

Course Objectives:

The objectives of the course are:-

1. To impart knowledge on various protozoan parasites affecting human and animals.
2. To understand basic principles of parasitic infection and the host immunological responses.
3. To familiarize students to differentiate among the common groups of protozoan parasites.
4. To improve their diagnostic assistance by explaining basic and advanced diagnostic techniques.
5. To provide advanced knowledge, understanding, and critical judgment appropriate for professional employment in Parasitology or a related discipline.
6. To provide a basic knowledge of the immune response and its involvement in health and disease.

Course Learning Outcomes

Upon successful completion of the course, the student will be able to:

1. **Attain** the basic acquaintance of Protozoans and philosophy of host-parasite interface
2. **Understand** the perception of parasitism and other animal associations; clarify the concept of damage; understand the basic features and characteristics of hosts

3. **Elucidate** the impediments related to the pathogenesis of the protozoan and effectively treating these infections.
4. **Diagnose** the protozoan infections by presentations of elementary and current techniques
5. **Evaluate** the difficulties linked with protozoan infections on the basis of signs and symptoms.
6. **Articulate** protozoan parasite infections affecting livestock, its morphology, life cycle, epidemiology, pathogenesis, treatment and control approaches.

Course Contents:

Introduction to parasitology, basic terminology, basic principles and concepts in parasitic ecology and evolution of parasites. Parasitic protists, forms, functions, nomenclature and classification. Host parasite relationship. Host and organ specificity. Protozoan zoonoses. Kinetoplastida; *Trypanosoma rhodesiense*, *T. gambiense*, *T. brucei*, *T. cruzi*, Trypanosomiasis. *Leishmania donovani*, *L. tropica*, *L. braziliensis*, *L. maxicana*, Leishmaniasis. Flagellated protozoa; *Chilomastix*, *Giardia*. Trichomonas. Subphylum Sarcodina, Amebas; Amoebiasis. Phylum Apicomplexa. *Gregarines*, *Coccidia*, *Toxoplasma*, *Sarcocystis*, *Cryptosporidium*. Phylum Apicomplexa, *Plasmodium falciparum*, *P. ovale*, *P. malariae*, *P. vivax*, Malaria. Phylum, Ciliophora, ciliated protistan parasites; *Balantidium*. Morphology, biology, pathogenesis, immunity and resistance, epidemiology, control and treatment of the diseases caused by above mentioned parasites will be considered.

Teaching-Learning Strategies

Teaching will be a combination of class lectures, class discussions, and group work. Short videos /films will be shown on occasion.

Assignments

The sessional work will be a combination of written assignments, class quizzes, presentation, and class participation/attendance.

Assessments and Examination

Sessional Work:	25 marks
Midterm Exam:	35 marks
Final term Exam:	40 marks

Books Recommended:

1. PRACTICAL EXERCISE IN PARASITOLOGY, 2001. Hatton, D.W., Behinke, M. and Marshal, I. Cambridge University Press, BSP.
2. VETERINARY PARASITOLOGY, 2000. Urquhart, G.M., Duncan, J.L., Qunn, A.M. and Jenniry, F.W. Longman Scientific and Technology, U.K.
3. PARASITIC DIAGNOSIS, 1999. Hayate, S. and Akhtar, M. UGC Govt. of Pakistan.
4. FOUNDATIONS OF PARASITOLOGY, 2000. 5th ed. Robert, L.S. and Janovy, J.Jr. W.C.B. Company, U.K.
5. INTRODUCTION TO ANIMAL PARASITOLOGY, 1994. Smyth, J.D. Cambridge Univ. Press.

UZO-578 Protozoology (Lab.)

Cr. (1)

Course Objectives:

The objectives of the course are:-

1. To impart knowledge on various protozoan parasites affecting human and animals.
2. To understand basic principles of parasitic infection and the host immunological responses.
3. To familiarize students to differentiate among the common groups of protozoan parasites.
4. To improve their diagnostic assistance by explaining basic and advanced diagnostic techniques.
5. To provide advanced knowledge, understanding, and critical judgment appropriate for professional employment in Parasitology or a related discipline.
6. To provide a basic knowledge of the immune response and its involvement in health and disease.

Course Learning Outcomes

Upon successful completion of the course, the student will be able to:

1. **Attain** the basic acquaintance of Protozoans and philosophy of host-parasite interface
2. **Understand** the perception of parasitism and other animal associations; clarify the concept of damage; understand the basic features and characteristics of hosts
3. **Elucidate** the impediments related to the pathogenesis of the protozoan and effectively treating these infections.
4. **Diagnose** the protozoan infections by presentations of elementary and current techniques
5. **Evaluate** the difficulties linked with protozoan infections on the basis of signs and symptoms.
6. **Articulate** protozoan parasite infections affecting livestock, its morphology, life cycle, epidemiology, pathogenesis, treatment and control approaches.

Course Contents:

Preparation of solutions used for parasitological examinations. Methods of collection, preservation and transportation of parasitic material. Qualitative and quantitative faecal examination for protozoa. Blood examination for protozoa. Microscopic measurement of protozoa. Identification of important members of protozoa.

Teaching-Learning Strategies

Teaching will be a combination of class lectures, class discussions, and group work. Short videos /films will be shown on occasion.

Assignments

The sessional work will be a combination of written assignments, class quizzes, presentation, and class participation/attendance.

Assessments and Examination

Sessional Work:	25 marks
Midterm Exam:	35 marks
Final term Exam:	40 marks