Syllabus
Phys-302 Physics of Biological Systems

Prof. Sahand Rahi

Syllabus

Week	Topic
1	Population genetics 1
2	Population genetics 2
3	Population genetics 3
4	Population genetics 4
5	Sequence alignments, extreme value distributions
6	Random graphs
7	Hopfield networks
8	Synchronization
9	Turing patterning
10	Microtubule growth, dynamic instability
11	Chemical kinetics modeling
12	Kinetic proofreading
13	Final project presentations
14	Final project presentations

Homework

4 graded homework sets

Final project and presentation

1) Team up in pairs
2) Think of some part of biology that interests you
3) Read about proteins that are involved in that part of biology
4) Find one of these proteins that has a homolog in budding yeast
5) Think which one would be interesting to target, e.g., for labeling or blocking
6) Use Bindcraft to design binders against the protein
7) Give a 10-min presentation about the biology, the protein, and the binders