



जम्मू केन्द्रीय विश्वविद्यालय  
Central University of Jammu  
राया-सुचानी (बगला), जिला: सांबा-181143, जम्मू (जम्मू और कश्मीर), भारत  
Rahya-Suchani (Bagla), District- Samba, 181143, Jammu (Jammu and Kashmir), India

Course Title: Parasitology

Credit: 4 (L-3, T-0, P-1)

Course Code:

Contact Hours/Week: (L-3, T-0, P-2)

**Course Objectives (CO):**

This course explores parasitology, covering parasite diversity, life cycles, host-pathogen interactions, ecology, evolution, pathology, and medical-veterinary relevance.

**Course Learning Outcomes (CLO):** the students will be able to:

1. Demonstrate an understanding of the diversity of parasites.
2. Discuss the parasite-host relationship and describe the effects parasites on their hosts.
3. Gain the knowledge of basic biology, physiology, morphology, life history, behavior, phylogeny and ecology of selected parasites.
4. Recognize significant morphological characteristics for identification of parasites to the taxonomic group and the life history stage.
5. Identify characteristic features, classification, and damage caused by parasitic vertebrates: Cookie-cutter shark, Candiru, Vampire bat.

**Unit I**

Introduction of Parasitology; types and general properties of Parasites. Host and parasite relationship. Vectors and their types,

**Unit II**

Morphology, Life cycle, Prevalence, Epidemiology, pathogenicity, diagnosis and treatment of Amoebiasis, Giardiasis, Trypanosomiasis, Malaria and Leishmaniasis.

**Unit III**

Prevalence, Epidemiology, pathogenicity, morphology, Life cycle, , diagnosis and prophylaxis of *Fasciolopsis buski*, *Schistosoma*, *Taenia solium* and *Hymenolepis nana*, *Ascaris lumbricoides*, *Trichuris trichura*, *Ancylostoma duodenale*.

**Unit IV**

Morphology, importance and control of Mosquitoes, (*Anopheles*, *Aedes* & *Culex*) *Derma center* (cow tick) and mites (*Sarcoptes scabiei*), fly maggots and myiasis *Pediculus humans*, *Xenopsylla cheopsis* (fleas), and *Cimex lectularius* (Bed bug). Mode of pathogenesis and prevention.

**Unit V**

Characteristic features, Classification and nature of damage by parasitic vertebrates; Cooki-cutter Shark, Candiru and Vampire bat.

Department of Zoology

Page 15 | 32



जम्मू केन्द्रीय विश्वविद्यालय  
Central University of Jammu

राया-सुचानी (बगला), जिला: सांबा-181143, जम्मू (जम्मू और कश्मीर), भारत  
Rahya-Suchani (Bagla), District- Samba, 181143, Jammu (Jammu and Kashmir), India

**Lab component:**

1. Preparation and study of protozoan slides.
2. Study of permanent slides of arthropod vectors.
3. Microscopical examination of blood smears for protozoan parasites.
4. Isolation and identification of protozoan cysts and eggs of Helminth parasites from fecal samples.
5. Use of Oculo-micrometer and Stage-micrometer for measurement.
6. Study of blood smears for differential count and cell morphology.

**Suggested readings:**

1. Arora D.R. and Arora B. (2005). Medical Parasitology. CBS Publishers and Distributors, New Delhi.
2. Arora D.R. (2004). The Textbook of Microbiology. CBS Publishers & Distributors, New Delhi.
3. Arthur D.R. (1962). Ticks and Disease. Harper and Row, New York.
4. Askew R.R (1971). Parasitic Insects. American Elsevier Publication Co. New York.
5. Baer J.G. (1951). The Ecology of Animal parasites. University of Illinois Press.
6. Jayaram, Paniker, (2018). Medical Parasitology. Jaypee brothers Medical Publishers

Department of Zoology