

CIS 104: Introduction to Computer Information Systems

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 - Office hours: To posted later
- Today:
 - Course Overview
 - Administrative issues
 - What is in a computer?
 - To do list:
 - Survey Posted online
 - Check the CIS104 Website:
web.missioncollege.edu/lecturers/prighas/cis104

Computers are visible everywhere...

- most students have their own computers
 - each one of which is far more powerful than the one that served a whole college campus in 1964
- software is big business
- networking is 'everywhere'
 - the Internet is an integral part of campus life
 - we can't live without email, chat, and Google
- our lives are full of computer-enabled gadgets and systems
 - cell phones, digital cameras, DVDs, MP3 players, ...
 - computer and network stories are daily features in newspapers, magazines, TV, ...

Most computers are invisible

- PCs represent less than 1% of all computers
- Appliances and consumer electronics all contain computers
 - TV, DVD, digital camera, iPod, microwave, digital assistants, etc.
 - Cell phones, pagers, GPS, etc.
- We depend on hidden computers and systems in many ways
 - Cars may have 20 computers
 - Power system
 - Planes, air traffic control
 - Medical equipment
 - Military systems
- **The Big Question:**
 - What happens if something goes wrong?

Course Outline

- Hardware (2 – 3 weeks)
 - What's inside the computer
 - How does it work?
 - How is it built?
- Software (3 – 4 weeks)
 - How we tell computers how to do things
 - A gentle introduction to programming in JavaScript
- Communication (3 – 4 weeks)
 - How the internet and the web work
 - Security, privacy, cryptography
- Summary
 - Putting all things together
 - Other topics

Goals

- Understanding of how computers work
 - hardware, software, networks
 - principles, not just today's details
- Some sense of the past and possible futures
 - history, trends, potential, intrinsic limitations
- Appreciation of some of computer science as a discipline
 - algorithms, representation of information, limits of computers
- Useful quantitative reasoning
 - numeracy: reasoning, estimation, plausibility,...
 - Judgment: do the numbers make sense?
- Intelligent skepticism about technology

Administration (read the web page daily!)

- Lectures: M (10:00 – 11:50 am) W (10:00 – 11:50 am)
- Reading: ~1 hour each week, before class
 - skim slashdot.org (< 5 min/day)
- 8 labs: 2-3 hours/week plus reading to prepare
- Labs start the week of Jan 17 (lab period to be announced later)
- 4-5 problem sets (1-2 hours/week)
- Grading (approx):
 - 20% labs + 20% (problem sets, quizzes, attendance) + 20% midterm + 40% final
- Class participation helps; absence can hurt
- Teaching assistant: Bandhit