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## Course Syllabus

- **Course Number:** BIO127L
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- **Course Title/Modality:** Nutrition for Health and Fitness with Lab (Online)
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- **Credit Hours:** 4
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- **Semester:** Spring 2025 [January 21 – May 10, 2025]
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- **Faculty Name:** Doreen Richards
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- **Email Address:** drichards@ccsnh.edu
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- **Office Location:** N/A
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- **Office Hours:** virtually by appointment
  - Sometimes one-on-one assistance is needed. You may make an appointment with the instructor as needed by emailing the instructor to schedule an a meeting via Zoom.
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- **Prerequisites:** None
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- **Course Description:** This course is a study of the nutrients and how the body handles the nutrients throughout the life cycle. Topics include metabolism of macro- and micronutrients; physiological benefits of an optimal diet with exercise; behavioral issues related to eating; energy balance and weight control; and disease prevention strategies related to diet. Life style behaviors, which optimize nutritional health and wellness, are also emphasized. The labs are designed to reinforce selected topics covered in the lecture portion of the course. (Credit can only be given for BIOL1270L or BIOL1290.)
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- **Text/Instructional Materials and Equipment Required:**  
All content will be accessed and delivered in the Canvas course utilizing the following OER textbook and additional resources as provided in each module:  
  
[Digital OER Textbook - Nutrition: Science and Everyday Application v. 1.0](#)  
[\[Authors:Alice Callahan, PhD, Heather Leonard, MEd, RDN, and Tamberly Powell, MS, RDN\]](#)
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- **Grading:**

Required Items	Percent of Total Grade
Discussion Board Participation	25%
Written Module Assignments	20%
Nutrient Based Disease 3 Part Project	30%
Laboratory Component	25%
Total	100%

**Grading Scale:**

A 93-100	B 83-86	C 73-76	D 63-66
A- 90-92	B- 80-82	C- 70-72	D- 60-62
B+ 87-89	C+ 77-79	D+ 67-69	F 0-59

- **Course Learning Outcomes/Competencies:**

1. Outcome 1: Use and define vocabulary pertinent to nutrition.
2. Outcome 2: Identify and describe macronutrients and micronutrients.
3. Outcome 3: Explain digestion, absorption, and utilization of nutrients by the digestive system.
4. Outcome 4: Describe the basic principles of nutritional sciences as they relate to health promotion and disease prevention.
5. Outcome 5: Understand the energy balance equation for weight control.
6. Outcome 6: Explain the differences in nutritional needs throughout the lifecycle.
7. Outcome 7: Evaluate foods and food labels for nutrient density
8. Outcome 8: Be aware of the latest nutrition updates as the semester allows.

- **Academic Integrity, Cheating, and Plagiarism**

Honesty is expected of all LRCC students. In academic matters this includes the submission of work that clearly indicates its sources. Dishonest acts include cheating and plagiarism, as well as other forms of academic misconduct.

**Cheating** is defined as copying or otherwise using material from others, or using sources not approved by faculty.

**Plagiarism** is defined as using the work (ideas, words, artwork, etc.) of another person as one's own. The failure to cite sources or the extensive use of others' work in written material are the most common types of plagiarism.

Cheating, plagiarism, and other forms of academic misconduct are considered serious disciplinary matters and are subject to the same penalties and procedures as other LRCC disciplinary matters. Students should be aware that penalties levied in substantiated cases of cheating or plagiarism may include, but are not limited to, the issuance of a grade of F, which may in turn lead to delay of graduation. Repeated offenses may lead to dismissal from a program or from the college.

Refer to the Academic Honesty Policy in the Student Handbook.

## Diversity, Equity, and Inclusion Statement

The content of this course is designed to challenge your viewpoints and perspective as part of your learning experience. It is my intent that students from all backgrounds and perspectives are well-served by this course. Students' learning needs will be addressed both in and out of class, and the diversity of students will benefit the class and will be considered a resource and strength. Materials and activities presented in class will respect diversity including gender identity, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture.

- Discuss privately with me if you feel your success in the class is being impacted by experiences outside of class. I am always open to listening to students' experiences and want to find acceptable ways to process and address the issue.
- If you feel that something offensive occurred regarding DEI topics in class (by anyone) that made you feel uncomfortable, please let me know.
- Please tell me if you have a name and/or set of pronouns different from those on your official records.
- I encourage you to seek out other resources, such as an academic advisor or another trusted faculty member, if you feel more comfortable addressing issues with these individuals.

[Anonymous feedback can be submitted here.](#)

I hope this course meets your expectations as a challenging, engaging, and respectful learning experience. If you find this not to be the case, I welcome the opportunity to address your concerns. This is not only a courtesy; it is a matter of process and procedure. Should we fail to arrive at a mutually satisfactory understanding, you should take the matter to my immediate supervisor, Matt Simon at [msimon@ccsnh.edu](mailto:msimon@ccsnh.edu).

## Course Schedule/Additional Information

### Nutrition for Health and Fitness with Lab (BIOL 127L) – Class Schedule Spring 2025 100% ONLINE

**Always refer to Canvas for the most up-to-date list of assignments.**

Week	Date	Topics	Assignments	Targeted Outcomes
1	January 21-26, 2025	Introduction/Overview Designing a Healthy Diet	<ul style="list-style-type: none"><li>• Read Assigned Content in Module 1 Overview Module</li><li>• Module 1: Written Assignment</li><li>• Module 1: Discussion Board – Introductions</li><li>• Module 1: Laboratory Assignment</li></ul>	Meets outcomes 1, 2, 4, 5, 7, and 8
2	January 27-February 2, 2025	Nutrition Science and Information Literacy	<ul style="list-style-type: none"><li>• Read Assigned Content in Module 2 Overview Module</li><li>• Module 2: Submit Topic for Final Project for Approval by Instructor in link assigned</li><li>• Module 2: Discussion Assignment</li><li>• Module 2: Laboratory Assignment</li></ul>	Meets outcomes 1, 4, and 8  Nutrient Related Disease Project Outcomes Identified in detail below
3	February 3-9, 2025	Molecules of Life: Photosynthesis, Digestion, and Metabolism	<ul style="list-style-type: none"><li>• Read Assigned Content in Module 3 Overview Module</li><li>• Module 3: Written Assignment</li><li>• Module 3: Discussion Assignment</li><li>• Module 3: Laboratory Assignment</li></ul>	Meets outcomes 1, 2, 3, 4, 5, and 6
4	February 10-16, 2025	Carbohydrates	<ul style="list-style-type: none"><li>• Read Assigned Content in Module 4 Overview Module</li><li>• Module 4: Laboratory Assignment</li><li>• Nutrient Related Disease Project – Part 1 Topic Introduction</li></ul>	Meets outcomes 1, 2, 3, 4, and 7  Nutrient Related Disease Project Outcomes Identified in detail below

5	February 17-23, 2025	Lipids	<ul style="list-style-type: none"> <li>• Read Assigned Content in Module 5 Overview Module</li> <li>• Module 5: Written Assignment</li> <li>• Module 5: Discussion Assignment</li> <li>• Module 5: Laboratory Assignment</li> </ul>	Meets outcomes 1, 2, 3, 4, 5, and 7
6	February 24-March 2, 2025	Protein	<ul style="list-style-type: none"> <li>• Read Assigned Content in Module 6 Overview Module</li> <li>• Module 6: Discussion Assignment</li> <li>• Nutrient Related Disease Project – Part 2 Topic Outline</li> </ul>	Meets outcomes 1, 2, 3, 4, and 7  Nutrient Related Disease Project Outcomes Identified in detail below
7	March 2-9, 2025	Energy Balance and Healthy Body Weight	<ul style="list-style-type: none"> <li>• Read Assigned Content in Module 7 Overview Module</li> <li>• Module 7: Discussion Assignment</li> <li>• Module 7: Laboratory Assignment</li> </ul>	Meets outcomes 1, 2, 4, 5, 6, and 8
8	March 10-16, 2025	Vitamins and Minerals Part 1	<ul style="list-style-type: none"> <li>• Read Assigned Content in Module 8 Overview Module</li> <li>• Module 8: Laboratory Assignment</li> <li>• Nutrient Related Disease Project – Part 3 Final Paper Submission</li> </ul>	Meets outcomes 1, 2, 4, and 7  Nutrient Related Disease Project Outcomes Identified in detail below
9	March 17-23, 2025	Spring Break	<ul style="list-style-type: none"> <li>• No Coursework</li> </ul>	
10	March 24-30, 2025	Vitamins and Minerals Part 2	<ul style="list-style-type: none"> <li>• Read Assigned Content in Module 9 Overview Module</li> <li>• Module 9: Discussion Assignment #1</li> <li>• Module 9: Discussion Assignment #2</li> <li>• Module 9: Laboratory Assignment</li> </ul>	Meets outcomes 1, 2, 4, and 7
11	March 31-April 6, 2025	Nutrition and Physical Activity	<ul style="list-style-type: none"> <li>• Read Assigned Content in Module 10 Overview Module</li> <li>• Module 10: Discussion Assignment #1</li> <li>• Module 10: Discussion Assignment #2</li> <li>•</li> </ul>	Meets outcomes 1, 4, 5, 6, 7 and 8
12	April 7-13, 2025	Nutrition Throughout the Lifespan	<ul style="list-style-type: none"> <li>• Read Assigned Content in Module 11 Overview Module</li> <li>• Module 11: Written Assignment</li> <li>• Module 11: Discussion Assignment</li> </ul>	Meets outcomes 1, 2, 4, 6, and 7
13	April 14-20, 2025	Nutrient Related Diseases	<p>Module 12: Student Led Discussion Forum – Project Presentations</p> <ul style="list-style-type: none"> <li>• Group A will create a new thread that includes the final project presentation and a minimum of 3 thought provoking questions regarding the topic for classmates to answer</li> <li>• Those students not leading the week will answer 3 questions from 3 different presentations</li> </ul>	Meets outcomes 1, 2, 3, 4, 5, 6, 7, and 8  Nutrient Related Disease Project Outcomes Identified in detail below
14	April 21-27, 2025	Nutrient Related Diseases	<p>Module 13: Student Led Discussion Forum – Project Presentations</p> <ul style="list-style-type: none"> <li>• Group A will create a new thread that includes the final project presentation and a minimum of 3 thought provoking questions regarding the topic for classmates to answer</li> </ul> <p>Those students not leading the week will answer 3 questions from 3 different presentations</p>	Meets outcomes 1, 2, 3, 4, 5, 6, 7, and 8  Nutrient Related Disease Project Outcomes Identified in detail below
15	April 28-May 4, 2025	Nutrient Related Diseases	<p>Module 14: Student Led Discussion Forum – Project Presentations</p> <ul style="list-style-type: none"> <li>• Group A will create a new thread that includes the final project presentation</li> </ul>	Meets outcomes 1, 2, 3, 4, 5, 6, 7, and 8

			<p>and a minimum of 3 thought provoking questions regarding the topic for classmates to answer</p> <ul style="list-style-type: none"> <li>Those students not leading the week will answer 3 questions from 3 different presentations Student Led Discussion Forum – Project Presentations</li> </ul>	Nutrient Related Disease Project Outcomes Identified in detail below
16	May 5 -10, 2025 [note: ends on a Friday]	Nutrient Related Diseases	<p>Module 15: Student Led Discussion Forum – Project Presentations</p> <ul style="list-style-type: none"> <li>Group A will create a new thread that includes the final project presentation and a minimum of 3 thought provoking questions regarding the topic for classmates to answer</li> <li>Those students not leading the week will answer 3 questions from 3 different presentations</li> </ul>	<p>Meets outcomes 1, 2, 3, 4, 5, 6, 7, and 8</p> <p>Nutrient Related Disease Project Outcomes Identified in detail below</p>

● **HOMEWORK/ONLINE ASSIGNMENTS:**

1. These activities are designed to increase your knowledge of the subject matter and to involve you in the 100% online class.
2. **No late assignments will be accepted.**
3. You are expected to complete the assigned chapters and assignments as outlined in the syllabus and on the Canvas Student Site. All online assignments are to be posted to the assignment board before the assigned due date. Assignments will include reading chapters, reviewing videos/power points as posted and answering questions related to the readings. Each weekly assignment will be worth points towards the Chapter Assignments Percentage of your overall grade.
4. Weekly online discussion questions will also be posted. You are expected to answer the assigned questions to the discussion board by **Thursday** of the assignment week. In addition, you must respond to two fellow students' postings with a question, your opinion or observation, or a response to that other student by Sunday of that week. Discussions are intended to reinforce and clarify specific topics and do not take the place of reading the additionally assigned materials. Each weekly discussion assignment will be worth up to 6 points towards the Discussion Percentage of your overall grade.
5. A three-part course project will be completed according to the guidelines on a topic of nutrient-related diseases. Each part will be graded according to the rubric aligned with the project part and account for the Final Project percentage of your overall grade. Expectations and rubrics are included in this syllabus below.
6. Laboratory assignments will take place in Canvas designed assignments to reinforce learning objectives.
7. As instructor, I reserve the right to modify any assignments listed in the syllabus or in Canvas.

## **Nutrition Project: Nutrient-Related Diseases Project Description and Grading Rubrics**

Within the study of nutrition, it is imperative to understand nutrient-related diseases and conditions that cause illness in humans. Some examples may include deficiencies or excesses in the diet, obesity and eating disorders, and chronic diseases such as cardiovascular disease, hypertension, cancer, and diabetes mellitus.

This research will be done by examining a specific topic chosen and its complexities and presenting your findings. **Topics will be posted for approval in a discussion thread week 2 of the semester.**

This assignment is comprised of three culminating portions of completion:

### 1. Course Project: Part 1 - Topic Introduction Paper (Due week 4)

- a. Detailed introduction and explanation with research citations to reinforce your basic understanding of the topic chosen.
- b. APA formatted
- c. 2 pages minimum
- d. Rubric grading

### 2. Course Project: Part 2 - Topic Outline (Due week 6)

- a. The following key points should be addressed. Other areas that are relevant and obtained through research should be included. Don't limit your findings to this list. Use it as a guide.
  - i. What is the topic and how does this condition relate to nutrition?
  - ii. What are the major causes of the disease?
  - iii. Identify at least 4 symptoms.
  - iv. Where/how you can acquire the said disease?
  - v. Treatment and recovery time (if available)
  - vi. What body system(s) is/are affected by the nutrient/related disease?
  - vii. How can this disease be prevented?
- b. Page count varies with content being covered in outline formatting.
- c. Rubric grading

### 3. Course Project: Part 3 - Presentation of Nutrient-related Disease (Due week 8)

- a. This project can be presented in your platform of choice. Examples include PowerPoint Presentations, narrated videos, and/or patient educational material. The goal is for you to be creative in your delivery of the material compiled towards best demonstrating your understanding of the disease complexity.
- b. APA Citations page to be included/attached
- c. Rubric grading

Presentations will additionally be shared for student led discussion forums **during weeks 12 – 16**. Discussion forums will be graded for responses to classmates' postings with attention to questions regarding the classmate's topics and research to be addressed/answered within the forum.

**Course Project: Part 1 - Topic Introduction**  
**Paper Grading Rubric**

Expectations	Proficient	Average	Needs Improvement
<b>Page Length (20 points)</b>	Minimum length of 2 pages, not including cover or title page, excessive graphs, charts or lists, or the reference page(s).	Less than 2 pages, not including cover or title page, excessive graphs, charts or lists, or the reference page(s).	Less than 1 page, not including cover or title page, excessive graphs, charts or lists, or the reference page(s).
<b>Content (50 points)</b>	Detailed introduction and explanation with research citations to reinforce your basic understanding of the topic chosen. What does this disease cause for symptoms? What does this disease do to the body? Is this disease treatable?	Explanation of disease is somewhat detailed but includes limited research citations to reinforce basic understanding of the disease. Minimally explains why the disease is important and what it does to the body.	Minimally explains understanding with scattered and inconsistent details. No research citations to reinforce basic understanding of the disease.
<b>Organization (20 points)</b>	Presentation is well organized and easy to follow. Transition between topics is smooth.	Presentation is organized and easy to follow but transition between topics is not smooth.	Presentation is very unorganized and difficult to follow.
<b>APA Formatting (10 points)</b>	Followed APA format and plagiarism guidelines with minimal errors	Minimally followed APA format and plagiarism guidelines with considerable errors	Did not follow APA format and plagiarism guidelines

**Course Project: Part 2 -  
Topic Outline  
Grading Rubric**

Expectations	Proficient	Average	Needs Improvement
<b>Structure of Presentation (how will it be presented. I.e. pictures, video etc.) (10 points)</b>	Full explanation of how the presentation will be presented. Audience and information match.	Full explanation is unclear. Audience and information don't match	Explanation is unclear and incomplete. Audience and information do not match.
<b>Identify the major causes of the disease (15 points)</b>	All major causes of the disease are identified.	Less than half of the major causes of the disease is identified.	Minimal to none of the major causes of the disease are identified.
<b>At least 4 symptoms of the disease (15 points)</b>	Clearly identifies 4 or more symptoms of the disease.	Identifies less than 4 of the symptoms of the disease.	Identifies 2 or fewer symptoms of the disease.
<b>Where you can acquire said disease (15 points)</b>	Clearly identifies examples of where the disease can be acquired.	Minimally identifies main examples of where the disease can be acquired.	Does not identify main examples of where the disease can be acquired.
<b>Treatment and Recovery Time (15 points)</b>	Clearly identifies examples of treatment options and recovery time.	Minimally identifies main examples of treatment options and recovery time.	Does not identify main examples of treatment options and recovery time.
<b>What body system(s) are affected by the disease (10 points)</b>	Identifies body systems being affected	Minimally Identifies body systems being affected	Does not identify body systems being affected
<b>How can this disease be prevented? (20 points)</b>	Identifies at least two evidence-based practices for disease prevention	Only clearly identifies one evidence-based practices for disease prevention	Does not identify any evidence-based practices for disease prevention



**Course Project: Part 3 –  
Presentation of Disease  
Grading Rubric**

Expectations	Proficient	Average	Needs Improvement
<b>Understanding of Key Issues (15 points)</b>	All major issues are identified and correctly explained in the presentation.	Superficial as well as some deeper issues are identified and correctly explained in the presentation.	Superficial or obvious issues are correctly identified but more complex issues are ignored.
<b>Aesthetic Quality of Presentation (10 points)</b>	Presentation tools are used to create and deliver a working presentation in which all of the major points are explained using elements that communicate effectively and follow basic principles of design.	Presentation tools are used to create and deliver a working presentation in which most of the major points are explained and most include effective use of graphic layout and design.	Presentation is unattractive or presentation tools (such as Microsoft PowerPoint) are not used consistently throughout the presentation, or the presentation does not work correctly.
<b>Content (50 points)</b>	Purpose of topic is clear, complete, accurate. Facts are supported. Audience and information match.	Purpose is unclear. Not all facts are supported. Audience and information don't match as well.	Purpose is unclear, incomplete, and inaccurate. Facts are not supported. Audience and information do not match at all.
<b>Organization(10 points)</b>	Information is pertinent and main points stand out. Key information is easy to spot.	Straightforward manner and main points inferred but don't stand out. Key information can be located with a little work.	Reader likely to be confused.No main points addressed and key information is difficult to locate.
<b>Format, Layout and Conventions (15 points)</b>	Layout attractive and balanced. Key ideas stand out (bold, italics, numbered list). Uses graphics when needed. Free from error.	Appropriate layout. Key ideas emphasized inefficiently with minimal graphics. Errors but minimal.	Layout is cluttered and key ideas are not emphasized. Graphics are needed and not used. Considerable errors.

## Targeted Outcomes Met for Nutrient-Related Diseases Project

### Part 1: Topic Introduction Paper (Due Week 4)

1. Outcome 1: Use and define vocabulary pertinent to nutrition
  - Students will need to use and define key terms related to their chosen nutrient-related disease.
2. Outcome 4: Describe the basic principles of nutritional sciences as they relate to health promotion and disease prevention
  - The introduction will require students to explain how their topic is related to nutrition and its impact on health and disease prevention.

### Part 2: Topic Outline (Due Week 6)

1. Outcome 1: Use and define vocabulary pertinent to nutrition
  - As students outline their topics, they will continue to use and define relevant nutritional terminology.
2. Outcome 2: Identify and describe macronutrients and micronutrients
  - In discussing the causes and symptoms of the disease, students will identify and describe the role of specific macronutrients and micronutrients.
3. Outcome 4: Describe the basic principles of nutritional sciences as they relate to health promotion and disease prevention
  - Students will outline how their topic relates to health promotion and disease prevention, incorporating basic nutritional principles.
4. Outcome 6: Explain the differences in nutritional needs throughout the lifecycle
  - Students may need to address how the disease affects individuals differently based on age or stage of life.
5. Outcome 7: Evaluate foods and food labels for nutrient density
  - Students might discuss how nutrient density impacts the prevention or management of the disease.

### Part 3: Presentation of Nutrient-Related Disease (Due Week 8)

1. Outcome 1: Use and define vocabulary pertinent to nutrition
  - In their presentations, students will use and define key nutritional terms.
2. Outcome 4: Describe the basic principles of nutritional sciences as they relate to health promotion and disease prevention
  - Presentations will include descriptions of how nutritional principles relate to the chosen disease.
3. Outcome 5: Understand the energy balance equation for weight control
  - Depending on the topic, students may need to explain how energy balance relates to the disease.
4. Outcome 8: Be aware of the latest nutrition updates as the semester allows
  - Students will incorporate the most recent research and updates related to their topic.

### Student-Led Discussion Forums (Weeks 12-16)

1. Outcome 1: Use and define vocabulary pertinent to nutrition
  - Students will use and define nutritional vocabulary in discussions and responses.
2. Outcome 2: Identify and describe macronutrients and micronutrients
  - Discussions may involve identifying and describing the nutrients involved in various diseases.
3. Outcome 3: Explain digestion, absorption, and utilization of nutrients by the digestive system
  - Thought-provoking questions and responses could address how diseases affect nutrient digestion, absorption, and utilization.
4. Outcome 4: Describe the basic principles of nutritional sciences as they relate to health promotion and disease prevention
  - Students will discuss and critique the role of nutrition in health promotion and disease prevention.
5. Outcome 5: Understand the energy balance equation for weight control
  - Some discussions might focus on the role of energy balance in preventing or managing diseases.
6. Outcome 6: Explain the differences in nutritional needs throughout the lifecycle
  - Students might discuss how nutritional needs and disease impacts vary across different life stages.
7. Outcome 7: Evaluate foods and food labels for nutrient density
  - Evaluations and recommendations discussed in the forum can address nutrient density and its importance.
8. Outcome 8: Be aware of the latest nutrition updates as the semester allows
  - Sharing recent research and updates will ensure students stay current with the latest nutritional information.