

FNP 409 NUTRITIONAL BIOCHEMISTRY

Course outcome:

- Describe techniques and instruments used in biochemical analysis of different biological samples.
- Use colorimetric techniques.
- Write down the study the blood analysis parameters.
- Analyze the urine samples using different qualitative and quantitative methods.

- 1) Techniques used in biochemical analysis
 - a) Determination of pH in acids, alkalis and buffers using pH meter and indicators
 - b) Colorimeters – use of colorimeter in UV and visual range, flame photometer, fluorimeter (principle to be explained and demonstrated with one example for each)
 - c) 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:

- Identify basic microbiological laboratory practice, culturing and handling of microbes.
- Isolate microorganisms from water and food sources.
- Identify by various staining techniques.
- Estimate total count in various food samples.

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