



## **Tropical Medicine**

### **Description:**

- Observe diagnosis and management of tropical infectious diseases.
- Evaluate patients with febrile illnesses and endemic conditions.
- Assist in ordering and interpreting relevant laboratory investigations.
- Observe and assist in procedures related to infectious disease management.
- Participate in ward rounds and case discussions.
- Gain exposure to diseases like malaria, dengue, tuberculosis, and parasitic infections.
- Understand public health aspects and preventive strategies in tropical medicine.

## Modules:

### Tropical Medicine Elective

An 8-week tropical medicine course in India for medical students from the Middle East and the West should be highly practical, regionally relevant, and cover the spectrum of infectious, environmental, and public health topics unique to tropical regions. This curriculum structure with weekly themes, learning objectives, and suggested teaching formats is based on established guidelines for tropical medicine courses in India and global standards<sup>1234</sup>.

### Course Overview

The course will blend lectures, interactive case-based workshops, lab sessions, field visits, and simulation-based training. Each week focuses on key tropical health issues, emphasizing conditions prevalent in both the Indian subcontinent and Middle Eastern/Western visitors.

### Weekly Breakdown:

#### Week 1: Introduction to Tropical Medicine

- History and Scope of Tropical Medicine
- Epidemiology and global burden
- Overview of major tropical diseases
- Social determinants and migration influences

#### Week 2: Tropical Infectious Diseases

- Malaria: diagnosis, treatment, control Dengue, Chikungunya, and other arboviral infections
- Leptospirosis, typhoid fever, scrub typhus
- Lab: Rapid diagnostic tests, microscopy

#### Week 3: Tropical Infectious Diseases II

- Tuberculosis: pulmonary, extra-pulmonary forms, MDR TB
- HIV/AIDS in tropical contexts
- Neglected tropical diseases: leprosy leishmaniasis, filariasis, schistosomiasis (with Middle East/W Africa focus)<sup>27</sup>

#### Week 4: Tropical Parasitology

- Intestinal helminths, protozoal infections
- Entamoeba, Giardia, Strongyloides, Schistosoma
- Lab: Wet mount, concentration techniques, parasite identification

**Week 5: Environmental and Nutritional Disorders**

- Malnutrition and micronutrient deficiencies
- Heat stroke, snakebite and other venomous bites and stings
- Occupational tropical illnesses
- Field: Nutrition assessment; rural health center visit

**Week 6: Maternal and Child Health in the Tropics**

- Tropical paediatrics: childhood infections, congenital diseases
- Maternal health: malaria in pregnancy, anaemia, factors affecting perinatal mortality
- Community health measures including visit to an immunization clinic

**Week 7: Emerging Diseases & Public Health**

- Zoonoses, emerging viral threats (Nipah, Zika, Coronavirus) in tropics)
- Global health initiatives, public health programs (IDSP, NTD elimination drives)
- Disaster medicine and humanitarian health, organization of disaster bricks

**Week 8: Practical Skills and Research**

- Clinical skills: CPR, emergency tropical care, IV access, lab safety Basic laboratory techniques: ELISA, PCR
- Research methodology, ethics, and best practices in tropical health research
- Student presentations and case-based discussions

## Teaching & Assessment Formats

- Lectures and Webinars: Use key textbooks and online platforms (e.g., Oxford Handbook of Tropical Medicine) <sup>13</sup> .
- Lab Workshops: Diagnostic methods for malaria/NTDs, microbiology, parasitology.
- Field Visits: Community health centers, vector control programs, nutrition initiatives.
- Simulation & Case Studies: Real-world scenarios, outbreak investigations.
- Assessment: Weekly quizzes, end-of-course OSCEs (Objective Structured Clinical Exams), group projects, presentations <sup>12 13</sup> .

## Customization for Middle Eastern & Western Students

- Case studies highlighting Middle East/West relevant diseases (e.g. leishmaniasis, viral hemorrhagic fevers, travel health advice) <sup>9</sup> .
- Cultural competency: Managing patients of diverse backgrounds, global standards, communication.
- Adapt cooling, heat, and disaster-related care modules for West Asian climates.

This design covers the breadth of modern tropical medicine with locally and globally relevant content, balancing clinical skills and public health approaches <sup>12 3 13 9 4</sup> .

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