MAR AUGUSTHINOSE COLLEGE RAMAPURAM

DEPARTMENT OF BIOTECHNOLOGY

Scheme and Syllabus of

Value Added Course

2023 - 2024

MAVAC006 - FOOD TECHNOLOGY

BOARD OF STUDIES (BoS)

Chairman- Dr. Sajeshkumar N.K.

(Head of Department of Biotechnology, MA College Ramapuram)

Members- Ms. Sheena John

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Ms. Manesh Mathew.

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INTRODUCTION

The Value-Added Courses aims to provide additional learner centric graded skill oriented technical training, with the primary objective of improving the employ-ability skills of students

AIM OF THE PROGRAMME

Understanding various aspects of the subject and acquiring methodological knowledge of them. Application of this knowledge in a suitable manner in required fields.

ELIGIBILITY FOR ADMISSIONS

All UG students from various departments of the college. The number of intakes to the course is limited. The course can be offered only if there are at least 5 students opting for it.

MEDIUM OF INSTRUCTION:

English.

DURATION OF THE COURSE

The duration of value-added course is 30 hours (including the hours of final examination) of which 25hrs theory and 5hrs for demonstration/experimental activities and the course can have a maximum of three hours a day.

The value-added courses will be offered beyond the usual class hours and days of the college.

The value-added course will be a blend of theory classes / experimental learning / project-based learning / assignments / activity-based learning.

COURSE OBJECTIVES

1. To sensitize students on food spoilage and its importance.
2. To develop practical skills for the management in food processing.
3. To equip the students with the methods to convert raw foods into value added substances.
4. To create an awareness in students to develop and adopt technologies and methods leading to food preservation.

COURSE OUTCOMES (Cos)

- CO_1. Imparting basic knowledge in the interdisciplinary field of food biotechnology.
- CO_2. To equip the candidates to meet the demands of the society in the management of food processing to get sustainable products and processes through biotechnology.
- CO_3. To be aware of food borne illness and the need of its proper management.
- CO_4. Promoting the application of fermented foods in day today life.

EVALUATION

The evaluation scheme shall contain two part; (a) External evaluation (written test at the end of the course) and (b) internal evaluation (continuous evaluation). 50% of mark for each. The total marks of the evaluation shall be 100. (50+50).

Components of internal Evaluation	**Marks**
Attendance	10
Assignment / Seminar	10
Project & Viva	30 (20+10)
Total	50

Pattern of questions Paper

Sl. No.	Pattern	Marks	Choice of questions	Total marks
1	Short Answer/problem type	**2**	**5/7**	**10**
2	Short essay/problem	**5**	**4/6**	**20**
3	Essay/problem	**10**	**2/4**	**20**
Total				**50**

1. A committee consisting of the Head of the Department, the course coordinator and a senior faculty member nominated by the Head of the department shall monitor the evaluation process.
2. The list of students along with the marks and the grades earned may be forwarded to the Principal/Chief Superintendent of Examinations.
3. The Dept. course coordinator is responsible for maintaining and processing the record with regard to the course, assessment marks and results.
4. Certificates will be issued to those students with 75% attendance, timely submission of assignment and project and a minimum of 40% marks in the qualifying examination.

Grading Pattern

Grades are given **on a 7-point scale** based on the total percentage of marks, ***(ISA+ESA)*** as given below: -

Percentage of Marks	Grade
95 and above	**S** Outstanding
85 to below 95	**A**$^{+}$ Excellent
75 to below 85	**A** Very Good
65 to below 75	**B**$^{+}$ Good
55 to below 65	**B** Above Average
45 to below 55	**C** Satisfactory
35 to below 45	**D** Pass
below 35	**F** Failure
Absent	**Ab**

SYLLABUS
MAVAC006 Food Technology
Total hours of instruction: 30 Hours

Module 1: 6 Hrs

Food biochemistry

Definitions. Various Food components- Carbohydrates, proteins. Lipids. water etc. Enzymes used in food industry, commonly used food additives and its applications

Module 2: 6 hours

Food microbiology

Microorganisms that cause food deterioration, good bacteria such as probiotics. Food born infections pathogenicity and control. Food quality control

Module 3: 8 hours

Food fermentation

Food fermentation, Microbes required for the manufacture of fermented foods such as cheese, yogurt, as well as bread, beer, and wine and other fermented food.

Module 4: 7 hours

Food engineering

Aspects include Food engineering, Food associated laws, food manufacturing operations such as food processing, production, handling, storage, conservation, control, packaging, and distribution

Module 5: 7 hours

Food industry waste management

Waste management – Reduce, Reuse, and Recycling of food waste and its importance.

Module 6: 5 hours

Enumeration of bacterial count in solid foods - Total plate count method

Enumeration of bacteria in milk sample - MBRT method