



On-demand Course Syllabus AMS352: Food Processing Unit Operations

INSTRUCTOR CONTACT INFORMATION:

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OFFICE HOURS: by appointment

COURSE CREDITS: 3

COURSE PREREQUISITES: MATH 116

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. Woodhead Publishing. ISBN# 9781845692162.
(The 4th edition is fine as well)
(This textbook can be purchased through [Elsevier](#))



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
- Blanching
- Pasteurization
- Heat sterilization
- Extrusion
- Dehydration
- Chilling and modified atmospheres
- Freezing
- Freeze drying and freeze concentration
- Irradiation
- High-pressure processing
- Minimal processing methods: pulsed electric fields, pulsed light and ultrasound

GRADING/COURSE EVALUATION

▪ Quizzes	30%
▪ Exams	30%
▪ Assignments	40%

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.

QUIZZES

There will be twelve quizzes for this course. The purpose of the quizzes is to assess the understanding of the material covered in previous lectures and reading assignments and to prepare you for the exams.

EXAMS

There are three regular exams for this course. The exams questions will be developed from assigned readings and lectures.

ASSIGNMENTS

There will be a set of homework assignments for this course. The assignments must be submitted on time via blackboard.

COURSE and UNIVERSITY POLICIES/PROCEDURES

MODE OF INSTRUCTION

This on-demand course will be delivered via Blackboard. 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 course syllabus, course schedule, announcements, handouts, PowerPoint slides, assignments, exams, and grades. You can find the course materials at [Blackboard](#) course 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.

CLASS EXPECTATIONS

Students must complete the class work individually. You are expected to be responsible for your own learning and to thoughtfully complete the assigned readings.

COMMUNICATION POLICY

Email is the preferred method of communication. My response time is within 24 hours Monday – Friday, and 48 hours on the weekends.

Email Subject Lines: Please start your subject lines in email correspondence with Course Number-username: Subject_Of_Message (**for example, AMS352-JHilltopper: Question regarding A01**)

HOW TO LABEL YOUR WORK

- **Assignments:** All homework assignments should be labeled as follows: username-class#-assignment#.doc. For example, a student named John Hilltopper would name his assignment **JHilltopper-AMS352-A1.doc**. Your name and the assignment number must be included in the text of the document attached.
- Failure to follow these guidelines could result in loss of points.

ACADEMIC HONESTY

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.

COURSE WITHDRAWAL

Students should refer to the Drop/Add deadlines and to information for withdrawing from a class for the particular term. It is the student 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."

STUDENT ACCESSIBILITY RESOURCE CENTER

"In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, Room 1074. The SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu. Please do not request accommodations directly from the

professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center."

TITLE IX MISCONDUCT/ASSAULT STATEMENT

Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at <https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf> and Discrimination and Harassment Policy (#0.2040) at https://wku.edu/policies/hr_policies/2040_discrimination_harassment_policy.pdf.

Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121.

Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and **MUST** report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.