

CPSC1105 – Introduction to Information Technology Summer 2009

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Official Course Description: This course provides an introduction to computer and information technologies. It discusses the nature of information, computer hardware, software, communications technology, and computer-based information systems. The theory is complemented by practical work aimed at gaining basic proficiency with different types of widely used application software. (3 credits).

Prerequisites: None.

Course Objective: Upon completion of this course, students will demonstrate an appreciation of the role of information technology in modern society. They will be familiar with the principal components of computer hardware and the functions of different types of software that make computers useful in daily life. They will demonstrate a basic understanding of the processes involved in the development of software for problem solving, and the life cycle of information systems. Students will be introduced to modern data communication technology including the Internet and the World Wide Web. They will be aware of various issues related to computer security and privacy. Students will obtain basic practical skills necessary for manipulating and presenting information in a productive way. Software packages used will deal with word processing, spreadsheets, presentation graphics, databases and Web page creation.

Course Outcomes:

- Students will demonstrate an understanding of the role of information technology.
 - Strategies and Actions used to produce the outcome:
 - Study the application of information technology in everyday life.
 - Class discussion about what an information system is, and aspects of information technology.
 - Field trips to London Museum of Science, Bletchley Park, the Cloud, and Linnean Society Digital Project.
 - Assessment Methods: Written Assignments and Exams.
- Students will demonstrate knowledge of the main components of a computer system.
 - Strategies and Actions used to produce the outcome:
 - Study different types of hardware components such as the CPU, memory and input/output devices.
 - Class discussion of how different hardware components work together and, with system software, make a computer system operational.
 - Field trips to London Museum of Science and Bletchley Park.
 - Assessment Methods: Written Assignments and Exams.
- Students will demonstrate familiarity with and basic proficiency in popular application packages such as Microsoft Word, PowerPoint, Excel, and Access.
 - Strategies and Actions used to produce the outcome:

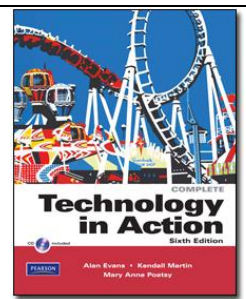
- Study the application of different types of software applications
 - Supervised laboratory sessions for gaining hands-on experience with using common application packages.
 - Assessment Methods: Written and Practical Assignments and Exams.
- Students will demonstrate knowledge of the use of programming languages and the process of software development.
 - Strategies and Actions used to produce the outcome:
 - Study of the concepts of computer programming and the use of programming languages, algorithms, compilers.
 - Classroom discussion and hands-on experience of computer programming using a user-friendly programming environment.
 - Assessment Methods: Written Assignments and Exams.
- Students will be familiar with the concepts and technology used in modern computer networks including the Internet.
 - Strategies and Actions used to produce the outcome:
 - Study concepts of data communication technology.
 - Classroom discussion of how computer networks are constructed and how they enable communication of information.
 - Field trips to London Museum of Science, Bletchley Park, the Cloud, and Linnear Society Digital Project.
 - Assessment Methods: Written Assignments and Exams.
- Students will demonstrate awareness of possible threats to computer security and how information can be protected.
 - Strategies and Actions used to produce the outcome:
 - Study various types of security threats and protection mechanisms.
 - Classroom discussion of computer security and relevant tools.
 - Field trips to London Museum of Science, Bletchley Park, the Cloud, and Linnear Society Digital Project.
 - Assessment Methods: Written Assignments and Exams.

Course Outline:

1. An Overview of information technology and its role in modern society
2. Principal components of a computer system – hardware, operating systems
3. Common types of application software and their use
4. Software development for problem solving
5. Information systems design and development
6. Data communication and the Internet
7. Computer security

Textbook:

Technology in Action by
Alan Evans, Kendall Martin, Mary Anne Poatsy
 6th Edition, (©2010) Pearson Prentice Hall
 ISBN 0-13-504624-6



Supplementary Books and Materials

- Class handouts & notes

- Software and manuals for application packages

Assignments for Course

- Readings from the textbooks
- Online materials available through blogs and wikis
- Outside reading from popular computing periodicals is expected to enhance your knowledge of Information Technology
- Readings from documents found on the Internet
- Practical assignments

Assessment of Learning Outcomes:

- ❖ Students are expected to participate in class discussions by reading the assigned materials before class, thinking about the issues and historical patterns suggested in the readings, and relating these issues to their own personal experience. Students will submit a short (one half - one page) reading response paper in the morning before each class. These papers are intended to provoke discussion. The instructor will provide tentative questions for response papers, but students are encouraged to raise their own questions. The response papers will serve as a basis for subsequent discussion in class. Some of this discussion may take place on the class's blog.
- ❖ Students are expected to keep a journal of their activities and thoughts throughout the five week class.
- ❖ Assignments for this course also include a final paper (10-15 pages; typed, double-spaced, with 1.25" margins). You may choose any topic that addresses the uses of computing. You may choose something close to your own area of expertise, or something completely different. The final paper is due in class by Wednesday of the fourth week. On the last week, students will give brief presentations (15-20 min.) of their final papers. A proposal for the final paper (1-2 pages) is due in class by Wednesday of the second week. You will receive feedback from the instructor's by the following Monday. The proposal should include:
 1. the central theme of the final paper;
 2. the significance of this question and how it relates to discussions in class;
 3. a brief outline; and
 4. a tentative bibliography, including both primary and secondary sources.

Assessment Criteria

- Class Participation / Response Papers 100 points
- Journal 100 points
- Final Paper/Presentation 100 points
- One comprehensive FINAL EXAM (100 pts)

A (90-100): The student fulfills or exceeds all of the assigned content requirements. The student's knowledge of the subject is accurate throughout. The student exhibits convincing range and quality of knowledge, having done appropriate research, if applicable.

B (80-89): The student fulfills all of the important assigned content requirements. The student's knowledge of the subject is accurate throughout except in minor details. The student seems informed on the subject, having done appropriate research, if applicable

C (70-79): The student fulfills most of the important assigned content requirements. The student's knowledge of the subject is generally accurate, though flawed. The student exhibits limited range or quality of knowledge, having done limited appropriate research, if applicable.

D (60-69): The student fulfills some of the important assigned content requirements. The student's knowledge of the subject is generally accurate, though flawed. The student exhibits limited range or quality of knowledge, having done minimal appropriate research, if applicable.

F (0-59): The student fails to address the important requirements of the course. The student's knowledge of the subject is generally inaccurate. The student's knowledge of the subject lacks range or quality

Class Attendance: Class attendance is MANDATORY. Each missed class or field-trip will result in a drop of one letter grade.

You are responsible for all class work missed, regardless of the reason for the absence(s). Late assignments will not be accepted, so if you are absent on the day an assignment is due, it is your responsibility to make alternate arrangements. No makeup exam will be given, so please make sure you are present for the final exam.

Tentative Weekly Schedule

****This schedule is subject to change.

Week Beginning	In class Material	Field Trips *
Week 1:	An Overview of information technology and its role in modern society Principal components of a computer system – hardware, operating systems	<ul style="list-style-type: none"> London Museum of Science (Babbage, Difference Engine, analog and digital computers)
Week 2:	Data communication and the Internet Computer security	<ul style="list-style-type: none"> The Cloud (London WiFi provider)
Week 3:	Common types of application software and their use Software development for problem solving	<ul style="list-style-type: none"> Bletchley Park (Computing Devices, Computing Museum, Enigma, Alan Turing, Turing Machine, Colossus)
Week 4:	Information systems design and development	<ul style="list-style-type: none"> Linnean Society Digital Project - University of London Computer Center
Week 5:	Final Presentations/Final Exam	

* Other possible field trips may include
 Museum of Computing - University of Bath in Swindon
 Cambridge High Performance Computing Center
 Twickenham Museum
 Royal Institution of Great Britain and Faraday Museum

Academic dishonesty

Academic dishonesty includes, but is not limited to, activities such as cheating and plagiarism. It is a basis for disciplinary action. Collaboration is not permitted on assignments or exams/quizzes in this course. Any work turned in for individual credit must be entirely the work of the student submitting the work. **All work must be your own.** You may share ideas but submitting identical assignments (for example) will be considered cheating. **You may discuss the material in the course and help one another with debugging, however, I expect any work you hand in for a grade to be your own.** . A simple way to avoid inadvertent plagiarism is to talk about the assignments, but don't read each other's work or write solutions together. Keep scratch paper and old versions of assignments until after the assignment has been graded and returned to you. **If you have any questions about this, please see me immediately.**

For assignments, access to notes, textbook, books and other publications is allowed. Stealing, giving or receiving any code, diagrams, drawings, text or designs from another person (CSU or non-CSU) is not allowed. Having access to another person's work on the system or giving access to your work to another person is not allowed. It is your responsibility to keep your work confidential.

No cheating in any form will be tolerated. The penalty for the first occurrence of academic dishonesty is a zero grade on the assignment or exam/quiz; the penalty for the second occurrence is a failing grade for the course. For exams/quizzes, access to any type of written material or discussion of any kind (except with me) is not allowed.

[http://aa.colstate.edu/advising/a.htm#Academic Dishonesty/Academic Misconduct](http://aa.colstate.edu/advising/a.htm#Academic_Dishonesty/Academic_Misconduct)

Software

To complete all lessons, assignments, labs, and tests, you will need to access a computer with:

- A web browser (e.g. Firefox, IE),
- Microsoft Office 2007 or comparable software (wordprocessor, spreadsheet, presentation software). [Google Docs is acceptable]

The course Web Site will contain class notes, class announcements, exam summaries, the course syllabus, test dates, and additional links.

Instructional Methods and Techniques

1. The class will meet two three hour lecture / discussion period and one full-day field-trip each week.

2. Each student is expected to attend all class meetings, to read the textbook chapters and to make notes. Students will be expected to participate in classroom discussions.
3. Students must have access to computers (either personal or in a cyber-café) for doing assignments.
4. The ACM recommends the following: “As a general guideline, the amount of out-of-class work is approximately three times the in-class time. Thus, a unit that is listed as requiring 3 hours will typically entail a total of 12 hours (3 in class and 9 outside).” Students will be expected to spend this time outside class reading the book, online materials and other materials; writing solutions to homework exercises and programming projects.

Student Responsibilities

As a student in this course, you are responsible to:

- manage your time and maintain the discipline required to meet the course requirements,
- come to class prepared to ask questions to maximize your understanding of the material,
- complete all readings,
- complete all assignments,
- complete all quizzes and exams,
- actively participate in discussions,
- read any e-mail sent by the instructor and respond accordingly.

“*I didn't know*” is **NOT** an acceptable excuse for failing to meet the course requirements. If you fail to meet your responsibilities, you do so at your own risk.

Instructor Responsibilities

As your instructor in this course, I am responsible to:

- lead the class discussion and answer students' questions,
- post weekly lessons outlining the assignments for the week,
- read all responses to discussion questions and comments to responses,
- actively participate in discussions when necessary,
- grade assignments, quizzes, and exams, and post scores within one week of the end of the week in which they are submitted, and
- read any e-mail sent by the you and respond accordingly within 48 hours.

CSU ADA statement

*If you have a documented disability as described by the **Rehabilitation Act of 1973 (P.L. 933-112 Section 504)** and **Americans with Disabilities Act (ADA)** and would like to request academic and/or physical accommodations please contact Joy Norman at the **Office of Disability Services** in the Center for Academic Support and Student Retention, Tucker Hall (706) 568-2330, as soon as possible. Course requirements will not be waived but reasonable accommodations may be provided as appropriate.*