

DISCIPLINE SPECIFIC ELECTIVE
DSE HP 4B1 : Physiology and Promotive Health

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical/ Practice		
Physiology and Promotive Health	4	2	0	2	XII Pass	NIL

Learning Objectives

- To learn about the structural organization of the human body.
- To understand the normal functioning of the organ systems and their interactions.
- To learn about modes of transmission of common communicable diseases and their prevention.
- To learn web of causation of Non communicable diseases and lifestyle disorders

Learning Outcomes

- Understand the knowledge about the structural organization of the human body.
- Develop insight of normal functioning of all the organ systems of the body and their interactions.
- Understanding modes of transmission of common communicable diseases and their prevention.
- Understanding causes of Non communicable diseases and lifestyle disorders.

SYLLABUS OF DSE HP 4B1

THEORY
(Credits 2; Hours 30)

UNIT I: Cardio-Respiratory and Gastric Physiology.

8 Hours

The unit presents the student with an understanding the structure and functioning of the Cardio-respiratory system and Gastro-Intestinal system.

Cardio-respiratory Physiology **3 Hours**

- Blood -Composition and function
- Blood circulations (systemic, pulmonary, coronary, and portal)
- Cardiac cycle, Heart Sounds &ECG
- Structure of lungs and its function

Gastro-intestinal Physiology **5 Hours**

- Structure of stomach, liver, gallbladder, pancreas, and their functions
- Composition, function and regulation of GI secretions

UNIT II Neuroendocrine, Renal & Reproductive Physiology **10 Hours**

The unit presents the student with the understanding of the structure and functions of the Neuroendocrine, Renal and reproductive system of the body.

Neuro-Endocrine Physiology **4 Hours**

- Organization of nervous system.
- Actions & disorders of Pituitary, Thyroid, Adrenal & Pancreatic hormones

Renal and reproductive Physiology **6 Hours**

- Structure of kidney and its function.
- Physiology of Menstruation, pregnancy, lactation, and Menopause

UNIT III Promotive Health and Community Health **12 Hours**

The unit presents the student with the understanding of the concept of health, disease and its prevention. This unit will also focus on communicable diseases, non-communicable diseases and community health.

Concept of Health, Disease, and its prevention **3 Hours**

- WHO definition of Health
- Epidemiological triad.
- Concept of Immunization, Immunization Schedule. Immunization during various stages of lifecycle of humans.
- Recent/Newer Vaccines
- Anticancer vaccines

Epidemiology of communicable diseases **4 Hours**

- Air borne infections: Tuberculosis, COVID
- Faeco-oral infections: Hepatitis, Enteric Fever

- Zoonotic diseases: Rabies
- Vector Borne diseases: Malaria & Dengue
- Sexually transmitted diseases: A.I.D.S

Epidemiology of Non-communicable diseases

2 Hours

- Hypertension
- Diabetes, PCOD
- Cancer

Community Health

3 Hours

- Maternal Health care: · Antenatal Care, Family Planning, and Contraception
- Occupational health.

**PRACTICAL
(Credits 2; Hours 60)**

1. Case study of Iron deficiency Anemia, investigations and diagnosis.
2. Case Study of Enteric Fever
3. Case Study of Dengue
4. Case Study of HIV/AIDs
5. Measurement of Oxygen saturation by pulse oximeter and its relevance
6. Measurement of Blood pressure by using sphygmomanometer and its relevance
7. Clinical significance of variations in blood glucose and Diabetes mellitus. Use of Glucometer
8. Demonstration of clinical examination to see for pallor, cyanosis, jaundice, oedema and dehydration and their importance.
9. Basic First aid procedures and CPR
10. Preparation of a project on various contraceptive devices
11. Understanding Oncogenesis: Risk factors, danger signal & vaccines.

Essential Readings:

- Ganong WF (2019). Review of Medical Physiology, 26th ed. McGraw Hill.
- Guyton, AC.and Hall, JE (2011) Textbook of Medical Physiology, XII Edition, Harcourt Asia Pvt. Ltd/ W.B. Saunders Company. Longman Group Ltd.
- Marieb, E (2014). Human Anatomy and Physiology, 10th Edition, Addison-Wesley.
- Park JE and Park K (2021). Park's Textbook of Preventive and Social Medicine, 26th ed
- Bedi YP (2018), 17th Edition Handbook of Preventive and Social Medicine: Community Health/Community Medicine
- Practical Workbook of Human Physiology, K Sri Nageswari and Rajeev Sharma, 2nd Edition 2018
- Textbook of Practical Physiology, G K Pal and Pravati Pal 5th Edition (2020)
- A Textbook of Practical Physiology, CL Ghai, 8th Edition, (2013)

Suggested Readings:

- Ross and Wilson (2018). Foundation of Anatomy and Physiology, Medical Division 12th Edition

- Singh HD (2010). Handbook of Basic human physiology for paramedical students.
- <https://www.who.int/news-room/fact-sheets/detail/cancer> (Accessed March 19th 2023)
- <https://www.who.int/news-room/fact-sheets/detail/hiv-aids> (Accessed March 19th 2023)
- <https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue> (Accessed March 19th 2023)
- https://www.who.int/health-topics/anaemia#tab=tab_1 (Accessed March 19th 2023)
- https://www.who.int/health-topics/contraception#tab=tab_1 (Accessed March 19th 2023)
- https://nhm.gov.in/images/pdf/guidelines/nrhm-guidelines/stg/Hypertension_full.pdf (Accessed March 19th 2023)
- <https://nvbdcp.gov.in/Doc/National%20Guideline%20for%20Dengue%20case%20management%20during%20COVID-19%20pandemic.pdf> (Accessed March 19th 2023)
- <https://www.nhm.gov.in/images/pdf/guidelines/nrhm-guidelines/stg/stg-tb.pdf> (Accessed March 19th 2023)
- <https://www.nhm.gov.in/images/pdf/guidelines/nrhm-guidelines/stg/dengue.pdf> (Accessed March 19th 2023)

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