COURSE SYLLABUS
BIOL 1322
NUTRITION AND DIET THERAPY
Spring 2019
MATH/NATURAL SCIENCES/SPORTS SCIENCES
Division Office: P330, Phone: 972 273-3500
Hours: 8:00 am-7:30pm, Mon-Thurs, 7:30am-4:30pm Friday

This course syllabus is intended as a set of guidelines for (Bio1 1322). Both North Lake College and your instructor reserve the right to make modifications in content, schedule, and requirements as necessary to promote the best education possible within prevailing conditions affecting this course.

Instructor Information:
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E-mail: lblackman@dcccd.edu
Office Phone Number: (972) 273-3500

Course Information
Course title: Nutrition and Diet Therapy I
Course number: 1322
Section number/ Class meeting time: 73501 Mon 5:45pm – 8:35pm
Credit hours: 3
Course description: This course introduces general nutritional concepts in health and disease and includes practical applications of that knowledge. Special emphasis is given to nutrients and nutritional processes including functions, food sources, digestion, absorption, and metabolism. Food safety, availability, and nutritional information including food labels, advertising, and nationally established guidelines are addressed.

Prerequisite: One of the following must be met: (1) DREA 0093 AND DWRI 0093; (2) English as a Second Language (ESOL) 0044 AND 0054; or (3) have met Texas Success Initiative (TSI) Reading and Writing standards AND the college Writing score prerequisite requirement.
Recommended: One semester of chemistry or human physiology
Required or Recommended Textbooks and Materials
1. Nutrition from Science to you: Book and Modified Mastering code w/ eText.
   Blake, Munoz, Volpe. 4th edition, 2019, Pearson. OR

Biology 1322 develops the following State Core Curriculum Outcomes as defined by the Texas Higher Education Coordinating Board.

Program-Level Outcome 1: Communication Skills (COM) - to include effective development, interpretation and expression of ideas through written, oral and visual communication

1. **Written**: Process and produce effective written communication adapted to audience, purpose, and time constraints.
2. **Visual**: Effectively interpret visual images or produce effective visual images.

Program-Level Outcome 2: Critical Thinking Skills (CT) - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

Program-Level Outcome 3: Empirical and Quantitative Skills (EQS) - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Program-Level Outcome 6: Social Responsibility (SR) – to include intercultural competence, knowledge of civic responsibility and the ability to engage effectively regional, national and global communities

COURSE-LEVEL STUDENT LEARNING OUTCOMES FOR BIOL 1322
BIOL 1322 supports the following learning outcomes from the Texas Higher Education Coordinating Board as enumerated in the ACGM –Academic Course Guide Manual.

Learning Outcomes
Upon successful completion of this course, students will:
1. Apply nutritional knowledge to analyze personal dietary intakes, to plan nutritious meals using nationally established criteria to meet recommended goals, and to evaluate food labels and the validity of nutritional claims.
2. Trace the pathways and processes that occur in the body to handle nutrients and alcohol through consumption, digestion, absorption, transport, metabolism, storage and waste excretion.
3. Discuss functions, sources, deficiencies, and toxicities of macro- and micronutrients, including carbohydrates, lipids, proteins, water, vitamins, and minerals.
4. Apply the concept of energy balance and its influences at the physical, emotional, societal, and cellular level to evaluate advantages and disadvantages of various methods used to correct energy imbalances.
5. Utilize concepts of aerobic and anaerobic energy systems, and knowledge about macronutrients, vitamins, minerals, ergogenics, and supplements and relate them to fitness and health.
6. Describe health and disease issues related to nutrition throughout the life cycle, including food safety, corrective dietary modifications, and the influence of specific nutrients on diseases.

<table>
<thead>
<tr>
<th>Learning Activity</th>
<th>Learning Outcomes (pages 2 – 3 ) /Student Learning Objective (SLO)</th>
<th>Assessment</th>
<th>State Core Curriculum Outcomes (Program Level ) Outcomes Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, MyDietAnalysis project using Pearson Mastering Access code to generate a compilation of nutrients consumed during a minimum 3-day period.</td>
<td>SLO1. Apply nutritional knowledge to analyze personal dietary intakes, to plan nutritious meals using nationally established criteria to meet recommended goals.</td>
<td>Completion of assignment questions which requires the analysis of numerical data such as bar graphs, pie charts and spreadsheets for conclusions made regarding the results of the diet analysis project at 70% proficiency measured by rubric.</td>
<td>State-Core Curriculum Outcomes: COM, CT, EQS</td>
</tr>
<tr>
<td>2. MyDietAnalysis project using Pearson Mastering Access code to generate a compilation of nutrients consumed during a minimum 3-day period.</td>
<td>SLO4. Apply the concept of energy balance.</td>
<td>Completion of assignment questions which requires the analysis of numerical data such as bar graphs, pie charts and spreadsheets for conclusions made regarding the results of the diet analysis project at 70% proficiency measured by rubric.</td>
<td>State-Core Curriculum Outcomes: COM, CT, EQS</td>
</tr>
<tr>
<td>3. MyDietAnalysis project using Pearson Mastering Access code to generate a compilation of nutrients consumed during a minimum 3-day period. Textbook and classrooms discussions on food supply (social responsibility) regarding civic/community engagement &amp; responsibility relevant to local, national and global food supply and its safety</td>
<td>SLO6. Describe health issues including food supply and food safety, the influence of specific nutrients on diseases and corrective dietary modifications.</td>
<td>Completion of assignment questions which requires the analysis of numerical data such as bar graphs, pie charts and spreadsheets for conclusions made regarding the results of the diet analysis project at 70% proficiency measured by rubric.</td>
<td>State-Core Curriculum Outcomes: COM, CT, EQS, SR</td>
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</table>
**Course Objectives**
Identify the principles of healthful nutrition and to study the interrelationships and roles of the major nutrients in health.

**Specific Course Learning Outcomes**
Upon successful completion of this course, students should be able to:
1. Describe the principles of healthy eating, Dietary Guidelines for Americans – MyPlate and the information on a food label.
2. Describe the anatomical pathway of food through the digestive tract and discuss the most common digestive disorders.
3. Classify carbohydrates, their digestion, absorption, function in the body and their connection to diabetes.
4. Distinguish among three types of lipids including their functions, digestion, benefits and their recommended dietary intake as well as the development of atherosclerosis and coronary heart disease.
5. Describe protein and amino acid, their digestion and roles in the human body.
6. Characterize the properties of catabolism pathways to breakdown carbohydrates, fats and protein for energy (ATP) production as well as metabolism of alcohol.
7. Define energy balance, how to measure energy expenditure and body composition to classify a healthy body weight, underweight, overweight and obesity.
8. List the health consequences of not enough food (food insecurity) and environmental contaminants (food safety) in food in the U.S. and the developing world to include Food Assistance Programs to increase food security in the U.S. and how individuals can help fight food insecurity in their communities.
9. Identify the water-soluble and fat-soluble vitamins, sources, function, deficiency symptoms and their roles in human metabolism and health.
10. Identify the food source, the function of selected minerals and problems with low and high intakes and the role of diet in the development of Osteoporosis.

**Exams and Assignments**
You will take 3 exams and a final and turn in a diet analysis assignment/project using online MyDietAnalysis based on 3 days of dietary consumption. The 3 exams and the final are each worth 100 points. The diet analysis assignment is worth 200 points.

**Evaluation Procedures**

<table>
<thead>
<tr>
<th>Assignment/project</th>
<th>Total points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment/project: MyDietAnalysis - 3 day diet record</td>
<td>200</td>
</tr>
<tr>
<td>Exam 1 (Chapters 1, 2, 21, 3)</td>
<td>100</td>
</tr>
<tr>
<td>Exam 2 (Chapters 4, 5, 6)</td>
<td>100</td>
</tr>
<tr>
<td>Exam 3 (Chapters 8, 14, 20)</td>
<td>100</td>
</tr>
<tr>
<td>Exam 4 - Final (Chapters 9, 10, 12)</td>
<td>100</td>
</tr>
<tr>
<td>Total Possible Points</td>
<td>600</td>
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NOTE: BONUS POINTS----Optional DSM Assignments at 2points per chapter for a possible 26 extra points.
### Grading Scale

<table>
<thead>
<tr>
<th>Points per Exam</th>
<th>Total Points</th>
<th>Final grade</th>
</tr>
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<tbody>
<tr>
<td>90 – 100</td>
<td>540 – 600</td>
<td>= A</td>
</tr>
<tr>
<td>80 – 89</td>
<td>480 – 539</td>
<td>= B</td>
</tr>
<tr>
<td>70 – 79</td>
<td>420 – 479</td>
<td>= C</td>
</tr>
<tr>
<td>60 – 69</td>
<td>360 – 419</td>
<td>= D</td>
</tr>
<tr>
<td>&lt;60</td>
<td>&lt; 360</td>
<td>= F</td>
</tr>
</tbody>
</table>

### Discipline/ Course/ Department/Policies

A. Exams must be taken as scheduled unless the absence is due to legitimate reasons such as medical (with written official documents of proof).

B. Assignment/project: Must be **keyed** (typed). Punctuality, neatness and calculations are all considered. Assignment (**MyDietAnalysis**) Plus project is due at 5:00 pm on the due date: **Monday, 4/22/19**

**To submit your Diet Analysis:** go to e-campus, clique on Diet Analysis then clique on “Submit Your Diet Analysis” then go to “Assignment Submission” and clique on “Browse My Computer” to attach your file for submission to me. **No late turn-ins will be accepted** (otherwise 20 point deduction per day late counting due date)

C. **Communication Policy:** I will respond to your e-mail within 48 hours Monday through Thursday and Friday by 1:00 pm. I will not be available during the weekend.

### INSTITUTIONAL POLICIES

*Institutional Policies relating to this course can be accessed from the following link*

[www.northlakecollege.edu/syllabipolicies](http://www.northlakecollege.edu/syllabipolicies)

### DROP POLICY

If you are unable to complete this course, you must officially withdraw by **Wednesday, April 17, 2019**. Withdrawing is a formal procedure which you must initiate; your instructor cannot do it for you. All Dallas County Community Colleges charge a higher tuition rate to students registering the third time for a course. This rule applies to the majority of credit and Continuing Education / Workforce Training courses. Developmental Studies and some other courses are not charged a higher tuition rate. Third attempts include courses taken at any DCCCD college since the fall 2002 semester. For further information, go online to:

[http://www.DCCCD.edu/thirdcourseattempt](http://www.DCCCD.edu/thirdcourseattempt)
COURSE SCHEDULE – BIOL 1322, SPRING 2019

WEEK 1    (1/22/2019)
  MARTIN LUTHER KING DAY HOLIDAY

WEEK 2    (1/28/2019)
  ORIENTATION, CHAPTER 1 - THE SCIENCE OF NUTRITION
  CHAPTER 2 – TOOLS OF A HEALTHY DIET

WEEK 3    (2/4/2019)
  CHAPTER 4 – HUMAN DIGESTION AND ABSORPTION

WEEK 4    (2/11/2019)
  EXAM 1 CHAPTERS 1, 2, 4
  CHAPTER 5 – CARBOHYDRATES

WEEK 5    (2/18/2019)
  CHAPTER 5 – continued

WEEK 6    (2/25/2019)
  CHAPTER 6 - LIPIDS
  TCCTA/PROFESSIONAL DEVELOPMENT DAY

WEEK 7    (3/4/2019)
  CHAPTER 6 -continued
  CHAPTER 7 – PROTEINS

SPRING BREAK 3/11 – 3/15/19

WEEK 8    (3/18/2019)
  CHAPTER 7 – continued
  EXAM 2 CHAPTERS 5, 6, 7

WEEK 9    (3/25/2019)
  CHAPTER 9 – ENERGY METABOLISM

WEEK 10   (4/1/2019)
  CHAPTER 10 - ENERGY BALANCE, WEIGHT CONTROL AND EATING DISORDERS

WEEK 11   (4/8/2019)
  CHAPTER 10 - continued
  CHAPTER 3 – THE FOOD SUPPLY

WEEK 12   (4/15/2019)
  CHAPTER 3 - continued
  EXAM 3 CHAPTERS 9, 10, 3
WEEK 13 (4/22/2019)
    CHAPTER 12 – THE FAT-SOLUBLE VITAMINS
* DIET ANALYSIS DUE *

WEEK 14   (4/29/2019)
    CHAPTER 13- THE WATER –SOLUBLE VITAMINS

WEEK 15   (5/6/2019)
    CHAPTER 14 - WATER AND MAJOR MINERALS

WEEK 16   5/13/2019
    FINAL EXAM CHAPTERS 12 - 14

NOTE: THIS COURSE SCHEDULE MAY BE AMENDED BY THE INSTRUCTOR