

Course Code	Course Name	Credits
26EC102	HEALTH ECONOMICS AND AI	04

Course Objectives

- Introduce the basic concepts and principles of health economics.
- Explain the determinants of demand and supply in healthcare services.
- Provide understanding of the structure and functioning of healthcare markets.
- Examine the relationship between health and economic development.
- Familiarize with the basic concepts and applications of Artificial Intelligence (AI) in health economics.

Learning Outcomes

Upon successful completion of this course it is intended that a student will be able to:

- Understand the fundamental concepts and scope of health economics.
- Analyze the factors affecting demand and supply in healthcare services.
- Evaluate different types of healthcare markets and their functioning.
- Explain the linkages between health status and economic development.
- Apply basic concepts of Artificial Intelligence in the context of health economics.

Unit 1 – Introduction to Health Economics (12Hrs)

Meaning, features and principles of health economics, health dimension and indicators, determinants of health status, importance of health economics.

Unit 2 –Demand and Supply (12Hrs)

Characteristics of health care demand, determinants of healthcare demand and supply, factors contributing to price-insensitivity in demand for healthcare, role of economic factors in shaping health – related behavior, concept of elasticity in health economics.

Unit 3 – Markets (12Hrs)

Meaning, features and players in healthcare market, markets within the healthcare market, difference of healthcare market and other markets, Information asymmetry in healthcare sector, the economics of health externalities.

Unit 4 – Health, Education and Equity (12Hrs)

Role of health and education in human development, equity: concept, types and role of government in promoting equity, the health policy trilemma, health and economic development.

Unit 5 –Health Economics and AI (12Hrs)

Concept of AI and its application in health economics, Digital health and health Information Technology - Preventive analytics in healthcare, Body Mass Index- application, uses and limitations.

Reference Books:

1. Dr. Rajni Parhania, Fundamentals of Health Economics, (2023)
2. Sumitra Naha (Das) Introduction to the economics of Health and education.(2021)
3. M. Grossman, The Shadow price of Health in the Economics of Health“ Vol. 1 by A.J. Culyes (Ed) (1991), Edward Elger publishing Ltd, UK.
4. Guinness, Loma and Virginia Wiseman, Introduction to health economic (2011) Mc Graw- Hill Education, 2011.
5. Bhattacharya, J., Hyde, T., Tu, P. (2014). Health economics, Palgrave Macmillan.
6. World Development Report (1993). Investing in Health. The World Bank. 38
7. World Health Organisation (2013). The economics of the social determinants of health and health inequalities: A resource book. World Health Organisation.

Websites and eLearning Sources:

1. <https://www.definitivehc.com> › healthcare-foundation
2. <https://metabolic.health/blog/beyond-bmi-obesity-measurement-limitations-future>

COs and Bloom's Taxonomy Mapping – 26EC102

Course Outcomes	On successful completion of this course, students will be able to	BTL
CO1	Recall the fundamental concepts and scope of health economics.	K1, K2
CO2	Analyze the various factors affecting demand and supply of healthcare services.	K4
CO3	Evaluate healthcare markets and their functioning.	K5
CO4	Explain the linkage between health and economic development.	K1
CO5	Apply AI concepts in health economics contexts.	K3

BTL (Bloom's Taxonomy Level) - K1 – Remembering, K2 – Understanding, K3- Applying, K4 – Analyse, K5- Evaluate and K6 - Create

Relationship Matrix – 26EC102

Course Outcomes	Programme Outcomes (POs)						Programme Specific Outcomes (PSOs)					Mean Score of Cos
	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	1	1	1	1	2	2	2	2	1	1.64
CO2	3	3	2	1	2	1	2	3	3	2	2	2.18
CO3	3	3	3	2	2	1	3	3	3	3	2	2.55
CO4	3	2	2	3	3	1	2	3	3	3	3	2.55
CO5	2	3	3	1	1	1	3	3	2	2	3	2.18
Total												2.22

Mean Score: 3- High, 2- Medium/Moderate, 1-Low

