

COURSE DESCRIPTION

DEPARTMENT AND COURSE NUMBER	CMPS 310	Course Coordinator	Magdy Bayoumi
Course Title	Computers in Society	Total Credits	2
URL	None	Semester hours	2

Current Bulletin Description: Technology and humanity, social and political impacts of computers. Privacy and information: wire tapping and encryption, internet security, communication in cyberspace, censorship. Protecting software and intellectual property: patent, cyberspace, censorship. Computer crimes: software piracy, hacking, information theft, digital forgery, internet crimes. Preq: CMPS 260 or equivalent or consent of the instructor.

Textbooks

Sara Baase, A Gift of Fire, Second Edition, Prentice Hall, ISBN 0-13-008215-5.

References

1. Several newspaper articles, magazine articles, and other handouts are provided to students during the semester on each topic of discussion.

Course Goals

- To understand how computers and the Internet affect our society in general
- To gain an understanding of privacy issues, privacy risks, and public interest
- To gain an understanding of interceptability of communication
- To understand trustability and reliability issues relative to computers and how they impact our society
- To address freedom of speech in cyberspace and its implications for both children and adults
- To learn what intellectual properties are and become aware of issues concerning copyrights, patents, and trade secrets
- To address computer crimes concerning online scams, and identity theft, and explore measures to fight against such crimes
- To learn the ethical responsibilities of software engineers as defined by the IEEE and ACM societies

Course outcomes

- Students have an understanding of how computers and the Internet affect our society in ways unseen before
- Students understand issues concerning online monitoring, tracking, consumer database, and become familiar with privacy laws governing such issues
- Students understand wire-tapping, interception, public-key, private key cryptography, steganography and their impact
- Students understand problems and effects of faulty software on our society and responsibility issues in developing and adopting software for important applications

- Students learn about issues concerning freedom of speech in cyberspace and usage of filters for protection of children
- Students learn legality of copying and distributing software, music, and other files with respect to copyright and patent laws
- Students learn what computer crimes are and how to take preventive measures against them
- Students have an understanding of their ethical responsibility as software engineers

Prerequisites by Topic

- Basic knowledge of software development process

Major Topics Covered in the Course

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|---|-----------|
| • Beneficial impacts of computers and the Internet on our society | 1 classes |
| • Privacy issue: privacy risks versus law enforcement issues | 4 classes |
| • Reliability and safety of computers and software | 4 classes |
| • Freedom of speech in cyberspace | 4 classes |
| • Intellectual property | 4 classes |
| • Computer crime | 4 classes |
| • Professional ethics and responsibilities | 4 classes |

Laboratory projects (specify number of weeks on each) **N.A.**

Oral and Written Communications

Students write a term paper on topics such as identity theft, protection of children, usage of RFID tags in sensitive documents (biometric measures for humans) for identification and tracking. Each student also makes an oral presentation of his/her term paper.

Social and Ethical Issues

The entire course is dedicated to social and ethical issues in computing.

Theoretical Content

Please list the types of theoretical material covered, and estimate the time devoted to such coverage.
N.A.

Problem Analysis

Please describe the analysis experiences common to all course sections.
N.A.

Solution Design

Please describe the design experiences common to all course sections.
N.A.