

Computers and Instruction

Computers are an integral part of today's educational process. It should come as no surprise that national surveys report that over 60% of students entering college own computers. Of the Medical School class entering in 1994, 59% indicated that they owned computers and 79% said they had direct access to them. In a recent survey of Health Sciences faculty conducted by IAIMS staff, 95% of the faculty responding felt that **students should acquire the skills necessary to use computers in their chosen profession while they are studying at the University of Washington.**

Past discussion about the worth of the computer in the Health Sciences curriculum are being replaced with suggestions of how we can best integrate the computer into the curriculum and how we can take advantage of its capabilities.

If it is a reality that computers are here to stay and that students need to acquire the skills necessary to use them, what about the faculty? What about those of us that were trained on Selectric typewriters, Dictaphones, and good old card catalogs? Where do we go to get the skills necessary to use computers? One of the best places to turn is to the Health Sciences Libraries and to the IAIMS Program. In many cases, IAIMS staff can provide the help

you need. If not, they probably know who can.

For example, you may need to upgrade your computer. The recommendations included in the box below may offer information that will help you make the right decision. Today's electronic world relies on the interconnection of computers to other computers, through the Campus Network, the Internet, and the World Wide Web. Your department computer support staff can

probably help you with a network connection, but if not, call Computing & Communications 543-5970 or the Health Sciences Libraries and Information Center at 543-3395.

What about library resources, Internet Listservs, News Groups, access to specialty databases, and help using the World Wide Web? The Health Sciences Libraries conducts classes on all these topics. Contact your library liaison

(continued on page 2)

Computer Recommendations for Health Sciences Students

MS/DOS® Desktop Computer

Estimated cost: \$1600
80486 computer
8 megabytes of RAM
Internal double speed CD-ROM drive
14" S-VGA computer monitor

Macintosh® Desktop Computer

Estimated cost: \$1600
68040 computer with
8 megabytes of RAM
Internal double speed CD-ROM drive

Other recommendations:

- 16 bit sound card with speakers is a valuable addition.
- 14.4 bps modem to access the Internet from home.
- A portable computer can be very useful for students who study in a variety of sites. Do consider purchasing one with the specifications listed above, except for the CD-ROM, which can be purchased as an external device.
- A printer is also a useful addition. Consider an ink-jet printer; it gives reasonable print quality for a low price.

Computers and Instruction (cont'd)

at 543-3394 or send email to hsl@u.washington.edu.

Perhaps you want to set up email communications with your students. Many faculty are finding this an effective way to manage class assignments, answer questions, and disseminate grades. Computing & Communications can help set up these accounts. See the publication, *Windows on Computing* No. 16, for information on how some faculty are using email or call 543-5970 for assistance.

Many instructors are now developing presentation media on their personal computers using presentation software. The Health Sciences Center for Educational Resources teaches a series of seminars on designing visuals, using technology for presentations, and several hands-on classes in using graphics software. Call 685-1156 for more information.

Perhaps you want some one-on-one professional assistance developing computer-based learning material for your students. Or perhaps you want to make your slide collection

available to students for study, to augment a lecture with animation, or to show a clinical procedure with labels and related graphics. To meet these and other educational needs, the developers of the IAIMS initiative created IDEAL.

IDEAL is an acronym for Integrated Databases for Enhancing Academic Learning; its purpose is to instruct Health Sciences faculty in the educational uses of the Internet, computers, and computer-based instruction and to assist in the development of new computer authoring tools. We hope that our activities will promote faculty development of effective information technology and will assist in the creation of educational programs and the use of information technology for health sciences students.

The IDEAL staff is working with all health sciences departments. Helping guide these efforts is an advisory committee made up of representatives from each school. These advisors

include: Dr. Jim Brinkley, School of Medicine; Dr. Doug Schaad, Department of Medical Education; Dr. Pam Mitchell, School of Nursing; Dr. John Evans, School of Dentistry; Cynthia Richie, School of Social Work; and Dr. Tom Koepsell, Department of Public Health.

One of the first tasks undertaken by the IDEAL staff was a survey of Health Sciences faculty. Developed by the Health Sciences Libraries, Health Sciences Center for Educational Resources, and Classroom Services staff, the purpose of this survey was to help determine how the staff could best develop and implement the use of new technologies for problem solving and learning.

The results are very interesting. For example, faculty were asked on which topics the IDEAL staff should offer assistance. The results are summarized in the box below.

(continued on page 3)

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The Educational Component of IAIMS Should Offer Assistance That Enables Faculty to:

Rank	Topics	%
1	Retrieve information resources in support of instruction.	61.0
2	Design educational programs with appropriate scope, sequence, and focus for intended learners.	55.1
3	Develop courses, presentations, and course materials using a systematic approach.	51.8
4	Deliver instruction to small and large groups in classroom settings, using a variety of strategies.	49.0
5	Assess student performance.	
6	Communicate effectively to different audiences.	35.8
7	Teach individuals and small groups in clinic and at bedside.	29.2
8	Evaluate program effectiveness both formatively and summatively.	28.7
9	Develop process strategies for organizing and drafting written material.	26.1
10	Prepare material according to general and specific format guidelines.	20.2

Computers and Instruction (cont'd)

The first four options are clearly preferred. They focus on information retrieval, a task vital to the IAIMS philosophy, and on helping faculty deliver quality instruction using a variety of methods. These replies will be used to help guide new IDEAL projects.

To help meet the instructional needs of the Health Sciences campus, IDEAL offers several different modes of instruction. We often work with individual faculty who are interested in developing instructional programs for their classes. Examples include: Dr. Peter Odland, with whom we are developing an interactive program entitled *Description of Skin Lesions*; Dr. Jim McArthur, who assisted in the development of *Introduction to Blood Morphology* (Figure 1); and Karan Dawson, with whom we are translating the *Virtual Pharmacy* program into a World Wide Web document.

To meet the needs of larger groups, we have sponsored a series of noon-time seminars. This series has been well attended. These presentations have focused on the use of the Internet, which is becoming an important educational, research, and publishing tool. Faculty and students alike are excited about the ability of the Internet to incorporate graphics, video, sound and text into an easy to use environment. Topics in the series have included:

- An overview of the World Wide Web, by Cliff Solomon, IAIMS program.

(continued on page 4)

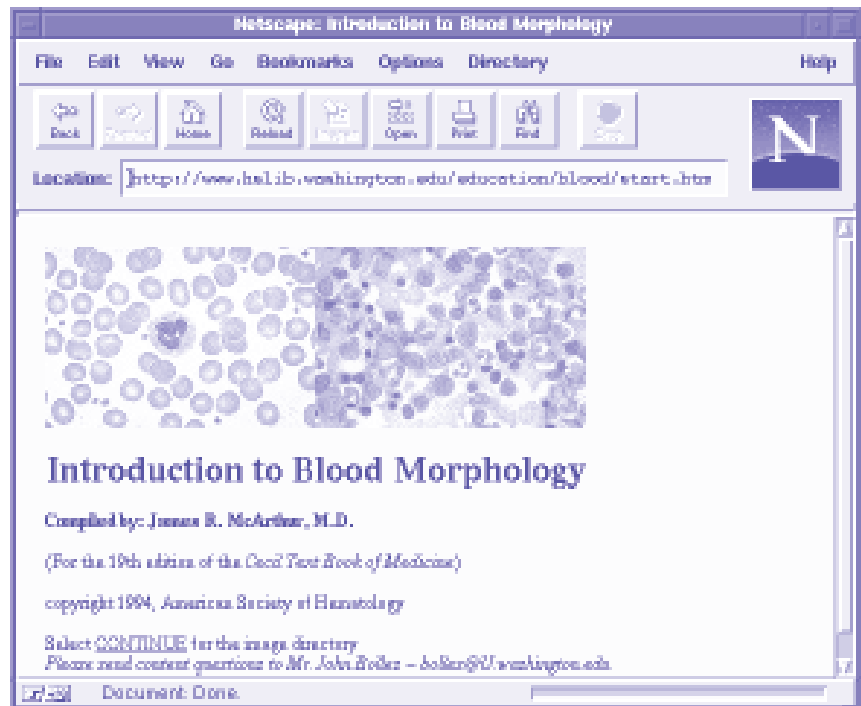


Figure 1

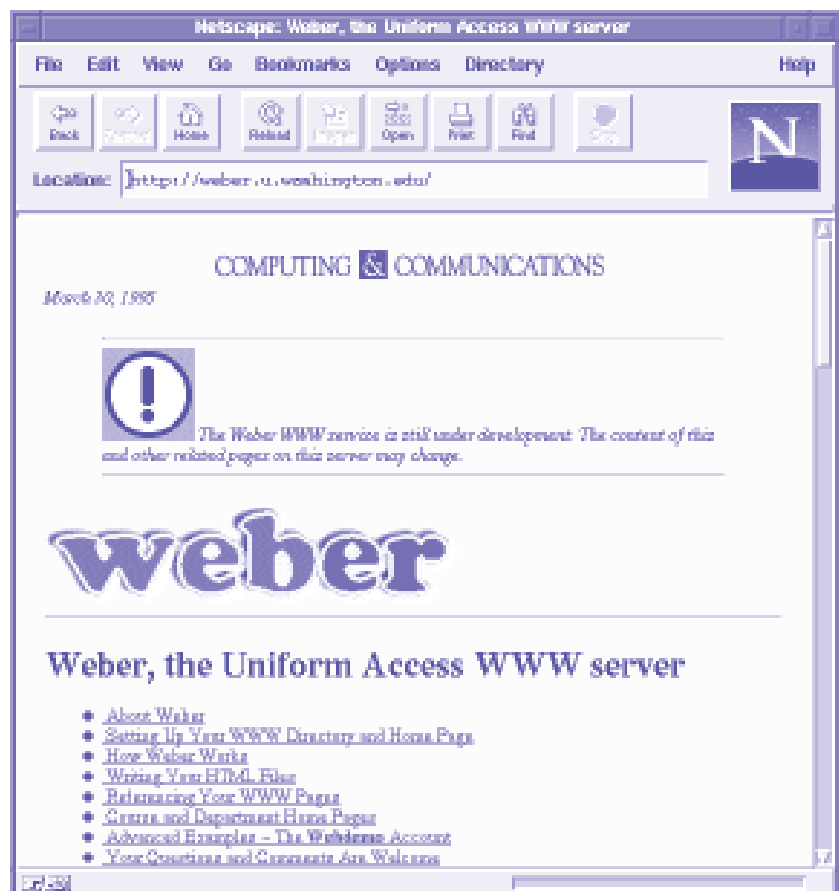


Figure 2

Computers and Instruction (cont'd)

- Basic hypertext mark-up language authoring, by Debbie Ketchell, IAIMS program.
- How to use Weber, the University's public web server, by Dave Dittrich, Computing & Communications (Figure 2).
- Search strategies using the WebCrawler and other Internet searching tools, by Brian Pinkerton, a graduate student in the Department of Computer Science and Engineering. Mr. Pinkerton is the developer of the WebCrawler.
- How to choose an Internet Service provider, by Steve Rauch, IAIMS Program.

Last fall, IDEAL also sponsored a workshop that showcased the work of three University of Washington departments which are innovators in the delivery of instructional materials over the Internet. These included:

- *The Department of Radiology.* Dr. Mike Richardson showed his Webserver, which includes a wide variety of images and computer tutorials relating to Radiology (figure 3).
- *The School of Nursing.* Brian Parkhurst demonstrated his World Wide Web site that collects Nursing-related information into one central Internet location (figure 4).
- *The Department of Bio-structure.* Dr. Jim Brinkley and Scott Bradley showed how they plan to deliver the Digital Anatomist Interactive Atlas over the Internet.

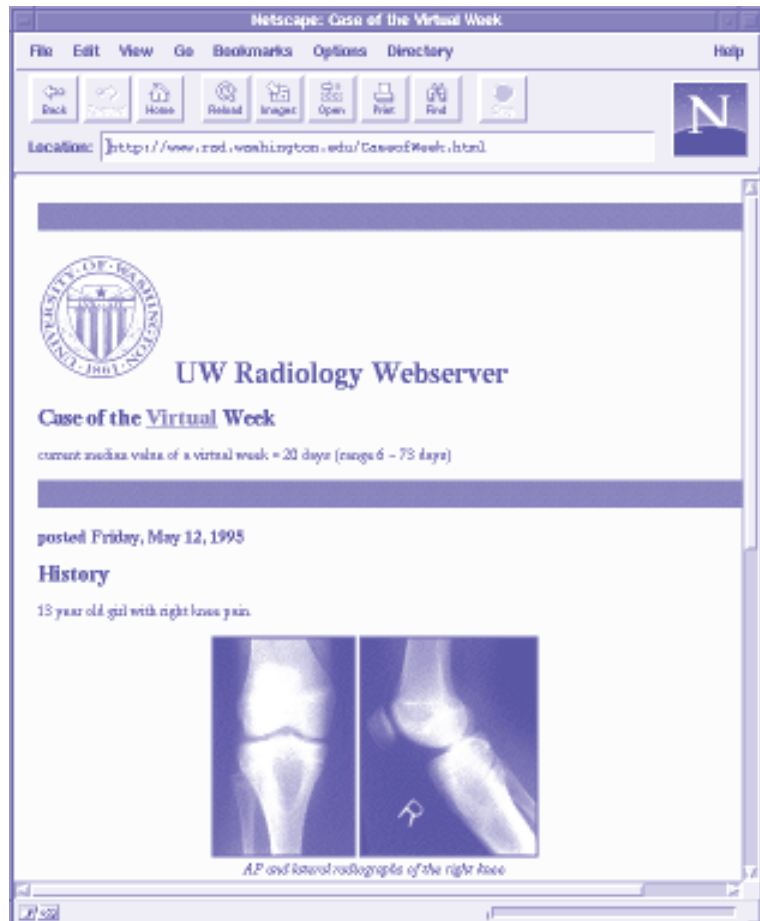


Figure 3



Figure 4

UW IAIMS Program Hosts National Meeting

The seventh annual meeting of the IAIMS Consortium will be held on July 19-21 in Seattle with the theme "IAIMS in the 21st Century". It will address issues and strategies for integrated information systems designers and implementers. The IAIMS Consortium is a membership organization of 15 academic institutions throughout the United States.



URL Addresses

Several World Wide Web Sites are mentioned in this issue. A good place to start looking for Health Sciences-related information is *HealthLinks*, a joint project maintained by IAIMS and the Health Sciences Libraries. Its URL is: <http://www.hslib.washington.edu>.

Other URL's mentioned in this issue include:

Introduction to Blood Morphology
<http://www.hslib.washington.edu/education/blood/start/htm>

Weber, the Uniform Access
WWW server
<http://weber.u.washington.edu/>

Webcrawler
<http://webcrawler.cs.washington.edu/webCrawler/Home.html>

School of Nursing
http://www_son.hs.washington.edu/

Department of Biostructure
<http://www.biostr.washington.edu/>

Dr. Parvati Dev Visiting Speaker

On April 3 and 4, the IAIMS program hosted Dr. Parvati Dev, Director of the Stanford University Medical Media and Information Technologies (SUMMIT) program. On Monday, Dr. Dev spoke to Infomatics students in the Spring Quarter Lecture Series. She discussed the development of computer managed learning material by the SUMMIT program at Stanford and how this material is being used in the Medical School curriculum.

On Tuesday, Dr. Dev was the speaker at the IAIMS lunchtime educational topics series. The development of computer programs using Hypercard and an "on-the-fly" conversion of these programs to HTML for Internet delivery was a methodology of interest to IAIMS and instructional faculty. In this way, material can be quickly developed within a well-known authoring environment and delivered to a large learner audience on multiple computer platforms. Similar delivery of Internet learning materials is underway with support and assistance from the IDEAL staff here at the University of Washington Health Sciences Center. For further information or assistance, contact Dr. Jim Barrett or Mr. Cliff Solomon at 685-1156, or send email to iaims@u.washington.edu.

UW Classes of Interest

Computing & Communications

Call 543-5970 to register

Introduction to Pine R118

Section E/May 24

Intermediate Pine R121

Section B/May 18

Section C/May 31

Moving Files with Pine R119

Section D/May 17

Section E/June 5

Using Email for Class

Communication: An Introduction for Instructors R112

May 25

Introduction to Unix R105

Section D/May 23,25,30

Basics of WWW Browsers and

HTML for Classroom Use R550

Section C/June 6, 8

Health Sciences Libraries

T227 H.S. Building
(Drop-in)

Introduction to UW Health Sciences Databases

Every Tuesday, 9:30-10:20

Every Wednesday, 1:30-2:20

Library Orientation Tour

June 6, 11:30-12:20

National Meetings

Electronic Publishing Meeting

Dartmouth, May 30-June 2

the info URL is [http://](http://www.cs.dartmouth.edu/~dags/homepage.html)

www.cs.dartmouth.edu/~dags/homepage.html

Slice of Life: Workshop on Interactive Multimedia Technology in Health Education

PreWorkshop Tutorials

June 19-21; Presentations and Demonstrations, June 22-24

Burnaby, British Columbia

(604) 432-8767

A Short Course on Medical Informatics

The Center for Advanced Medical Informatics at Stanford (CAMIS)

Dates: June 19-23; repeated on

August 28-September 1

Brochure available on World Wide

Web at <http://camis.stanford.edu/shortcourse.html>

To obtain course description via email, send message to: *short-course request @camis.stanford.edu*

with SUBJECT: send course, or call 415-723-6979

American Medical Informatics Association (AMIA) Spring Congress

June 24-28

Cambridge, MA

Capturing the Clinical Encounter

(301) 657-1291 or email MAIL@amia2.amia.org

IAIMS Consortium Meeting

July 19-21

University of Washington, Seattle

(206) 685-2166 or email

iaims@u.washington.edu

Computer-Based Patient Record Institute - Fourth Annual Meeting

July 21, Vancouver, B.C.

Fax: (708) 706-6747

MEDINFO'95 - 8th World Congress on Medical Informatics

July 23-27, Vancouver, B.C.

(403) 4809-8100 or email

medin95@acs.ucalgary.ca

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CONTENTS

Computers and Instruction	1
Computer Recommendations	1
Preliminary Faculty Survey Results	2
IAIMS Consortium Meeting	5
URL Addresses	5
Dr. Parvati Dev Visiting Speaker	5
Classes & Meetings	6