

Core 1 - BT1CRT01 BASIC LIFE SCIENCES Total hours of instruction: 90 Hours/ week: 5 Credit: 4

Module I: 30Hrs Nutrition-digestive system, mechanism of digestion-enzymes, absorption of carbohydrate, lipid and proteins, storage and mobilization of food reserves , respiration, respiratory system – structure, function, mechanism, Hb - structure and function, regulation of respiration.

Module II: 15 Hrs Lymphatic system, lymph – functions,Excretion - structure of kidney and nephron, glomerular filtration, urine-normal and abnormal constituents

Module III 15 Hrs Nervous coordination: Structure of neuron, transmission of nerve impulse, Synapse; structure and function, neurotransmitters: Types and functions.

Module IV: 15 Hrs Absorption and transport of water: Theories on absorption, macro and micro nutrients, transpiration, Photosynthesis: photosystems, cyclic and noncyclic photophosphorylation, calvin cycle, Rubisco, CAM plants

Module V: 15Hrs Plant growth regulators-auxin, cytokinin, gibberellin, ethylene, abscisic acid, plant movements-tropic,tactic and nastic movements, photoperiodism, vernalisation.

References:

1. Medical Physiology –A C Guyton, J E Hall, Saunders/ Elsevier pub.
2. Animal Physiology for BSc and MSc- Mohan p Arora, Himalaya Pub, india
3. Medical Physiology- A. B.SMahapatra- Current Books International, IndiaPub.
4. Foundation course in Biology- Agarwal, Ane books.
5. Text Book of Plant Physiology - V Verma, Ane Books
6. Fundamentals of Plant Physiology - V.K.Jain, S Chand Pub.,New Delhi, India.
7. Essentials of Modern Biology - R C Sobti and VL Sharma, Ane books, New Delhi
8. Plant Anotomy, - B. P. Pandey. S. Chand & Company Ltd. New Delhi
9. Animal physiology- B S Thyagi, S Chand Publishers., India