



Advanced Undergraduate Seminar

7.342 - Decoding Cellular Complexity: Modeling Biological Networks to Gain Biological Insights

Mathematical models are increasingly being used in the study of biological systems. In this course, we will study how these models can succeed, and fail, in generating biological insight, discuss best practise in the use of mathematical models, and survey the variety of mathematical models used in cellular biology.

The course does not intend to teach mathematics to biologists, rather it will instead focus on how the two fields can benefit from each other.

The class will consist of 4–8 students, is based on the discussion of research literature, and includes a field trip to Gingko Bioworks.

For more information:



...or contact instructors by email

Wednesdays 11 am - 1 pm, Fall 2023 (but flexible to student's schedule)

Instructors: Mark Greenwood (markg@wi.mit.edu) &
Torkel Loman (torkell@mit.edu)