

# GUJARAT TECHNOLOGICAL UNIVERSITY

## B.E Semester: 4 Biomedical Engineering

Subject Code 140301  
Subject Name Life Science-II

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### ANATOMY

Sr.No	Course content
1.	Excretory system: Brief structure of kidney, Size, shape & location of kidney. Blood supply to kidney, nerve supply to the kidney, ureter, bladder, Structure of skin.
2.	Digestive system: Size, shape, location various organ of digestive system.
3.	Nervous System: Outline of Cranial and Spinal nerves. Structure of Spinal Cord and different Brain parts. Vertebral column and cranial cavity
4.	Reproductive system: male reproductive organs, female reproductive organs.

### PHYSIOLOGY

Sr.No	Course content
1.	Excretory system: Function of kidney, urine formation, Concentration and Dilution of Urine, micturition, Renal Function Tests, Dialysis, Artificial Kidney, Function of skin.
2.	Digestive system: organs of digestive system, movement of gastrointestinal tract, mastication, deglutination, physiological activities in mouth, pharynx, oesophagus, stomach, pancreas, liver, gall bladder, small and large intestine, Digestion and absorption.
3.	Nervous System: Neuron, Neuroglial cell, Synapse, Receptors, Sensory tract, motor tract, reflex arc, EEG.
4.	Reproductive System: Spermatogenesis; Ovarian cycle physiology. Physiology of menstruation, Pregnancy and Contraception.
5.	Endocrine system: endocrine glands, physiological action of the hormones secreted by pituitary, thyroid, parathyroid, islets of langerhans, adrenal, testes, ovaries, biofeedback mechanism of hormone regulation.

## Reference Books:

1. Anatomy and physiology in health and illness By- Ross and Wilson
2. Essential of medical physiology: By- Indu khurana
3. General Anatomy :By- B.D. Chaurasia
4. Human Anatomy(Vol.1,2,3): By- B.D. Chaurasia
5. Physiology of Human Body: By- Guyton.
6. Principles of General Anatomy: By- A.K.Datta.