Course Description

- A history of the development of computing technologies, concentrating on the latter half of the twentieth century.

- We will focus on several specific views of computing development:
  - Hardware (CPUs and I/O devices)
  - Operating systems
  - Programming languages
  - …and the people that made all this happen
Course Description

- Although the course will use these subjects as the building blocks of the subject matter, its goal is to present the important steps in the development of computing
  - in the context of their times and contemporary technologies.
- The course aims to give students
  - an appreciation for the tremendous advances in modern computing during its first half-century
  - an understanding of how the computing world came to be the way it is today
  - a knowledge of the people who made it happen
The subject of this course, computers, is inherently technical. However, the course is designed to be accessible to non-technical students as well those in computer disciplines.

- We will occasionally have short, fairly in-depth technical discussions. It is not necessary to understand these discussions to do well in the class.
Course Description

“History is a chronology of facts, but the word history contains the word story in it, and telling stories is not rendered obsolete by technology.”

-Paul E. Ceruzzi: “A History of Modern Computing”

❖ So, the real goal of the course is to tell the story of computing
  • in a way that everyone can relate to and use as a basis for their ongoing work with this technology
❖ …and, to have fun doing it
Required to Pass the Class

- Demonstrated understanding of the material presented (though exams)

- Completion of two writing assignments on the following subjects:
  - In-depth report on a specific technology or person covered in the course
    - (e.g., one computer system, OS, language, person, etc.)
  - Or a small programming project(s) in some language(s) covered in the course
    - not compiled, just turned in and graded
    - should be pre-approved by the instructor or TA
About the Instructor

❖ Have worked with computers since 1970
  • Includes much of the 60 years we will concentrate on in the class
  • Familiar with mainframes, minis, micros (a.k.a. PCs), embedded and special-purpose systems
  • PhD in Computer Engineering from UCSC

❖ Full-time employee of IBM
  • At Almaden Research Center, CS Storage Department
  • Only on campus for class and office hours:
    • Thursdays, 11:00-12:00 in E2-549A
    • Other times by special request?
  • Email: pease@soe.ucsc.edu

❖ TA: Shengwei Wang (shengwei@soe.ucsc.edu)
Subjects we will cover

- Computing hardware evolution through the 1990s
  - Electronic technologies from which computers are built
  - Computing (CPU) development
  - I/O device technologies and development
- Operating system evolution from the same time period
  - Origin and purpose of operating systems
  - Types of operating systems
  - Genealogies of common modern operating systems
- Programming language development for that period
  - Early approaches to programming computers and the need for better tools
  - The development of languages designed for specific tasks
  - The development of general-purpose languages
  - Genealogies of common modern programming languages
- A discussion of the ways in which technological developments have changed the computer, and how those changes have in turn changed our society.
Course Schedule

- Midterm Exam, October 29th in class
- Thanksgiving holiday, November 26rd
- Last day of class, December 3rd
- Final Exam, December 8th

- Possible field trip to Computer History Museum in Mountain View?
Keeping in Touch

♦ Come to class! 😊
  • Tests will cover lecture contents

♦ Read the class web page:
  • http://www.soe.ucsc.edu/classes/cmpe080h/Fall09/
  • I will post slides and other class materials there

♦ If needed, I will set up a class mailing list that you can read or subscribe to
  • However, I don’t expect to need it
Academic Honesty

- You are expected to adhere to the highest ethical standards.

- All work you submit *must* be your own.

- Plagiarism of any form is unacceptable.
  - You must give credit where it is due.

- Otherwise:
  - A letter will be sent to the Department, to the School of Engineering and to your Provost, and you will fail the course.