Course Code: CSE498 Credits: 03
Course Title: Social and Professional Issues in Computing CIE Marks: 60
SEE Marks: 40

Course Description (from syllabus)/Rational):

Social and Professional Issues in Computing course is a theory course which deals with different issues related to both social and professional life. Hence, this course will deal with different computing issues i.e. privacy, social engineering, crime, hacking, and freedom of speech issue and so on. Furthermore, throughout the course we will focus on various professional issues like intellectual property, ethics and professional ethics, human vs computer, trusting computer etc. Besides, different social and international issues will also be discussed in this course.

<u>Course Learning Outcome:</u> (at the end of the course, student will be able to do :)

CLO1	Understanding the implications, impacts and benefits of the modern technology.
CLO2	Understanding and application of freedom of speech, offensive or hate speech and
	censorship, spam, anonymity.
CLO3	To know the different types of computer crime, the reason of computer crime and way of protecting them, privacy risks, privacy and computer technology, different privacy policies and to understand the code of ethics, different ethics type, professional ethics and their guidelines.
CLO4	To learn about the intellectual property such as copyright, patent, trade mark and trade secret and how to use them.
CLO5	To know the error, risks and failures occurred from the system development and to learn do's and don'ts in work life.

Mapping of Course Learning Outcomes to Program Learning Outcomes [attainment level used for COs from 1(weak)-3(strong) correlation]

PLO's	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CLO's												
CLO1							2					
CLO2						3						
CLO3								3				
CLO4					3			2				
CLO5			3								2	2

Teaching and Learning Activities (TLA)

TLA1	Lectures twice a week using whiteboard/multimedia of different topics.
TLA2	Active discussion in class regarding efficient solving of the logical and mathematical problems.
TLA3	Group discussion and presentation regarding diverse problems and corresponding lectures.
TLA4	Evaluation of class performances to reach each student in a class for every topic.

Course Delivery Plan:

Week/Lessen	Discussion Topic & Book Reference	Student Activities	Mapping with
(hour)		during Online and	CLO
		Onsite and TLA	
Week 1 Lessen 1 & 2 (1.5 each)	Benefits (Unwrapping the Gift) 1. The Pace of Change 2. Change and Unexpected Developments 3. Themes 4. Ethics Ref. A Gift of Fire – Fourth Edition (Chapter 1)	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; TLA1, TLA3	CLO1
Week 2 Lessen 1 & 2 (1.5 each)	 Privacy Privacy Risks and Principles The Fourth Amendment, Expectation of Privacy, and Surveillance Technologies The Business and Social Sectors. Government Systems Protecting Privacy Technology, Markets, Rights, and Laws Communications Ref. A Gift of Fire – Fourth Edition	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; TLA1, TLA3	CLO2, CLO3
	(Chapter 2		

Week 3 Lessen 1 & 2 (1.5 each)	 Communications Paradigms Controlling Speech Posting, Selling, and Leaking 	Online/Onsite discussion; Review Feedback online; Using Interactive	CLO2
	Sensitive Material 4. Anonymity 5. The Global Net: Censorship and Political Freedom	content e.g. Voice over PPT, PPT, Video, H5P;	
	6. Net Neutrality Regulations or the Market? Ref. A Gift of Fire – Fourth Edition	<u>TLA1, TLA3</u>	
	(Chapter 3)		
Week 4	Computer Crime	Online/Onsite	CLO3
Lessen 1 & 2 (1.5 each)	 Introduction Hacking Identity Theft and Credit Card Fraud Whose Laws Rule the Web? Ref. A Gift of Fire – Fourth Edition (Chapter 5)	discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P;	Class Test# 1 (Either online or onsite based on Wk1-Wk3 discussion) based on CLO1, CLO2, CLO3
		TLA1, TLA3	
Week 5 Lessen 1 & 2 (1.5 each)	 Normative vs. descriptive Ethics Three Main Ethical Approaches Whistleblowing Dimensions of Ethics (3 "R's" of Ethics) Codes of Ethics Computer Ethics 	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P;	CLO2, CLO3 Assignment: - Privacy - Computer Crime - Ethics Due: Week-11
	Ref. Handout		
Week 6 Lessen 1 & 2 (1.5 each)	 Review Review for the MID Term Examinations Problem solving Session Ref. Contents of Week 1 – Week 6	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; TLA2, TLA4	CLO1, CLO2, CLO3 Class Test# 2 (Either online or onsite based on Wk4-Wk5 discussion) based on CLO2, CLO3

Week 7 Midterm Exam Week			
	Topics: W	/eek 1 – Week 5	
Week 8 Lessen 1 & 2 (1.5 each)	 Intellectual Property Principles, Laws, and Cases Responses to Copyright Infringement Search Engines and Online Libraries Free Software Patents for Inventions in Software Ref. A Gift of Fire – Fourth Edition (Chapter 4)	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; TLA1, TLA3	CLO4
Week 9 Lessen 1 & 2 (1.5 each)	Errors, Failures, and Risks 1. Failures and Errors in Computer Systems 2. Case Study: The Therac-25 3. Increasing Reliability and Safety 4. Dependence, Risk, and Progress Ref. A Gift of Fire – Fourth Edition (Chapter 8)	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; TLA1, TLA3, TLA4	CLO5
Week 10 Lessen 1 & 2 (1.5 each)	 Professional Ethics and Responsibilities What Is "Professional Ethics"? Ethical Guidelines for Computer Professionals Scenarios Ref. A Gift of Fire – Fourth Edition (Chapter 9)	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; TLA1, TLA3	CLO3
Week 11 Lessen 1 & 2 (1.5 each)	 Evaluating and Controlling Technology Evaluating Information The "Digital Divide" Neo-Luddite Views of Computers, Technology, and Quality of Life Making Decisions About Technology Ref. A Gift of Fire – Fourth Edition (Chapter 7) 	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; TLA1, TLA3	CLO5 Class Test# 3 (Either online or onsite based on Wk8-Wk11 discussion) based on CLO3, CLO4, CLO5

Week 12	Work and Wealth	Online/Onsite	CLO5
Lessen 1 & 2 (1.5 each)	 Introduction Automation and Employment Workplace Changes Globalization The Digital Divide The "Winner-Take-All Society" Ref. Ethics for the Information Age — Sixth Edition (Chapter 10)	discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; <u>TLA1, TLA3</u>	Presentation: Topics will be provided as Individual or Group.
Week 13 Lessen 1 & 2 (1.5 each)	Review 1. Review for the Final Examinations 2.Problem solving Session Contents of Week 8 – Week 12	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; TLA2, TLA4	CLO3, CLO4, CLO5
Week 14	Final Exam Week Topics: Week 8 – Week 13		

Text Book:

1. A Gift of Fire, 4th Edition Author: Sara Baase

<u>Reference Books:</u>

1. Ethics for the Information Age – Sixth Edition

CIE – Breakup (Theory) [60 marks]

Bloom's Criteria	Attendance (07)	Class Test (15)	Assignment (05)	Presentation (08)	Mid Exam (25)
Remember		05			
Understand		05	02	02	05
Apply		05		03	05
Analyze			03		05
Evaluate					05
Create				03	05

SEE - Semester End Examination [40 marks] {Theory}

Bloom Criteria	Score for the Test
Remember	05
Understand	05
Apply	15
Analyze	05
Evaluate	05
Create	05

Appendix-1: Program outcomes

POs	Category	Program Outcomes
PO1	Engineering Knowledge	Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
PO2	Problem Analysis	Identify, formulate, research the literature and analyze complex engineering problems and reach substantiated conclusions using first principles of mathematics, the natural sciences and the engineering sciences.
PO3	Design/Development of Solutions	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety as well as cultural, societal and environmental concerns.
PO4	Investigations	Conduct investigations of complex problems, considering design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.
PO5	Modern tool usage	Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6	The engineer and society	Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.
PO7	Environment and sustainability	Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of, and need for sustainable development.
PO8	Ethics	Apply ethical principles and commit to professional ethics, responsibilities and the norms of the engineering practice.
PO9	Individual work and teamwork	Function effectively as an individual and as a member or leader of diverse teams as well as in multidisciplinary settings.
PO10	Communication	Communicate effectively about complex engineering activities with the engineering community and with society at large. Be able to comprehend and write effective reports, design documentation, make effective presentations and give and receive clear instructions.
PO11	Project management and finance	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work as a member or a leader of a team to manage projects in multidisciplinary environments.
PO12	Life Long Learning	Recognize the need for and have the preparation and ability to engage in independent, life-long learning in the broadest context of technological change.