



# **Tripura University**

**(A Central University)**

**Suryamaninagar**

**West Tripura**

**Syllabus for**  
**Four Years Undergraduate Programme Subject:**  
**Human Physiology**  
**(As per NEP-2020)**

**3<sup>rd</sup> Semester (Interdisciplinary)**

Revised as on October, 2025

**HP-3<sup>rd</sup> Semester IDC**  
**HP-301ID**  
**Total Marks-100 (IA=40+ESE=60)**  
**Credit-4**

**Unit-I- Physio-chemical Principles and Chemistry of Biomolecules**

1. Diffusion. Osmosis, Osmotic Pressure, Hypo and Hypertonic Solution
2. Acid, Base, pH. Buffers-Definition and Biological Significance
3. Chemistry, Classification of Carbohydrates, Proteins and Fats
4. Protein Purification Techniques

**Unit-II- Digestive System and Nutrition**

1. Anatomy and Histology of elementary Tract and Digestive Glands
2. Composition and Function of Salivary, Gastric, Pancreatic, Intestinal Juices and Bile
3. Digestion and Absorption of Carbohydrates, Proteins and Fats
4. Physiology of Deglutition and Defecation and Physiological Function

**Unit-III- Metabolism**

1. Carbohydrate Metabolism- Glycolysis, Pentose Phosphate Pathway (PPP), Glycogenesis, Neoglucogenesis, TCA Cycle
2. Lipid Metabolism- Fatty Acid Biosynthesis, Beta Oxidation
3. Protein Metabolism-Deamination, Transamination, Urea Cycle
4. Nucleic Acid Metabolism- Catabolism of Purine and Pyrimidine, Gout

**Unit-IV- Nutrition**

1. Concept of Nutrients
2. Water Soluble Vitamins-source, requirement, deficiency syndrome
3. Fat Soluble Vitamins- source, requirement, deficiency syndrome
4. Bulk and Trace Elements-Physiological roles and Deficiency syndromes, PCM, Hypervitaminosis, Anemia, Goiter, Obesity