

Biological Dynamics

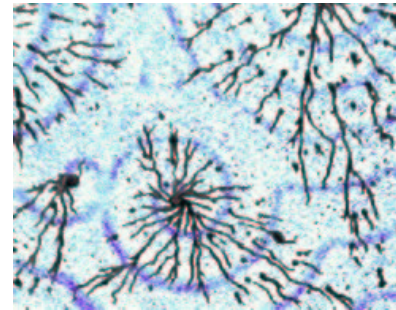
APC/EEB/MOL 514, Fall 2002

Meets:

Tuesdays, Thursdays, 2:40–4:00PM, starting Sept. 12
Lewis Thomas Laboratory Room 118

Topics to be covered:

- Action Potentials and Simple Neural Circuits
- Dynamics of Disease
- Intracellular Chemical Networks
- Spatial Patterns in Development



Randomly dispersed *Dictyostelium* amoebae self-organize and propagate spiral waves of the chemoattractant cAMP. Courtesy E. C. Cox.

Lecturers include:

- W. S. Bialek, Dept. of Physics
- E. C. Cox, Dept. of Molecular Biology
- J. G. Dushoff, Dept. of Ecology and Evolutionary Biology
- J. J. Hopfield, Dept. of Molecular Biology
- A. L. Lloyd, Program in Theoretical Biology, IAS
- J. B. Plotkin, Program in Applied and Computational Mathematics
- S. Y. Shvartsman, Dept. of Chemical Engineering
- D. W. Tank, Depts. of Molecular Biology and Physics

No background in the relevant biology is required. However, a solid preparation in mathematics, including differential equations, integral calculus, and linear algebra is essential, as is some experience in using mathematics to model the real world. Graduate students with undergraduate degrees in mathematics, physics, electrical engineering, mathematical biology, and biophysics will have such backgrounds, as should Princeton seniors with these majors.

For more information, visit:

<http://www.math.princeton.edu/~jmoehlis/APC514> (Course Website)
<http://www.eeb.princeton.edu/~slevin/BWF/BWFIntro.html>
(Graduate Training Program in Biological Dynamics)

or email Jeff Moehlis, Course TA, at jmoehlis@math.princeton.edu

The course is coordinated by E. C. Cox, Dept. of Molecular Biology.