

Southeast Missouri State University
Course Syllabus
New Course: Spring, 2001

Department of: Human Environmental Studies

Course No.: FN 530

New: Spring 2001

Title of Course: Implications for Nutrition and Exercise Science: Pathophysiology

I. Catalog Description and Credit Hours

*An in-depth examination of pathophysiology and the relationship to nutrition and exercise.
(3 credit hours)*

II. Prerequisites:

Anatomy, Physiology, FN502 – Nutrition II, HL 331 - Exercise Physiology or permission of the instructor.

III. Objectives of the course:

The student will

- A. Apply the knowledge of anatomy, physiology, nutrition and exercise physiology to the biochemical and physiological changes that occur in injury and illness.
- B. Demonstrate competence in nutrition and fitness assessment techniques and their application for individuals who are experiencing illness or injury.
- C. Apply the knowledge of pathophysiology in determining the adaptation to exercise.
- D. Apply the knowledge of pathophysiology in determining the nutritional modifications used in medical therapy.
- E. Competently use medical terminology.
- F. Critically analyze current literature in the fields of nutrition, exercise physiology, and medicine.
- G. Demonstrate the ability to interpret current research and statistical analysis in the fields of nutrition and exercise physiology.

IV. Expectations of students:

- A. To complete all assigned materials prior to class and to actively participate in all classes.
- B. To maintain a double entry journal of all reserved readings, following the assigned procedures.
- C. To complete all case studies in a timely and professional manner using the required format.
- D. To successfully complete all examinations.
- E. To design and deliver a class lecture on pre-determined topic using the appropriate pedagogy. (graduate students only).

V. Course Content

1. Cellular Pathology: Injury, Cell Death, Adaptations and Cell Aging	3 hours
2. Inflammation and the Infectious Process Medical Care, Implications for Nutrition and Exercise Science, Pathophysiology	3 hours
3. Immunology Medical Care, Implications for Nutrition and Exercise Science, Pathophysiology	6 hours
4. Fluid, Acid Base Balance Medical Care, Implications for Nutrition and Exercise Science, Pathophysiology	5 hours
5. Cardiac Disease Medical Care, Implications for Nutrition and Exercise Science, Pathophysiology	6 hours
6. Respiratory Disease Medical Care, Implications for Nutrition and Exercise Science, Pathophysiology	5 hours
7. Endocrine Disease/ Diabetes Mellitus Medical Care, Implications for Nutrition and Exercise Science, Pathophysiology	6 hours
8. Disease of Bones and Joints/ Osteoporosis Medical Care, Implications for Nutrition and Exercise Science, Pathophysiology	5 hours
9. Disease of the Nervous System Medical Care, Implications for Nutrition and Exercise Science, Pathophysiology	3 hours
10. Neoplasia Medical Care, Implications for Nutrition and Exercise Science, Pathophysiology	3 hours

V. Textbook(s) and/or other required materials or equipment:

1. Hansen, (1998). Pathophysiology: Foundations of Disease & Clinical Interventions: Saunders Publishing.
ISBN: 0721644651.
2. Taber's Cyclopedic Medical Dictionary – 19th Edition.
3. Reserve Readings

VII. Basis for Student Evaluation

Undergraduate Assignments:

4 exams @ 100 points each.....	40%
Case Studies 9@ 50 points each.....	45%
Reading Journal.....	15%

TOTAL.....100%

Graduate Assignments:

4 exams @ 100 points each.....40%
 Case Studies 9@ 50 points each.....45%
 Reading Journal.....5%
 Class Presentation.....10%
 TOTAL.....100%

Description of Assignments:

1. **Exams:** Four exams will be given throughout the semester. The format for these exams will be a combination of multiple choice, short-answer, and essay formats.
2. **Case Studies:** You will research and write nine case studies which will focus on the medical, nutritional, and physical activity for each. The following format will be used:
 - I. Introduction
 - a. Chief complaint
 - b. History of present illness
 - c. Past medical history
 - d. Patient profile (social and family history)
 - II. In-depth Discussion of pathophysiology of diagnosis (es) summarizing the typical medical care for the patient's condition.
 - III. Nutrition and Exercise Physiology
 - a. Nutrition assessment
 - b. Fitness and physical assessment
 - c. Pertinent laboratory data (include interpretation of the labs and their relationship to the nutritional status and/or medical condition)
 - d. Prescribed medications (describe rationale for their use and any potential drug-nutrient interactions)
 - e. Identification of nutrition and physical fitness problems
 - f. Summarize objectives, goals and plan of intervention
3. **Reading Journal:** You will keep a response journal to all readings in class. This will take the form of a double-entry journal. Each page of your journal will be divided into half : the objective entry on the left side and the subjective response on the right. Objective information will be facts, notes from the readings. But you don't have to write down everything from the article, you should write down areas that are of interest or that you think are important. The subjective will be your individual response to the objective information - your opinions, your questions, your ideas, etc. These journals will be turned at each exam period and at the end of the course for my response. The content is not graded (i.e. spelling, grammar) but the format and maintenance of the journal will be graded. This will be discussed in detail during the first class meeting.
4. **Class Lecture:** As a graduate student, you will be responsible for the design and delivery of a class lecture on a mutually determined topic using the appropriate pedagogy. Class objectives, education plan, and evaluation techniques will be handed for approval two weeks prior to class lecture.