


Course Description Form

1. Course Name:	
Cereal Technology	
2. Course Code:	
CETE365	
3. Semester / Year:	
First semester (fall) / 2023-2024	
4. Description Preparation Date:	
1/2/2024	
5. Available Attendance Forms:	
Presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30theoretical hours + 45 practical hours (75 hours) / 3.5 units	
7. Course administrator's name (mention all, if more than one name)	
Name: Ph.D. Roqaya Fouad Lafy and Israa Maan Email: roqayafouad@uomosul.edu.iq Name: ph.D. Azhar Ibrahim shuker Email: azhar.Ibrahim@uomosul.edu.iq	
8. Course Objectives	
Theoretical: -Familiarize students with the importance of food cereals and strategy - Raising the technological knowledge of students' cereal industry - Familiarize students with different ways to manufacture different cereals - Familiarize the student with the methods of receiving and storing cereals	Practical: *Enabling the student to become familiar with the most important laboratory methods Grain study
9. Teaching and Learning Strategies	
Theoretical - Interactive lecture - Brainstorming - Dialogue and discussion - Assigning reports -Conducting monthly and daily examinations - Offers for cereal models and appliances for cereal technology	practical: - Assigning group work to reveal leadership skills - Assigning tasks and reporting for each experiment


10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2Theoretical 3Practical	<p>THEORETICAL b 1: Know the Vegan Cereal Classification Knowing the economic importance of cereals Know the anatomical structure and chemical composition of the grain C 4: Practical: Calculates the weight of 1,000 grains</p>	<p>THEORETICAL Importance of cereals and their chemical composition</p> <p>Practical: adjectives Morphology of grains</p>	<p>THEORETICAL audio methods, Writing on the board Direct dialogue style Practical: conducting the test, explaining and presenting Sample</p>	<p>THEORETICAL Short exams, assignments, discussions</p>
2	2Theoretical 3Practical	<p>THEORETICAL C1: Know the characteristics of cereals related to storage, know the factors that affect the process of storing cereals, and learn about the forms of damage to cereals and the changes that occur during storage</p> <p>Practical: E 3: Estimates moisture in grains</p>	<p>THEORETICAL Grain storage</p> <p>Practical: laboratory milling</p>	<p>THEORETICAL audio methods, Writing on the board Direct dialogue style Practical: conducting the test, explaining and presenting Sample</p>	<p>THEORETICAL Short exams, assignments, discussions</p>
3	2Theoretical 3Practical	<p>THEORETICAL b 2 : Recognize the methods of storing cereals Silo fittings and detection of insect injury</p> <p>Practical: b7: Demonstrates a</p>	<p>THEORETICAL Grain storage</p> <p>Practical: laboratory milling</p>	<p>THEORETICAL audio methods, Writing on the board Direct dialogue style Practical: conducting</p>	<p>THEORETICAL Short exams, assignments, discussions</p>

		moisturizing method Wheat		the test, explaining and presenting Sample	
4	2Theoretical 3Practical	THEORETICAL a 1: Identify methods of fighting insects, rodents, grain dust, risk of silo explosion and dust prevention methods Practical: c5: Enumerate laboratory mills And grinding methods And calculate extraction ratios For every method	THEORETICAL Stored grain rodents Practical: laboratory milling	THEORETICAL audio methods, Writing on the board Direct dialogue style Practical: conducting the test, explaining and presenting Sample	THEORETICAL Short exams, assignments, discussions
5	2Theoretical 3Practical	THEORETICAL C2: The student understands the plant and agricultural properties of wheat Practical: b 8: Check the color of the flour Pekar test	THEORETICAL Wheat Quality Properties Practical: flour color	THEORETICAL audio methods, Writing on the board Direct dialogue style Practical: conducting the test, explaining and presenting Sample	THEORETICAL Short exams, assignments, discussions
6	2Theoretical 3Practical	THEORETICAL b 3 : Shows the physical and chemical properties of cereals Practical: c6: Explains characteristics and	THEORETICAL Wheat Quality Properties Practical: wheat proteins	THEORETICAL audio methods, Writing on the board Direct dialogue Style Practical: conducting	THEORETICAL Short exams, assignments, discussions

		structure Wheat flour proteins		the test, explaining and presenting Sample	
7	2Theoretical 3Practical	THEORETICAL C3 : Know the technological properties of cereals Practical: b 9:Applies flour strength testing methods	THEORETICAL Wheat Quality Properties Practical: flour strength	THEORETICAL audio methods, Writing on the board Direct dialogue style Practical: conducting the test, explaining and presenting Sample	THEORETICAL Short exams, assignments, discussions
8	2Theoretical 3Practical	THEORETICAL a 2:Recognizes the steps and methods of receiving, cleaning, storing, beating and moisturizing wheat Practical: d 1: enumerates estimation methods Alphaamylase activity	THEORETICAL Grinding wheat Practical: amylase enzymes	THEORETICAL audio methods, Writing on the board Direct dialogue style Practical: conducting the test, explaining and presenting Sample	THEORETICAL Short exams, assignments, discussions
9	2Theoretical 3Practical	THEORETICAL b 4: Distinguishes between the products of various wheat grinding steps Practical: d 2: Measures the dough's resistance to mixing	THEORETICAL Grinding wheat Practical: physical tests of dough	THEORETICAL audio methods, Writing on the board Direct dialogue Style Practical: conducting the test,	THEORETICAL Short exams, assignments, discussions

				explaining and presenting Sample	
10	2Theoretical 3Practical	<p>THEORETICAL</p> <p>a 3: Masters mill management and specification of flour quality</p> <p>practical:c7: Explains how the xttensograph device works</p>	<p>THEORETICAL</p> <p>Grinding wheat</p> <p>Practical: Physics dough method</p>	<p>THEORETICAL</p> <p>audio methods, Writing on the board Direct dialogue Style Practical: conducting the test, explaining and presenting Sample</p>	<p>THEORETICAL</p> <p>Short exams, assignments, discussions</p>
11	2Theoretical 3Practical	<p>THEORETICAL</p> <p>b 5: Recognizes the stages of the bulgur industry and the importance of the wheat type in the production and nutritional value of the bulgur</p> <p>practical:c8: Draws lines for the readings obtained from the curves of the mixograph device</p>	<p>THEORETICAL</p> <p>Bulgur Industry</p> <p>Practical: Physics dough method</p>	<p>THEORETICAL</p> <p>audio methods, Writing on the board Direct dialogue style Practical: conducting the test, explaining and presenting Sample</p>	<p>THEORETICAL</p> <p>Short exams, assignments, discussions</p>
12	2Theoretical 3Practical	<p>THEORETICAL</p> <p>e 1:Knowledge of the Freekeh industry and its nutritional value</p> <p>practical:b 10: It documents the relationship of</p>	<p>THEORETICAL</p> <p>Freekeh Industry</p> <p>practical: Rice</p>	<p>THEORETICAL</p> <p>audio methods, Writing on the board Direct dialogue Style Practical:</p>	<p>THEORETICAL</p> <p>Short exams, assignments, discussions</p>

		specifications and characteristics of starch in rice to judge the quality of rice		conducting the test, explaining and presenting Sample	
13	2Theoretical 3Practical	THEORETICAL a 4:Recognizes the product and nutritional value of rice practical:b11 It confirms the most important tests conducted on semolina used in pasta manufacturing	THEORETICAL Rice Practical : pasta products	THEORETICAL L audio methods, Writing on the board Direct dialogue style Practical: conducting the test, explaining and presenting Sample	THEORETICAL L Short exams, assignments, discussions
14	2Theoretical 3Practical	THEORETICAL b 6: Knows about the pasta industry and common defects in the pasta produced practical: d3: Applies the Lane and Eynon method to determine sugars in cereals and their products	THEORETICAL Pasta Industry practical: Sugars	THEORETICAL L audio methods, Writing on the board Direct dialogue style Practical: conducting the test, explaining and presenting Sample	Short exams, assignments, discussions
15	2Theoretical 3Practical	THEORETICAL E2:Familiarize students with equipment, tools, quality and sensory assessment equipment for cereals, mills and silos	THEORETICAL Field visit to one of the research laboratories or centres for cereal technology practical:	 Practical: conducting the test,	THEORETICAL L Give a brief lecture by the student regarding his/her scientific visits Submission of

	practical: d4: A method is used to obtain wheat starch in the laboratory	Starch	explaining and presenting Sample	a report of the student's views at the said visit
--	--	--------	----------------------------------	---

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily

t	Evaluation methods	Evaluation date (one week)	Grade	Relative weight %
1	Final theoretical report +theoretical practical reports	Theoretical 15 weeks Practical 1-15 weeks	7 theoretical + 6 practical	13%
2	Short test 1 Quiz	3 weeks	4 theoretical + 2 practical	6%
3	Midterm exam (theoretical and practical)	9 weeks	10 theoretical + 5 practical	15%
4	Short test 2 Quiz	12 weeks	4 theoretical + 2 practical	6%
5	Final practical test	practical exams week	20	20%
6	Final theoretical exam	Theoretical exams week	40	40%
			100	100

preparation, daily oral, monthly, or written exams, reports etc


12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Cereal Technology, Dr. Mohammed Abid Alsaïdi,, Ministry of Higher Education and Scientific Research. Republic of Iraq. 1982
Main references (sources)	-Cereal Milling Technology Written by Engineer dr. Farhan Ahmed Alfin, 2013 -LA. MANUAL 3 MANUAL OF METHODS- OF ANALYSIS OF FOODS FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA MINISTRY OF HEALTH AND FAMILY WELFARE GOVERNMENT OF INDIA,NEW DELHI 2015
Recommended books and references (scientific journals, reports...)	- Pasta and methods of inspection and testing/Part II, 2006. Arab Republic of Egypt, Egyptian General Authority for Specifications and Quality - Health Promotion and Disease Prevention Knowledge Gateway – Whole grain

	Whole grain,2017 - CEREAL AND CEREAL PRODUCTS- Heat and Flour Testing Methods, A Guide to Understanding Wheat and Flour Quality, Wheat Marketing Center, Inc. Portland, Oregon, USA
Electronic References, Websites	.www.world-grain.com http://wheat.pw.usda.gov/ggpages/wheatpests.html


 Instructor of theoritical part

Dr. Roqaya fouad lafy


 Instructor of practical part

Dr.Azhar ibrahim shuker
 Israa maan


 Chairman of the scientific committee

Prof. Dr. Moafak mahmood ahmed


 Head of the department of Food science

Prof. Dr. Sumiya kalaf badawi

الأستاذ الدكتور

سويتة خليل بلوى
 رئيس قسم علوم الأغذية