

**PRACTICALS**  
**FNP 406 FOOD SCIENCE**

**Course Outcome:**

*At the end of this course the students will be skilled in the -*

- CO 1. Application of cereal and pulse cookery in food science.
- CO 2. Detecting chemical reactions in fruits and vegetables and various methods used in preservation
- CO 3. Assessing the milk quality using various parameters.
- CO 4. Evaluation of eggs and egg cookery.

1. Cereals

Cereal cookery

Methods of cooking fine and coarse cereals

Preparation of selected Indian Cereal recipes

Pulses cookery

Cooking soaked and raw pulses

Effects of adding salt, acid and alkali on cooking

Preparation of baked products using leavening agents (bread, biscuits, cookies)

2. Fruits and Vegetables

Effect of acid and alkali

Browning reaction

Preparation of dishes with fruits and vegetables (different modes of cooking)

3. Milk

Milk adulteration test

Milk platform test, pH, sensory evaluation

Preparation of fermented and non fermented milk products. Analysis of chemical properties of milk

Specific gravity

Total solids

Acidity

Lactose content

4. Egg

Egg quality evaluation

Egg cookery

**FFNP 407 PRINCIPLES OF NUTRITION**

**Course outcome:**

*At the end of this course the students will be thorough with-*

- CO 1. Laboratory techniques common to basic food chemistry.
- CO 2. Analytical techniques used for food products
- CO 3. Evaluating chemical properties and estimating carbohydrates and proteins quantitatively and qualitatively.
- CO 4. Estimating quantity of lipids in various food samples by using various methods.

1. Determination of energy value of food using Parr oxygen bomb

calorimeter

2. Glucose estimation (reducing sugar method or Willstates method)
3. Test for protein (qualitative analysis)
4. Nitrogen analysis by Kjeldhal method
5. Estimation of amino acid by Sorenson's formaldehyde titration method
6. Protein estimation by Lowry's method
7. Crude lipid estimation- groundnut, egg yolk, soya product
8. Estimation of total lipid in egg yolk

### **FNP 408 HUMAN PHYSIOLOGY**

#### **Course outcome:**

*At the end of this course the students will be able to-*

- CO 1. Identify different blood grouping,
- CO 2. Handel hemocytometer and blood cell counting.
- CO 3. Estimate hemoglobin content of blood
- CO 4. Identify other different parameters of hematology.

1. Study of hemocytometer
2. Blood groups
3. Estimation of hemoglobin
4. Total WBC count
5. Total RBC count
6. Total platelet count
7. Packed cell volume
8. Blood indices

### **FNP 409 NUTRITIONAL BIOCHEMISTRY**

#### **Course outcome:**

*At the end of this course the students will be able to-*

- CO 1. Use techniques and instruments for biochemical analysis of different biological samples.
- CO 2. Use colorimetric techniques.
- CO 3. Analyze blood parameters.
- CO 4. Analyze the urine samples using different qualitative and quantitative methods.

1. Techniques used in biochemical analysis
  - Determination of pH in acids, alkalis and buffers using pH meter and indicators
  - Colorimeters – use of colorimeter in UV and visual range, flame photometer, flourimeter (principle to be explained and demonstrated with one example foreach)
  - Separation techniques- chromatography- paper and Column. Centrifugation, electrophoresis and dialysis (one example for each may be demonstrated)
2. Blood analysis- enumeration of RBC & WBC. Blood glucose, serum albumin, globulin, phosphorous, calcium, cholesterol and urea.
3. Urine analysis- quantitative- sugar, albumin and microscopy

### **FNP 410 FOOD MICROBIOLOGY**

#### **Course outcome:**

*At the end of this course the students will be able to-*

- CO 1. Identify basic microbiological laboratory practice, culturing and handling of microbes.
- CO 2. Isolate microorganisms from water and food sources.