



**DEPARTMENT OF HEALTH & HUMAN PERFORMANCE**  
**COURSE SYLLABUS: Spring 2025**  
**NUTR 320-01E: Food Science**  
**MWF 1:00pm-1:50pm NHS 161**

**INSTRUCTOR INFORMATION**

**Instructor:** Rebecca Bridgefarmer, M.S., RDN, LD  
**Office Location:** NHS 145  
**Office Hours:**

- TBD

**Office Phone:** 903.886.5549  
**Office Fax:** N/A  
**University Email Address:** Rebecca.Bridgefarmer@tamuc.edu  
**Preferred Form of Communication:** e-mail  
**Communication Response Time:** 24-48 hours

*\*Changes made to the syllabus / course will be communicated to students via email & announcements\**

**COURSE INFORMATION**

**Materials – Textbooks, Readings, Supplementary Readings**

**Textbook:**

**Course Description:**

This course explores the scientific principles underlying food composition, preparation, and preservation. Students will examine the chemical, physical, and biological properties of food and their impact on flavor, texture, appearance, and nutritional value.

**Student Learning Outcomes**

By the end of the course, the successful student should be able to:

- Explain the structure and components of food systems, including agricultural production, processing, distribution, and consumption, and discuss their impact on food availability and sustainability.

- Describe the chemical properties and reactions of carbohydrates, proteins, lipids, and water in food systems and their roles in food quality and functionality.
- Analyze the relationship between food composition and human nutrition, identifying how nutrient levels are affected by food processing and preparation methods.
- Evaluate the key factors affecting food quality, including sensory attributes, nutritional content, and shelf life, and apply these concepts to assess food products.
- Compare traditional and modern food preservation techniques, such as refrigeration, freezing, drying, canning, and irradiation, and assess their impact on food safety and quality.
- Identify biological, chemical, and physical hazards in food and describe strategies for minimizing these risks to ensure safe food production and consumption.
- Summarize key food safety and labeling regulations, such as those established by the FDA and USDA, and explain their significance in protecting public health.
- Explore emerging trends and technologies in food science, such as plant-based products, 3D food printing, and functional foods, and evaluate their potential impact on the industry and consumers.
- Apply scientific principles and critical thinking to analyze food science case studies and propose solutions to challenges related to food quality, safety, and sustainability.

## **COURSE REQUIREMENTS**

### **Minimal Technical Skills Needed**

Students should have a basic knowledge of computer and Internet skills to be successful in this course. Here are some highlights:

1. Knowledge of terminology, such as browser, application, URL, etc.
2. Understanding of basic computer hardware and software; ability to perform computer operations, such as: managing files and folders: save, name, copy, move, backup, rename, delete, check properties
3. Ability to use the learning management system, using Microsoft Word and PowerPoint, using presentation and graphics programs, accessing, and navigating sites like YouTube
4. Knowledge of copying and pasting, spell-checking, saving files in different formats and sending and downloading attachments
5. Internet skills (connecting, accessing, using browsers) and ability to perform online research using various search engines and library databases.
6. Ability to use online communication tools, such as email (create, send, receive, reply, print, send/receive attachments), discussion boards (read, search, post, reply, follow threads), chats, etc.

### **Instructional Methods**

This is a face-to-face course. Information will be delivered through a combination of resources such as the e-book, lecture, case studies, PowerPoints, supplementary multimedia content, or reading materials. Quizzes, discussion boards, projects, and exams can serve as assessment methods for this course.

### **Student Responsibilities or Tips for Success in the Course**

- **Communicate effectively:** Reach out via email with any questions or concerns as soon as they arise. Waiting until the last moment may result in the issue not being resolved appropriately.
- **Manage your time wisely:** Prioritize tasks and allocate sufficient time for studying, completing assignments, and reviewing course material.
- **Review all course materials:** assessments will include information from both the e-book and any additional material provided in the modules. Make sure you review it thoroughly.

### **GRADING**

Final grades in this course will be based on the following scale:

#### **Letter Grade / Point Value**

A	900-1000
B	800-899
C	700-799
D	600-699
F	0-599

### **ASSESSMENTS**

#### **Chapter Readings:**

Students are expected to read the assigned chapters and review all material in the modules for that week.

#### **Assignment Point Values**

Quizzes	15 x 20	300
Labs	10 x 50	500
Midterm	1 x 100	100

Exam	1 x 100	100
<b>Total Points</b>		1000

### **Quizzes**

Each week you will be given a quiz that covers information in the chapters assigned for that week. The quizzes will consist of 10-20 questions. Please review all chapter and module materials and resources before attempting each quiz.

### **Labs**

Food science labs provide hands-on experience with the principles discussed in class, allowing students to explore food composition, quality, safety, and preservation through experiments. Labs will be completed in the Kitchen (Room ).

### **Midterm**

The Midterm will be given halfway through the course and will cover the chapters covered up to that date. The Midterm will be taken in person. Please see the course calendar for additional details.

### **Exam**

The final exam will consist of 50 questions. Questions may consist of multiple choice, short answer, matching, or fill-in-the-blank. Electronics and notes are not allowed to be used while completing the exam.

## **LATE WORK POLICY**

**Late work will not be accepted** unless accompanied by a documented medical reason. Please note that vacations are not excepted as a reason. The policy is implemented to maintain fairness, consistency, and academic integrity within the course. All projects, quizzes, and other course-related tasks are expected to be submitted by the due date outlined in the course calendar. Any submissions received after the specified due date will not be considered.

Students seeking to submit late work due to a medical reason must provide appropriate documentation, such as a medical certificate or note from a healthcare professional clearly outlining the nature and duration of the medical condition that prevented timely completion of the assignment. The document must be submitted within 1 week of the original due date, unless extenuating circumstances warrant an extension, as determined by the instructor on a case-by-case basis.

## **AI USE POLICY**

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, Chatbots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

For this course, the use of any form of AI for generating text, discussion boards, project information, and communication is prohibited and will be reported if used.

Students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty  
13.99.99.R0.10 Graduate Student Academic Dishonesty

### **BRIDGEFARMER AI USE POLICY**

If the instructor has reason to believe that an assignment was completed using AI in violation of the above ETAMU policy, the student will be required to attend a meeting, either in person or via Zoom, to verbally defend their work without the aid of the submitted assignment. The meeting will allow the students to demonstrate their understanding of the material and their ability to discuss the assignment topic independently. Failure to adequately explain or justify the work may result in a grade penalty or further academic action, in accordance with the university's academic integrity policy.

### **TECHNOLOGY REQUIREMENTS**

#### **LMS**

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements:

LMS Requirements: <https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

Zoom Video Conferencing Tool

[https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom\\_Account.aspx?source=universalmenu](https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu)

### **ACCESS AND NAVIGATION**

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

## **COMMUNICATION AND SUPPORT**

If you have any questions or are having difficulties with the course material, please contact your instructor.

### **Technical Support**

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures/Policies**

#### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

### **University Specific Procedures**

#### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

TAMUC Attendance For more information about the attendance policy please visit the Attendance webpage and Procedures 13.99.99.R0.01

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

#### **Academic Integrity**

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03 Undergraduate Student Academic Dishonesty Form

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

## **Graduate Student Academic Dishonesty Form**

[13.99.99.R0.03UndergraduateAcademicDishonesty.pdf \(tamuc.edu\)](http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf)

## **Students with Disabilities-- ADA Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

## **Office of Student Disability Resources and Services**

East Texas A&M University

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148 Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu) Website: Office of Student Disability Resources and Services

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

## **Nondiscrimination Notice**

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

## **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus

document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all ET A&M campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

**Mental Health and Well-Being**

The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of our commitment to your well-being, we offer access to Telus Health, a service available 24/7/365 via chat, phone, or webinar. Scan the QR code to download the app and explore the resources available to you for guidance and support whenever you need it.





**Department or Accrediting Agency Required Content**

**COURSE OUTLINE / CALENDAR**

\*Subject to Change

**Spring 2025**

<b>Week</b>	<b>Chapters/Topics</b>	<b>Assignments Due</b> (All assignments are due on Sunday at 11:59pm with exception of the midterm and final exam)
<b>1</b> 1/13-1/19	Orientation Ch. 1 Overview of Food Science	Chapter Quiz
<b>2</b> 1/20-1/26	Ch 2 Food Systems and Sustainability	Chapter Quiz
<b>3</b> 1/27-2/2	Ch 3 Chemistry of Foods	Chapter Quiz
<b>4</b> 2/3-2/9	Ch 4 Nutrition and Digestion Ch 5 Food Composition	Chapter Quiz
<b>5</b> 2/10-2/16	Ch 6 Quality Factors in Food	Chapter Quiz Lab
<b>6</b> 2/17-2/23	Ch 8 Food Deterioration	Chapter Quiz
<b>7</b> 2/24-3/2	Ch 9 Heat Ch 10 Cold	Chapter Quiz Lab
<b>8</b> 3/3-3/9	Ch 11 Drying and Dehydration	Chapter Quiz Lab <b>MIDTERM</b>
<b>Spring Break Week 3/10-3/16</b>		
<b>9</b> 3/17-3/23	Ch 13 Fermentation, Microorganisms, and Biotechnology	Chapter Quiz Lab
<b>10</b> 3/24-3/30	Ch 14 Food Additives	Chapter Quiz Lab
<b>11</b> 3/31-4/6	Ch 16 Milk	Chapter Quiz Lab
<b>12</b> 4/7-4/13	Ch 17 Meat Ch 18 Poultry and Eggs	Chapter Quiz Lab
<b>13</b> 4/14-4/20	Ch 20 Cereal Grains, Legumes, and Oilseeds	Chapter Quiz Lab
<b>14</b> 4/21-4/27	Ch 21 Fruits and Vegetables	Chapter Quiz Lab
<b>15</b> 4/28-5/4	Ch 26 Food Safety	Chapter Quiz Lab
<b>16</b> 5/5-5/9	<b>Final Exam</b>	<b>FINAL EXAM</b>