Course specification

Programme(s) on which the course is given	Diploma of Microbiology
Major or minor element of programmes:	Major
Department offering the Programme:	Botany
Department offering the course:	Botany
Academic year / Level:	One year
Date of specification approval:	2012

A-Basic Information

Title: Food microbiology	Code: B6812	
Credit Houre:3h	Lecture: 2h	
Tutorial: 0	Practical: 2h	Total: 3h

Teaching staff: Prof.Dr. Mohamed Ali Afifi Hefnawy **B- Professional Information**

1- Overall aims of course

The course aims to give the student Knowledge, understanding and skills on food resources, food hazards and roles of microbes in food spoilage and preservation. The most common fungi and bacteria found in different types of foods. Spoiled and pathogenic bacteria and fungi that found as a food contaminant. Methods and techniques for counting microbes in food. Microbial toxins in food and methods of food preservations.

2- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

The student should be able to:

a.1- Have the knowledge about food hazards and roles of microbes in food spoilage

a.2- Recognize the sources of food contaminant

a.3-Identify pathogenic bacteria and fungi that found as a food contaminant.

a- 4 Describe microbial toxins in food and methods of food preservations.

A 5- have knowledge about beneficial microbes and their utilization in food technology

b- Intellectual skills

The student should be able to

b.1-Evaluate microbial, chemical and physical hazards of food.

b.2- Analyze the hazard and detect the critical control point

b-3- Illustrate a plane to control food spoilage.

c- Professional and practical skills

The student should be able to

C 1- Collect food samples an prepare it for microbial count

c.2- Isolate, count and identify different microbes in a particular type of food.

c.3- prepare selective culture media for specific microbes.

- c.4- Identify the pathogenic microbes that contaminate food.
- **C** 5- Give report about food samples.

3-Contents

TopicNo. of hoursLectureTutorial/PracticalFood sources. Preventing food losses and food preservation. Natural occurring toxins. Food hazards and Hazard analysis.422Sources of microbes in food. Parameter of growing microbes in food.312Sources of microbes in food.312Estimating the number of bacteria in food. Preparing food samples. Techniques of total aerobic bacterial count312Techniques of isolation and enumeration of fungi from food.3124Microbial types in food. Food borne illnesses624Character of some food poisoning bacteria: Salmonela, E. coli, Yersinia enterocolitica, Listeria monocytogenes, Bacillus cereus, Vibrio parahaemolyticus514Mulds and food spoilage, spoilage of iyoing resh foods by fungi. Fungal spoilage of vegetables, dairy food, meat and cereals.312Fungal spoilage of stored dry foods traction.3122Princinals of food preservations3122	5-Contents	N7 0	.	
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4- Teaching and learning methods

- 1- Lectures
- 2- Writing Reports
- 3- Practical demonstration

5- Students assessment methods

- 1- Written and oral Exam to assess understanding competencies
- 2- Practical Exam to assess laboratory performance

Assessment schedule

Assessment 1 Mid term	Week 4 and 7
Assessment 2 Semester activities	Week 5 and 8
Assessment 3 Final term practical exam	Week 13
Assessment 4 Final term written exam	Week 14

Weighting of assessments

Mid Term Examination (written + practical)		20%
Final Term Examina	tion (written + practical	60%
Semester Work	(written + practical)	20%
Total	-	100%
6- List of reference	8	

1- Course notes

Prepared notes describe the outline of the lectures are handed out to the students

2- Essential books (text books)

Text books under the title (Food Microbiology)

3-Recommended books

Vashishta B. R 1984 Botany for degree students Part 1 Algae. S.Chand and company ITD, New Delhi -110055.

4-Periodicals, Web sites,..... etc

Journal of microbiology

7- Facilities required for teaching and learning

overhead and slide projectors, reserved and fresh specimens, microscopes, TV-demonstrating system

Course coordinator: Prof.Dr. Mohamed Ali Afifi Hefnawy Head of Department: Prof.Dr. Mohamed Ali Afifi Hefnawy Date: