

Course Code	Course Name	Credits
26ZY111	MEDICAL ENTOMOLOGY	04

### Course Objectives

- To understand the importance of insects in medical science.
- To study the biology and classification of medically important insects.
- To develop knowledge on insect-borne diseases and transmission.
- To understand methods of insect control and public health management.
- To enhance awareness on emerging medical entomological issues.

### Learning Outcomes

- Explain the role of insects in disease transmission.
- Identify medically important insects and vectors.
- Demonstrate knowledge of insect life cycles and ecology.
- Analyze control measures for vector management.
- Apply medical entomology concepts in public health programmes.

#### Unit 1 - Introduction to Medical Entomology (12 Hrs.)

Definition, scope and importance of medical entomology; classification of medically important insects; morphology and life cycle of insects; insect-host interactions.

#### Unit 2 - Mosquitoes and Mosquito Borne Diseases (12 Hrs.)

Biology of Anopheles, Culex and Aedes mosquitoes; malaria, dengue, filariasis and chikungunya; epidemiology and prevention.

#### Unit 3 - Other Medically Important Insects (12 Hrs.)

Biology and medical importance of houseflies, sandflies, fleas, lice and bed bugs; plague, kala-azar and typhus transmission.

#### Unit 4 - Insect Control and Management (12 Hrs.)

Chemical and biological control methods; insecticides and resistance; integrated vector management; environmental management and public health measures.

#### Unit 5 - Emerging Trends in Medical Entomology (12 Hrs.)

Climate change and vector distribution; surveillance of vector-borne diseases; genetic control of insects; public health programmes and future prospects.

#### Reference Books:

1. Service, M.W. (2018). Medical Entomology for Students. Cambridge University Press.
2. Gullan, P.J. and Cranston, P.S. (2019). The Insects: An Outline of Entomology. Wiley.
3. Pedigo, L.P. (2017). Entomology and Pest Management. Waveland Press.
4. WHO (2021). Vector-Borne Disease Control Manual. World Health Organization.
5. Chapman, R.F. (2016). The Insects: Structure and Function. Cambridge University Press.

#### Websites and eLearning Sources:

1. <https://www.who.int/>
2. <https://www.cdc.gov/>
3. <https://www.ncbi.nlm.nih.gov/>

