



SCHOOL OF PHARMACY & HEALTH SCIENCES

SEMESTER:	SUMMER
COURSE:	MIC 2362: Parasitology and Entomology
LECTURER :	James Obila
CLASS DAYS/TIME:	T/T 11.00 – 12.30 P.M
CLASS VENUE:	SCIC 7
CREDIT UNIT:	3
OFFICE HOURS:	M/W 3.00 – 4.30 P.M (SCIC Building, Room 10)
CONTACTS:	jobila@usiu.ac.ke

MIC 2362: PARASITOLOGY AND ENTOMOLOGY

Pre-requisites: MIC 2361

Credit Units: 4.5

2.12.2 Purpose of the course;

To train the student on the different types of parasites and vectors; how to make diagnoses; and how to manage the diseases they cause.

2.12.3 Expected Learning Outcomes of the Course;

At the end of the course, the student should be able to:

1. Outline the mode of transmission, pathogenesis and identification and control of helminths and protozoa;
2. Describe pathogenesis, clinical signs and symptoms and complications of parasitic infections;
3. Outline the treatment for various parasitic infections, giving the methods of prevention and control of infection at individual and community levels;
4. Safely handle infectious materials of parasitic origin, especially in hospital;
5. Explain the mechanisms of parasitic resistance to drugs;
6. List the vectors of medical relevance and state their life cycles and control;
7. State the general principles of immune reactions and immunodiagnosis of parasitic infections;
8. Use the simple and compound microscopes.

2.12.4 Course Content

Parasitic diseases in humans.

Parasitology: Introduction of medical parasitology. Parasitology methods. **Helminths:** Tissue and intestinal nematodes, cestodes and trematodes. **Protozoa:** Tissue and intestinal protozoa. Trichomonas vaginalis. Diagnosis and chemotherapy of parasitic infections. **Entomology: Arthropods; Mosquitoes;** Chrysops, House flies, Sand fly, Tse tse fly, Simulium & Biting midges; Brachycera. Musca, Stomoxys & Glossina. **Sarcophagidae, Calliphoridae & myiasis:** Fleas, Lice & Bugs; Ticks & Mites; Arthropods of Minor Medical Importance. **Principles of immunoparasitology. Diagnostic Parasitological techniques. Practicals:** Identification of ova, cysts, trophozoites and larva, adult worms and vectors.

2.12.5 Mode of Delivery;

Lectures, power point presentations, and class discussions. These will take a participatory approach. Laboratory learning and Experiments: The lecturer, together with the laboratory technical staff, will take the students through practical sessions, beginning with demonstrations. The students will thereafter be expected to use pre formulated laboratory manuals to carry out various practical exercises then write out their findings in their laboratory workbooks. Video demonstrations and/or CD-Roms on Medical Parasitology when available, after the relevant topic has been covered. Assignment criteria: Students will be given several individual or group research assignments on topics relevant to the course. These could include lectures, discovery learning, problem-based learning, experimental learning, group-based learning, independent studies and e-learning.

2.12.6 Instructional Materials and/or Equipment;

Lecture notes or power points for presentation; Microscopes; Equipment and reagents for practical microbiology; Practical Manuals; Text books; microbiology charts. Culture media; Demonstration slides and living material. Tutorials; Video demonstrations; CD-ROMs and other illustrative material.

2.12.7 Course Assessment;

Distribution of Marks

Continuous Assessment Tests /Quizzes (atleast 2 sit in)		20%
Oral examination/Term paper	10%	
Mid-Quarter Exam	20%	
Final Exam	25%	
Continuous Laboratory exercises	15%	
End semester Practical Exam	10%	
Total	<u>100%</u>	

Grading

90 – 100	A
87 - 89	A ⁻
84 - 86	B ⁺
80 - 83	B
77 - 79	B ⁻
74 - 76	C ⁺
70 - 73	C
67 - 69	C ⁻
64 - 66	D ⁺
62 - 63	D
60 - 61	D ⁻
00 - 59	F

Core Reading Materials for the Course

Despommier, D. D., Gwadz, R. W. and Hotez, P. J., [Krogstad](#), D., Karapelou, J. W. (2012). Parasitic Diseases. 5th Edition. Springer-Verlag New York, LLC

JANOVY, J., ROBERTS, L. S. AND NADLER, S. (2012). FOUNDATIONS OF PARASITOLOGY. 9TH EDITION. MCGRAW-HILL HIGHER EDUCATION, LONDON

Service, M. (2012). Medical Entomology for Students. 5th Edition. Cambridge University Press, Cambridge

Recommended Reference Materials;

Chatterjee, K. D. (2009). Medical Parasitology. 13th Edition. CBS Publishers & Distributors, New Delhi

[Sullivan, J. T.](#) (2009). Color Atlas of Parasitology. 8th Edition. Parasitology, San Francisco, CA