P.R GOVERNMENT COLLEGE (AUTONOMOUS) , KAKINADA

THE PROGRAMME LEARNING OUTCOMES RELATING TO B.SC DEGREE PROGRAMME IN

FOOD SCIENCE

1. Academic Competence

1.1 Disciplinary knowledge and understanding of food science, structure and function of macronutrients & micronutrients.

1.2 understanding concepts of bio technology & genetically engeneering techniques.

1.3 understanding the growth and control of micro organisms.

1.4 demonstrate an experiential learning and critical thinking of the structure and function of both prokaryotic and eukaryotic cells.

1.5 demonstrate an understanding of the principles, and have practical experience of, a wide range of biochemical techniques (e.g. chromatography electrophoresis, etc.).

1.6 Understanding fundamentals of product quality, product analysis & quality management system.

2. Personal and Behavioral Competence

2.1 carry out laboratory-orientated numerical calculations (e.g. inter-conversion of masses, moles, and molarity, preparation of solutions and accurate dilutions), be capable in data visualization and analysis, including the application of data transformations (e.g. logarithmic, exponential)

2.2 basic professional skills pertaining to biochemical analysis, carrying out clinical diagnostic tests

2.3 ability to use skills in specific areas related to biochemistry such as industrial production, technology development, clinical, health, agriculture, community development, etc. .

2.4 ability to use various e-resources in order to solve challenges related to biochemistry.

2.5 articulation of ideas, scientific writing and authentic reporting, effective presentation skills

2.6 having conversational competence including communication and effective interaction with others, listening, speaking, and observational skills.

3. Enrepreneurial and social competence

3.1 collaboration, cooperation and realizing the power of groups and community, ability to work in a group, community

3.2 the ability to plan and manage projects in order to achieve objectives

3.3 ability to grasp ideas and to turn ideas into action related to biochemical mechanisms and processes related to industries, industrial production, health, agriculture, etc.

3.4 creativity, innovation and risk-taking ability

3.5 social skills to build great teams

3.6 multilevel commitment to health and well being

FOOD SCIENCE (F S-1):

Introduction to Food science Course-level learning outcomes that a student of this course is required to demonstrate are:

- Understanding of food science as a discipline and milestone discoveries in life sciences that led to establishment of food science as separate discipline.
- Fundamental properties of carbohydrates,proteins,fats. etc. and to apply them in
- To understand the basic commodities both raw and processed in food industries and various aspects of their production and distribution.
- To discuss the qualities and standards of available commodities and their suitability for different purposes

Food science Practical (BCH S-1P): Introduction to food science

. 1. Cooking methods and Cereal cookery.

2. Gelatinization

3. Pulse Cookery

4. Sugar Cookery

5. Egg Cookery

6. Vegetable Cookery

7. Milk Cookery

8. Fruits – Salads and Beverage

9. Nuts and oil seeds cookery

Food science (F S-2): FOOD SCIENCE

Acquire knowledge on the macro and micro constituents of the food.

b. Know the structure and chemical & biological characteristics of constituents of food.**Food science Practical (F S-2P)**

Food science Qualitative tests for carbohydrates

2. Qualitative rests for proteins

3. Moisture assay by oven drying method

4. Estimation of starch

5. Estimation of Crude fiber

FOOD SCIENCE (F S -3) HUMAN PHYSIOLOGY)

To enable the students to understand the necessity of energy and its production in the body.

To understand the relationship between nutrition and human well being.

FOOD SCIENCE (F S -3 P) (Human Physiology)

To help the students to acquire an elementary knowledge about micro organisms, develop an understanding of industry and in maintenance of healt

, To understand the relationship between nutrition and human well being.

FOOD SCIENCE(F.S-4) (FOOD MICROBIOLOGY

To help the students to acquire an elementary knowledge about micro organisms, develop an understanding of industry and in maintenance of health,

acquire knowledge about the adulterants of food, food born diseases and health hazards

FOOD SCIENCE(F.S-4 P) (FOOD MICROBIOLOGY)

Students will learn the handling of microscope.

Gain expertise in the isolation of various cell organelles and staining of cellular biomolecules.

FOOD SCIENCE(F.S-5) (Food processing and preservation)

To help the student to acquire an knowledge about food processing of different foods.

To acquire knowledge about the preservation of foods and different techniques of preservation.

FOOD SCIENCE(F.S-5P) (Food processing and preservation)

Acquire knowledge of Indian fermented food.

Preparation of fruit preserves and vegetable preserves.

Acquire knowledge of balancing and browing control.

FOOD SCIENCE(F.S-6) ;

To enable students to develop new food products which are marketable and nutritional and economical vialble

To develop entrepreneutial abilities for small scale food industries.

To understand the therapeutic nutrition for different diseases.

To acquire knowledge on food safetyand quality control.

FOOD SCIENCE(F.S-6P) ;

To understand the qualitative tests for detection of adulterauts.

To understand the quality of meat, pulses, cereals, milk, and milk products.