



## Syllabus: Bio 127N Human Nutrition and Biology

### Course Information

Semester: Fall 2020

Class Days/Times: Asynchronous Online

Credit Hours: 4.00

### Instructor Information

Name: Teresa DeKoker

Phone/Voice Mail: 520-328-7599

E-mail: tdekoker@tocc.edu

Office location: n/a

### Course Description

Principles of nutrition presented in the context of human biology. Includes chemistry, digestion, absorption, and metabolism of nutrients. Also includes biological and nutritional perspectives on various health issues such as cardiovascular disease, hypertension, cancer, diabetes, and osteoporosis.

### Student Learning Outcomes

**Upon completion of the course, the student will be able to do the following:**

1. Demonstrate improvement in the general education goals of communication and critical thinking.
2. Evaluate the design, results, and conclusions of various nutritional studies.
3. Explain the purpose and significance of dietary recommendations.
4. Describe the biology of human digestion and absorption in general, as well as the nutritional, metabolic, and physiological significance of carbohydrates, proteins, amino acids, lipids, vitamins, major minerals, trace elements, and non-nutrient substances.

5. Describe several nutrient-nutrient and drug-nutrient interactions.
6. Elaborate on basic aspects of clinical nutrition, and various nutrition related issues.
7. Describe how nutrient needs change during human development from the embryonic period through adulthood, along with the nutritional needs during pregnancy and lactation.
8. Competently use dietary analysis software.

## Course Structure

Course structure consists of weekly on-line homework, readings and quizzes; weekly discussions; labs; a dietary analysis assignment using dietary analysis software; a group project on type 2 diabetes. In accordance with my teaching philosophy, in which I believe student learning occurs primarily through real world application of course materials. I welcome student feedback about the course anytime.

Bio 127N is a completely online course and there is no scheduled meeting time. You will, however, need to meet weekly deadlines. The course content is set up in modules. Each week you will be expected to complete one module (feel free to complete more if you'd like). Each module contains readings, videos, graded discussions, homework and a quiz. There is also various longer-term projects or labs that may extend into multiple weeks. The weekly assignments are all online through McGraw-Hill Connect, which is integrated into Canvas.

## Course Learning Materials and Textbook Information

Required: *Nutrition Essentials: A Personal Approach by Wendy J. Schiff, 2<sup>nd</sup> edition*. Ebook and access to Connect required. The book comes as an access card that will provide you access to the book, homework and quizzes. I suggest you purchase this from the TOCC bookstore.

## Courses Outline

- I. Introduction to Human Nutrition and Biology
  - A. Definitions of nutrition, nutritional status, nutrients, and risk factors
  - B. The cell
  - C. Nutritional science
    - a. Nutritional studies: design, types, and criticism
    - b. Methods of nutritional assessment
- II. Dietary Recommendations, Nutrient Density, and Desirable Blood Lipid Profile Levels
- III. Human Biology of Nutrition
  - A. Anatomy and physiology of human digestive system

- B. Digestion & absorption
  - C. Role of enzymes in biology and nutrition
  - D. Energy metabolism
- IV. Digestion, Absorption, Metabolism, Deficiency Symptoms, Food Sources, and/or Biological Effects (beyond the prevention of deficiency symptoms) for the following:
- A. Carbohydrates
  - B. Proteins and amino acids
  - C. Lipids
  - D. Vitamins
  - E. Minerals and trace elements
  - F. Non-nutrient substances such as dietary fiber and various phytochemicals
  - G. Nutrient-nutrient interactions
- V. Developmental Nutrition
- A. Maternal nutrition (both pregnancy and lactation)
  - B. Nutrition from the embryonic period through adulthood
- VI. Biology and Nutrition of Health Issues
- A. Cardiovascular disease
  - B. Cancer
  - C. Hypertension
  - D. Obesity
  - E. Lactose intolerance
  - F. Diabetes
  - G. Osteoporosis
  - H. Eating disorders
  - I. Alcohol consumption
  - J. Food allergies
  - K. Weight loss and weight gain
  - L. Effects of dietary antioxidants
  - M. Food safety
  - N. Pesticides and food additives
- VII. Clinical Nutrition
- A. Biology of diseases and their effects on nutrition
  - B. Effects of disease treatment on nutrition
  - C. Diet therapy for selected diseases and disorders
  - D. Drug-nutrient interactions
- VIII. Current Nutrition Issues
- A. Myths
  - B. Misleading advertisements
  - C. Nutrition public policy
  - D. World hunger
  - E. Genetically modified foods

**Courses Schedule** (see CANVAS course)**Evaluations and Grading & Assignments:**

90 and above is an A

80 - 89 is a B

70 - 79 is a C

60 - 69 is a D

Under 60 is Failing

**Your grade will be determined by the following:**

<b>Evaluation</b>	<b>Percentage of total grade</b>
Online Discussions	25%
Quizzes and Exams	20%
Homework and Labs	45%
Dietary Analysis Project	5%
Diabetes Project	5%
TOTAL	100%

**Himdag Cultural Component**

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**DISCLAIMER:** This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of any changes as they occur.

Tohono O'odham traditions and cultural beliefs will be discussed as relevant to topics of nutrition and only as appropriate to the Tohono O'odham Nation's traditional standards for sharing information.

The Diabetes project will give students the opportunity to examine Tohono O'odham food and medicine traditions as they relate to nutrition and health.

## **Policies and Expectations**

### **Attendance Policy**

You are expected to arrive to class on time and be prepared to participate in each class period. Attendance will be taken each week. You will be expected to log in to Canvas at least 3 times per week. Less than that will be counted as an absence. Four unexcused absences may result in withdrawal and a "W" or "Y" will be recorded. You may request to be excused from class for religious observances and practices, for illness, for school or work-related travel or for personal or family emergency. If you will be absent, please notify the instructor as soon as possible (approved by Faculty Senate April 2014).

### **Incomplete Policy**

Incomplete (I) grades are not awarded automatically. The student must request an "I" from the instructor who can choose to award an Incomplete only if all three of the following conditions are met:

1. The student must be in compliance with the attendance policy.
2. The student must have unavoidable circumstance that would prohibit the student from completing the course.
3. The student must have completed over 75% of the course requirements with at least a "C" grade.

Incompletes are not a substitute for incomplete work due to frequent absences or poor academic performance. Incomplete grades that are not made up by the end of the ninth week of the following semester will be automatically changed to an F if the agreed upon work, as stipulated on the written form signed by the instructor and the student when the I grade is awarded, is not completed.

### **Instructor Withdrawals**

Students who have missed four consecutive classes (or the equivalent) not submitted any assignments nor taken any quizzes by the 45th day census report, due on October 8th are assumed NOT to be participating in the class and may be withdrawn at the faculty member's discretion.

## Student Withdrawals

Students may withdraw from class at any time during the first 2/3 of the semester without instructor permission and without incurring any grade penalty. Please be sure to withdraw yourself by November 9th if you do not expect to complete the class, otherwise you may receive an "F" grade.

## Special Withdrawals (Y) Grade

The "Y" grade is an administrative withdrawal given at the instructor's option when no other grade is deemed appropriate. Your instructor must file a form stating the specific rationale for awarding this grade. "Y" grades are discouraged since they often affect students negatively. Your instructor will not award a "Y" grade without a strong reason.

## *Policies and Expectations:*

- 1) Students are expected to sign into Canvas 3 times each week and complete the discussions, homework, quizzes and activities in that week's module.
- 2) Class participation and preparation are essential to student success. Students must read textual material, prepare for projects, complete required research as stated on the course schedule
- 3) Students are expected to check TOCC email regularly (at least 3 times per week).
- 4) Late work will be marked down 1% for each day that it is late.
- 5) Failure to submit a project results in a grade of zero (0). An F is a better grade!
- 6) No work accepted after the last class

**Academic Integrity:** Violations of scholastic ethics are considered serious offenses by Tohono O'odham Community College, the Student Services Department, and by your instructor. Students may consult the TOCC Student Handbook sections on student code of conduct, on scholastic ethics and on the grade appeal procedure. Copies are available at Tohono O'odham Community College.

All work done for this class must be your own. While you may discuss assignments with other class members, your assignments must clearly be your own. You may use work from books and other materials if it is properly cited. Copying from a book without

proper reference or from a person under any circumstances will result in an “F” for the assignment, and at the instructor’s discretion, possibly an “F” for the course.

**Final Grades:** Students will receive a grade transcript from the college mailed to the address given with registration materials at the end of the semester when all grades have been recorded.

### **Course Feedback:**

All assignments will be graded and returned to the students promptly, typically within a week after the assignment is closed for handing in. E-mail and phone messages will be returned within two days. A student or the instructor may request a student conference at any time during the semester. Quarterly grade reports will be provided to each student, either in person, by email or via the electronic system of Canvas.

### **SPECIAL NOTE TO STUDENT:**

For privacy and security reasons, instructors are advised **NOT** to give grades over the telephone. Grades will only be emailed with written permission from the student.

Your instructor will make every attempt to follow the above procedures and schedules, but they may be changed in the event of extenuating circumstances.

Students submitting assignments through by email are advised to make copies for their own protection.

If you move during the semester, please file a change of address form with the Student Services Office, and inform your instructor.

### **Equal Access Statement/Disability Accommodations**

Tohono O’odham Community College seeks to provide reasonable accommodations for qualified individuals with disabilities. The College will comply with all applicable regulations, and guidelines with respect to providing reasonable accommodations as required to ensure an equal educational opportunity. This process includes self-identifying as a student with a disability, providing supporting documentation of their disability, and being approved for services through the Disability Resources Office (DRO). It is the student's responsibility to make known to their instructor(s) the student's specific needs within the context of each class in order to receive appropriate

accommodations. We will work together in order to develop an accommodation plan specifically designed to meet the individual student's requirements.

For more information or to request academic accommodations, please contact: Anthony Osborn, TOCC Disabilities Resource Coordinator, aosborn@tocc.edu, or 520-383-0033 for additional information and assistance.

## **Title IX**

Tohono O'odham Community College encourages each student to have the knowledge and skills to be an active bystander who intervenes when anyone is observed or being harassed or endangered by sexual violence. Sexual discrimination and sexual violence can undermine students' academic success and quality of life on campus and beyond. We encourage students who have experienced or witnessed any form of sexual misconduct to talk about their experience and seek the support they need.

Confidential support and academic advocacy can be found with: Student Services Title IX Coordinator/Counselor, Alberta Espinoza, M.Ed. located in I-We:mta Ki: Room 18. Phone 520-383-0033 email: aespinoza@tocc.edu

## **Conduct: Bias, Bullying, Discrimination and Harassment**

Tohono O'odham Community College faculty and staff are dedicated to creating a safe and supportive campus environment as a core value. Harassment based on age, class, color, culture, disability and ability, ethnicity, gender, gender identity and expression, immigration status, marital status, political ideology, race, religion/spirituality, sex, sexual orientation, and tribal sovereign status will not be tolerated.

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