

Biology 3301 (web-based course) Human Nutrition—3 credits Fall 2021 Sul Ross State University

Course location: Online

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Office Hours: MWF 10-11:30; M 1:00-3:00; T 10:50-11:30 & 1:00-3:00; R 10:50-11:30 & 1-3; & by appt.

Text: **Byrd-Bredbenner, Carol (2013).** Wardlaw's Perspectives in Nutrition (**11th ed.**) **Boston: McGraw-Hill Companies, Inc. *REQUIRED. PRINT or eBook.*** You can purchase the eBook in the SRSU Bookstore or find a used print copy online.

Course Description: This course will cover the scientific principles of human nutrition with an emphasis on nutrients, metabolism, and factors affecting utilization in the human body throughout the life cycle. This also includes influence of food selection on health and evaluation of personal diets. A variety of on-line activities are incorporated to enhance learning. These include PowerPoint presentations, self-assessment quizzes, threaded discussions, personal nutrition assessment activities, and an individual dietary analysis project.

The students will:

1. Note the history of nutrition as a science and how it relates to current nutrient requirements, diet related diseases and disease prevention.
2. Describe the frontiers of nutrition research and the limitations upon that research.
3. Explain the application of the "scientific method" to the solution of nutrition problems.
4. Identify differences between nutrition facts and misinformation based on current research and knowledge.
5. Recognize the significance of the quantity and quality of the essential nutrients in various foods and how they relate to nutritional status and prevention of disease.
6. Discuss the role of nutrition as it interacts with other environmental and genetic factors to impact human health and well-being.
7. Describe the function of the major nutrients in terms of their chemical properties and influence upon biological systems.
8. Apply nutrition knowledge to the selection of appropriate nutrient-dense foods for the maintenance of optimal health.

Grading: Grades will be distributed according to the table below. If you have a valid excuse to miss a test, you must contact me **within 24 hours** of the closing of the test. Failure to do so will result in a zero – no exceptions. Due dates will be posted, so it is your responsibility to participate and complete tests on time.

Unit Tests (5 @ 50 pts each)	250	56%
Participation/Discussion (5 @ 20 pts each)	100	22% (due dates posted in syllabus)
<u>Diet Analysis</u>	<u>100</u>	<u>22%</u>
TOTAL	450 points	100.0%

Course Requirements:

1. **Unit Tests** (5 @ 50 points each) 250 points

You will find the exams in Blackboard under **Unit Tests**. You will have 90 minutes to complete the test. Each exam will have ~50 questions. See Blackboard for directions.

Course Test Schedule:

Unit 1: Nutrition Fundamentals Unit #1 test (CH 1, 2, 3, 4)

Unit 2: Energy-Yielding Nutrients and Alcohol Unit #2 test (CH 5, 6, 7, 8)

Unit 3: Metabolism and Energy Balance Unit #3 test (CH 10, 11, 12) **skip CH 9**

Unit 4: Vitamins and Minerals Unit #4 test (CH 13, 14, 15)

Unit 5: Nutrition Applications in the Life Cycle Unit #5 test (CH 17, 18) **skip CH 16**

2. **Diet Analysis:** 100 points. This is a personal nutrition assessment project, where you'll track and analyze your dietary intake over three days. Don't procrastinate; start this as soon as you can. I'll post instructions under **Diet Analysis** on Blackboard. **DUE NOV 12**

3. **Participation Points/Discussion Questions** (5 @ 20 points each) 100 points

There will be 5 opportunities (one per Unit) for participation points worth up to 20 points each. These will consist of threaded discussions. You must post at least TWO responses – (1) You must respond to the instructor's statement/questions, AND (2) you must post a response to at least **one** of your peers' responses. Rather than merely restating information, I expect you to use the following thinking skills: interpret, illustrate, analyze, compare and contrast, criticize, question, examine, synthesize, formulate, generate, organize, evaluate, judge, assess, etc.

During each unit, click onto the threaded discussion through the **Discussion Board**, and respond to the instructor's statement/question within five days (Due dates will be posted). You are required to include a thoughtful, researched response to each question to receive up to 20 participation points per discussion. ***I expect students to adhere to acceptable codes of ethical, personal, and civil conduct when conversing online...just as we would in the classroom.***

DATE	TENTATIVE LECTURE TOPIC	READ THE FOLLOWING CHAPTERS
WEEK 1		
Aug 23-27	Intro to course; The Science of Nutrition	1
WEEK 2		
Aug 30-Sep 03	Tools of a Healthy Diet	2
	The Food Supply	3
WEEK 3		
Sep 06-10	Human digestion and Absorption;	4
Sep 10	Unit Test #1 (Ch 1-4); Discussion #1 due	
WEEK 4		
Sep 13-17	Carbohydrates	5
WEEK 5		
Sep 20-24	Lipids	6
	Proteins	7
WEEK 6		
Sep 27-Oct 01	Alcohol	8
Oct 01	Unit Test #2 (Ch 5-8); Discussion #2 due	
WEEK 7		
Oct 04-08	Energy Balance, Weight Control	10 (skip Chapter 9)
WEEK 8		
Oct 11-15	Nutrition, Exercise, & Sports	11
WEEK 9		
Oct 18-22	The Fat-Soluble Vitamins	12
Oct 22	Unit Test #3 (Ch 10-12); Discussion #3 due	
WEEK 10		
Oct 25-29	The Water-Soluble Vitamins	13
WEEK 11		
Nov 01-05	Water and Major Minerals	14
WEEK 12		
Nov 08-12	Trace Minerals	15
Nov 12	DIET ANALYSIS DUE	
WEEK 13		
Nov 15-19	Review Unit 4 material	
Nov 19	Unit Test #4 (Ch 13-15); Discussion #4 due	
WEEK 14		
Nov 22-23	Nutrition Through the Growing Years	17 (skip Chapter 16)
Nov 24-26	THANKSGIVING Break—No class	
WEEK 15		
Nov 29- Dec 03	Nutrition Through the Adult Years	18
Dec 03	Discussion #5 due	
WEEK 16		
Dec	Unit Test #5 (Ch 17-18) This exam is your final exam and is not comprehensive.	

Distance Education Statement: Students enrolled in distance education courses have equal access to the university's academic support services, library resources, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should submit online assignments through Blackboard, which requires secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website.

STUDENT LEARNING OUTCOMES (SLOs)

The graduating biology student graduating with a BS in Biology should be able to:

- 1) The student will be able to demonstrate an understanding of basic biological concepts, including but not limited to evolution via natural selection, cell theory, and the role and function of DNA.
- 2) The student will be able to demonstrate utilization of various field techniques toward addressing scientific questions in the specific discipline. These field techniques can include, but are not limited to, plant collection and processing, various animal collection techniques, ecological surveying and sampling, and biodiversity indexing.
- 3) The student will be able to use biological instrumentation to solve biological problems using standard observational strategies.
- 4) The student will develop writing skills by summarizing and critiquing recent relevant biological literature.

CORE OBJECTIVES:

- 1) Communication Skills – Students will effectively communicate the results of scientific investigations, using oral, written, and visual communication, either in group discussions or on written exams.
- 2) Critical Thinking Skills – Students will include creative thinking, innovation, inquiry, and analysis required to relate new information with previous information in a way that demonstrates the diversity and similarity due to evolutionary ancestry.
- 3) Empirical and Quantitative Skills – Students will use basic math skills to solve problems (e.g., related to genetic outcomes, cellular energy production, and probability) resulting in informed conclusions.
- 4) Teamwork Skills – Students will work effectively with others to support a shared goal during lab sessions on activities, such as dissections, problem solving, and other experimental procedures.

MARKETABLE SKILLS: A student getting a degree in the biological sciences would be expected to acquire the following marketable skills by graduation.

- 1) Students will be able to organize, analyze, and interpret data.
- 2) Students will be proficient at using presentation software.
- 3) Students will acquire experience in managing time and meeting deadlines.
- 4) Students will gain the ability to speak effectively and write concisely about scientific topics.
- 5) Students will acquire experience and guidance in the development of professional email correspondence.

ADA Statement: Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. Students with qualifying disabilities who seek accommodations must initiate a request for a meeting for accessibility services. Students seeking accessibility services must contact Rebecca Greathouse Wren, M.Ed., LPC-S, Counseling & Accessibility Services, Telephone: 432-837-8203, or email: rebecca.wren@sulross.edu. For more information see: <https://www.sulross.edu/page/1384/accessibility-services>

SRSU Library Services. The Sul Ross Library offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, library.sulross.edu. Off-campus access requires your LoboID and password. Check out materials using your photo ID. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

COVID-19 Response: Hand sanitizer stations are placed at all building entrances and students are encouraged to use them in addition to handwashing. Given the high level of contagion of this coronavirus and the implications of its disease COVID-19, it's highly recommended you wear a mask and socially distance in public spaces.