

# BASIC COURSE IN ORNITHOLOGY

## MULTI FACULTY

**TYPE OF COURSE** : New | Elective | UG/PG  
**COURSE DURATION** : 12 weeks (24 Jan' 22 - 15 Apr' 22)  
**EXAM DATE** : 23 Apr 2022

**PRE-REQUISITES** : Participants should have completed at least the first year of undergraduate degree

**INTENDED AUDIENCE** : Undergraduate and postgraduate students in sciences. But we also welcome interested and enthusiastic members of the public.

**INDUSTRIES APPLICABLE TO** : Industries that will value this course include: Agriculture, Forestry, Wildlife and biodiversity conservation, Sustainability divisions of any industry.

### COURSE OUTLINE :

The course intends to introduce students to the scientific study of birds (ornithology). It covers basics of a range of topics like bird anatomy, physiology, taxonomy, behaviour, conservation. It is ideal for students pursuing their Bachelors and Masters degree in life sciences and for those who want to explore ornithology as a career option.

### ABOUT INSTRUCTOR :

Prof. Ghosh received her Masters degree in Wildlife Science from the Wildlife Institute of India in 2007 and her doctoral degree from Saurashtra University in 2013. For her doctoral research, she studied the historical and ecological correlates of breeding distribution of Himalayan leaf warbler communities.

Prof. Manjari Jain received her PhD from CES, IISc Bangalore and is currently an Associate Professor of Biology at IISER Mohali. Her research focuses on acoustic communication in animals and the drivers of signal evolution.

Prof. Jayapal is a faculty at Salim Ali Centre for Ornithology and Natural History. His main research interests include taxonomy and distribution of birds, ecology of bird communities and assemblages, and general natural history of birds.

Prof. Krishnan uses birds as a system to understand the context, function and physical principles underlying biological sound in tropical environments. Simultaneously, he also works back using sound to study basic ecological processes.

Prof. Suhel Quader is a Senior Scientist at the Nature Conservation Foundation. His training is in wildlife biology, animal behaviour and evolutionary ecology. His current interests are focussed on participatory science and in techniques and problems in data science.

Prof. Robin is an evolutionary ecologist hugely motivated by the natural history of birds, especially those on the Shola Sky Islands of the Western Ghats.

Prof. Umesh Srinivasan is based at the Centre for Ecological Sciences at the Indian Institute of Science. Umesh studies how climate change and forest degradation affect the population dynamics of forest birds in the Eastern Himalayas of Arunachal Pradesh, and is also involved in a community-based

### COURSE PLAN :

**Week 1:** Introduction to Ornithology; Avian Diversity and Classification; Evolution and Speciation

**Week 2:** Anatomy and Morphology; Physiology; Coloration

**Week 3:** Life History; Foraging Behaviour; Mating and Breeding Behaviour

**Week 4:** Social Behaviour; Methods of Science and Posing Research Questions

**Week 5:** Vocal Behaviour: Mechanisms; Ecology & Evolution; Vocal Behaviour: Case Study

**Week 6:** Migration; Basics of Research Design

**Week 7:** Bird Populations: Concepts; Bird Communities: Concepts

**Week 8:** Mixed species flocks; Studying Bird Populations and Communities: Techniques

**Week 9:** Avian Disease; Introduction to data visualisation and analysis

**Week 10:** Biogeography; Macroecology; Macroecology: Case Study

**Week 11:** Avian Conservation: Concepts; Avian Conservation: Case Studies 1; Avian Conservation

**Week 12:** Citizen Science in Ornithology; Molecular Techniques in Ornithology; Molecular Techniques