

SOFTWARE FOR CELLULAR PHYSIOLOGY AND BIOPHYSICS

PART 1

2.791J / 2.794J / 6.021J / 6.521J / HST541J

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Fall 1996

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Chapter 1

GENERAL INSTRUCTIONS

1.1 Do I have to be a computer expert to use the software?

The software has been written for use by students of physiology and biophysics and focusses on those topics. The programs are written in C and operated under the UNIX operating system on workstations operated by Project Athena. However, you will need to know nothing about C and virtually nothing about the workstations, Project Athena or the UNIX operating system. Although not required, some knowledge of these is helpful to make management of your data files efficient, and to allow flexibility in obtaining prints and plots of your results. If you wish to obtain knowledge about Athena and UNIX that exceeds that *required* to carry out the assignments, read the Project Athena “Essential” publications such as “Essential Athena” and “Essential UNIX”. You may also wish to attend lectures offered on these and other topics by Project Athena.

1.2 How do I start the subject software?

To login to a workstation, first make sure the power is turned on and then type < RETURN >. After a pause, a window will appear that gives directions for login. To connect to the subject software simply use the hierarchic pull-down menu (on the dashboard) to select *Courseware, Electrical Engineering, Quantitative Physiology*. If a rectangular window appears on the screen, click the left mouse button and wait. A menu, entitled **Quantitative Physiology: Cells & Tissues**, will appear that shows the names of the applications programs that are available. If an application program is available, you will be able to highlight it by moving the mouse and to select it by clicking any mouse button. After you have selected an application, the computer will beep and in a short time a window for controlling the selected software will appear. If the subject software is not available through the dashboard, then type

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Then type one of the following acronyms to start that software package:

Software package	acronym
Steady-State Chemically Mediated Transport	cmt
Hodgkin-Huxley Model	hh
Macroscopic Diffusion	diffuse
Random Walk Diffusion	rwalk
Voltage-Gated Ion Channels	channel

1.3 How do I logout?

First click on **Quit** in the application software and then **Quit** in the subject software menu. Then logout of the workstation.