

Clarendon College  
Division of Science and Health  
Agriculture Department

AGRI 1329: Principles of Food Science  
Summer 12 week 2024

**Course Syllabus**

**Meeting Time:** 13:00 Thursday (Roach) Tuesday (Jordan)

**Instructor:** Dr. Caraway

**Office Hours:** By appointment

**Course Description:**

Food technology in relation to world and domestic food supply and demand. Classification of food systems and general processes.

**Statement of Purpose:**

Principles of Food Science partially satisfies the requirements for the Associates Degree at Clarendon College and is designed for transfer to a senior college.

**Methods of Instruction:**

This course centers upon class lecture and discussion. Discussion is essential for the exchanging of ideas and a greater understanding of the content. Therefore, questions will be asked in order to make a more complete learning environment. It is essential for the student to read the class assignments as a basis for the class. Videos and other materials will also be a part of the instructional process.

**Student Outcomes:**

- a) Identify what food science is and how it related to production, quality control, research and development, technical sales, or working as a consultant will encounter processing equipment as part of their job.
- b) Describe new technologies in the food science
- c) Discuss how engineering, microbiology and chemistry are used to process food
- d) List and discuss the various stages of food processing

## **Course Objectives:**

- a) To help students understand that most food scientists, whether they are in production, quality control, research and development, technical sales, or working as a consultant will encounter processing equipment as part of their job.
- b) To make students aware that food scientists need a broad understanding of how these processes work, what can and cannot be done, and what new technologies are on the horizon.
- c) To provide information about how new products can be designed, ingredients sold, clients persuaded, or problems solved without an understanding of how the food is processed.
- d) To help students understand on how various basic principles of engineering, microbiology, and chemistry are being used to process foods. This class is designed to introduce the students to food processing and to make you aware of what is available.

## **Grading Policies:**

The final semester grades will be figured as set in the current catalog:

90-100 = A 80-89 = B 70-79 = C 60-69 = D 59 or Below = F

Grades will be calculated as follows:

4 Exams (including the final) @ 70% of total grade

Term Paper @ 10%

Discussion and Participation @ 10%

Assignments/Quizzes @ 10%

Each exam will be administered after the completion of the respective unit. Discussion and participation will be based upon the student's involvement in the class. Attendance and participation is required and expected. Final Exam: Students must take a final. The time for the final is published at the beginning of each semester. The fourth exam of the semester will be the "Final" Exam and will be administered during the scheduled final exam time. Make-up exams will not be given. Arrangements with the instructor must be made prior to the student missing an exam so that an exam may be given early.

## **Class Participation and Attendance:**

As stated earlier, class participation and attendance is required and expected. All absences validated by doctor's notes, Clarendon College Personnel requests (coaches, Deans, etc.), and instances of extreme emergency as determined by the instructor will be considered excused. All other absences will be considered unexcused. A total of five unexcused absences will result in the complete forfeit of the Class Participation grade. It is vital for the education of the student as well as the other students for each student to participate in class discussions and to be involved in the learning process.

**Withdrawal:** If you decide that you are unable to complete this course or that it will be impossible to complete the course with a passing grade, you may drop the course and receive a "W" on our transcript instead. Withdrawal from a course is a formal procedure that you must initiate. If you do not go through the formal withdrawal procedure, you will receive a grade of "F" on your transcript. A student is permitted to drop a course if he/she obtains an official drop slip from the office and has the instructor sign the slip before the 12<sup>th</sup> class week.

Remember, a student is only allowed to drop the same class twice before he/she will be charged triple the tuition amount for taking the class a third time or more. Furthermore, beginning with the Fall 2007 semester, students in Texas may only drop a total of 6 courses throughout their entire undergraduate career. After the 6<sup>th</sup> course, he/she will no longer be able to withdraw from any classes.

## **Classroom Policies:**

### **Classroom Conduct**

Failure to comply with lawful direction of a classroom instructor is a disruption for all students enrolled in the class. Cheating violations include, but are not limited to: (1) obtaining an examination , classroom activity, or laboratory exercise by stealing or collusion; (2) discovering the content of an examination , classroom activity, laboratory exercise, or homework assignment before it is given; (3) using an unauthorized source of information during an examination, classroom activity, laboratory exercise, or homework assignment ; (4) entering an office or building to obtain unfair advantage; (5) taking an examination for another person; (6) completing a classroom activity, laboratory exercise, homework assignment, or research paper for another person; (7) altering grade records; (8) using any unauthorized form of electronic communication device during an examination, classroom activity, or laboratory exercise; (9) Plagiarism. Plagiarism is the using, stating, offering, or reporting as one's own, an idea, expression, or production of another person without proper credit. Disciplinary actions for cheating in a course are at the discretion of the individual instructor. The instructor of that course will file a report with the Dean of Students when a student is caught cheating in the course, whether it be a workforce or academic course. The report shall include the course, instructor, student's name, and the type of cheating involved. Students who are reported as cheating to the Dean of Students more than once shall be disciplined by the Dean. The Dean will notify all involved parties within fourteen days of any action taken.

### **American with Disabilities Act Statement:**

Clarendon College provides reasonable accommodations for persons with temporary or permanent disabilities. Should you require special accommodations, notify the Office of Student Services (806-874-3571 or 800-687-9737). We will work with you to make whatever accommodations we need to make.

**Dropping a Course:**

A student who is enrolled in a developmental course for TSI purposes may not drop his/her only developmental course unless the student completely withdraws from the college. A student may drop any other course with a grade of "W" any time after the census date for the semester and on or before the end of the 12th week of a long semester, or on or before the last day to drop a class of a term as designated in the college calendar. The request for permission to drop a course is initiated by the student by procuring a drop form from the Office of Student Services. (Refer to other policies concerning this issue in the current college catalog online.)

**Withdrawal from College:**

When a student finds it necessary to withdraw from school before the end of the semester, he or she should obtain a withdrawal form from the Office of Student Services. Students may also withdraw from the college by sending a written request for such action to the Registrar's Office. The request must include the student's signature, the student's current address, social security number and course information details. Students who withdraw after the census date for the semester and on or before the end of the 12th week of a long semester, or on or before the last day to drop a class of a term as designated in the college calendar will be assigned a grade of "W."

**Core Objectives:**

In accordance with recommendations from the Texas Higher Education Coordinating Board, all social and behavioral science courses at Clarendon College will address the following core objectives:

**CT - Critical Thinking Skills** – to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

**COM - Communication Skills** – to include effective written, oral, and visual communication.

**EQS - Empirical and Quantitative Skills** – to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

**SR – Social Responsibility** – to include intercultural competency, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities.

**Student Outcomes:**

1. Identify the principles of food science related to food production, quality, safety, nutrition, and distribution.
2. Describe common and emerging technologies in food science.
3. Explain how engineering, microbiology, and chemistry are applied in food production and processing systems.
4. Describe food safety procedures in U.S. production systems.
5. Demonstrate appropriate food handling/food safety procedures.
6. Explain nutrient composition and the link between nutrition and health.
7. Examine the dynamics of global food supply.

**Grading Policies:**

The final semester grades will be figured as set in the current catalog:

90% - 100%      A

80% - 90%      B

70% - 80%      C

60% - 70%      D

50% and below      F

Grades will be calculated as follows:

4 Exams (including the final) @ 75% of total grade

Research Paper @ 10%

Assignments/Quizzes @ 10%

Discussion and Participation @ 5%

☒ Each exam will be administered after the completion of the respective unit. Final Exam: Students must take a final. The time for the final is published at the beginning of each semester. The fourth exam of the semester will be the “Final” Exam and will be administered during the scheduled final exam time.

☒ The Research Paper will be utilized to assess the student’s understanding of the course material. A variety of topics will be offered for selection and students will be required to research the topic in depth, complete a paper and a brief presentation over their findings.

☒ Assignments will vary.

☒ Discussion and participation will be based upon the student’s involvement in the class.

○ Attendance and participation is required and expected.

**College Policies**

**Academic Integrity Policy** Clarendon College is committed to a philosophy of honesty and academic integrity. It is the responsibility of all members of the Clarendon College community to maintain academic integrity at Clarendon College by refusing to participate in or tolerate academic dishonesty. Any act of academic dishonesty will be regarded by the faculty and administration as a serious offense.

Academic dishonesty violations include, but are not limited to: (1) obtaining an examination, classroom activity, or laboratory exercise by stealing or collusion; (2) discovering the content of an examination, classroom activity, laboratory exercise, or homework assignment before it is given; (3) observing the work of another during an examination or providing answers to another during the course of an examination; (4) using an unauthorized source of information during an examination, classroom activity, laboratory exercise, or homework assignment ; (5) entering an office, classroom, laboratory, or building to obtain unfair advantage; (6) taking an examination for another person; (7) completing a classroom activity, laboratory exercise, homework assignment, or research paper for another person; (8) altering grade records; (9) using any unauthorized form of an electronic communication device during an examination, classroom activity, or laboratory exercise; and/or, (10) plagiarism. (Plagiarism is defined as the using, stating, offering, or reporting as one’s own, an idea, expression, or production of another person’s work without proper credit. This includes, but is

not limited to, turning in a paper purchased or acquired from any source, written by someone other than the student claiming credit, or stolen from another student.)

Students are responsible for reporting known acts of academic dishonesty to a faculty member, the program coordinator, the associate dean, and/or dean. Any student with knowledge of a violation who fails to report it shall him/herself be in violation and shall be considered to have committed an act of academic dishonesty. Additionally, any student who reports him/herself in violation of this code before it is likely that another might consider this possibility will be understood as repentant and acting in good faith. Though the confession will not excuse the student for the violation, the confession will be considered and the violation should not result in suspension from school except in the most extreme cases.

While academic integrity and honesty are the responsibility of the individual student, each individual faculty member, teaching assistant, and/or laboratory instructor is responsible for classroom management and for maintaining ethical behavior within the classroom and/or laboratory. Faculty who discover or suspect a violation should discuss the matter with the suspected violator(s) and attempt to resolve the case at that point. In cases of convincing evidence, the faculty member should take appropriate action. The faculty member and student should complete a Counseling Sheet regarding the violation. (The Counseling Sheet should contain at a minimum the date and time of the violation, the course, the instructor's name, the student's name, an explanation of the infraction or facts of the case, and the resolution to the incident.) This form should be signed by the student, faculty member, program coordinator, and the Dean of Students. The Dean of Students will maintain a file on all violations. If a faculty member prefers to report the case directly to the Dean of Students, it remains his/her prerogative to do so. Additionally, if the faculty member and the accused student cannot reach a resolution or if the faculty member believes that suspension from school is the only fair sanction, the case should immediately be reported by the faculty member, in writing, to the Dean of Students. If the Dean of Students observes any trends in student behavior which involve more than one violation or act of academic dishonesty, the Dean is responsible for notifying all faculty members involved, for contacting the student(s) involved, and after consultation with the faculty member(s) involved for taking the appropriate action. The Dean of Students is responsible for the timely notification (normally within two weeks) to all parties of an action taken.

Students wishing to appeal a disciplinary decision involving academic integrity or acts of academic dishonesty may do so through the Student Appeals and Grievance Procedure.

**Withdrawing from (Dropping) the Course** If you decide that you are unable to complete this course or that it will be impossible to complete the course with a passing grade, you may drop the course and receive a "W" on your transcript instead. (The last day to drop a course is available on the Academic Calendar, located at the Student link on the Clarendon College website.) Withdrawal from a course is a formal procedure that you must initiate. If you do not go through the formal withdrawal procedure, you will receive whatever grade you have earned.

Whether to drop a class or not requires a lot of thought. According to Texas state law a student is only allowed to drop the same class twice before he/she will be charged triple the tuition amount for taking the class a third time or more. Furthermore, beginning with the Fall 2007 semester, students in Texas may only drop a total of 6 courses throughout their entire undergraduate career. After the 6<sup>th</sup> dropped class, he/she will no longer be able to withdraw from any classes.

**Accommodations Statement** Clarendon College provides reasonable accommodations for persons with temporary or permanent disabilities. Should you require special accommodations, notify the

Vice President of Student Services. We will work with you to make whatever accommodations we need to make.

### **Student Rights and Responsibilities**

listed on the College website at:

<http://www.clarendoncollege.edu/Resources/Student%20Services/StudentRightsResponsibilities.pdf>.

### **Course Outline**

#### **Unit One:**

Introduction and Principles

Chapter 1: Food Choices and Sensory Characteristics

Chapter 2: Food Economics and Convenience

Chapter 3: Food Safety

Chapter 4: Food Regulations and Standards

#### **Exam 1**

#### **Unit Two:**

Food Markets and Institutions

Chapter 6: Heat Transfer in Cooking

Chapter 7: Microwave Cooking

Chapter 8: Seasonings, Flavorings and Food Additives

Chapter 9: Food Composition

Chapter 10: Fats, Frying and Emulsions

#### **Exam 2**

#### **Unit Three:**

Starch, Cereal Grains and Bakery Products

Chapter 13: Starch

Chapter 14: Pasta and Cereal Grains

Chapter 15: Batters and Dough

Chapter 19: Pastry

#### **Exam 3**

#### **Unit Four:**

Fruits, Vegetables, Dairy, Meat and Poultry

Chapter 20: Vegetables and Vegetable Preparation

Chapter 23: Milk and Milk Products

Chapter 25: Meat and Meat Cookery

Chapter 26: Poultry

#### **Exam 4**