Viewing and Capturing Diversity in Nature

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution Of The Course			Eligibility Criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Viewing and Capturing Diversity in Nature	**2**	**0**	0	**2**	Class XII	NIL

Learning objectives

- Understand fundamentals of digital cameras and smartphone photography technology.
- Develop a working knowledge of digital image analysis and processing.
- Understand the importance and use of Nature photography in business and as career goal.
- Enhance appreciation for the tremendous aesthetics inherent in nature.

Learning Outcomes

On successful completion of this course, a student will be able to:

- Describe and use the digital camera and smartphone camera functions and their applications
- employ different photographic equipment to enhance their photographic skills and create digital resources.
- discriminate between the photographic variables with reference to weather and season.
- employ the photographic skills in various professions and for entrepreneurship.

Syllabus

Practicals: 60 hours

1. To study the parts of a digital camera. 4 hours
2. To study the principle and working of digital camera/ smartphone camera. 4 hours
3. Working and handling of light microscopes (Dissection and Compound). 4 hours
4. Study of plant forms through microscopic lens (Single-celled, colonial forms, filamentous forms, multicellular and complex forms). 8 hours

5. To study techniques of capturing shots (using light and lenses effectively, macro and micro photography, wide angle and close-ups). 4 hours
6. Study of plant adaptations through photographs (Aquatic and desert plants). 4 hours
7. To capture and understand the Ecological Interactions. 8 hours
8. Identification of different plant life forms through online available tools/ search engines. 8 hours
9. Outdoor/ Campus Photography: Plants, Environment, Landscapes and Cityscape. 4 hours
10. Foldscope: The domestic microscope. Use the Foldscope to explore microscopic organisms in pond water. 4 hours
11. Project Work: To make a portfolio of diverse landscaping patterns/ selected themes through outdoor visits. 8 hours

Essential Readings:

1. Ang., T. (2008). Fundamentals of modern Photography. London, Mitchell.
2. Freeman Patterson "The Art of Seeing" by Key Porter Books.
3. Tim Fitzharris "Landscape Photography" Firefly Books.
4. Kelby, S. (2012). The digital photography book. Peachpit Press.
5. Langford, M., Fox, A., and Smith, R.S. (2013). Langford basic photography:the guide for serious photographers. Amsterdam: Focal Press/Elsevier.
6. Peterson, B. (2016). Understanding exposure: how to shoot great photographs with any camera. AmPhoto Books.

Suggestive readings:

1. Sharma P.D. (2008) Ecology and Environment. Rastogi Publishers.

Examination scheme and mode:

Evaluation scheme and mode will be as per the guidelines notified by the University of Delhi.