Syllabus (1)

Bookmark the class website / syllabus

(This URL is on HW 1.)

web.cecs.pdx.edu/~harry/cs105/syllabus.html

Weekly Homeworks

2 Midterm Exams and a Final Exam

Cancelled Class (Last Tuesday in January)
Syllabus (2)

Goals for this course

Gain general “computer literacy”.
Learn basic concepts.
Get familiar with the most important professional applications:

- Microsoft** Word** – for creating documents
- Microsoft** Excel** – for creating spreadsheets
- Microsoft** PowerPoint** – presentations like this
- Microsoft** Access** – for maintaining “databases”
Syllabus (3)

A computer is required.

(There are computers in the PSU Library)

- Mac or Windows
- Microsoft Office
  - Word, Excel, PowerPoint, …
- Need ability to print.

Get an “Odin” account at PSU.
Add yourself to the class mailing list.
Syllabus (4)

Textbooks

*Computing Essentials 2008*

We’ll cover all of this book.

Read chapters 1 and 2 for next week.

*Microsoft Office 2007*

1400 pages; We’ll cover a lot of it.

*Windows XP*

For students who use Windows XP.
Homework #1

- Read chapters 1 and 2, *Computing Essentials*
  Take online “quizzes” and e-mail me results
- Read chapter 1 from *Office 2007*
- Create a simple document
  Print it out and hand it in.
- The full homework will be handed out today
  (or download from the class website)
Syllabus (6)

**Grading (Tentative)**

- 25% - Homeworks
- 20% - Midterm Exam #1
- 20% - Midterm Exam #2
- 30% - Final
- 5% - Attendance
To succeed in this class:

• Read all assigned material *before* it is discussed.
• Attend all classes.
  
  Attendance will be counted.
• Don’t do other stuff during class time.
• Plan to spend about 6 hours / week
  (not including class time)
Chapter 1

Information Technology, The Internet, and You
Competencies (Page 1 of 2)

- Explain the five parts of an information system: people, procedures, software, hardware, and data.
- Distinguish between system software and application software.
- Discuss the three kinds of system software programs.
- Distinguish between basic and specialized application software.
- Identify the four types of computers and the four type of microcomputers.
Competencies (Page 2 of 2)

• Describe the different types of computer hardware including the system unit, input, output, storage, and communication devices.
• Define data and describe document, worksheet, database, and presentation files.
• Explain computer connectivity, the wireless revolution, and the Internet.
Introduction

- **Computer competency** refers to acquiring computer-related skills
- Microcomputers are common tools in all areas of life
- New forms of learning have developed
- New ways to communicate, to find people with similar interests, and to buy goods are available.
## Five Parts of an Information System

1. **People**
   - People are end users who use computers to make themselves more productive.

2. **Procedures**
   - Procedures specify rules or guidelines for computer operations.

3. **Software**
   - Software provides step-by-step instructions for computer hardware.

4. **Hardware**
   - Hardware includes keyboard, mouse, monitor, system unit, and other devices.
   - Data consists of unprocessed facts including text, numbers, images, and sounds.
   - Connectivity allows computers to share information and to connect to the Internet.
People

- Most important part of any system
- Contact is …
  - Direct
  - Indirect
- Computer uses
  - Business & Entertainment
  - Education & Medicine
Software

- AKA Programs
- Two major kinds of software
  - System Software
  - Application Software
System Software

• A collection of programs—not a single program
• Enables the application software to interact with the hardware
• “Background software” that helps the computer manage its own resources
Application Software

• End-user software
• Two major categories
  – Basic Application or General purpose
  – Specialized applications
Hardware - Types of Computers

- Supercomputers
- Mainframe computers
- Minicomputers (also known as mid-range computers)
- Microcomputers
Microcomputer Types

- Desktop
- Notebook or laptop
- Tablet PC
- Handheld
Desktop Computers

- Desktop computers are small enough to fit on top of or alongside a desk yet are too big to carry around.
Notebook or Laptop Computers

- **Notebook computers**, also known as **laptop computers**, are portable, lightweight, and fit into most briefcases.
Tablet PC

- A **tablet PC** is a type of notebook computer that accepts your handwriting. This input is digitized and converted to standard text that can be further processed by programs such as a word processor.
Handheld

- Are the smallest and are also known as palm computers. These systems typically combine pen input, writing recognition, personal organizational tools, and communications capabilities.
- Personal digital assistants (PDA’s) are the most widely used handheld computer.
Microcomputer Hardware

• Four basic categories of equipment:
  – System Unit
  – Input/Output
  – Secondary Storage
  – Communication
System Unit

- Two important components
  - Microprocessor
  - Memory
Input/Output Devices

- Common input devices are the *keyboard* and the *mouse*
- Common *output devices* are printers and *monitors*
Secondary Storage

• Unlike memory, secondary storage holds data and programs even if electrical power is not available.
• The most important types of secondary media are floppy, hard, and optical disks.
Communications

- Communication Devices provide microcomputers with the ability to communicate with other computer systems across the globe.
- The **modem** is the most widely used communication device.
- Modems modify telephone communications into a form that can be processed by a computer.
- Modems also modify computer output into a form that can be transmitted across standard telephone lines.
Data

- Raw, unprocessed facts
- Processed data becomes information
- Stored electronically in files
  - Document files
  - Worksheet files
  - Database files
  - Presentation files
Document Files

- Created by word processors to save documents such as memos, term papers, and letters
Worksheet Files

- Created by electronic spreadsheets to analyze things like budgets and to predict sales
Database Files

- Typically created by database management programs to contain highly structured and organized data
Presentation Files

- Created by presentation graphics programs to save presentation materials. For example, a file might contain audience handouts, speaker notes, and electronic slides.
Connectivity, the Wireless Revolution, and the Internet

- Connectivity
  - Sharing of information
  - Wireless communication is becoming popular
- Computer networks
  - Connected communication system of computers
  - Largest network is the Internet
# Careers In IT


<table>
<thead>
<tr>
<th>Career</th>
<th>Description</th>
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<tbody>
<tr>
<td>Webmaster</td>
<td>Develops and maintains Web sites and Web resources. See page 00.</td>
</tr>
<tr>
<td>Computer support specialist</td>
<td>Provides technical support to customers and other users. See page 000.</td>
</tr>
<tr>
<td>Technical writer</td>
<td>Prepares instruction manuals, technical reports, and other scientific or technical documents. See page 000.</td>
</tr>
<tr>
<td>Software engineer</td>
<td>Analyzes users' needs and creates application software. See page 000.</td>
</tr>
<tr>
<td>Network administrator</td>
<td>Creates and maintains computer networks. See page 000.</td>
</tr>
<tr>
<td>Database administrator</td>
<td>Uses database management software to determine the most efficient ways to organize and access data. See page 000.</td>
</tr>
<tr>
<td>Systems analyst</td>
<td>Plans, designs, and maintains information systems. See page 000.</td>
</tr>
<tr>
<td>Programmer</td>
<td>Creates, tests, and troubleshoots computer programs. See page 000.</td>
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A Look to the Future

- The Internet & Web
- Powerful Software
- Powerful Hardware
- Security & Privacy
- Organizations
- Changing Times
Discussion Questions (Page 1 of 2)

• Explain the five parts of an information system. What part do people play in this system?

• What is system software? What kinds of programs are included in system software?

• Define and compare basic and specialized application software. Describe some different types of basic applications. Describe some types of specialized applications.
Discussion Questions (Page 2 of 2)

- Describe the different types of computers. What is the most common type? What are the types of microcomputers?

- What is connectivity? How are the wireless revolution and connectivity related? What is a computer network? What is the Internet? What is the Web?
The End