CSE 2501: Social, Ethical, and Professional Issues in Computing

Course Description

Social, ethical, and professional issues facing computing professionals; ethical principles; discussion of case studies.

Prior Course Number: 601
Transcript Abbreviation: Socl Ethcl Issues
Grading Plan: Satisfactory/Unsatisfactory
Course Deliveries: Classroom
Course Levels: Undergrad
Student Ranks: Sophomore, Junior
Course Offerings: Autumn, Spring, Summer
Flex Scheduled Course: Never
Course Frequency: Every Year
Course Length: 14 Week
Credits: 1.0
Repeatable: No
Time Distribution: 1.5 hr Lec
Expected out-of-class hours per week: 1.5
Graded Component: Lecture
Credit by Examination: No
Admission Condition: No
Off Campus: Never
Campus Locations: Columbus
Prerequisites and Co-requisites: (CSE 1222 or CSE 1223 or CSE 2231 or CSE 214 or CSE 230 or CSE 222) and (CSE 2321 or Math 366) and (CSE 2421 or CSE 360)
Exclusions: Not open to students with credit for CSE 601
Cross-Listings:

Course Rationale: Existing course.

The course is required for this unit's degrees, majors, and/or minors: Yes
The course is a GEC: No
The course is an elective (for this or other units) or is a service course for other units: No

Subject/CIP Code: 14.0901
Subsidy Level: Baccalaureate Course

Programs

Abbreviation	Description
BS CSE	BS Computer Science and Engineering

Course Goals

Be competent in the identification of social and ethical issues that arise in the development and application of computing technology in modern society
Be competent in the appreciation for alternate points of view and broader perspectives in the analysis of social and ethical concerns arising in the context of computing technology
Be familiar with the immediate and long-term implications to society in the creation and use of computing technology
Be familiar with analyzing the potential benefits and risks of computing technology to society, both locally and globally

Be familiar with the impact of computing technology on the economy at large as well as long-term trends
Be familiar with the codes of ethics of one or more professional societies related to computing technologies (e.g., ACM, IEEE, CISSP)
Be familiar with effective methods of written and oral communication
Be exposed to the distinction between a profession and a trade, and how this distinction relates to ethics and responsibility
Be exposed to some legal issues that computing professionals may encounter as part of their practice

Course Topics

Topic	Lec	Rec	Lab	Cli	IS	Sem	FE	Wor
Professional ethics	3.0							
Effective communication	1.5							
Privacy / Civil liberties	3.0							
Security / Civil liberties	3.0							
Intellectual property	3.0							
Censorship	1.5							
Computer risks	1.5							
Computer crime	3.0							
Global perspectives	1.5							

Representative Assignments

Write a short paper (< 1000 words) on a topic chosen from a pick list of themes relevant to the course
Give an 8-10 minute in-class presentation on topic chosen from a pick-list of themes relevant to the course
Short response questions from topics raised in class

Grades

Aspect	Percent
Short paper	30%
In-class presentation	30%
Short response homeworks	30%
Class participation	10%

Representative Textbooks and Other Course Materials

Title	Author
A Gift of Fire	Sara Baase
Ethics for the Information Age	Michael J. Quinn

ABET-EAC Criterion 3 Outcomes

Course Contribution		College Outcome
	a	An ability to apply knowledge of mathematics, science, and engineering.
	b	An ability to design and conduct experiments, as well as to analyze and interpret data.
	c	An ability to design a system, component, or process to meet desired needs.
	d	An ability to function on multi-disciplinary teams.

Course Contribution		College Outcome
	e	An ability to identify, formulate, and solve engineering problems.
***	f	An understanding of professional and ethical responsibility.
**	g	An ability to communicate effectively.
***	h	The broad education necessary to understand the impact of engineering solutions in a global and societal context.
*	i	A recognition of the need for, and an ability to engage in life-long learning.
**	j	A knowledge of contemporary issues.
	k	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

BS CSE Program Outcomes

Course Contribution		Program Outcome
	a	an ability to apply knowledge of computing, mathematics including discrete mathematics as well as probability and statistics, science, and engineering;
	b	an ability to design and conduct experiments, as well as to analyze and interpret data;
	c	an ability to design, implement, and evaluate a software or a software/hardware system, component, or process to meet desired needs within realistic constraints such as memory, runtime efficiency, as well as appropriate constraints related to economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability considerations;
	d	an ability to function on multi-disciplinary teams;
	e	an ability to identify, formulate, and solve engineering problems;
***	f	an understanding of professional, ethical, legal, security and social issues and responsibilities;
**	g	an ability to communicate effectively with a range of audiences;
***	h	an ability to analyze the local and global impact of computing on individuals, organizations, and society;
*	i	a recognition of the need for, and an ability to engage in life-long learning and continuing professional development;
**	j	a knowledge of contemporary issues;
	k	an ability to use the techniques, skills, and modern engineering tools necessary for practice as a CSE professional;
	l	an ability to analyze a problem, and identify and define the computing requirements appropriate to its solution;
	m	an ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices;
	n	an ability to apply design and development principles in the construction of software systems of varying complexity.

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