**COURSE OBJECTIVES:  WHAT YOU WILL LEARN**

This course is designed to provide the student with a comprehensive introduction to information management technologies that are significant for library science and allied disciplines, such as archives administration, records management, knowledge management, and information systems analysis.  The course emphasizes computers but other technologies—such as networking, video, facsimile, and document reproduction—will also be covered.  The course will deal in a systematic manner with technical terms and concepts that information professionals must understand.  The characteristics of particular systems and their current status in information management will be explained.  Vendors and industry trends will be covered.  Classes will consist of lectures and discussions on topics outlined below.  Assignments will provide hand-on computer experience.

At the end of the course, you should:

- Be familiar with the most important computer terms and concepts at a level that will enable you to communicate effectively with information processing specialists and understand most articles in professional and trade publications.

- Understand the most important aspects of information processing technology, including the characteristics and functions of computer hardware; the interrelationship of computer hardware and software; essential computer networking concepts; the scope and characteristics of video technologies; and the role of document reproduction technologies information management.

- Have an effective foundation for elective courses in information management, electronic recordkeeping, library automation, and other technologically-oriented subjects.

**TOPICS TO BE COVERED**

Week 1
- Introduction to course requirements
- Essential computer terms and concepts; structure of computer systems

Week 2
- Introduction to course requirements
- Types of computers and their intended markets -- mainframes, midrange computers, personal computers, mobile computing devices

Week 3
- Computer hardware survey: input devices and data entry methods

Week 4
- Computer hardware survey: output technology and devices

Week 5
- Computer hardware survey: storage devices and media – Part 1

Week 6
- Computer hardware survey: storage devices and media – Part 2

Week 7
- Computer software—Part 1: definitions and essential concepts

Week 8
- Computer software—Part 2: systems vs. application software, computer operating systems, the software development process

Week 9
- Computer software—Part 2: pre-written software

Week 10
- Data communication terminology and concepts

Week 11
- Computer networking—Part 1:  terminology and concepts

Week 12
- Computer networking—Part 2:  public and private networks, the Internet and intranets, local area and wide area networks

Week 13
- Video technology

Week 14
- Document reproduction technologies

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**ASSIGNED READING**

There is no textbook for this class.  At each class session, you will receive detailed handouts that present the topic for that class in an organized outline format.  You will also receive a list of up to 10 web sites that contain information related to the topics presented in that class session.  You will be expected to consult these web sites outside of class and be

prepared to discuss their contents at the next class session. You should expect to spend 4 hours per week consulting these web sites.

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**WRITTEN ASSIGNMENTS**

Your grade in this course will be determined by two factors: (1) a take-home final examination, which will be described later in the course, and (2) completion of written assignments described below. The purpose of the assignments is to allow you to examine specific topics in greater depth than can be covered in class.

Your grade will depend on the number of written assignments you choose to complete. To qualify for the grade of "A" you must complete <u>8</u> of the assignments described below. To qualify for a grade of "B" you must complete <u>6</u> of the assignments. On average, each assignment will require approximately 12 to 15 hours to complete. You may complete these assignments at your own pace, but you should work on them steadily throughout the semester. For a grade of A, you should complete 1 assignment per 12 days on average. For a grade of B, you should complete 1 assignment on average per 16 days on average.

Each written assignment involves the preparation of a report or other document. The due date and submission method for assignments will be announced in class. No assignments will be returned. Make a copy for yourself prior to submitting your assignments.

You must select from the following assignments. Substitutions are not permitted, but the assignments can be narrowed, where appropriate, to suit individual interests. All students must do assignments #1 and 2.

     1. **Google vs. Other Search Engines**. The purpose of this assignment is to compare Google, the most popular Internet search engine, with other search engines that are not as well known. This is a 2-part assignment. For Part 1, select two search engines for comparison with Google. Possibilities include, but are not limited to, AltaVista, AlltheWeb, Ask.com, Gigablast, Lycos, Bing, and Yahoo. For Google and each of the search engines you selected, describe and evaluate the following retrieval functionality: availability of simple vs. advanced search mode, phrase searching, Boolean searching, display of search results, and handling of sponsored links. For Part 2, do a search on Google and the two search engines you selected to retrieve information about using the PDF format for archival storage of documents—the so-called PDF/A format. Summarize your findings by comparing the first 20 results obtained with each search engine.

     2. **What Technology Costs**. Give two examples of prices for each of the following information technology products. You must cite brand and model numbers for each example:

- A Windows-compatible notebook computer with 6 GB RAM, 320 GB (minimum) hard drive, 15-inch (approximate) LCD display, recordable DVD drive, Wi-Fi

card, Windows 7 Professional, and the latest version of Microsoft Office (any edition).

- A MacBook notebook computer with an Intel processor, 4 GB RAM, 250 GB (minimum) hard drive, 15-inch (approximate) LCD display, and Wi-Fi card (give 2 sources where this item can be purchased).
- A 23-inch LCD color desktop monitor with HDTV 1080p resolution.
- A photo-quality color inkjet printer, minimum resolution of 4800 by 1200 dpi.
- An 12-megapixel (approximate) digital camera with Wi-Fi compatibility.
- A laser 4-in-1 (copier/printer/scanner/fax) machine.

3.  **Topical Bibliography**.  Prepare an annotated bibliography of articles or other publications dealing with one of the following topics:

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|---|---|
| voice recognition technology | virtualization |
| 4G cellphone technology | streaming media |
| IT outsourcing | cloud computing |
| green computing | ergonomic aspects of computing |

Your bibliography must include a minimum of 15 publications representing a total of 100 pages of reading.  For each article or other publication, your annotation should include a complete bibliographic citation (author, title, publication, volume, issue, year, pagination) plus a one-paragraph summary of the article.  The summary should cover the major points treated in the article.  NOTE: You may submit bibliographies for two topics.  Each will count as one assignment completed.

4.  **Product Report**.  Prepare a report describing the current state of the art for one of the following product groups:

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|---|---|
| Macintosh computers | web-enabled cell phones |
| 64-bit personal computers | plasma displays for TV or computing |
| solid state storage devices | digital video recorders |
| Blue-ray technology | 3D television products |
| Satellite radio | tablet computers |

Your report can be based on reading supplemented, where possible, by examination of specific products.  NOTE: You may submit reports for two topics.  Each will count as one assignment completed.

5.  **Company Report**.  Based on news stories, articles, company web sites, press releases, or other sources, prepare a report about one of the following companies:

| | |
|---|---|
| Apple Computer | Ricoh |
| Canon | Dell |
| Direct TV | Computer Associates |
| Iomega | Hewlett-Packard |
| Acer | Oracle |
| Epson | Imation |
| Advanced Micro Devices | Lenovo |

TiVo                                    Samsung

Your report should address the following questions:  What is the company's history?
What are the company's principal lines of business? What types of products do they offer
that come within the scope of this class? What was their financial performance for the
most recent reporting period?  Who is their principal competition?  What new products
have they introduced in the last year?  NOTE: You may submit reports for two
companies.  Each will count as one assignment completed.

    6.  **Computer Stocks**.  Select 20 publicly traded companies that manufacture or
market computer equipment, software, computer-based information services,
telecommunications products, computer networking components, or any other products
or services covered in this class.  Monitor the performance of the companies' stocks from
the first week of classes through the end of the last week of classes.  Prepare a table
summarizing the activity of the 20 stocks for the indicated period.  Your can pick stocks
that trade on any public exchange, including the N.Y. Stock Exchange, the American
Stock Exchange, and the NASDAQ.

    7.  **Computer Magazines**.  Describe, compare, and contrast 5 magazines about
computing.  The magazines must be intended for a broad audience.  Scholarly journals
are unacceptable.  Examples of acceptable publications include, but are not limited to,
Computerworld, PC Magazine, PC World, InfoWorld, Information Week, MacWorld,
and MacAddict.  Electronic magazines are also acceptable.  Your report can consider the
types of articles the magazines publish, their subject scope, their value as a source of
product reviews, overall production values, their intended audience and readability, the
ratio of articles to advertisements, the level of technical knowledge required of readers,
etc.

    8.  **Useful Web Sites**.  Identify and describe 5 web sites, such as PC Webopaedia
or ZDNet, that contain information that pertains to the subject matter of this course.
Vendor sites are excluded from this assignment.  Your report should give the URL for
each site and describe its contents.

    9.  **Computer Industry Mergers/Acquisitions**.  Prepare a report about a
computer industry merger/acquisition, such as the merger of Compaq and Digital
Equipment Corporation in 1998, the merger of Compaq and Hewlett-Packard in 2001, or
Acer's 2007 acquisition of Gateway.  The mergers need not be recent; for example, you
could report on the 1986 merger of Burroughs and Sperry to form Unisys Corporation or
AT&T's 1991 acquisition of NCR Corporation, which it subsequently divested in 1996.
Your report could also deal with an outright acquisition, such as Honeywell's purchase of
General Electric's computer business in 1970, Peoplesoft's purchase of J.D. Edwards in
2003, Oracle's purchase of Peoplesoft in 2004, or Oracle's proposed takeover of Sun
Microsystems in 2009.  Mergers involving foreign computer companies, such as the
Fujitsu's 1990 acquisition of ICL, are also acceptable.  Your report should describe the
pre-merger status of each company, the circumstances that led to the merger, and the
merger's outcome, both short-term and long-term.

**OUT-OF-CLASS WORKLOAD**

The out-of-class workload for this course is a composite of review of in-class notes, reading of information at assigned web sites, preparation of written assignments, and the take-home final exam.  The estimated out-of-class workload is 131 to 149 hours for the B grade and 155 to 179 hours for the A grade.  The estimated out-of-class workload is calculated as follows:

- The anticipated out-of-class workload for review of in-class notes and consultation of web sites is 4 hours per week for a total of 56 hours for the semester.

- The anticipated out-of-class workload for the B grade is approximately 72 to 90 hours.  The anticipated workload for the A grade is 96 to 120 hours.

- The anticipated out-of-class workload for the take-home final exam is 3 hours.