



**COURSE OUTLINE : NUTR 125**

**D Credit – Degree Applicable**

**COURSE ID 001422**

**Cyclical Review: September 2020**

**COURSE DISCIPLINE :** NUTR  
**COURSE NUMBER :** 125  
**COURSE TITLE (FULL) :** Elements of Nutrition  
**COURSE TITLE (SHORT) :** Elements of Nutrition

**CATALOG DESCRIPTION**

NUTR 125 presents an overview of the many aspects of nutrition, including current dietary trends and related food and nutrition controversies, the nutritive processes of the body, the functions, utilization, food sources, and recommended allowances of nutrients. It emphasizes the USDA Dietary Guidelines for Americans, as well as the general principles of eating for optimal health and disease prevention, supported by scientific research.

Total Lecture Units: 3.00

Total Laboratory Units: 0.00

**Total Course Units: 3.00**

Total Lecture Hours: 54.00

Total Laboratory Hours: 0.00

Total Laboratory Hours To Be Arranged:0.00

**Total Contact Hours: 54.00**

**Total Out-of-Class Hours: 108.00**

Recommended Preparation: ENGL 100 or ESL 151.



**ENTRY STANDARDS**

|    | <b>Subject</b> | <b>Number</b> | <b>Title</b>              | <b>Description</b>  | <b>Include</b> |
|----|----------------|---------------|---------------------------|---|----------------|
| 1  | ESL            | 151           | Reading and Composition V | Read and critically analyze various academic readings;  | Yes            |
| 2  | ESL            | 151           | Reading and Composition V | summarize readings;   | Yes            |
| 3  | ESL            | 151           | Reading and Composition V | organize fully-developed essays in both expository and argumentative modes;   | Yes            |
| 4  | ESL            | 151           | Reading and Composition V | compose a 500 to 550-word essay which: summarizes and cites appropriately a reading passage; includes a clear thesis statement; uses evidence to support the thesis; shows clear organization into an introduction, body, and conclusion; | Yes            |
| 5  | ESL            | 151           | Reading and Composition V | revise writing to eliminate errors in syntax, and grammatical constructions;  | Yes            |
| 6  | ESL            | 151           | Reading and Composition V | employ basic library research techniques;   | Yes            |
| 7  | ESL            | 151           | Reading and Composition V | compose one research paper (1,000 words) or two short research papers (500-700 words each) with citations.  | Yes            |
| 8  | ENGL           | 100           | Writing Workshop          | Read, analyze, and evaluate contemporary articles and stories to identify topic, thesis, support, transitions, conclusion, audience, and tone;  | Yes            |
| 9  | ENGL           | 100           | Writing Workshop          | read, analyze, and evaluate contemporary articles and stories for the comprehension of difficult content and the identification of main ideas and (topic-based) evidence;   | Yes            |
| 10 | ENGL           | 100           | Writing Workshop          | read, analyze, and evaluate student compositions for unity, development, use of evidence, interpretation, coherence, and variety of sentence form;  | Yes            |
| 11 | ENGL           | 100           | Writing Workshop          | write a summary of a contemporary article or story with correct citation techniques;  | Yes            |
| 12 | ENGL           | 100           | Writing Workshop          | write an argumentative essay that has an introduction, body paragraphs, and a conclusion, demonstrating a basic understanding of essay organization;  | Yes            |
| 13 | ENGL           | 100           | Writing Workshop          | write an argumentative essay that addresses the topic, is directed by a thesis statement, uses appropriate textual evidence, develops logical interpretations, and concludes with some compelling observations;                           | Yes            |
| 14 | ENGL           | 100           | Writing Workshop          | write an argumentative essay that integrates the ideas of others (i.e., authors) through paraphrasing, summarizing, and quoting with correct citation techniques;   | Yes            |



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| 15 | ENGL | 100 | Writing Workshop | write an argumentative essay that generates novel ideas (those that add to the conversation rather than repeating the author's ideas) related to the topic and the readings; | Yes |
| 16 | ENGL | 100 | Writing Workshop | write compositions (e.g., summaries and argumentative essays) that are easy to read and follow, though some errors in grammar, mechanics, spelling, or diction may exist;    | Yes |
| 17 | ENGL | 100 | Writing Workshop | proofread and edit essays for content, language, citation, and formatting problems.  | Yes |

**EXIT STANDARDS**

- 1 Recognize the role of food, dietary patterns and nutrients in health maintenance and disease prevention;
- 2 analyze and critique a dietary intake for nutrient and energy adequacy, deficiency or excess;
- 3 discuss current popular dietary trends and their possible consequences;
- 4 recognize and critique food and nutrition controversies.

**STUDENT LEARNING OUTCOMES**

- 1 identify the functions, utilization, food sources, and recommended allowances of nutrients
- 2 apply the Dietary Guidelines to diet planning for health maintenance and disease prevention

**COURSE CONTENT WITH INSTRUCTIONAL HOURS**

|   | Description   | Lecture | Lab | Total Hours |
|---|---|---------|-----|-------------|
| 1 | Food Choices and Human Health <ul style="list-style-type: none"> <li>• Diet and health connection</li> <li>• The human body, its food, and nutrients</li> <li>• Research and science behind nutrition</li> <li>• Reliable vs. unreliable nutrition information sources</li> </ul> | 5       | 0   | 5           |
| 2 | Nutrition Tools, Standards and Guidelines <ul style="list-style-type: none"> <li>• Dietary Reference Intakes</li> <li>• Dietary Guidelines for Americans</li> <li>• USDA Food Guide</li> <li>• Functional food</li> </ul>   | 5       | 0   | 5           |



|   |   |   |   |   |
|---|---|---|---|---|
| 3 | <p>Human Physiology from the Nutrition Perspective</p> <ul style="list-style-type: none"> <li>• Cells and genes</li> <li>• Cardiovascular system</li> <li>• Hormonal and nervous systems</li> <li>• Immune system</li> <li>• Digestive system</li> <li>• Excretory and storage systems</li> <li>• Alcohol and nutrition</li> </ul>  | 4 | 0 | 4 |
| 4 | <p>Carbohydrates</p> <ul style="list-style-type: none"> <li>• Types and structure: sugars, starch, glycogen, fibers, others</li> <li>• Functions: needs, recommendations, and intakes of carbohydrates</li> <li>• Digestion and absorption</li> <li>• The body's use of glucose</li> <li>• Enriched vs. whole grains</li> <li>• Diabetes: types, causes, consequences, etiology, diagnosis, and management</li> <li>• Finding the carbohydrates in foods</li> <li>• Alternative sweeteners</li> </ul>                                   | 6 | 0 | 6 |
| 5 | <p>Lipids</p> <ul style="list-style-type: none"> <li>• Types and structure: triglycerides, fatty acids, glycerol, phospholipids, and sterols</li> <li>• Functions: needs, recommendations, and intakes</li> <li>• Digestion, absorption, and storage and transport</li> <li>• Dietary fats: saturated, unsaturated, and cholesterol and health</li> <li>• Essential polyunsaturated fatty acids</li> <li>• Hydrogenated fats: trans fats and health</li> <li>• Finding the fats in food</li> <li>• Fats and defensive dining</li> </ul> | 6 | 0 | 6 |
| 6 | <p>Proteins and Amino Acids</p> <ul style="list-style-type: none"> <li>• Structure and variety</li> <li>• Functions: needs, recommendations, and intakes</li> <li>• Consequences of protein deficiency and excess</li> <li>• Nitrogen</li> <li>• Balance</li> <li>• Protein and amino acid supplements</li> <li>• Digestion, absorption, and metabolism</li> <li>• Protein quality and quantity in foods</li> <li>• Vegetarian diets: benefits and pitfalls</li> </ul>  | 6 | 0 | 6 |



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|---|---|---|---|---|
| 7 | <p><b>Vitamins</b></p> <ul style="list-style-type: none"> <li>• Definition and classification</li> <li>• Fat soluble vitamins: functions, food sources, and deficiency and toxicity Vitamin A</li> <li>• Vitamin D</li> <li>• Vitamin E</li> <li>• Vitamin K</li> <li>• Water soluble vitamins: functions, food sources, and deficiency and toxicity</li> <li>• Vitamin C</li> <li>• The B complex vitamins</li> <li>• Vitamin supplements: benefits vs. risks</li> </ul>   | 6 | 0 | 6 |
| 8 | <p><b>Water</b></p> <ul style="list-style-type: none"> <li>• Functions of water in the humanbody</li> <li>• Thirst, dehydration and water balance</li> <li>• Safety and sources of drinking water: bottled vs tap water</li> <li>• Electrolyte and acid-base balance</li> </ul>   | 2 | 0 | 2 |
| 9 | <p><b>Minerals</b></p> <ul style="list-style-type: none"> <li>• Definition and classification</li> <li>• Major minerals: functions, food sources, and deficiency and toxicity</li> <li>• Calcium</li> <li>• Phosphorus</li> <li>• Magnesium</li> <li>• Sodium</li> <li>• Potassium</li> <li>• Trace minerals: functions, food sources, deficiency and toxicity</li> <li>• Iodine</li> <li>• Iron</li> <li>• Zinc</li> <li>• Selenium</li> <li>• Fluoride</li> <li>• Osteoporosis: risk factors, etiology, and prevention</li> </ul> | 5 | 0 | 5 |



|    |   |   |   |           |
|----|---|---|---|-----------|
| 10 | <p><b>Energy Balance and Healthy Body Weight</b></p> <ul style="list-style-type: none"> <li>• Problems of overweight and underweight</li> <li>• The body's energy balance</li> <li>• Body weight vs. body fatness</li> <li>• Body Mass Index: classification of overweight and obese</li> <li>• Body fat percentage and distribution</li> <li>• Physiology of the eating cycle</li> <li>• Hunger and appetite regulation</li> <li>• Satiation and satiety</li> <li>• Internal and external causes of obesity</li> <li>• How the body gains and loses weight: popular diets</li> <li>• Strategies for achieving and maintaining a healthy body weight</li> <li>• Pros and cons of medical treatment of obesity</li> <li>• Surgery</li> <li>• Medications, herbal and other supplements</li> <li>• Etiology, perils and management of eating disorders</li> <li>• Anorexia and binge eating</li> <li>• Bulimia</li> </ul> | 6 | 0 | 6         |
| 11 | <p><b>Performance Nutrition</b></p> <ul style="list-style-type: none"> <li>• The benefits and guidelines for physical activity</li> <li>• The body's energy systems and use of fuels</li> <li>• Nutrient needs for physical activity</li> </ul>   | 3 | 0 | 3         |
|    |   |   |   | <b>54</b> |

**OUT OF CLASS ASSIGNMENTS**

- 1 summary of observations and learning experiences from a field trip;
- 2 summary of key points of a guest speaker's nutrition talk;
- 3 review of observations and findings from a visit to a food or health care industry convention/expo.

**METHODS OF EVALUATION**

- 1 individual projects (e.g. present a nutritional analysis of a 3-day dietary intake);
- 2 midterm examination;
- 3 final examination.



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**METHODS OF INSTRUCTION**

- Lecture
- Laboratory
- Studio
- Discussion
- Multimedia
- Tutorial
- Independent Study
- Collaboratory Learning
- Demonstration
- Field Activities (Trips)
- Guest Speakers
- Presentations

**TEXTBOOKS**

| <b>Title</b>                         | <b>Type</b> | <b>Publisher</b> | <b>Edition</b> | <b>Medium</b> | <b>Author</b> | <b>ISBN</b>   | <b>Date</b> |
|--------------------------------------|-------------|------------------|----------------|---------------|---------------|---------------|-------------|
| Nutrition Concepts and Controversies | Required    | Cengage          | 15             | print         | Sizer, F.     | 9781337906371 | 2019        |