



Course Syllabus

AMS352: Food Processing Unit Operations

Fall 2016

INSTRUCTOR CONTACT INFORMATION:

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OFFICE HOURS: MW, 1:00-4:00 pm or anytime by appointment

COURSE CREDITS: 3

COURSE PREREQUISITES: Math 116

MODE OF INSTRUCTION:

This web-based course will be delivered via Blackboard and follow a traditional, semester-based schedule so it is important that you join the course as soon as the class starts. You must be committed to learn to use the technology required to participate in a World Wide Web course. This includes using e-mail and Blackboard course management system. On Blackboard you will find syllabus, course schedule, announcements, handouts, PowerPoint slides, discussion questions, assignments, exams, and grades. You can find the course materials at [Blackboard](#) website. If you need assistance with Blackboard, you may contact the WKU IT Helpdesk at (270) 745-7000.

You should take the time to thoroughly read the course syllabus. Your success in this class depends on your understanding of and adherence to the policies contained in this syllabus. If you have any questions you should contact your instructor. Remember that it is your responsibility to stay current with your coursework and due dates.

CATALOG DESCRIPTION:

An overview of unit operations and processing techniques used in food processing industry. Topics include thermal processing, low temperature preservation, dehydration, irradiation, enzyme technology, separation and concentration, evaporation and distillation, and high-pressure and minimal processing methods.

REQUIRED TEXTBOOK:

Fellows, P.J. (2009). Food Processing Technology - Principles and Practice, 3rd edition. CRC Press, Boca Raton, FL.

ISBN# 9781845692162.

(The book can also be purchased at lower price through [Amazon](https://www.amazon.com/Food-Processing-Technology-Principles-Practice/dp/1439887182))

**LEARNING OBJECTIVES:**

By the end of this course, students should be able to:

- Explain the basic terms and principles of food processing.
- Describe the concepts of food processing and preservation and their relationship to food safety and quality.
- Explain how each type of food processing technique employed to preserve the food.
- Identify the food processing equipment required to make the most common food products.

COURSE TOPICS:

Topics may include:

- Introduction to Food Processing
- Properties of food and processing
- Raw material preparation
- Size reduction
- Mixing and forming
- Separation and concentration of food components
- Blanching
- Pasteurization
- Heat sterilization
- Evaporation and distillation
- Extrusion
- Dehydration
- Smoking
- Baking and roasting
- Frying
- Chilling and modified atmospheres
- Freezing
- Freeze drying and freeze concentration
- Irradiation
- High-pressure processing
- Minimal processing methods: pulsed electric fields, pulsed light and ultrasound

See the course schedule on Blackboard for weekly activity details and due dates.

GRADING/COURSE EVALUATION:

▪ Exams	45%
▪ Quizzes	15%
▪ Term Paper	20%
▪ Discussion	20%

GRADING SCALE: A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = < 60.

All deliverables **MUST** be completed in order to pass the course.

EXAMS:

There will be two midterm exams and one final for this course. The exams will consist of true/false, multiple-choice and essay questions. The exam questions will be developed from assigned readings and lectures. More details about the dates of these exams can be found on blackboard.

QUIZZES:

There will be a set of announced quizzes for this course. The quizzes will consist of true/ false and multiple-choice questions. The purpose of the quizzes is to assess the understanding of the material covered and to prepare you for the exams. **There are no make-ups for quizzes.**

TERM PAPER:

During the first week of class, students will be divided into small groups (3-4 students). Each GROUP will prepare a written paper covering a topic related to unit operations in food processing. Describe in detail the unit operation(s) and how it is used to prepare safe foods. Make a flow chart(s) showing equipment, sequence of operations, and unit operations. Provide pictures of equipment used in the manufacture of the product and flow diagrams, as necessary. Describe how the unit operation(s) affects the quality and safety of finished products.

The maximum length for the paper should be less than 20 pages (double-spaced, 1 inch margins, 12 pt font). The paper will be graded for both content and presentation. The paper will be evaluated for completeness, scientific accuracy, adherence to topic, correctness and quality of works cited, and presentation (readability, grammar, and spelling). A minimum of 5 citations is required. Cite all the references used. References must be from peer-reviewed articles published in scientific journals, books, and reliable online sources (typically government or scientific society). It is recommended to follow the American Psychological Association Publication Association style.

At the end of the course, each **STUDENT** will fill out a self and peer evaluation form regarding each member contributions to the group.

The term paper must be submitted on time via Blackboard. The paper is due on **11/27**. More details about the paper can be found on the course website.

DISCUSSION:

Participation in the discussion boards is required. A description of all discussion questions can be found under the Discussion Board on Blackboard. You are required to post to the initial discussion topics/questions and respond to classmates on a minimum of three separate days per week. Your responses must contribute to quality and

advancement of discussion. Your post should be a minimum of one short paragraph and a maximum of two paragraphs. At minimum, your post should have at least five to seven sentences in the paragraph. Whether you agree or disagree explain why with supporting evidence from the assigned readings or a related experience. Support your discussion with a reference, link, or citation when appropriate.

The discussions also provide a forum for students to ask questions and answer important questions about the course material. The discussion questions also allow students to receive feedback from other students in the class and the instructor. I will read every post you make on the discussion board. However, I will not interfere unless I see you off track or I want to give a feedback.

The discussion questions have a **specific due dates and must be submitted on time**. There will be **no make up discussion accepted** so pay a close attention to deadlines. The discussion questions will be graded and posted to the grade sheet. The following rubric will be used for the online discussion assessment.

	1 pt	2 pts	3 pts	4 pts	Total Points
<u>Timeliness</u> Post to the INITIAL discussion topics/questions and respond to classmates on a minimum of THREE SEPARATE days per week.	Fewer than 2 posts	2 or more posts--all on one day	2 or more posts on two days	3 or more posts on three or more days	X 2 =
<u>Response Content</u> 1. Responses on topic 2. Responses original 3. References are utilized where appropriate 4. Responses contribute to the quality and advancement of the discussion.	Meets 0-1 Criterion	Meets 2 Criteria	Meets 3 Criteria	Meets all 4 Criteria	X 2 =
<u>Organization</u> 1. Clear Structure 2. Responses meet posted length requirements. 3. Any references or resources utilized are cited using APA format. 4. Responses are clearly written and contain few spelling/grammatical errors.	Meets 0-1 Criterion	Meets 2 Criteria	Meets 3 Criteria	Meets all 4 Criteria	=
TOTAL					= — / 20

LATE SUBMISSION:

All assignments must be submitted on time via Blackboard. Assignments will be considered as late if submitted after 11:30 pm. A late submission will not be graded and receive a score of zero.

HOW TO LABEL YOUR WORK:

- **Assignments:** All assignments should be labeled as follows: username-class#-assignment#.doc. For example, a student named John Hilltopper would name his assignment **JHilltopper-AMS352-A01.doc**. Your name and the assignment number must be included in the text of the document attached.
- **Email Subject Lines:** Please start your subject lines in email correspondence with Course Number-username: Subject_Of_Message (**for example, AMS352-JHilltopper: Question regarding Discussion**)

CLASS EXPECTATIONS:

Students are required to logon to the Blackboard system *regularly* and be alert for my announcements. Students must complete the class work individually, unless stated otherwise. You are expected to be responsible for your own learning, to thoughtfully complete the assigned readings, to bring questions and offer thoughtful and constructive comments to discussion board, and to actively participate in discussion and class activities. You are expected to do all required assignments and turn them in on time, as late assignments are not accepted. I also expect you to act honestly and ethically at all times and to treat one another with respect.

CLASS MAKE-UP POLICY:

Make-up examinations and assignments will only be granted under extenuating circumstances and at my discretion. It is your responsibility to inform me (ahead of time, whenever possible) of extenuating circumstances that might prevent you from completing work by the assigned deadline. Please note that evaluation of extenuating circumstances is at my discretion and documentations may be required for verification of the extenuating circumstances. In case of a medical emergency, a doctor's note or a statement from a medical professional must be submitted.

COURSE WITHDRAWAL:

Students should refer to the Drop/Add deadlines and to information for withdrawing from a class for the particular term. It is your responsibility to officially withdraw from the class if you wish no longer to continue in the course. The university policy states "Nonattendance does NOT release students from the responsibility to officially drop any course for which they have enrolled and choose not to complete."

ACADEMIC INTEGRITY:

All Western Kentucky University policies are in effect. Academic dishonesty will not be tolerated in any form. Plagiarism is defined as the use of the words and ideas of another as one's own without crediting the source. References must be cited and quotation marks used in direct quotes. Academic dishonesty includes cheating on exams, quizzes,

assignments and representing someone else's work as your own work. Plagiarism and cheating are serious offenses and may be punished by failure on the exam, assignment, paper or project.

STUDENT DISABILITY SERVICES:

In compliance with university policy, students with disabilities who require accommodations (academic adjustments, and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services in Downing University Center, A-200. The phone number is (270) 745-5004; TTY is (270) 745-3030. Per university policy, please DO NOT request accommodations directly from the professor without a letter of accommodation from the OFSDS.

NETIQUETTE:

Interactions in an online classroom are in written form. Your comfort level with expressing ideas and feelings in writing will add to your success in an online course. The ability to write is necessary, but you also need to understand what is considered appropriate when communicating online.

The word "netiquette" is short for "Internet etiquette." Rules of netiquette have grown with the growth of the Internet to help users act responsibly when they access or transmit information online. As a WKU student, you should be aware of the common rules of netiquette for the Web and employ a communication style that follows these guidelines.

- **Wait to Respond.** Wait to respond to a message that upsets you and be careful of what you say and how you say it. Allow time for email to be received, and replied to, keeping in mind time differences around the world and other people's busy schedules.
- **Be Considerate.** Rude or threatening language, inflammatory assertions, personal attacks, and other inappropriate communication will not be tolerated. Sending harassing messages to students is not only frowned on, it may be illegal. Keep in mind that threaded discussions are meant to be constructive exchanges.
- **Be Respectful.** Be respectful and treat everyone as you would want to be treated yourself. Always remember the **Golden Rule!**
- **DON'T SHOUT.** Never post a message that is in all capital letters; it comes across to the reader as SHOUTING! Using a word or two in caps is fine, but shouting is not recommended.
- **Be Brief Online.** Keep messages short and to the point.
- **Think Before Posting.** Always practice good grammar, punctuation, and composition. Use spell check! This shows that you've taken the time to craft your response and that you respect your classmates' work.
- **Keep Personal Information Private.** Posting private and personal information online can have serious consequences. Keep private messages private; don't post to the group.