

Syllabus CompModelsS09

This is a dynamic syllabus.

Last update: Feb 1, 2009

First half of course will be tutorials from Neurons in Action, 2 or 3 per class.

Jan 26: JR Intro to Computl Neuro + sims + motivating anims w/ NIA/NEURON

Feb 2: The Membrane Tutorial, Equilibrium Potentials, The Na Action Potential

Feb 9: The Na Action Potential –cont'd, Threshold: To Fire or Not to Fire, Voltage Clamping a Patch

HW: Chattering Ion Channels, The Ca Action Potential

Feb 16: The Neuromuscular Junction, Postsynaptic Inhibition, Interactions of Synaptic Potentials

Feb 23: The Passive Axon, The Unmyelinated Axon, Axon Diameter Change

HW: The Myelinated Axon, Partial Demyelination

March 2: A Dynamical View of Threshold, Na and K Channel Kinetics

March 9: Cells: 2 of the 5 tutorials.

March 16: NYU Spring Break

March 23: Being HR Wilson: Spikes, Decisions, Actions