VOCATIONAL SKILL ENHANCEMENT COURSE (VSEC)
offered by Department of Zoology
B.Sc. Semester I (VSC – I)
Name of the course: Tools And Techniques in Zoology I

[4 hrs/week 15 weeks* 4 practical = 60 P]

[Credits 2]

Course description:

Course is designed to train students about tools and techniques used in Zoology. Specifically about study of non chordates, cell biology and use of Microsoft office in data presentation.

Course Objectives:

To learn about tools and techniques used to study non chordates and cell biology.

Course learning outcomes:

CO1: To comprehend the key skills needed to study invertebrates.

CO2: To be able to expert in microscope operation and slide making.

CO3: To be able to use of computers and Microsoft office in data presentation.

Practical: [60 P]

1. Collection, documentation and photography of invertebrates
2. Introduction to light microscope: parts and uses of light microscope.
3. Measurement of animal cells using micrometer under light microscope.
4. Preparation of temporary slide of cheek cell (using eosin and glycerin).
5. Preparation of permanent slide (WM of material staining using eosin).
6. Preparation of powerpoint presentation
7. Representation of data in Excel using tables and graphs
8. Report writing using MS- word.
9. Presentation of collected data using MS-office.

REFERENCE BOOKS :

1 S.Chand: A Manual of Practical Zoology: Invertebrates : P.S. Verma

2 Learn Microsoft Office 2019: A comprehensive guide to getting started with Word, PowerPoint, Excel, Access, and Outlook Paperback : Linda Foulkes

Mode of Evaluation :

Continuous internal evaluation (no end semester examination) / Poster presentation / Project / Presentation / Assignment / Quiz

Total Marks :- 100

VOCATIONALSKILLENHANCEMENT COURSE (VSEC) offered by Department of Zoology B.Sc. Semester II (SEC – I) Syllabus under Autonomy Name of the course :Tools and Techniques in Zoology II

[4 hrs / week 15 weeks*4 practical =60P]

[Credits 2]

Course description:

Course is designed to train students about tools and techniques used in Zoology. Specifically about study of chordates ,solution preparation, use of colorimeter, UV spectrometer and *Drosophila* culture , study of genetic traits.

Course Objectives:

To learn about tools and techniques used to study chordates, instrumentation and genetics.

Course learning outcomes:

CO1: To comprehend the key skills needed to study vertebrates .

CO2: To be able to expert in instrument operation and solution preparations.

CO3: To be able to study genetics using *Drosophila* culture.

Practical: [60P]

1. Collection, documentation and photography of chordates.
2. Preparation and standardization of solutions : Normality, Molarity, pH.
3. Introduction to pipetting and micropipetting.
4. Finding λ max of solution using colorimeter.
5. DNA estimation using UV spectrophotometer.
6. Sterilization of instruments and media using autoclave.
7. Drosophila culture preparation.
8. Drosophila culture maintenance.
9. Study of genetic traits in Drosophila.

REFERENCEBOOKS:

1. S. Chand: A Manual of Practical Zoology : vertebrates : P.S.Verma
2. Alpha Science International Limited : Introductory Practical Biochemistry : S.K. Sawhney

Mode of Evaluation :

Continuous internal evaluation (no end semester examination) / Poster presentation / Project / Presentation / Assignment / Quiz

Total Marks :- 100