

Syllabus, ZOO 4XXX/6927. "Evolutionary Systems Biology"

Instructor: Charles F. Baer

Credits: 1

Day/Time/Place: TBA

Description: The seminar will have a Journal Club format, whereby every registered student will lead a discussion on a paper of interest. Just to set the stage as to my idea of what constitutes "evolutionary systems biology", the first reading will be Kacser and Burns classic paper on the evolution of dominance and the second reading will be Andreas Wagner's influential model on the evolution of transcriptional networks. However, I don't envision "evolutionary systems biology" as being the same thing as "evolution of genetic systems" (e.g., dominance, recombination, mutation rate, etc.) but there are obvious areas of overlap.

Week 1: Organization

Week 2: Kacser, H. and J. A. Burns. 1981. The Molecular Basis of Dominance. *Genetics* 97: 639-666 (discussion led by CFB).

Week 3: Wagner, A. 1996. Does Evolutionary Plasticity Evolve? *Evolution* 50: 1008-1023 (student-led discussion).

Weeks 4->: To be decided, based primarily on the interests of the class.