

Bi 192. Introduction to Systems Biology. 6 (2-0-4); First Term. Prerequisites: Ma 1abc, and either Bi 8, CS1, or ACM 95 or instructor's permission.. The course will explore what it means to analyze biology from a systems-level point of view. Given what biological systems must do and the constraints they face, what general properties must biological systems have? Students will explore design principles in biology, including plasticity, exploratory behavior, weak-linkage, constraints that deconstrain, robustness, optimality, and evolvability. The class will read the equivalent of 2-3 scientific papers every week. The format will be a seminar with active discussion from all students. Students from multiple backgrounds are welcome: non-biology or biology students interested in learning systems-level questions in biology. Limited enrollment. Instructor: Goentoro.