

PSG3C01 HUMAN PHYSIOLOGY

Module 1 The Visual System

- 1.1 Structure of the human eye, Organization of retina and visual pathways.
- 1.2 Functioning of the eye, visual coding, chemistry of vision, transduction in the retina, theories of color vision, visual perception.
- 1.3 Visual defects (myopia, hypermetropia, presbyopia, astigmatism, cataract, color blindness, nyktelopia).

(Hours – 18)

Module 2 Auditory System

- 2.1 Anatomy of the auditory system.
- 2.2 Auditory pathways, auditory perception and hearing abnormalities.
- 2.3 Statoreceptors.

(Hours - 16)

Module 3 Gustatory and Olfactory system

- 3.1 Anatomy of taste buds and its function, primary sensations of taste, taste thresholds and intensity discrimination, taste preferences and control of the diet.
- 3.2 Taste pathways and transmission of signals into the central nervous system.
- 3.3 Organization of the olfactory membrane, sense of smell and stimulation of the olfactory cells.
- 3.4 Categorizing smell, transmission of smell signals into the central nervous system.

(Hours - 16)

Module 4 Cutaneous senses (Somatic sensations)

- 4.1 Classification - the mechanoreceptive somatic senses (tactile and position), the thermoreceptive senses (heat and cold), the pain sense.
- 4.2 Detection and transmission of tactile sensations - tactile receptors, detection of vibration, tickling and itch.
- 4.3 Sensory pathways for transmitting somatic signals into the central nervous system, somatosensory cortex, position senses, position sensory receptors.
- 4.4 Thermal sensations - thermal receptors, their excitation and transmission of thermal signals.
- 4.5 Pain - purpose, types, pain receptors, pain suppressive system, pain sensation.

Module 5 Endocrine system

- 5.1 Introduction to endocrinology, an overview of the importance of endocrine glands.
- 5.2 Mode of action of hormones and influence on growth and behavior.
- 5.3 Major endocrine glands - their location, structure, hormones produced and its role

(Hypothalamus, pituitary, thyroid, adrenal, gonads, thymus, pineal body, placenta).

(Hours - 20)