Course Code: ZOO 435 **Course Title: Scientific Communication**
Number of Credits: 2
Effective from AY: 2020 -21

Prerequisite for the Course:	Elementary knowledge of Cell Biology and Physiology.	
Objectives:	To develop successful Science Writing in students to demonstrate their ability to understand and use of available knowledge in science.	
Content:	**Module 1** Making Oral presentation: Pronunciation, accent, intonation, clarity, speed, fluency; eye contact; planning and organization. Enrichment of Vocabulary: word forms and derivation, prefixes and suffixes, Scientific and technical vocabulary, spelling. Basic grammar: Tenses; Voices; Proposition and conjunctions; conditional sentences; Punctuations. Softwares for Plagiarism Check and Grammar, Softwares for Reference styles and manuscript organization. Effective writing presentation: Order of sentences in a paragraph, Sentence connection, cohesion and coherence; Contradiction, tautology, semantic anomaly, circumlocution. Introduction to Scientific writing skills; Ethics of scientific write-up, Scientific method : Concept, hypothesis, theory, law; Design of experiment, Inductive and deductive reasoning. **Module 2** Pattern of a literature review; Online search tools and tactics for literature survey Citing a reference in a text body and in the References, Styles of Reference citations, UGC-CARE LIST. Preparing the manuscript: Guidelines for authors; The IMRAD format. Framing the Title, Abstract, Key words; Introduction with defining the problem, Literature survey, Justification of study; Experimental procedure with proper techniques, reproducibility, units of measurements and statistical analysis; Results with proper presentation data and illustration; caption and legends; Discussion with components and sequesnce, comparison and integration of data; conclusions and significance; implication of further study. Research project proposal: Framing summary of Proposal (SOP), Scientific flow of Project proposal building.	3 hrs 3 hrs 3 hrs 3 hrs 3 hrs 6 hrs 3 hrs

Pedagogy:	Lectures/Tutorials/ PBL/Videos/Assignments/Group Activities/ Online teaching mode/Self-study.
Learning Outcome:	After successful completion of this course, students will be able to: 1. Present scientific information in appropriate language for various audiences, including scholarly and general, in print and online.
References /Reading:	1. Day RA and Gastel B (2006), How to Write and Publish a Scientific Paper. Sixth Edition, ISBN: 0-313-33040-9 2. Alley, M. 2003. 2. The Craft of Scientific Presentations: Critical steps to succeed and critical errors to avoid. Springer, NY. 241 pages. ISBN:0-387-95555-0. 3. Day DA, Sakaduski N and Day N (2011), Scientific English: A guide for scientists and other professionals. ABC-CLIO Publ. 4. Alley M (1996), The craft of scientific writing. Springer Publ. 5. Day RA (1988), How to write & publish a scientific paper, Cambridge University Press.