

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.

CO 3. Identify by various staining techniques.

CO 4. Estimate total count in various food samples.

1. Study of microbiological laboratory instruments.
2. Preparation of media and isolation techniques
3. Preparation of bacterial smears, simple staining, differential staining, spore staining, staining of molds and yeast
4. Study of the microbiological quality of milk by MBR test.
5. Direct microscopic examination of foods.
6. Estimation of total microbial count of yeast and molds from spoiled food samples.
7. Estimation of total microbial bacterial plate count of spoiled food sample
8. Enumeration of Coliforms and indicator organisms (Most Probable Number)
9. Detection of Coliforms using membrane filter techniques.
10. Estimation of total microbial count of (a) milk products (b) fruits and vegetable products (c) meat, fish and poultry products (d) canned foods.