Course Description Form

1. Course Name:

Cereal Technology

2. Course Code:

CETE365

3. Semester / Year:

First semester (fall) / 2024-2025

4. Description Preparation Date:

1/9/2024

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

Course administrator's name (mention all, if more than one name)

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8. Course Objectives

Theoretical:

- -Familiarize students with the importance of food cereals and strategy
- Raising the technological knowledge o students' cereal industry
- Familiarize students with different wa to manufacture different cereals
- Familiarize the student with methods of receiving and storing cereals

Practical:

*Enabling the student to become famil with the most important laborate methods

Grain study

9. Teaching and Learning Strategies

Theoretical

- Interactive lecture
- Brainstorming
- Dialogue and discussion
- Assigning reports
- -Conducting monthly and daily examinations

practical:

- Assigning group work to rev

- Assigning tasks and reporting for ea

- Offers for cereal models and appliances for cer technology

10. Course Structure

Week	Hours	Required Learning	Unit or subject	Learning	Evaluation
	d All Manager	Outcomes	name	method	method
1	2Theoretical 3Practical	THEORETICAL a1: possesses knowledge of botani taxonomy. Economic importance, anatomi structure, chemical composition, grain properties related to storage, factors affecting the grain storage process and wheat quality properties. Practical: C1: Identify laborate mills, grinding meth and calculation of extraction ratios For each method and qualitative qualities	chemical composition Grai storage and whea quality propertie Practical: Morological, chemical, qualitative and rheological qualities and grinding methods of gra	style	Short exams, assignments, discussions
2	2Theoretical 3Practical	rheoretical a1: possesses knowledge of botani taxonomy. Economic importance, anatomi structure, chemical composition, grain properties related to storage, factors affecting the grain storage process and wheat quality properties. Practical: C1: Identify laborate mills, grinding meth and calculation of extraction ratios for each method and qualitative qualities	grains and their chemical composition Grain storage and where quality properties Practical: Morological, chemical, qualitative and rheological qualities and grinding method of grain storage and sto	board Direct dialogue style Practical:	Short exams, assignments,

		cereals			
3	2Theoretical	THEORETICAL	THEORETICAL	THEORETICAL	
	3Practical			audio methods,	
		a1 : possesses	The importance of	Writing on the	Short exams,
		knowledge of botani	grains and their	board	assignments,
		taxonomy. Economic	chemical	Direct dialogue	discussions
		importance, anatomi	composition Grai		
		structure, chemical	storage and whea	Practical:	
		composition, grain	quality propertie	conducting the	
		properties related to		test, explaining	
		storage, factors	Practical:	and presenting	
		affecting the grain	Morological,	Sample	
		storage process and			
		wheat quality	qualitative and		
		properties.	rheological		
		Practical:	qualities and		
		Practical:	grinding method		
		C 1: Identify laborate	of grain		
		mills, grinding meth			
		and calculation of			
		extraction ratios For			
		each method and			
		qualitative qualities			
		cereals			muno p pmio
4	2Theoretical	THEORETICAL	THEORETICAL	THEORETICAL	THEORETICA
	3Practical	a1 : possesses	mı .	audio methods,	Ch and aman
		knowledge of botani			Short exams,
		taxonomy. Economic		board	assignments,
		importance, anatomi		Direct dialogue	discussions
		structure, chemical	composition Grai	style	
		composition, grain	storage and whe	100	
		properties related to	Practical:		
		storage, factors affecting the grain		test, explaining	
		storage process and	Morological, chemical,	and presenting	
		wheat quality	qualitative and	Sample	
		properties.	rheological		
		properties.	qualities and		
		Practical:	grinding method		
		C 1: Identify laborate	of grain		
		mills, grinding meth	or grain		
		and calculation of			
		extraction ratios For			
		each method and			
		qualitative qualities	2.2		
		1 (3/1 00)	و جامعة الموص		
5	2Theoretical	THEORETICAL -4		THEORETICAL	THEORETICA
J	3Practical	omilionii Jugi	THE CHARLE	audio methods,	THEORETICA
	Jindellear	a1 : possesses	(Fermiortance	Writing on the	Short exams,
		knowledge of botani		board	assignments,
		Tricuse of Dolaill	premie and their	DUGIU	assigninchis.

1						
		2Th course	taxonomy. Economic importance, anatom structure, chemical composition, grain properties related to storage, factors affecting the grain storage process and wheat quality properties. Practical: C 1: Identify laborate mills, grinding method and calculation of extraction ratios For each method and qualitative qualities cereals	composition Grastorage and when quality properties Practical: Morological, chemical, qualitative and rheological qualities and grinding method of grain	Practical: conducting the test, explaining and presenting Sample	
	6	2Theoretical 3Practical	b 3: Shows the physical and chemical properties of cereals Practical: C 1: Identify laborate mills, grinding methorand calculation of extraction ratios For each method and qualitative qualities occreals	chemical composition Grai storage and whea quality propertie Practical: Morological,	THEORETICAL audio methods, Writing on the board Direct dialogue Style Practical: conducting the test, explaining and presenting Sample	THEORETICAL Short exams, assignments, discussions
	7	2Theoretical 3Practical	a1: possesses knowledge of botani taxonomy. Economic importance, anatomi structure, chemical composition, grain properties related to storage, factors affecting the grain storage process wheat quality properties.	THEORETICAL The importance of grains and their chemical composition Grain storage and where quality properties Practical: Morological chemical,	style	THEORETICAL Short exams, assignments, discussions
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		Practical:	of grain		
		C 1: Identify laborate			
		mills, grinding meth			
		and calculation of			
		extraction ratios For			
		each method and			
		qualitative qualities			
		cereals			
8	2Theoretical	THEORETICAL	THEORETICAL	THEORETICAL	THEORETICAL
O	3Practical	IIIBONEIIG		audio methods,	
	or ractical	a1 : possesses	The importance of	Writing on the	The same of the sa
		knowledge of botani		board	assignments,
		taxonomy. Economic		Direct dialogue	
			The second secon	style	uiscussions
		importance, anatomi structure, chemical	storage and whe	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
				The second secon	
		composition, grain	quality propertie Practical:	_	
		properties related to		test, explaining	
		storage, factors	Morological,	and presenting	
		affecting the grain	chemical,	Sample	
		storage process and	qualitative and		
		wheat quality	rheological		
		properties.	qualities and		
			grinding method		
		Practical:	of grain		
		C 1: Identify laborate			
		mills, grinding meth			
		and calculation of	*		
		extraction ratios For			
		each method and			
		qualitative qualities			
		cereals			
9	2Theoretical	THEORETICAL	THEORETICAL		THEORETICAL
	3Practical			audio methods,	
		a1: possesses	The importance	Writing on the	Short exams,
		knowledge of botani	grains and their	board	assignments,
		taxonomy. Economic	chemical	Direct dialogue	discussions
		importance, anatomi	composition Grai	Style	
		structure, chemical	storage and whe	Practical:	
		composition, grain	quality propertie		
		properties related to	Practical:	test, explaining	
		storage, factors	Morological,	and presenting	
		affecting the grain	chemical,	Sample	
		storage process and	qualitative and		
		wheat quality	rheological		
		CI/COUT H	gualitles and		
			gratethy frethod		
		Practical:	of Brain		
		C 1: Identify laborate			
		mills, grinding meth			
					1
		and calculation of	P Bus also IK		

10		extraction ratios For each method and qualitative qualities			
10					
10		qualitative qualities	\	•	1
10					
10		cereals			
31		THEORETICAL	THEORETICAL		THEORETICAL
	Practical			audio methods,	1
		a1 : possesses	The importance of		
		knowledge of botani	The second second		discussions
		taxonomy. Economid	The Part of the Control of the Contr	Direct dialogue	
	1	importance, anatomi			
	1	structure, chemical	storage and whea		
		composition, grain properties related to		test, explaining	
		storage, factors	Morological,	and presenting	
		affecting the grain	chemical,	Sample	
		storage process and	qualitative and	Junip. 2	
		wheat quality	rheological		
		properties.	qualities and		
			grinding method		
		Practical:	of grain		
		C 1: Identify laborate			
		mills, grinding metho			
		and calculation of extraction ratios For			
	1	each method and			
		qualitative qualities			
		cereals			
11 27	Theoretical		THEORETICAL	THEORETICAL	THEORETICAL
	Practical			audio methods,	
				Writing on the	
		knowledge of botani			discussions
		taxonomy. Economic		Direct dialogue	
		importance, anatomi structure, chemical	Bulgur, freekeh,	style Practical:	
		The latest contraction of the second contrac		conducting the	
		properties related to		test, explaining	
		storage, factors		and presenting	
		affecting the grain		Sample	
		storage process and			
		wheat quality			
	1	properties.			
		Described			
	1	Practical:			
	- 1	b1 studies the qualit qualities of rice, past			
		bulgur and freekeh			
12 27			THEORETICAL	THEORETICAL	THEORETICAL
	Practical	6 7	و جامعة الموص	audio methods,	
		a2 Learns about the	Mafilitacette of	Writing on the	assignments,
		stages of making	pulgur freekeh,	board	discussions
Ema alea IVa Luk					

18		bulgur, freekeh, rice	rice and pasta	Direct dialogue	
		and pasta and the	Practical:	Style	
		importance of the ty	Bulgur, freekeh,	Practical:	
		of grains in their	rice and pasta.	conducting the	
		production and their		test, explaining	1
		nutritional value		and presenting	
		nati tionai varae		Sample	
		Practical:		dampie	
		b1 studies the quali			
		qualities of rice, pas	1		
		bulgur and freekeh			
12	2Theoretical	THEORETICAL	THEORETICAL	THEORETICAL	THEORETICAL
13	3Practical	a2 Learns about the		audio methods,	
	Sriactical	stages of making	Manufacture of	Writing on the	assignments,
		bulgur, freekeh, rice	20 20 30	board	discussions
		and pasta and the	rice and pasta	Direct dialogue	uiscussions
		importance of the ty		style	
		of grains in their	Bulgur,	Practical:	
		production and their	_	conducting the	
		nutritional value	and pasta.	test, explaining	
		nati tionai vaiae	and pastar	and presenting	
		Practical:		Sample	
		b1 studies the qualit			
		qualities of rice, past			
		bulgur and freekeh			
14	2Theoretical	THEORETICAL	THEORETICAL	THEORETICAL	Short exams,
	3Practical			audio methods,	assignments,
		a2 Learns about the	Manufacture of	Writing on the	discussions
		stages of making	bulgur, freekeh,	board	
		bulgur, freekeh, rice		Direct dialogue	
		and pasta and the	Practical:	style	
		importance of the ty		Practical:	
		of grains in their	rice and pasta.	conducting the	
		production and their		test, explaining	
		nutritional value		and presenting	
		D 1		Sample	
		Practical:			
		b1 studies the qualit			
		qualities of rice, past			
15	2Theoretical	bulgur and freekeh THEORETICAL	THEORETICAL	THEODETICAL	THEORETICAL
15	3Practical	THEORETICAL	THEORETICAL	INEUKETICAL	THEORETICAL
	Siractical	d1: The student	Field visit to one	audio methods,	Give a brief
		communicates with	the research	Writing on the	lecture by the
		one of the grain	laboratories or	board	student regardi
		processing laborator	THE RESERVE OF THE PROPERTY OF		his/her scientif
		or private research	techniology 3	style	visits
		centers to informath	وكلية الزراعة والغا	,	Submission of a
		student about the m	practical:		report of the
		important laborator	Rightly sit to one		student's views
			. 1		
		يد ع	و قسم علموم الاغسد		
ation					

equipment and	the research		the said visit
methods of work,	laboratories or		
especially those that	centres for cerea		1
are not available in t			
department		Practical:	
		conducting	
practical:		the test,	
d1: The student		explaining	
communicates with		and	
one of the grain		presenting	
processing laborator		Sample	
or private research			
centers to inform the			
student about the m			
important laborator			
equipment and			
methods of work,			
especially those that			
are not available in t			
department			

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	Theoretical15weeks Practical1-15 weeks	7theoretical + 6 practical	13%
2	Short test 1 Quiz	3 weeks	4theoretical + 2practical	6%
3	Midterm exam (theoretical and practical)	9 weeks	10theoretical + 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 Alsai Ministry of Higher Education and Scientific Resear

Republic of Iraq. 1982

Main references (sources)

tren by Engineer dr. Farhan Ahmed

و تسم علوم الاغدية

	-LA. MANUAL 3 MANUAL OF METHODS- OF ANALYSIS OF FOODS FOOD SAFETY A STANDARDS AUTHORITY OF INDIA MINISTRY OF HEALTH AND FAMILY WELFARE GOVERNMENT OF INDIA, NEW DELHI 2015
Recommended books and reference (scientific journals, reports)	 Pasta and methods of inspection and testing/Part II 2006. Arab Republic of Egypt, Egyptian General Authority Specifications and Quality Health Promotion and Disease Prevention Knowled 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, In 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

Chairman of the scientific committee

Head of the department of Food science

A.Prof. Dr. Taha Mahmood Taqi Mahmood

Prof. Dr. Sumaya khalaf badawi

