Module (Course Syllabus) Catalogue

2023-2024

College/ Institute	**Shaqlawa Technical College**						
Department	**Food Quality Control Technique-Morning**						
Module Name	**Food biophysics**						
Module Code	FBP202						
Degree	**Technical Diploma**	*	**Bachelor**				
	High Diploma		**Master**		**PhD**		
Semester	**Second**						
Qualification	**PhD in Food Quality Control and Safety**						
Scientific Title	**Lecturer**						
ECTS (Credits)	**6**						
Module type	**Prerequisite**		**Core**		**Assist.**		
Weekly hours	**5**						
Weekly hours (Theory)	**(2)hr Class**		**(32)Total hrs Workload**				
Weekly hours (Practical)	**(3)hr Class**		**(48)Total hrs Workload**				
Number of Weeks	**16**						
Lecturer (Theory)	**Dr. Rozhgar Kamal Mohammed**						
E-Mail & Mobile NO.	**rozhgar.mohammad@el.epu.edu.iq (07504290554)**						
Lecturer (Practical)	**Dr. Rozhgar Kamal Mohammed**						
E-Mail & Mobile NO.	**rozhgar.mohammad@el.epu.edu.iq (07504290554)**						
Websites	**https:// epu.edu.iq**						

Course Book

Course Description	The course introduces students to the fundamental concepts of food science including: Instruments, Solution, Methods of determination, types of food sciences, physical properties of foods, size and shapes of foods, food structure, etc……
Course objectives	1. Describe the definition of food, food science. 2. Fundamental molecules (water, proteins, lipids, carbohydrates) that provide the structure, function, and chemical/physical properties of foods. 3. Various forms of processing used for food preservation and their effects on food quality. 4. Physical, chemical and microbial forms of food deterioration and preservation
Student's obligation	1. Students have to attend theoretical and practical lectures to obtain primary information. 2. Students must done quiz weekly in practice lectures. 3. Suitable clothes, safety gloves and masks have to be used for practice lectures. 4. Students must to complete homework, reports and seminars on time. 5. Obtained information of theory and practice lectures is student's duty through several different sources such as (notes during lectures, books, internet and journals.

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<table>
<tr><td>Required Learning Materials</td><td colspan="5">1. Theory lectures will be tough by data show in PPT form.
2. Practice lectures will be tough by data show in PPT form, scientific movies, laboratory works and scientific visiting.
3. Group working during practice lectures, in labs.</td></tr>
<tr><td rowspan="11">Assignments</td><td colspan="2">Task</td><td>Weight (Marks)</td><td>Due Week</td><td>Relevant Learning Outcome</td></tr>
<tr><td colspan="2">Paper Review</td><td></td><td></td><td></td></tr>
<tr><td rowspan="5">Assignments</td><td>Homework</td><td>8</td><td></td><td>14%</td></tr>
<tr><td>Class Activity</td><td>2</td><td></td><td>2%</td></tr>
<tr><td>Report</td><td></td><td></td><td></td></tr>
<tr><td>Seminar</td><td>4</td><td></td><td>8%</td></tr>
<tr><td>Essay</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Project</td><td>10</td><td></td><td>10%</td></tr>
<tr><td colspan="2">Quiz</td><td>8</td><td></td><td>8%</td></tr>
<tr><td colspan="2">Lab.</td><td></td><td></td><td>2%</td></tr>
<tr><td colspan="2">Midterm Exam</td><td>16</td><td></td><td>16%</td></tr>
<tr><td colspan="2">Final Exam</td><td>40</td><td></td><td>40%</td></tr>
<tr><td colspan="2">Total</td><td>100</td><td></td><td>100%</td></tr>
<tr><td>Specific learning outcome:</td><td colspan="5">1- Theory: lecture, group discussion, seminar, pair work, group work, role play, case-based learning.
2- Laboratory practice: Lecture, group discussion, group work. Sampling techniques of chemical, physical and biological examination of food.
3- Laboratory with equipment for training, oven, incubator, balance, burner,…</td></tr>
</table>

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16. Course Reading List and References:

- Key references:

Brennan, J. G. (2006). Food Processing Hand book. published by WI LEY-VCH Verlag GmbH & Co. KGaA, Weinheim ISBN: 3-527-30719-2.

- Useful references:

1-**Manay , N. S. and Shadaksharaswamy , M. (2008)**. Foods facts and principles. Third revised edition. New Age International (p) Ltd., publisher.

2- **Ramaswamy , H. and Marcotte, M. (2006)**. Food processing principles and applications. Published by CRC pres., Taylor and Francis group, Library of Congress.

- Magazines and review (internet):

1-Journal of Food Processing and Preservation

2- **http://www.who.int/en/**

Theoretical Topics:	**Lecturer's name**
1- Introduction to principles of food sciences. 2- Carbohydrates. 3- Disaccharides. 4- Lipid. 5- Triglyceride. 6- Protein 7- Water in food system. 8- Food vitamins. 9- Food flavors. 10- Physical properties of foods. 11- Classification of amino acids. 12- Rheological properties of foods.	Lecturer's name Dr. Rozhgar kamal mohammed ex: (2 hrs)

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18. Practical Topics (If there is any)	
1- Solution	
2- Preparation of solution	
3- Hydrometer	
4- Refractometer	
5- Preservative	
6- Drying of foods	
7- Freezing	
8- Jam	
9- Kachap	
10-Density of foods	
11-Lab instrument	
12-Scientific activity (trip for manufactures)	

19. Examinations:

Sample of Questions

1- Define the following

2-What is the cause each of the following:

3- Write what you know about the following

Tomato juice extraction

4-prepare sugary solution with 20% concentration and its weight 60 kg

5- Enumerate each of the following

6- Fill the following blanks with appropriate word

7-Answer by true or false the following statement & correct the false statement :

8- What are the differences between:

20. Extra notes:

Here the lecturer shall write any note or comment that is not covered in this template and he/she wishes to enrich the course book with his/her valuable remarks.

21. Peer review **پێداچوونەوەی هاوەڵ**

This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.

(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).

ئەم کۆرسبووکە دەبێت لەلایەن هاوەڵێکی ئەکادیمیەوە سەیر بکرێت و ناوەڕۆکی بابەتەکانی کۆرسەکە پەسەند بکات

و جەند ووشەیەک بنووسێت لەسەر شیاوی ناوەڕۆکی کۆرسەکە و واژووی لەسەر بکات.
هاوەڵ ئەو کەسەیە کە زانیاری هەبێت لەسەر کۆرسەکە و دەبیت پلەی زانستی لە مامۆستا کەمتر نەبێت.

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