**ENTO-7117 INSECT BIOCHEMISTRY 3(2-1)**

This course aims to provide concepts of biochemistry of insect energy pathways in different life stages. This will help to understand the insect biochemical cycles necessary for their life.

***Contents (Theory)***

1. Introduction to insect biochemistry
2. Energy metabolism and production in insects
3. Biochemistry of cuticle, muscles, flight, synaptic transmission, light production, biochromes, hormones and karomonoes
4. Biochemical mechanism of Insect growth regulators and diapause in insects
5. Metabolism and role of carbohydrates, proteins and lipids in insects
6. Chemical control of insect behaviour
7. Biochemical defences in insects

***Contents (Practical)***

1. Chemical identification of insect species and biotypes
2. Pheromone extraction, its identification and control in insects;
3. Hormonal control of insect growth and development.
4. Quantitaive analysis of Amino acids, proteins, uric acids in haemolymph; amylase etc.

***Recommended Books***

1. Chapman, R.F., 1998. Insects: Structure and Function. 4th ed. American Elsvier. Publ. Co. Inc., New York.
2. Candy, D.J. and B.A. Kilby, 1978. Insect Biochemistry and Function (2nd ed.) Chapman and Hall London. 314 pp.

***Suggested Books***

1. Gilmour, D., 1961. The Biochemistry of Insects. Academic Press London. 343 pp.
2. Morgan, E.D. 2004. Biosynthesis in insects. T.J. Intl. USA.
3. Rockstein, M., 1978. Biochemistry of Insects. Academic Press, New York, U.S.A., 649 pp.
4. Turner, R.B., 1977. Analytical Biochemistry of Insects. Elsevier Scientific Publishing Company New York. 315 pp.