

Course objectives:

- To study the comparative morphology of insect organ systems.
- To study the morphology of an organ is related to its function.

Learning Outcomes:

The students would be able to;

- Understand the comparative morphology of insect organ systems.
- Understand how the morphology of an organ is related to its function.

Course Content:

1. Introduction
2. Integument and its derivatives
3. Body regions
4. Segmentation, sclerites, sulci and appendages of head, thorax and abdomen with their modifications in economically important insect orders
5. Endoskeleton and internal organ systems
6. Exocrine and endocrine organs.

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

Recommended Books:

1. Beutel, R. G., Friedrich, F., Yang, Xing-Ke and Ge, Si-Qin. 2014. Insect Morphology and Phylogeny. Walter De Gruyter Inc publisher.
2. Chapman, R. F. 2012. The insects: Structure and Function (5th Ed.). Cambridge University Press.
3. Dunston P.A. 2004. The Insect Structure, Function and Bio-Diversity. Kalyani Publishers, Ludhiana.
4. DuPorte, E. M. 1959. Manual in Insect morphology. Reinhold Press. University of Minnesota, USA.
5. Gilbert, L.I., Iatrou, K. and Gill, S. S. 2005. Comprehensive Molecular Insect Science. 2nd edition, Elsevier/Pergamon.
6. Kerkut, G.A. and Gilbert, L.I. 1985. Comprehensive Insect Physiology, Biochemistry and Pharmacology. Vols. 1-12, Pergamon Press, Oxford, New York, Toronto, Sydney, Paris, Frankfurt.
7. Richard, O.W. and Davies, R.G. 1984. Imm's General Textbook of Entomology, Vol. I,

- revised. 10th Ed. (Structure, Physiology & Development). Chapman and Hall, London, N.Y.
8. Snodgrass, R. 1935. Principles of Insect Morphology. Cornell Univ. Press., U.S.A.

UZO-512 Insect Morphology (Lab.)

Cr. 1

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Learning Outcomes:

The students would be able to;

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- Understand how the morphology of an organ is related to its function.

Course Content:

1. Structure of integument and its derivatives
2. Comparative external and internal morphology of economically important insect orders
3. Preparation for illustrations.

Teaching-Learning Strategies

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