

DEPARTMENT OF HOME SCIENCE
B.A (Prog) with Nutrition and Health Education (NHE)
Pool of Discipline Specific Elective Course (DSE) for Odd Semester
Category-V

DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE-NHE 1: Basic Physiology of Digestive System

CREDIT DISTRIBUTION, ELIGIBILITY AND PREREQUISITES OF THE COURSE

Course and Code	Title	Credits	Credit distribution of the course			Eligibility Criteria	Prerequisite of the course
			Lecture	Tutorial	Practical/ Practice		
	Basic Physiology of Digestive System	4	3	1	0	XII Pass	NIL

Learning Objectives

- To impart knowledge about the basic structure of human digestive system.
- To explain the functioning of the human digestive system.
- To provide overview of the various disorders in relation with human digestive system.

Learning Outcomes

After completion of the course, the students will be able to:

- Understand the fundamentals of the human digestive system.
- Develop insight of functioning of the digestive system in the human body.
- Understand overview of the various diseases of human digestive system.

SYLLABUS OF DSE-NHE-1

THEORY
(Credits 3; Hours 45)

UNIT I: Fundamentals of Human Digestive System

10 Hours

The unit explains the concept of the gross positioning and basic functioning of digestive system. It also imparts understanding about the contribution of different organ systems in relation to the digestive system.

- Overview of the gross structural positioning of digestive system in human body
- Contributions of different systems of human body in relation to the digestive system
- Functions of digestive system: ingestion, propulsion, digestion, absorption, and elimination
- Digestion and absorption of carbohydrates, fats, and proteins

UNIT II: Physiology of Gastrointestinal Tract (GIT) of Human Digestive System 18 Hours

This unit presents an understanding of the gross structure and functions of alimentary canal of digestive system and their correlation with specific disease conditions.

- Gross structure and functions of Gastro Intestinal Tract (GIT): mouth, pharynx, oesophagus, stomach, small intestine, large intestine, rectum and anal canal
- An overview of the diseases in correlation with alimentary canal/GIT: gastro oesophageal reflux disease (GERD), peptic ulcers, diarrhoea, constipation, irritable bowel syndrome etc.

UNIT III: Physiology of Accessory Organs of Human Digestive System 17 Hours

The unit presents an understanding of structure and functions of accessory organs of the digestive system and their correlation with specific disease conditions.

- Gross structure and functions of accessory organs of digestive system: teeth, tongue, salivary glands, liver, gallbladder, pancreas
- An overview of the diseases in correlation with accessory organs of digestive system: hepatitis, Non-alcoholic Fatty Liver Disease (NAFLD), liver cirrhosis, cholelithiasis, pancreatitis, diabetes etc.

TUTORIALS (Credits 1; Hours 15)

Tutorial classes will involve:

1. Q&A sessions/ Group Discussions/ Problem Solving exercises with the Students
2. Presentation of project/ research activity by students
3. Any other scholastic work related to application of conceptual understanding of the subject
4. Evaluation and feedback by the teacher

ESSENTIAL/ RECOMMENDED READINGS

- Jain, A. K. (2019). *Human Physiology for BDS*. (6th edn.). Avichal Publishing Company.
- Singh, H. D. (2010). *Handbook of basic human physiology for paramedical students*. S. Chand Publishing.
- *Manav evan igyan evum yog*, M.Y-104. Uttrakhand Mukta Vishwa Vidyalaya
<https://uou.ac.in/sites/default/files/slm/MY-104.pdf> (Accessed on 10 March 2023).

SUGGESTED READINGS

- Ross., & Wilson. (2018). *Anatomy and Physiology in Health and Illness* (13th edn.). Elsevier.
- Chaudhari, S. K. (2016). *Concise Medical Physiology* (7th edn.). New Central Book Agency (P) Ltd.
- *Manav sharir -rachna aur kriya- vigyan*, paper- 4 of PGDIPP, SIGFA Solutions
<http://assets.vmou.ac.in/PGDIPP04.pdf> (Accessed on 10 March 2023).

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

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