Semester	JAN 2022
Open to semester	4
Course code	**BI2223**
Course title	**Physiology**
Credits	3 /
Course Coordinator & participating faculty (if any)	Nishad Matange*, Satyajit Rath
Nature of Course	Lectures
Pre-requisites	None.
Objectives (goals, type of students for whom useful, outcome etc)	Physical and chemical functions of molecules, cells, tissue and organs interact to build an integrative organism. The Physiology course provides a general background to mechanisms and processes that shape ways of how whole organisms function. Key topics fundamental to all organisms, including microbes, plants and animals, will be covered. The course will focus on fundamental unifying processes and mechanisms making life possible but also take a comparative approach, wherever possible, to showcase the divergence in strategies employed by different groups.
Course contents (details of topics /sections with no. of lectures for each)	Concept of Homeostasis a. Homeostasis as an organizing principle in Biology b. Mechanisms of homeostatic maintenance: Set-points, Regulate-able variables, Feedback loops c. Relationship between homeostasis and evolution Challenges to the maintenance of homeostasis using examples from the following broad areas: a. Nutritional physiology b. Physiology of water c. Temperature d. Gases e. Defense f. Integrative control of physiology
Evaluation /assessment	End-Sem Examination-30%

	Mid-Sem Examination-30% Others-Continuous assessment will account for 40% of the final grade and will involve quizzes and assignments.%
Suggested readings (with full list of authors, publisher, year, edn etc.)	Hill, R.W., Wyse, G.A. & Anderson, M. 20XX. Animal Physiology, (Latest Edition). Sinauer. Taiz, L., Zeiger, E., Møller I.M. & Murphy A. 20XX. Plant Physiology and Development, (Latest Edition). Sinauer. Rece, J.B., Urry, L.A., Cain, M.L., Wasserman, S.A., Minorsky, P.V. & Jackson, R.B. 20XX. Campbell Biology, (Latest Edition). Pearson. Assorted reading material will be provided during the course