

HECO 1410  
Science of Nutrition

Human Sciences

Department of Science

Division of Arts and Sciences  
South Plains College

SPRING 2024

Associate Professor:  
Keila Ketchersid, MS, RD, LD

**HECO 1410 Science of Nutrition  
Course Information  
SPRING 2024**

Course Title: HECO 1410 Science of Nutrition  
Instructor: Keila Ketchersid, MS, RD, LD  
Office: Science 68  
Office Hours: Tuesday 9:30 AM – 12:00 PM 1:00 -2:30 PM  
Thursday 9:30 AM – 12:00 PM  
F 10:00 AM –11:30 AM (or by appointment)  
Will also be able to accommodate virtual meetings.  
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**Course Title:** HECO 1410 / Science of Nutrition

**Department:** Science

**Discipline:** Human Sciences

**Course Number:** HECO 1410

**Course Title:** Science of Nutrition

**Credit:** 4 (Lecture: 3 / Lab: 1)

This course satisfies an elective requirement but not a lab science requirement at SPC, does count as a core lab science at TTU. Satisfies pre-requisite requirement for Texas Tech and Covenant School of Nursing.

**Prerequisites:** None

**Available Formats:** Face to Face class

**Campuses:** Levelland

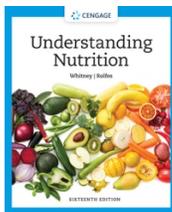
**Course Description:** The course is the study of the nutrients found in foods and utilization of those nutrients by the body. Designed to convey the basic principles of nutritional science.

**Course Specific Instructions:** Blackboard is our communication tool outside of class. A syllabus, power point notes for class, e-mails, and announcements, are all posted on Blackboard. Familiarity with the navigation of Blackboard is crucial for success in the course.

**Course Purpose/ Rationale/ Goal:** The purpose of the course is to introduce students to the six classes of nutrients, carbohydrate, lipids, protein, vitamins, minerals, and water. Students will discover food sources of the nutrients, digestion, absorption, and metabolism of the nutrients, as well as their relationships to chronic disease. Over-consumption and toxicities are also addressed where they are appropriate.

## General Course Information: Lecture

- **Textbook Info/Inclusive Access:** The textbook and resources for this course are available in digital form through the Inclusive Access textbook program at South Plains College. That means the e-book edition of the textbook and/or all required resources are provided in the Blackboard portion of the course from the first day of class. The fee for the e-book/resources are included in the student tuition/fee payment, so there is no textbook or access code to purchase for this course.
- **E-book features:** Features include the ability to hear the text read aloud, highlight, take notes, create flash cards, see word definitions, build study guides, print select pages, and download up to 20% of the book for offline access.
- **Physical textbook:** Students who would also like a printed textbook can purchase through various online locations with the ISBN listed below. Note you cannot opt of the eBook inclusive access due to the fact that this is where your assignments and the Diet and Wellness application are located.



ISBN: 9780357709962

- Calculator – Simple 4 function calculator required. You will not be allowed to use your cell phone or graphing calculator on exams.
- Attendance - Attendance will be taken at the beginning of class each day. A student with one or less absence or an A average will be exempt from the Final Exam.

### Minimum Computer Requirements:

- Laptop or PC running a 1.8+ GHz CPU , 32 MB of free memory, a minimum 2 GB hard drive and running updated Windows, macOS, or ChromeOS software (mobile device not recommended for course content)
- Web Browser: Google Chrome is strongly recommended for MindTap.
- Knowledge of how to navigate web pages and how to deal with pop-up blockers and warnings.
- A reliable, high-speed internet connection.
- Knowledge of how to download files from your web browser and find them on your computer once they are downloaded
- Microsoft Office, specifically Microsoft PowerPoint and Word software (free through SPC)
- Knowledge of basic operations of Microsoft Word and Microsoft PowerPoint
- Windows Media or Quicktime Player (the latest version)
- DirectX graphics with working speakers or headphones

### Grading Policies:

- **Lecture Exams: 6 Major Exams** will be given during the semester. **No make-up exams** will be given if the exam is given via an online format. If you miss an exam online you will receive a 0.
- **Lab Exams: 3 Lab Exams** will be given during the semester. **No make-up lab exams** will be given via an online format. If you miss an exam online you will receive a 0.
- **Diet and Wellness Activities:** Students will complete 5-7 Diet and Wellness activities during the semester. If you do not complete the initial Three Day Food Record and Diet and Wellness Report, you will not be able to complete the remaining nutrient reports.
- **Mindtap Activities** – Approximately 2 per chapter. These will be assigned via the Mindtap Link.
- **Lab Reports:** Students will complete 10 lab reports, dates for turning them in will be specified by instructor.
- **Project/Poster:** Students will be required to participate in a group project/presentation. The project entails presentation skills, creativity, technology skills, public speaking, and nutrition knowledge, More details will be given at assigned time of project. Poster assignment TBD. Project and Poster both count as an exam grade.
- **Lecture Final Exam:** Final exam will be comprehensive, covering Chapters 1-13. Grade on the exam will be counted twice. Students who have earned an A (90% or above) or have 1 or less absence during the semester will not be required to take the final exam.
- **Pop Quizzes and Various Daily Activities** – May occur occasionally quizzes or various worksheets throughout the semester.
- **Class and Online Participation:** All students are asked to participate in class discussions and will be frequently asked to give an overview of the chapters and to discuss points they find would be helpful to be covered in class. Students may also be asked to view video lectures and discussions online via Blackboard.
- **Cheating will not be accepted in this class.** If you are found cheating on any assignment or test, you will immediately be dropped from the course with an F.

**PLEASE SILENCE YOUR CELL PHONE IN LECTURE AND LAB, NO TEXTING DURING CLASS!!!!**

## **Expected Course Learning Outcomes:**

- Discuss the various factors influencing food habits and choices.
- Identify the components of a healthy diet.
- Discuss the six classes of nutrients, their food sources, and functions in the body, deficiencies, and toxicities.
- Distinguish the sound nutrition information from faddism and quackery.
- Describe the principles of digestion, absorption, and metabolism of the nutrients.
- Calculate individual energy expenditure and needs.
- Explain the association between nutrition and chronic disease.
- Evaluate personal dietary intake for nutritional adequacy.

## **Core Objectives to be integrated into HECO 1410 as required by the THECB (Texas Higher Education Coordinating Board):**

- Teamwork
- Communication
- Empirical and Quantitative Skills
- Critical Thinking

## **Suggestions for success in HECO 1410:**

- Before each class:
  - Read the Chapters- highlight important sections. Use explanations and definitions found in columns on sides of text.
  - Outline Chapters
- Class: Attend all classes as specified by instructor or listen to available video content. Take detailed lecture notes and ask questions. Participate in class and team discussions. You may record lectures.
- After each class: Review lecture notes.
- Studying for Exams:
  - Study daily as we cover chapters. Do not wait until the night before the exam.
  - Prepare flash cards with possible test questions.
  - Re-read chapters.
  - Use much detail in completing your review sheet.

## Grade Itemization

6 Major Exams (100 pts/each)	600 points
3 Lab Exams (25 pts/each)	75 points
10 Lab Reports (10 pts/each)	100 points
13 Mindtap Activities	195 points
5 Diet and Wellness Activities (10 pts/each)	50 points
Presentation	100 points
Poster	100 points
Final Exam	200 points (unless exempt)

Assignments and Exams are subject to change due to instructor discretion.

## KEEP A RECORD OF ALL YOUR GRADES- KEEP ALL RETURNED PAPERS.

### Lab Exams

1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_

### Lecture Exams

1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_  
4 \_\_\_\_\_  
5 \_\_\_\_\_  
6 \_\_\_\_\_

### Final Exam

1 \_\_\_\_\_

### Lab Reports

1 \_\_\_\_\_ 7 \_\_\_\_\_  
2 \_\_\_\_\_ 8 \_\_\_\_\_  
3 \_\_\_\_\_ 9 \_\_\_\_\_  
4 \_\_\_\_\_ 10 \_\_\_\_\_  
5 \_\_\_\_\_  
6 \_\_\_\_\_

### Diet and Wellness (Blue Sheets)

1 \_\_\_\_\_ 4 \_\_\_\_\_  
2 \_\_\_\_\_ 5 \_\_\_\_\_  
3 \_\_\_\_\_ 6 \_\_\_\_\_

### Presentation

1 \_\_\_\_\_

### Poster

1 \_\_\_\_\_

### Mindtap Activities

1 \_\_\_\_\_ 10 \_\_\_\_\_  
2 \_\_\_\_\_ 11 \_\_\_\_\_  
3 \_\_\_\_\_ 12 \_\_\_\_\_  
4 \_\_\_\_\_ 13 \_\_\_\_\_  
5 \_\_\_\_\_  
6 \_\_\_\_\_  
7 \_\_\_\_\_  
8 \_\_\_\_\_  
9 \_\_\_\_\_

For information regarding official South Plains College statements about intellectual exchange, disabilities, non-discrimination, Title IX Pregnancy Accommodations, CARE Team, AI, and Campus Concealed Carry, please visit <https://www.southplainscollege.edu/syllabusstatements/>.

### COVID-19

Please contact DeEtte Edens at [dedens@southplainscollege.edu](mailto:dedens@southplainscollege.edu) or 806-716-2376 for COVID 19 questions. <https://www.southplainscollege.edu/emergency/covid19-faq.php#>

# Spring 2024 Dates

Schedule is subject to change due to Instructor's Discretion.

## January 2024

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>
<b>15</b> MKJ Jr. Holiday	<b>16</b>	<b>17</b> 1 <sup>st</sup> Class Day -Intro to Course -Blackboard -Cengage/Mindtap -Assignment #1	<b>18</b>
<b>22</b> Chapter 1- An Overview of Nutrition -Tanita Measurements	<b>23</b>	<b>24</b> Chapter 1- Cont. Lab – Practice Exam Calculations -Pink Worksheets -Tanita Measurements	<b>25</b>
<b>29</b> Chapter 2 – MyPlate  -MyPlate Trivia -Three Day Food Record	<b>30</b>	<b>31</b> Chapter 2 – Nutrition Labels  Nutrition Lab/Cereal Assessment	

## February 2024

Monday	Tuesday	Wednesday	Thursday
<p>5 Chapter 3 – Digestion, Absorption, and Transport</p> <ul style="list-style-type: none"> <li>- Three Day Food Record</li> <li>-Diet and Wellness Report</li> </ul>	<p>6</p>	<p>7 Chapter 3 Cont.</p> <p>Millionaire Game for Review</p>	<p>8</p>
<p>12 EXAM # 1 (Chapters 1-3)</p> <p>Lab Exam: Nutrition Calculations and Digestive System Diagram</p>	<p>13</p>	<p>14 Chapter 4 – Carbohydrates</p> <p>Carbohydrate /Fiber Diet and Wellness</p>	<p>15</p>
<p>19 Chapter 4 Cont.</p> <ul style="list-style-type: none"> <li>-Complete Carb Diet and Wellness</li> <li>-Blood Glucose Levels</li> <li>-Diabetes Risk Assessment</li> </ul>	<p>20</p>	<p>21 Chapter 5- Lipids</p> <p>-Fat and Cholesterol Diet and Wellness</p>	<p>22</p>
<p>26 Chapter 5 Cont.</p> <ul style="list-style-type: none"> <li>-Cholesterol Lab</li> <li>-Check your BP and Cholesterol</li> </ul>	<p>27</p>	<p>28 Chapter 6 – Proteins</p> <p>-Protein Diet and Wellness</p>	<p>29</p>

## March 2024

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>
<b>4</b> Chapter 6 Cont.  -Review Game for Exam 2	<b>5</b>	<b>6</b> EXAM #2 (Chapters 4-6)	<b>7</b>
<b>11</b>  <b>Spring Break</b>	<b>12</b>	<b>13</b>	<b>14</b>
<b>18</b> Chapter 7 – Metabolism  -Yellow Metabolism Worksheets	<b>19</b>	<b>20</b> Chapter 7 Cont.  EXAM #3 (Chapter 7 only)	<b>21</b>
<b>25</b> Chapter 8 – Energy Balance and Body Composition  Cardiovascular Assessment	<b>26</b>	<b>27</b> Chapter 8 Cont.  -Yellow Metabolism Worksheets	<b>27</b>

## April 2024

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>
<b>1</b> Chapter 9 – Weight Control  -Exam Review	<b>2</b>	<b>3</b> Exam #4 (Chapters 8-9)	<b>4</b>
<b>8</b> Chapter 10 – Water-Soluble Vitamins  Project Introduction	<b>9</b>	<b>10</b> Chapter 10 Cont. Project Group Work	<b>11</b>
<b>15</b> Chapter 11 – Fat-Soluble Vitamins  -Vitamin Diet and Wellness -Project Group Work	<b>16</b>	<b>17</b> EXAM #5 (Chapters 10-11)	<b>18</b>
<b>22</b> Group Presentations	<b>23</b>	<b>24</b> Group Presentation (Extra Day if needed)	<b>25</b>
<b>29</b> Chapter 12 – Water and the Major Minerals Cont.  Possible Take Home Exam or Poster Project -Mineral and Fluid Intakes	<b>30</b>		

## May 2024

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>
<p>Chapter 12 – Water and the Major Minerals Cont.</p> <p>Possible Take Home Exam or Poster Project -Mineral and Fluid Intakes</p>		<p>1 Chapter 13 Trace Minerals</p> <p>Exam # 6 (Ch 12-13) or Poster Project</p> <p>Diet and Wellness Mineral and Fluid Intakes -Final Exam Review</p>	<p>2</p>
<p>13 HECO 1410.001 10:15- 12:15 PM</p>	<p>14</p>	<p>15</p>	<p>16</p>