Department :Chemical Engineering **Division:** Chemical Engineering

Course Title : Food Biochemistry

- **Aim:**

Introduction to biomolecules and chemical/biochemical reactions in keeping food qualities

- **Syllabus:**

- ✓ foods and biological systems – similarities and differences
- ✓ essentiality of water in life, moisture content of foods - sorption isotherm (Longmuir and BET equations)
- ✓ carbohydrates –photosynthesis- role of carbohydrates in energy generation in living cells (fermentation process/electron transport chain-aerobic respiration)
- ✓ redox reactions- electrochemistry concept as related to microbial fuel cells and microbial electrolysis cell -photo catalysis as related to wastewater treatment
- ✓ lipid classification/ autoxidation process and antioxidants and pro-oxidants/ transesterification/ enzymatic biodiesel formation 6-protein classification-enzyme and enzyme catalyzed reactions-thermodynamics and kinetics of enzymatic reactions

- **Reading Resources:**