

# **Diet and Disease**

## **NFS 260**

### **Fall 2019**

Professor: **Haley Dienst MS, RD, CD**

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Please include NFS in subject line

Office Hours: by appointment

Class Time: **5:05-8:05**

Course Credits: **3 hours**

Course Description: **Examination of the physiologic, biochemical, and psychological basis of several disease states and the application of medical nutrition therapy in treatment.**

Course Prerequisites: **NFS 53, 143, 243**

Course Objectives:

**The student will:**

1. Understand and appreciate the profession of dietetics, the scope of dietetics practice, standards of practice, standards of professional performance, and ethical practice.
2. Understand the role and function of the clinical dietitian in the profession of dietetics.
3. Obtain a working knowledge of the different techniques and parameters utilized by a clinical dietitian.
4. Practice critical thinking skills and apply their knowledge while assessing nutritional status, formulating individual care plans, modifying dietary intake, and educating and counseling clients in the analysis of case studies.
5. Exhibit understanding of disease, diet and food through effectively using communication skills in written assignments and class discussion.
7. Understand the chemical, biochemical, and physiological basis of disease.
8. Understand the pathophysiology of specific disease states and disorders.
9. Understand alterations which occur in nutrient metabolism during certain disease

states, eg. fluid and electrolyte changes, drug-nutrient interactions, nutrient-nutrient interactions.

10. Read and understand clinical research articles, eg. interpretation, statistics, medical terminology.
11. Understand the influence of socioeconomic, cultural, and psychological factors on food and nutrition behavior and apply those influences in planning and calculating menus and medical nutrition therapy for individuals.
12. Understand and utilize nutrition assessment data to implement the Nutrition Care Process for certain disease states.
13. Understand the use of medical nutrition therapy in the treatment of specific disease states and disorders.
14. Understand alternative feeding modalities and be able to calculate enteral and parenteral formulas

### **Core Knowledge and Competencies for the Registered Dietitian**

KDR 1.1 The curriculum must reflect the scientific basis of the dietetics profession and must include research methodology, interpretation of research literature and integration of the research principles into evidence-based practice

Learning outcome: 70% of students will receive 80 of 100 point of the Evaluation of a Research Article Project

KDR 2.1 The curriculum must include opportunities to develop a variety of communication skills sufficient for entry into preprofessional practice

KDR 2.3 The curriculum must include opportunities to understand governance of dietetics practice, such as Scope of Dietetics Practice and the Code of Ethics; and interdisciplinary relationships in various practice settings

KDR 3.1 The curriculum must reflect the principles of Medical Nutrition Therapy and the practice of the nutrition care process, including principles and methods of assessment, diagnosis, identification and implementation of interventions and strategies for monitoring and evaluation

Learning outcome: 60% of students will receive 80% or better on the Complex MNT Case Study Analysis

KDR 5.2 The physical and biological science foundation of the dietetics profession must be evident in the curriculum

Textbooks:

Required:

**Nelms, Marcia; Sucher, Kathryn P.; Roth, Sara Long; and Lacey, Karen, "Nutrition Therapy and Pathophysiology" (2011). Books by SJSU Authors. Book 28.**

**Additional readings per instructor discretion.**

**Students are encouraged to become student members of the Academy of Nutrition and Dietetics as materials discussed are available on the member only Academy website. Materials related to the Nutrition Care Process, Standards for Professional Practice, Professional Ethics, and the Evidence Based Library are all**

**available to student members of the Academy. You also need to be a member of the Academy to apply for scholarships given by the Academy of Nutrition and Dietetics Foundation.**

**Supplemental Books: (may be helpful, not required)**

Rolfes SR, Pinna K, Whitney EN. Understanding Normal and Clinical Nutrition, 9<sup>th</sup> Edition, 2012.

Coulston AM, Boushey CJ. Nutrition in the Prevention and Treatment of Disease, 2<sup>nd</sup> Edition, 2008.

International Dietetics & Nutrition Terminology (IDNT) Reference Manual: Standardized Language for the Nutrition Care Process, 4<sup>th</sup> Edition, 2013.

Nelms M, Sucher K, Long S. Nutrition Therapy and Pathophysiology, 2<sup>nd</sup> Edition, 2011.

**Grading:**

<b>Assignment</b>	<b>Points</b>
Interprofessional Practice Education	60
Enteral Calculations	50
Parenteral Calculations	50
Evaluation of Research Article	100
Case Study	100
Class Participation/Attendance	100
Exam 1	100
Exam 2	100
Exam 3	100
Total Points	760

Students obtaining 6 or more points will be assured of an A grade, students with 608 or more points will be assured of a B grade, students with 532 or more points will be assured of a C grade, students with 456 or more points will be assured of a D grade, and students with less than 456 points are in jeopardy of failure. Plus and minus grades will be given for each grade range.

**Grading:** Exams will be graded and returned to you within two weeks. Case study and Evaluation of Research Article will be graded and returned to you within three weeks.

**Class Structure:** Class will be a combination of lecture, class discussion, and group discussion and reporting to the class. Because of the class size, each student will need to be responsible for the reading of class materials and assignments prior to coming to class. All students will participate in class discussion. They will be active participants involving case studies, some of which may be evaluated by peers. The group discussions are an attempt to help each of you obtain problem solving and critical thinking skills regarding case studies without having a written assignment for each case study. These techniques are to help you learn the NCP and use your problem solving and critical thinking skills in your group. Additionally, all students should come to class prepared to

be called upon to answer questions regarding class materials or to report findings of their group discussion.

**Class Attendance:** Attendance will not be taken in the class, however, if you miss the discussion groups and other in class assignments, it will affect your participation points. If you become ill or for other reasons will miss more than one class in a row, please contact the CALS Dean's Office to discuss what you can do.

**Late Policy:** Assignments are expected to be turned in on the date they are due, either in class or emailed to me by midnight. Assignments turned in one day late will be marked down 5%; those turned in two days late will be marked down 10%. No assignments will be accepted or graded if handed in more than 7 days after the due date. If you believe that you have extenuating circumstances, speak to me as soon as possible to make other arrangements.

**Class Conduct:** All class participants are expected to refrain from the use of cell phones in the classroom. In case of a campus emergency, the instructor will be notified via the classroom computer, and the instructor will notify students of the emergency. Computers are allowed for note taking in class. No computers or cell phones will be allowed during exam periods. As entering and leaving disrupt other students and class flow, please take care of personal needs prior to class unless it is an emergency.

**Class Code:** All class participants are expected to adhere to the academic honesty policies of the University of Vermont. Additionally, the University prohibits discrimination and unlawful harassment. Please see the University of Vermont Code and Student Handbook available on the UVM website.

Offences against the Code of Academic Integrity are deemed serious and insult the integrity of the entire academic community. Any suspected deliberate violations of this code are taken very seriously and will be forwarded to the Center for Student Ethics & Standards for further investigation.

**Graduate Credit:** To receive graduate credit for this course the student will contact the instructor within the first two weeks of class and complete:

- 1) An additional case study of instructor's choosing to include researching and discussing the pathophysiology of the disease, the nutrition implications and appropriate medical nutrition therapy
- 2) A review of the nutrition literature regarding a nutrient and its role in a disease

**Religious Holidays:** The official policy for excused absences is: Students have the right to practice the religion of their choice. Each semester students should submit in writing to their instructors by the end of the second full week of classes their documented religious holiday schedule for the semester. Faculty must permit students who miss work for the purpose of religious observance to make up this work.

**Course Outline: readings for 13<sup>th</sup> edition**

<b>Date</b>	<b>Topic</b>	<b>Assignment*</b>
Aug 28	Introduction Dietetics as a Profession Scope of Dietetics Practice Professional Ethics Clinical Dietitians Medical Nutrition Therapy  Nutrition Care Process (NCP) Overview Assessment Diagnosis Intervention Monitoring/Evaluation	<b><i>Suggested:</i></b> <b>Academy of Nutrition and Dietetics:</b> Scope of Practice in Nutrition and Dietetics, J Acad Nutr Diet, 2013; 113 (Suppl 2): S11-S16. <b>Academy of Nutrition and Dietetics:</b> Revised 2012 Standards of Practice in Nutrition Care and Standards of Professional Performance for Registered Dietitians, J Acad Nutr Diet, 2013; 113 (Suppl 2): S29-S45.
Sept. 4	Intervention Monitoring/Evaluation PES Statements ADIM(E) Charting and Documentation Health Care Team Interprofessional Practice	<b>Nelms</b> , Chapter 2, 3, 6,
Sept. 11	Delivering Nutrients Enteral Nutrition	<b>Nelms</b> , Chapter 5, 12
Sept. 18	Parenteral Nutrition Obtaining Science Based Information in Medical Nutrition Therapy	<b>Nelms</b> , Chapter 5 <b><i>DUE: Enteral Calculations</i></b> Discuss Evaluation of Research Article
Sept. 25	Upper Gastrointestinal Diseases	<b>Nelms</b> , Chapter 14 <b><i>DUE: Parenteral Calculations</i></b>
Oct 2	<b>Exam 1</b>	

Oct. 9	Lower Gastrointestinal Diseases Thyroid	<b>Nelms</b> , Chapter 15 Discussion of Celiac Disease case and Gluten Free Diet
Oct 16	Cardiac Disease Pulmonary Disease	<b>DUE:</b> Evaluation of Research Article <b>Nelms</b> , Chapter 13, 21, Discuss Case Study Assignment
Oct. 23	Endocrine Disorders Liver Disease Gallbladder and Pancreatic Disease	<b>Nelms</b> , Chapter 16, 17 Discussion of Liver case
Oct 30	Diabetes Mellitus	<b>Nelms</b> , Chapter 17
Nov. 6	<b>Exam 2</b>	
Nov. 13	Kidney Disease	<b>DUE:</b> Case study assignment <b>Nelms</b> , Chapter 18
Nov. 20	Thanksgiving Recess	
Nov. 27	Cancer Treatment & Recovery HIV Neurologic Disorders	<b>Nelms</b> , Chapter 23 <b>Nelms</b> , Chapter 24 <b>Nelms</b> , Chapter 20
Dec. 4	Rheumatic Disorders Metabolic Disorders Metabolic Stress	<b>Nelms</b> , Chapter 25 <b>Nelms</b> , Chapter 26 <b>Nelms</b> , Chapter 22
Dec 11	Final Exam 730 pm Aiken 102	

\*Other current literature may be assigned for discussion if deemed pertinent by the instructor.