PROGRAMME DESCRIPTION

Title: Tropical and Neglected Infectious Diseases: An Integrated One Health Approach to Public Health.

Infectious diseases have been a major public health concern for centuries, causing significant morbidity and mortality worldwide. In recent years, the emergence and re-emergence of infectious diseases have become more frequent due to various factors such as globalization, climate change, and increased human-animal interaction. As such, understanding the basic microbiology, epidemiology, and ecology of infectious diseases, as well as the interplay between humans, animals, and the environment, is crucial for their control and prevention.

This interdisciplinary course covers a range of topics related to infectious diseases and their impact on public health. The course emphasizes the One Health approach, which recognizes the interconnectedness of human, animal, and environmental health, and aims to promote collaboration and communication across different sectors to achieve optimal health outcomes.

Students will learn about the major waterborne diseases in Brazil and their implications for public health, as well as wastewater genomics surveillance strategies. They will also study the transmission of arboviruses and neglected diseases such as Chaga's disease, malaria, leishmaniasis, Sporotrichosis, HTLV, Hansen's disease and Tuberculosis. General aspects of disease in Brazil and current research avenues in the country will also be discussed. Finally, students will explore the sense of neglected diseases in Bahia, with a focus on the place of populations and territories.

Overall, this course provides a comprehensive overview of infectious diseases and public health, highlighting the importance of an integrated One Health approach to their control and prevention.

AIM

This course aims to discuss the emergence, transmission, and control of tropical and neglected diseases, as well as the relationship between these diseases and environmental degradation. Students will study the mechanisms of transmission and pathogenesis of major tropical and neglected diseases, focusing on their epidemiology, microbiology, and ecology. By the end of the course, students will be able to understand the complexity of these diseases and the challenges faced in their control and prevention, as well as the necessary strategies and approaches to promote public health and the well-being of affected populations.

COURSE CONTENT DESCRIPTION

1- The Brazilian public healthcare system
2- Epidemiology and global health
3- Health surveillance and information systems in Brazil: epidemiological transition in a developing country (practical class)
4- Integration of Infectious Diseases, Reference Laboratories, and Surveillance in Tropical and Neglected Diseases
1- The influence of environment on infectious diseases transmission
2- One health approach in the study of infection diseases
3- Arboviruses
4- Water security and its relationship with waterborne diseases
5- Major waterborne diseases in Brazil and their implications for public health
6- Wastewater based genomic surveillance strategies.
7- Other neglected disease
    a. Sporotrichosis
    b. Leishmaniasis
    c. Chagas disease
    d. Malaria
    e. HTLV infection
    f. Leptospirosis
    g. Hansen’s disease
    h. Tuberculosis
8- Neglected Diseases in Bahia: the place of populations and territories.

9- Water quality parameters and its relation to neglected tropical diseases (practical class)

WEEK 1		
ACTIVITY	**HOUR**	**DATE**
Welcome reception	9 – 10 am	09.07
Institutional presentation	10 – 10:30 am	09.07
Coffee Break	10:30 – 11 am	09.07
Socio Cultural Activity	1 pm – 6 pm	09.07
Brazilian public healthcare system	08 – 10 am	10.07
Epidemiology and global health	10 am – 12 pm	10.07
Health surveillance and information systems in Brazil: epidemiological transition in a developing country (practical class)	2 – 6 pm	10.07
WEEK 2		
Integration of Infectious Diseases, Reference Laboratories, and Surveillance in Tropical and Neglected Diseases	8 am – 12 pm	13.07
Field trip LACEN (to be confirmed)	8 am – 12 pm	14.07
One health approach in the study of infection diseases	8 – 10 am	15.07
The influence of environment on infectious diseases transmission	10 am -12 pm	15.07
Water security and its relationship with waterborne diseases	2 - 4 pm	15.07
Major waterborne diseases in Brazil and their implications for public health	4 – 6 pm	15.07
The influence of environment on infectious diseases transmission	8 – 10 am	16.07
Water quality parameters and its relation to neglected tropical diseases (practical class)	10 am – 12 pm	16.07
Field trip Parque São Bartolomeu (to be confirmed)	8 am – 12 pm	17.07
WEEK 3		
Wastewater based genomic surveillance strategies.	8– 10 am	20.07
Other neglected disease • HTLV	10 am - 12 pm	20.07
Arboviruses	8 am – 12 pm	21.07

• Leptospirosis	8 am – 12 pm	22.07
Other neglected disease • Chaga's disease Malaria	8 am – 12 pm	23.07
Other neglected disease • Sporotrichosis	8 am – 12 pm	24.07
Field trip Zoonoses Control Center (to be confirmed)	2 – 6 pm	24.07
WEEK 4		
Other neglected disease Leishmaniasis	2 – 6 pm	27.07
Other neglected disease • Hansen's disease Tuberculosis	8 am – 12 pm	28.07
Field trip ICOM (to be confirmed)	8 am – 12 pm	29.07
Closing ceremony	8 am – 12 pm	30.07

REQUIRED QUALIFICATIONS

Essential: intermediate knowledge in English.

Desirable: knowledge of molecular biology, cellular biology, pathology, microbiology and ecology.

PROGRAM

09th July to 30th July, 2026

Monday to Friday (8 to 12 am and/or 2 to 6 pm)

Workload: 80 hours

The course will include technical visits to some locations that are directly related to the content covered in the course. These visits will provide knowledge and real-word examples that will help enhance your learning experience.