education in the discipline of clinical nutrition to further knowledge from undergraduate education, previous postgraduate course work and experience as a licensed health care provider. The course may meet the requirements to qualify to sit a qualifying examination for or inclusion in organizations that give certification in the discipline of nutrition. Northwestern Health Sciences University advises anyone wishing to obtain certification, using official transcript hours from this course, to contact the organization to verify their requirements.

The course will be given in a 3 part series. Each series will consist of 8 fourteen hour sessions over a period of 8 months. A Certificate of Attendance will be given at the end of each 3 part series if a student completes all 8 sessions and successfully passes the examination requirements with a minimum grade of 75. At the end of the course an attendee who successfully completes a minimum of 22 of the 24 sessions and requests in writing, will receive a certificate stating he/she has completed a 300 hour postgraduate program in Clinical Nutrition given by Northwestern Health Sciences University. For students enrolled in the whole program, notes for a missed session may be available for purchase at the discretion of the Postgraduate Department. Notes are only available for students enrolled in the entire program.

At the end of the first 8 sessions a written examination will be given and each attendee will submit one literature research paper suitable for publication in the format given. (Student /author will want to check with journal or other publication for format required by that specific publisher.) At the end of the second 8 sessions a written examination will be given and each attendee will submit a written case history of an actual patient in the format given. At the end of the third 8 sessions both written and practical examinations will be given and each attendee will submit 2 written case histories in the format given. The case history(ies) or research paper will count 50% of the grade for each series. A passing grade will be 75 or above for each examination. Grades will be made available to any certification board if requested by the student. There may be a fee for official transcripts.

The final curriculum for this course is at the discretion of the institution offering it. While a concerted effort has been made to cover the broad subject of nutrition with the end use in mind, a candidate for any Board Examination or any student wishing to apply to a certifying organization is ultimately responsible for learning the sources and material required by the examining board and/or organization. The institution offering this course does not guarantee that all required material will be covered in the course or that a student will pass a Board certification examination or meet requirements of a certifying organization.

Students who have completed postgraduate coursework in clinical nutrition, through an institution acceptable to NWHSU, may submit an official transcript to the Postgraduate department to determine if all or part of the coursework will transfer into this program. All decisions made by NWHSU are final and not debatable.

The College reserves the right to alter dates, times, faculty, program locations or sources and sequences of presentations to accommodate for unexpected faculty, student or College needs. For this reason, the College recommends prior confirmation of seminar status before on-site registration. The College cannot be held responsible for any expenses incurred by students if a program must be altered.

Tuition for all students for each 14 hour weekend session will be as advertised by the College.

**300 HOUR CLINICAL NUTRITION COURSE**  
**SERIES 1 \* SESSIONS 1 - 8**  
**112 HOURS**

**SESSION 1. Introduction to the Study of Nutrition, Assessment and Evaluation, Education**

This section will begin with information on the syllabus, texts, instructors for the sessions, extra classroom assignments, research paper and case history preparation and continue with the following topics.

- a. Why is the study of nutrition important
- b. Nutrition and its relation to health
- c. Trends in the American diet
- d. Adequacy of the American diet
- e. Cultural, age and economic factors
- f. Clinical appraisal of patient
  - questionnaires and forms
- g. Psychological evaluation
  - stress and other questionnaires
- h. Physical examination of nutrition patient
  - how it differs from medical and musculoskeletal examination
  - examples shown
- i. Laboratory testing
- j. Information on how to choose supplement companies
- k. Risk management issues including the nutrition informed consent

**Session 2      Laboratory 1**

This class will cover an introduction to laboratory analysis for the nutrition practice. The student will be responsible for obtaining required texts. Information on how to contact various testing laboratories to obtain knowledge on the tests including interpretation, obtaining specimen kits, order requisitions and pricing will be given. Specific tests pertinent to individual diseases or evaluations will be covered throughout the course.

- a. Routine blood chemistries and organ profiles
- b. Urinalysis
- c. Hair analysis
- d. Salivary testing
- e. Stool analysis
- f. Nutrient level determination

**Session 3      Nutritional Aspects in Gastrointestinal Disease**

- a. Mouth
  - Tooth decay
  - Bleeding gums
  - Periodontal
- b. Stomach
  - Dyspepsia
  - Gastritis
  - Ulcers
  - Hiatal hernia
- c. Gallbladder
- d. Intestine
  - Dysbiosis
  - Irritable bowel syndrome

- Malabsorption syndrome
- Parasitic infections
- Infectious diarrhea
- Colitis
- Leaky gut syndrome
- Diverticulitis
- Constipation
- Hemorrhoids

Functional laboratory testing for GI disorders

Diets for specific GI disorders

#### **Session 4 Nutrient - Nutrient and Drug - Nutrient Interactions, Contraindications and Risk Management**

Risk management for the clinical nutritionist includes knowledge of

- Nutrient - nutrient interactions and reactions
- Nutrient - drug interactions and reactions

#### **Session 5 Metabolism I**

Carbohydrates

- General considerations
- Dietary significance
- Monosaccharide
- Disaccharides
- Polysaccharides
- Digestion and absorption

Fats

- General considerations
- Composition, classification and characteristics
- Functions
- Digestion and absorption
- Metabolism
- Cholesterol, Prostaglandins, phospholipids
- Essential fatty acids and triglyceride

Protein

- General considerations
- Composition, classification and characteristics
- Functions
- Digestion and absorption
- Metabolism
- Enzymes

Energy Metabolism

#### **Session 6 Female Nutrition**

Common female diseases and syndromes

- PMS
- Osteoporosis
- Menopause
- Vaginitis
- Candidiasis

- Endometriosis
- Cystitis

Pregnancy

Lactation

Functional laboratory testing for female disorders

Diets for specific female disorders

## **Session 7 Nutrition in Infancy, Adolescence**

### Infancy

- Growth
- Nutritional requirements
- Feeding considerations
  - Alternatives to processed baby foods
  - Supplementary foods
  - Allergies

Specific health issues

- Colic
- Ear Infections
- Iron deficiency anemia

### Adolescence

- Growth and development
- Evaluation of the child's nutritional state
- Age group need differences
- Food habits
- School lunch program
- Nutrition education

Specific health issues

- Dentition and nutrition
- Obesity
- ADD and ADHD
- Autism

Functional laboratory testing for infant and adolescent disorders

Diets for specific infants and adolescents

## **Session 8 Nutrition Practice Management, Research Paper Presentation, and Examination**

General nutrition practice management tools will be covered including:

- incorporating nutrition into an existing practice
- redirecting patient dollars already spent on supplements
- risk management

In addition to the written examination over Sessions 1 - 8, each participant will submit and present 1 literature research paper suitable for publication, typed in proper format with a minimum of 25 references

**336 HOUR NUTRITION DIPLOMAT COURSE**  
**SERIES 2 \* SESSIONS 9 – 16**  
**112 HOURS**

**Session 9      Musculoskeletal Nutrition**

Nutrition consideration should always be included in the complete management of soft tissue injuries or complaints and those of bone tissue also. Satisfactory repair of injured tissue and the maintenance of strong, healthy soft tissue will decrease the frequency and severity of injury.

**Soft Tissue Nutrition**

- a. Acute injury
- b. Disc
- c. Chronic sprain/strain
- d. Myofascial / Fibromyalgia
- e. Carpal tunnel

**Bone and Joint Nutrition**

- a. Fractures
- b. Osteopenia, osteoporosis, osteomalacia
- c. Arthritis

Functional laboratory testing for musculoskeletal disorders

Diets for specific musculoskeletal disorders

**Session 10      The Role of Vitamins, Macro and Trace Minerals as Nutrients**

Vitamins

Minerals

Trace minerals

Water

**Session 11      Geriatrics and Longevity**

- Characteristics of aging including
  - Vision loss
  - Hearing loss
  - Dry skin
  - Constipation/diarrhea
  - GERD
  - Dysphagia
  - Arthritis
  - Sarcopenia/osteopenia
  - Anemia
  
- Physiologic and metabolic changes
  - Memory loss/Alzheimer's disease
  - Multiple medication side effects
  - Functional testing
  - BIA, grip strength, albumin, metabolic markers
  
- Nutritional and diet requirements
  - Obtaining adequate calorie intake

- Dentition complications
- Drug-nutrient interactions

**Session 12     Hyperimmunity – Nutritional considerations for allergies, autoimmune disorders and dermatology**

Allergies

- a. Acute and latent allergies
- b. Nutritional considerations in autoimmune disorders
- c. The role of the GI tract in both problems
- d. Food additives and preservatives

Dermatology

Functional laboratory testing for hyperimmune disorders

Diets for specific hyperimmune disorders

**Session 13     Hypoimmunity - Phytochemicals, Immunology, HIV/AIDS, and Cancer**

- a. Understanding phytochemicals and their role in nutrition
- b. Nutritional support for the immune system
- c. Nutrition for HIV/AIDS support
- d. Diet, nutrition and cancer prevention
- e. Discussion on alternative cancer therapies

**Session 14     Herbal Medicine: Introduction and Clinical Applications**

- a. Basic introduction to and understanding of herbology
- b. Understanding the various preparations and when to use
- c. Dosage for pediatric, adult and geriatric patients
- d. Use of herbs in the treatment of common illnesses

Risk management issues including government regulations, manufacturing practices and standardization, herb-nutrient and herb-drug interactions

**Session 15     Nutrition in Blood Diseases, Infections and Metabolic Disorders**

- a. Blood disorders
  - Anemias
- b. Acute and chronic infections
  - Antibody and hormonal response
  - H. pylori, E. Coli, Staph aureus, Rhinovirus, Herpes, Hepatitis
- c. Metabolic Disorders
  - Metabolic Syndrome
  - Diabetes mellitus and gestational
  - Rheumatoid arthritis

Functional laboratory testing for metabolic disorders

Diets for specific disorders

**Session 16     Stress Management, Research Paper Presentations, and Written Examination over Sessions 9 – 16.**

Adrenal hormone and stress management protocols including relaxation exercises. Guided imagery stress reduction technique will be used in class

In addition to the written examination over sessions 9 thru 16, each participant will be expected to submit and present to the class a written case history in the format given.

**336 HOUR NUTRITION DIPLOMAT COURSE**  
**SERIES 3 \* SESSIONS 17 - 24**  
**112 HOURS**

**Session 17    Nutritional Considerations in Cardiovascular Health**

- a. General considerations
  - Coronary risk factors
  - Role of diet
  - Diet prescriptions
  - Patient education
- b. Atherosclerosis
- c. Peripheral vascular disease
- d. Hypertension
- e. Ischemic heart disease
- f. Rheumatic heart disease

**Pulmonary heart disease**

Functional laboratory testing for cardiovascular disorders  
Diets for specific cardiovascular disorders

**Session 18    Laboratory diagnosis using computer program analysis**

- Functional approach to tests on blood, stool, urine, saliva to access nutrient recommendations
- Show standard clinical as well as optimal nutritional ranges
- Profile analysis for
  - Heart disease
  - Liver disease
  - Kidney disease
  - Gall Bladder disease
  - Metabolic disease and diabetes
- Reporting, documentation and follow up testing

**Session 19    Use of Homeopathic Preparations in Nutrition Practice**

This is an overview of homeopathy and the use of OTC products in clinical nutrition and is not intended to make the student a classical homeopath. Risk management issues will be covered including ethics and legalities.

- Homeopathic material medica
- Potency and frequency
- Specific items for constitutional vs first aid

**Session 20    Sports Nutrition for the Athlete, Bariatrics and Eating Disorders**

- a. Diet for optimum athletic performance
- b. Proper nutritional supplementation for the athlete
- c. Anorexia
- d. Bulimia

- e. Obesity
- Functional laboratory testing for sports disorders  
Diets for specific sports disorders and training

**Session 21 Nutritional Aspects of Neurological and Psychiatric Disorders**

- a. Headache
  - b. Neuromuscular disorders
  - c. Toxicity H
  - d. Depression
  - e. Hyperactive / manic states
  - f. Stress management
  - g. Attention deficit
- Functional laboratory testing for neurological and psychiatric disorders  
Diets for specific neurological and psychiatric disorders

**Session 22 Diseases of the Urogenital System and Male Problems**

- Urogenital
- a. Glomerulonephritis
  - b. Nephrosis
  - c. Kidney failure
  - d. Principles of dietary treatment

- Conditions of the male reproductive organs
- a. Prostate
  - b. Infertility

Functional laboratory testing for urogenital disorders  
Diets for specific urogenital disorders

**Session 23 Metabolism III Interrelationships and pathways. Inborn errors of metabolism.**

This class will pull information from all previous classes to show anabolism and catabolism of carbohydrates, fats and proteins, redox reactions for energy and antioxidant systems and the integration of metabolism. Integration of endocrine and other messengers for regulation of metabolism including genetic/inborn errors of metabolism will be covered.

As time permits, instructor will address metabolism questions in general to pull all of the topic together for better understanding and application.

**Session 24 X-ray Findings in Metabolic Disorders, Case Histories and Final Examination Including Written and Practical over Sessions 17-24**

The course work will cover Volume 2 Chapter 14 in Essentials of Radiology by Yokum and Rowe.

In addition to the written and practical examinations, each participant will submit 2 case histories typed in proper format with supporting documentation to present and defend orally.

## **300 HOUR CLINICAL NUTRITION COURSE INITIAL BIBLIOGRAPHY**

This bibliography is initial and partial. While none of the references listed below will be deleted, you may expect additions over the 30 month course.

Alpers, Stenson and bier, **MANUAL OF NUTRITIONAL THERAPIES**, 3<sup>rd</sup> Ed, 1995

Blumenthal, M., **THE ABC CLINICAL GUIDE TO HERBS**, 2003

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Bralley & Lord, **LABORATORY EVALUATIONS IN MOLECULAR MEDICINE**, 2001

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Bucci, **NUTRITION APPLIED TO INJURY REHABILITATION AND SPORTS MEDICINE**, 1995

Callen, et at, **COLOR ATLAS OF DERMATOLOGY**, 2<sup>nd</sup> Ed.

Cheung & Richmond, **CHILD HEALTH, NUTRITION AND PHYSICAL ACTIVITY**, 1995

Chi, Tsu-Tsair, NMD, PhD, **DR. CHI'S METHOD OF FINGERNAIL AND TONGUE DIAGNOSIS**, 2<sup>nd</sup> Ed, 2002

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Diamond John, **AN ALTERNATIVE MEDICINE DEFINITIVE GUIDE TO CANCER**, **Future Medicine Publishing**, 1997

Gruenwald, Brendler & Jaenicke, **PDR FOR HERBAL MEDICINES**, 4<sup>TH</sup> Ed.

Guyton, **TEXTBOOK OF MEDICAL PHYSIOLOGY**, 9<sup>th</sup> Edition, 1996

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Harkness and Bratman, **HANDBOOK OF DRUG-HERB AND DRUG-SUPPLEMENT INTERACTIONS**, 2003

Hershoff, **HOMEOPATHY FOR MUSCULOSKELETAL HEALING**, 1996

Howell, **ENZYME NUTRITION**, 1985

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Kopple & Massary, **NUTRITIONAL MANAGEMENT OF RENAL DISEASE**, 2<sup>nd</sup> Ed, 2003

La Valle, et al, **NATURAL THERAPEUTICS POCKET GUIDE**, Lexi-Comp, Inc, 2000-2001

Mahon, **KRAUSE'S FOOD, NUTRITION & DIET THERAPY**, 11<sup>th</sup> Edition, 2003

McCandless, J., **CHILDREN WITH STARVING BRAINS**, 3<sup>rd</sup> Ed.

Medical Economics, **PHYSICIANS DESK REFERENCE**, latest edition

Murray & Pizzorno, **ENCYCLOPEDIA OF NATURAL MEDICINE**, 2<sup>nd</sup> Ed, 199

Nelson & Cox, **LEHNINGER PRINCIPALS OF BIOCHEMISTRY**, 5<sup>th</sup> Ed

Owen, Splett & Owen, **NUTRITION IN THE COMMUNITY**, 4<sup>th</sup> Ed, 1999

Pearlmutter, D, **BrainRecovery.com: Powerful Therapy for Challenging Brain Disorders**, 2<sup>nd</sup> Ed.

Sheldon, **PDR FOR NUTRITIONAL SUPPLEMENTS**, 2<sup>nd</sup> Ed, 2001

Shils, Olson & Shike, **MODERN NUTRITION IN HEALTH AND DISEASE**, 10<sup>th</sup> Ed, 2005

Wallach, Jacques, MD, **INTERPRETATION OF DIAGNOSTIC TESTS**, 8<sup>th</sup> Ed, 2007

Walker, Watkins & Duggan, **NUTRITION IN PEDIATRICS**, 3<sup>rd</sup> Ed

Werbach, **NUTRITIONAL INFLUENCES ON MENTAL ILLNESS**, 1991

Werbach, **FOUNDATIONS OF NUTRITIONAL MEDICINE**, 2<sup>nd</sup> Edition, 1999

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Wilson, et al, **HARRISON'S PRINCIPLES OF INTERNAL MEDICINE**, 1991

Yokum & Rowe, **ESSENTIALS OF RADIOLOGY**, Volume 2, Chapter 14