

Jordan University of Science and Technology
Faculty of Agriculture
Department of Nutrition and Food Technology
First Semester 2022/2023
Course Specifications

Title & Instructor	
Course Title	Food Engineering
Course Number	NF 475
Prerequisites	
Course Website	
Instructor	Prof. Taha Rababah
Office Location	
Office Phone	
Office Hours	To be determined and by appointment
E-mail	
Teaching Assistant	To be announced

Course Description	
Materials used for manufacture of food processing machines and their effect on foodstuffs. Temperature control, steam generation and its uses in food processing. Studying the engineering theories for the preparation, handling and manufacturing of food and the basics of the devices involved in these operations	
Learning Outcomes	Weights
Students have fundamentals of the basic processes of food production with emphasis on the impact of individual processes on biological and nutritional value of foods.	50%
They understand technological processes not requiring heat energy supply, processes requiring heat energy supply, and processes requiring the removal of heat energy	50%

Text Book & References	
Title	Introduction to Food Engineering
Author(s)	R.P. Singh, and D.R. Heldman.
Publisher	
Year	2014
Edition	5th Ed., Academic Press
Book Website	
References	

Teaching & Learning Methods

PowerPoint slides presented by the instructor and provided as soft and hard copies for students.
 Small group discussions and in-class activities.
 Encouraging the use of social media and communication between students to enhance the learning experience.
 In-class revision sessions and discussion in preparation for exams.

Assessment

Assessment Type	Expected Due Date	Weight
First Exam	To be determined	30%
Second Exam	To be determined	30%
Final Exam	To be determined	40%

Course Content

Week	Topics	ref
1,2,3	Basic concepts and terms of food processes.	1
3-6	Processes without any thermal energy: cleaning, sorting, peeling, mixing, milling, mechanical separation etc.	1
7-9	Processes that require the application of thermal energy: blanching pasteurization, sterilization, evaporation, extrusion, drying, baking, microwave heating	1
10-14	Processes that require removal of thermal energy: cooling, freezing, lyophilization	1

Policies

Exams	The exams will include a variety of questions, true-false, multiple choice, fill in the blanks, and essay questions.
Cheating	Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty. Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty.
Attendance	Consistent with Jordan University of Science and Technology guidelines, students absent from regularly scheduled examinations because of authorized University activities will have the opportunity to take them at an alternate time. No make-up exams will be given for unexcused absences.
Participation	Participation and discussion are encouraged for earning additional points (extra credits).
Withdraw	Consistent with Jordan University of Science and Technology guidelines