

Course contents for Biology of Parasitism

1. **Faculty:** FLSB
2. **Program and Semester:** M.Sc. Biotechnology Semester 3
3. **Course Title:** Host-pathogen interactions
4. **Number of Credits:** Two
5. **Course objectives:**

The course gives rundown of biological basis of parasitic lifestyles including host responses and parasite evasion of host defense mechanisms. It has been designed keeping in mind important parasites afflicting the SAARC region. The students would be trained about transmission, epidemiology, diagnosis, clinical manifestations, pathology, treatment and control of major parasites which can be applied to public health.

6. Minimum prerequisites for taking this course, if any: Bachelor's degree in any field of Biology/Life Sciences

7. Course structure with units, if applicable:

1. Evolution of host – parasite relationship, Microbial immune evasion mechanisms
2. Malaria: Epidemiology; mode of infection and detection; pathology; immune evasion mechanisms; drug targets and mechanism of drug resistance. Malaria vaccine strategies.
3. Leishmaniasis: Epidemiology; mode of infection and detection; pathology; immune evasion mechanisms; drug targets and mechanism of drug resistance. Vaccine strategies.
4. Amoebiasis: Epidemiology; mode of infection and detection; pathology; immune evasion mechanisms; drug targets and mechanism of drug resistance. Vaccine strategies.
5. Filariasis: Epidemiology; mode of infection and detection; pathology; immune evasion mechanisms; drug targets and mechanism of drug resistance. Vaccine strategies.
6. Tuberculosis: Epidemiology; mode of infection and detection; pathology; immune evasion mechanisms; drug targets and mechanism of drug resistance. Vaccine strategies.

8. Reading suggestions:

1. Foundations of Parasitology, Roberts L.S. and Janovy J., McGraw-Hill Publishers, New York, USA.
2. Modern Parasitology: A Textbook of Parasitology, FEG Cox., Wiley-Blackwell, U. K. 3.
3. Parasitology: A Conceptual Approach, Eric S. Loker, Bruce V. Hofkin. CRC Press

9. Evaluation:

Theory:	Mid-semester Written Examination	: 40% Marks
	End-semester Written Examination	: 40% Marks
	Quiz / Assignment/Presentation (oral / poster)/other	: 20% Marks