

Name of the Programme: M. Sc. Zoology

Course Code: ZOO-530

Title of the Course: Animal Cell Biology (Practical)

Number of Credits: 01

Effective from AY: 2023-24

Pre-requisites for the Course:	Basic understanding of different components and functions of the cell. Parallel enrolment for the courses ZOO-529, Animal cell biology Theory	
Course Objectives:	<ol style="list-style-type: none">1. To provide hands-on training on organelle separation technique.2. To determine viable cell count and toxicity assay for isolated cells.3. To demonstrate the histological and cytological techniques.	
Content:	Isolation of lysosomes/ mitochondria from chicken liver using differential centrifugation. Cell isolation and enumeration using the trypan blue method. Cell toxicity study using MTT/XTT assay. Study of histology technique using HE staining. Study of Cytokinesis-block assay using lymphocytes culture.	15 x 2 hours
Pedagogy:	Mini Projects, Group activities, Demonstrations	
References/ Readings:	<ol style="list-style-type: none">1. C. L. Ghai, A text book of Practical physiology. Jaypee Brothers Medical Publishers, 2013.2. M. Clynes, Animal Cell Culture Techniques. Springer, New York, 1998.3. R. I. Freshney, Culture of Animal Cells: A Manual of Basic Techniques. Willey Publishers, 2005.	
Course Outcomes:	The learner will <ol style="list-style-type: none">1. Skilled to isolate cells from tissue and perform the cell count and toxicity studies.2. Design and interpret the cytokinesis experiments.3. Independently prepare the histological slides of given animal tissue.4. Design the cell toxicity experiment to evaluate various compounds.	