Computer software for physiology education

The computer programs listed below are presented to help physiologists locate appropriate software for use in their curricula. These programs have not been reviewed by Advances in Physiology Education, and inclusion in the listing does not constitute endorsement of the software. If you use or are aware of software that may be useful in teaching physiology, please share this information with us, so that it can be included in future listings. Send pertinent information to Harold Modell, Editor, Advances in Physiology Education, Department of Radiology RC-70, University of Washington, Seattle, WA 98195.

AneSoft Corporation
13061 SE 47th Place
Bellevue, WA 98006
(206) 644-7488

Anewave: the Radial Artery Pressure Waveform. Simulation dealing with factors influencing the shape of the radial arterial pressure waveform. Available for IBM-PC-compatible equipment.


Biosource Software
2105 S. Franklin, Suite B
Kirkville, MO 65501
(816) 665-3678

Concepts in Thermography. Tutorial covering basic DC concepts, peripheral vascular physiology, detecting skin temperature, amplifiers, and processing DC signals. Program for Apple II equipment.

Skeletal Muscle Anatomy/Physiology. Tutorial covering three muscle categories, skeletal muscle microstructure, sliding filament theory, motor units, and lever systems. Program for Apple II equipment.

Command Applied Technology
West 400 Main Street
Pullman, WA 99163-0511
(509) 334-8145

Cardiovascular Systems and Dynamics. Simulation of aspects of cardiovascular physiology. Includes an isolated heart laboratory, heart-lung laboratory, systemic circulation laboratory, and a full circulatory system. Available for IBM-PC-compatible equipment.


COMpress
P.O. Box 102
Wentworth, NH 03282
(603) 764-5831

Cardiac Muscle Mechanics. Simulation of heart muscle behavior in response to changes in length, load, and contractility. Available for IBM-PC-compatible equipment.


Educational Materials
and Equipment Co.
P.O. Box 9805
Danbury, CT 06813-2605
(203) 798-2050

Human Circulatory System. High-resolution pictorial simulation. Available for Apple II (enhanced) and IBM-PC-compatible equipment.

HRM Software
175 Tompkins Avenue
Pleasantville, NY 10570
(914) 769-7496; (800) 431-2050

Cardiovascular Fitness Lab. Provides students with everything they need to use the microcomputer to monitor cardiovascular activity. Program available for Apple II and Commodore 64/128 equipment.

Exercise Experiments. Part of 10-program package Experiments in Human Physiology. The effect of exercise and physical condition on heart rate, breathing rate, and skin temperature is investigated. Program available for Apple II equipment.

Heart Rate. Part of 10-program package Experiments in Human Physiology. Light and light sensor for measuring and recording heart rate. Program available for Apple II equipment.

Hormones-Thermoregulation. Part of 10-program package Experiments in Human Physiology. Students investigate the body's ability to maintain a constant internal temperature by subjecting a volunteer to mild temperature excursion while recording and displaying skin and body temperature. Program available for Apple II equipment.

Respiration Rate. Part of 10-program package Experiments in Human Physiology. A sleeping subject is monitored for heart and breathing rate. Results are compared with the data acquired when the subject is awake. Program available for Apple II equipment.


Response-Time Investigations. Part of a 10 program package Experiments in Human Physiology. The effects of reaction times of stimulus type and response location are studied. Program available for Apple II equipment.

Skin Temperature. Part of a 10-program package Experiments in Human Physiology. Temperature probe (included) senses body and skin temperatures. Program available for Apple II equipment.

Indiana University School of Medicine
Dept. of Physiology and Biophysics
635 Barnhill Drive
Indianapolis, IN 46293
Acid-Base Physiology Simulation. Simulation of acid-base disturbances based on Davenport Diagram. Program available for IBM-PC-compatible equipment.

Cardiovascular Interactions. Cardiovascular physiology simulation. Program available for IBM-PC compatible equipment.

Gas Diffusion in the Lung. Simulation of oxygen and CO₂ transfer between alveolar air and blood. Program available for IBM-PC compatible equipment.


The Body in Focus. Tutorial for investigating body systems including skeletal, muscular, respiratory, cardiovascular, gastrointestinal, endocrine, and integumentary. Available for Apple II and IBM-PC-compatible equipment.

ECG Tutor. Tutorial presenting basic cardiac electrophysiology. Available for IBM-PC-compatible equipment.


DIGESTION

Abgame. Tutorial and game providing practice in acid-base principles. Program available for IBM-PC-compatible equipment.

Capexch. Simulation dealing with exchange at the capillary level. Available for IBM-PC-compatible equipment.


Problems in Fluid Compartment Re-Distribution. Tutorial covering solution of simple problems in fluid compartment changes in the face of perturbations. Program available for IBM-PC-compatible equipment.
