Instructor: Dr. Jameela Banu
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Telephone: 956-665-3222
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Office hours: Tuesday to Thursday 10:00 AM - noon or by appointment ONLY
Term: Fall 2019

Method of Delivery: Online

Textbook and/or Resource Material

Required textbooks:

Additional Reading:

Course Description and Prerequisites –
This course will introduce the students to the metabolic processes of macronutrients and micronutrients. Information on the relevance of nutrients to energy production during normal resting state and exercise state. Metabolic relationship between the nutrients and disease will also be discussed.

Prerequisites:
CHEM 2323 and CHEM 2123 Organic Chemistry Lecture and Lab

Learning Outcomes
Upon successful completion of this course, students will:
1. Identify the metabolic pathways of macro and micronutrients
2. Familiar with energy production
3. Define interactions of nutrients in normal resting state and exercise mode
4. Identify relationship between nutrients and diseases

Learning Objectives for Core Curriculum Requirements:
Students taking this course will learn about how the nutrients consumed will produce energy and know the metabolic changes during exercise and disease condition.

Objectives: Critical Thinking, Communication, Empirical & Quantitative Skills, Teamwork

Critical thinking: is a way of examining and exploring issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

Communication:
Written communication is the development and expression of ideas in writing. Written communication involves learning to work in many genres and styles. It can involve working with many different writing technologies, and mixing texts, data, and images. Written communication abilities develop through iterative experiences across the curriculum.

Empirical and Quantitative Skills: Quantitative Literacy (QL) – also known as Numeracy or Quantitative Reasoning (QR) – is a "habit of mind," competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

Teamwork: is the ability of individuals to work together to accomplish a task or produce a product in a way that is respectful and values the strengths of the members of the team.

Grading Policies
Your course grade will be determined as follows:

- Participation (Every week)   10 pts
- Exams (4)                   60 pts
- Assignment (3)             30 pts
- Total                      100 pts

Participation will be assessed based on a quiz at the end of every week’s learning information. This quiz will have questions from the chapter(s) and any videos, reading materials assigned for the posted online.

For any questions regarding the Bb and online problems you can get help from COLTT – COLTT Help Desk Information:

**COLTT Office Hours** Monday - Friday, 7:30 a.m. - 6:00 p.m.

**Location**
Brownsville Campus
Rustenberg 108
(956) 882-6792

Edinburg Campus
Education Complex 2.202
(956) 665-5327

**Submit a Ticket**
[utrgv.edu/coltthelp](http://utrgv.edu/coltthelp)

**Website**
[www.utrgv.edu/online](http://www.utrgv.edu/online)

Exams and quizzes will have multiple choice, true or false, fill in the blanks, and match the following questions.

The point range for each letter grade is given below:

- 90-100    A
- 80-89     B
- 70-79     C
- 60-69     F
Quizzes and exams will be online. Quizzes and exams will be open **ONLY** on the day of the quiz or exam. The dates are specified in the syllabus. You have to download **Respondus lockdown browser** in your computer to take the tests online.

e. **Grades are based on performance ONLY. This is measured simply and numerically.**

**Other Course Information:**

a) **Contacting the Professor:**
You can contact me during the office hours. You can email or come in person to my office. **If you want to come in person please email me before coming, so I will be better prepared to answer your questions and our time is efficiently utilized. PLEASE GIVE ME 24 - 48 HRS TO RESPOND TO YOUR E-MAIL.**

b) **Policy for make up exams/quiz:**
- **If you know you will be absent for a test, you must contact me at least one week in advance to make arrangements to take the test at another time.**
- **If you can provide written documentation of a medical or other emergency, on the day of the test, I will consider a make-up test.**
- **A grade of zero will be entered for missed tests.**

c) **Please look out for announcements that are posted in Blackboard**

**Suggestions for success:**

- Review any videos posted and take notes.
- Read the chapter thoroughly.
- Go through the powerpoints.
- If there are any questions, contact the instructor.
- Attend all the participation quizzes, quizzes and exams.

**University calendar:**

**Fall 2019 Term (August 26 – December 12)**

- Apr. 1 (Mon.) Registration Begins
- Aug. 21 (Wed.) Payment Due Last day to join a waitlist
- Aug. 23 (Fri.) Last day to withdraw (drop all classes) and receive a 100% refund
- Aug. 26 (Mon.) Fall classes begin
- Aug. 29 (Thurs.) Last day to add a class or register for Fall classes
- Aug. 30 (Fri.) Last day to withdraw (drop all classes) and receive an 80% refund
- Sep. 2 (Mon.) Labor Day Holiday. No classes.
- Sep. 9 (Mon.) Last day to withdraw (drop all classes) and receive a 70% refund
- Sep. 11 (Wed.) Census Day (last day to drop without it appearing on the transcript)
- Sep. 16 (Mon.) Last day to withdraw (drop all classes) and receive a 50% refund
- Sep. 23 (Mon.) Last day to withdraw (drop all classes) and receive a 25% refund
- Nov. 13 (Wed.) Last day to drop a class (grade of DR) or withdraw (grade of W)
- Nov. 28-29 (Thurs.-Fri.) Thanksgiving Holiday. No classes.
- Dec. 5 (Thurs.) Study Day. No classes.
- Dec. 6-12 (Fri.-Thurs.) Final Exams Dec. 12 (Thurs.) Fall classes end; Official last day of the term
- Dec. 13-14 (Fri.-Sat.) Commencement Exercises
- Dec. 16 (Mon.) Grades Due at 3 p.m.
### Calendar of Activities (Tentative)

**NUTR 3310 Advanced Nutrition and Exercise Metabolism**  
**Fall 2019**  
**Online course**

<table>
<thead>
<tr>
<th>Dates</th>
<th>Chapter</th>
<th>Topic</th>
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| **Week 1**        | Chapter 1 from *Bender DA* – Introduction to nutrition and metabolism | Chapter 1 from *Lanham-New SA et al* - Core concepts of nutrition:  
Chapter 2 from *Lanham-New SA et al* - Molecular aspects of nutrition  
**Sep 1** Participation quiz 1 on all chapters covered this week  
Submit discussion - Introductions |
| **Aug 26th – Sep 1** | Chapter 2 from *Bender DA* – Enzymes and metabolic pathways | Chapter 1 and sections 3.9 -3.16 from *Mougios V* - Introduction  
**Sep 8th** Participation quiz 2 |
| **Week 2**        | Chapter 4 from *Bender DA* – Digestion and absorption | Chapter 10 from *Lanham-New SA et al* – The gastrointestinal tract  
**Sep 15th** Participation quiz 3 on all chapters covered this week |
| **Sep 9th – Sep 15th** | Chapter 5 from *Mougios V* Carbohydrates | Chapter 9 from *Mougios V* – Carbohydrate metabolism in exercise  
Chapter 10 from *Mougios V* – Lipid metabolism in Exercise  
**Oct 6th** Participation quiz 5 on all chapters covered this week |
| **Week 3**        | Chapter 4 from *Lanham-New SA et al* – Integration of metabolism 2: Macronutrients | Chapters 4 from *Mougios V* – Nucleic acid and gene expression  
Chapter 12 from *Mougios V* – Effects of exercise on gene expression  
**Sep 29th** Participation quiz 4 on all chapters covered this week |
| **Sep 7th – Oct 13th** | Chapter 10 from *Bender DA* – Integration and control of metabolism | Chapter 8 from *Mougios V* - compounds of high phosphoryl transfer potential  
**Oct 13th** Participation quiz 6 on all chapters covered this week |

**Week 8**
Oct 14th – Oct 20th
EXAM 2 Chapters covered in weeks 5-8
Submit assignment 2 – Energy generation and macronutrients

Week 9
Oct 21st Oct 27th
Chapter 5 from Bender DA - Energy nutrition: the metabolism of carbohydrates and fats
Chapter 3 from Lanham-New SA et al – Integration of metabolism 1: Energy
Chapter 13 from Mougios V Integration of EX metabolism
Oct 27th Participation quiz 7 on all chapters covered this week

Week 10
Oct 28th – Nov 3rd
Chapter 9 from Bender DA – Protein nutrition and protein requirements
Chapter 5 Lanham-New SA et al: Integration of metabolism 3: Protein and amino acids
Nov 3rd Participation quiz 8 on all chapters covered this week

Week 11
Nov 4th – Nov 10th
Chapter 3 from Mougios V - Proteins
Chapter 11 from Mougios, V - Protein metabolism in Exercise
Nov 10th Participation quiz 9 on all chapters covered this week

Week 12
Nov 11th – Nov 17th
Nov 17th EXAM 3 Chapters covered in weeks 9-12
Submit assignment 3 – Influence of exercise on energy generation and utilization

Week 13
Nov 18th – Nov 24th
Chapter 11.1 – 11.14 from Bender DA - Vitamins
Chapter 11.15 – 11.16 from Bender DA - Minerals
Nov 24th Participation quiz 10 on all chapters covered this week

Week 14
Nov 25th – Dec 1st
Chapters 13-16 from Mougios V – Biochemical Assessment of Exercising persons
Chapter 18 from Lanham-New SA et al – Exercise Performance
Dec 1st Participation quiz 11 on all chapters covered this week

Week 15
Prepare for the final examination
Dec 8th Final Examination ONLINE Comprehensive (all chapters)