

Contents of Hans Othmer's mini-course

(1) Direction sensing and movement in single cells -- how cells polarize, actin dynamics, cell blebbing, multiphase mixtures of the cytosol. This would be two lectures on single cell dynamics.

(2) Population-level descriptions of chemotaxis, aggregation, flocking and other collective behavior, starting with transport equations and ending with PDEs. This would be a 1 hour overview of the problems, rather than an in-depth treatment of specific problems, but there is some coherence to the topics and common mathematical threads.