	Daffodil International University Department of Computer Science and Engineering (CSE) Course Outline	

Course Code:	CSE 498		
Course Title:	Social and Professional Issues in Computing		
Program:	B.Sc. in CSE		
Faculty:	Faculty of Science and Information Technology (FSIT)		
Semester:	Spring	**Year:**	2022
Credit:	3.00	**Contact Hour:**	3:00 hr/Week
Course Level:	L4T3	**Prerequisite:**	Null
Course Category:	Core Engineering		
Instructor Name:	Dr. Fizar Ahmed		
Designation:	Assistant Professor		
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1. Course Rationale

Social and Professional Issues in Computing 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 discusses in this course.

1.1. Course Objective

- To see and understand the implications and impacts of the technology
- To know the ethics of leaking sensitive information
- Discussion of plagiarism
- Use of social media and personal devices at work
- To know hacking by governments to attack others

1.2. Course Outcome's (CO's)

CO1	Understanding the implications, impacts and benefits of the modern technology.
CO2	Understanding and application of freedom of speech, offensive or hate speech and censorship, spam, anonymity.
CO3	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.

CO4	To learn about the intellectual property such as copyright, patent, trade mark and trade secret and how to use them.
CO5	To know the error, risks and failures occurred from the system development and to learn do's and don'ts in work life.

1.3. Program Outcomes (PO's)

Program Outcomes are reported in Appendix-I.

1.4. CO-PO Mapping:

Range: Weak = 1, Average = 2, Strong = 3.

PO's CO's	PLO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CLO1							2					
CLO2						3						
CLO3								3				
CLO4					3			2				
CLO5			3								2	2

1.5. CO Assessment Scheme

Assessment Task	CO's					Mark
	CO1	CO2	CO3	CO4	CO5	(Total = 100)
Attendance	-	--	--	--	--	7
Class Test (CT1, CT2, CT3)	-	--	--	--	--	15
Assignment	-	--	--	--	--	5
Presentation	-	--	--	--	--	8
Midterm Examination	5	10	10	--	--	25
Semester Final Examination	-	10	10	10	10	40
Total Mark	5	20	20	10	10	100

2. Strategies and approaches to learning

2.1. 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.

3. Course Schedule and Structure

3.1. Textbook

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

3.2. Reference Book

1. Ethics for the Information Age – Sixth Edition.

3.3. Course Plan/Lesson Plan

Week/Lessen (hour)	Discussion Topic & Book Reference	Student Activities during Online and Onsite and TLA	Mapping with CLO
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	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P;	CLO1

	Ref. A Gift of Fire – Fourth Edition (Chapter 1)	*TLA1, TLA3*	
Week 2 Lessen 1 & 2 (1.5 each)	**Privacy** 1. Privacy Risks and Principles 2. The Fourth Amendment, Expectation of Privacy, and Surveillance Technologies 3. The Business and Social Sectors. 4. Government Systems 5. Protecting Privacy 6. Technology, Markets, Rights, and Laws 7. Communications *Ref. A Gift of Fire – Fourth Edition (Chapter 2*	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; *TLA1, TLA3*	CLO2, CLO3
Week 3 Lessen 1 & 2 (1.5 each)	**Freedom of Speech** 1. Communications Paradigms 2. Controlling Speech 3. Posting, Selling, and Leaking Sensitive Material 4. Anonymity 5. The Global Net: Censorship and Political Freedom 6. Net Neutrality Regulations or the Market? *Ref. A Gift of Fire – Fourth Edition (Chapter 3)*	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; *TLA1, TLA3*	CLO2
Week 4 Lessen 1 & 2 (1.5 each)	**Computer Crime** 1. Introduction 2. Hacking 3. Identity Theft and Credit Card Fraud 4. Whose Laws Rule the Web? *Ref. A Gift of Fire – Fourth Edition (Chapter 5)*	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; *TLA1, TLA3*	CLO3 *Class Test# 1* (Either online or onsite based on Wk1-Wk3 discussio n) based on CLO1, CLO2, CLO3

Week 5 Lessen 1 & 2 (1.5 each)	**Ethics** 1. Normative vs. descriptive Ethics 2. Three Main Ethical Approaches 3. Whistleblowing 4. Dimensions of Ethics (3 "R's" of Ethics) 5. Codes of Ethics 6. Computer Ethics **Ref. Handout**	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; **_TLA1, TLA3_**	CLO2, CLO3 **_Assignment:_** - Privacy - Compute r Crime - Ethics Due: Week- 11
Week 6 Lessen 1 & 2 (1.5 each)	**Review** 1. Review for the MID Term Examinations 2. 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 discussio n) based on CLO2, CLO3
Week 7	_**Midterm Exam Week** **Topics: Week 1 –** **Week 5**_		
Week 8 Lessen 1 & 2 (1.5 each)	**Intellectual Property** 1. Principles, Laws, and Cases 2. Responses to Copyright Infringement 3. Search Engines and Online Libraries 4. Free Software 5. 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	Online/Onsite discussion; Review Feedback online; Using Interactive	CLO5

	4. Dependence, Risk, and Progress *Ref. A Gift of Fire – Fourth Edition (Chapter 8)*	content e.g. Voice over PPT, PPT, Video, H5P; *TLA1, TLA3, TLA4*	
Week 10 Lessen 1 & 2 (1.5 each)	**Professional Ethics and Responsibilities** 1. What Is "Professional Ethics"? 2. Ethical Guidelines for Computer Professionals 3. 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** 1. Evaluating Information 2. The "Digital Divide" 3. Neo-Luddite Views of Computers, Technology, and Quality of Life 4. 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 discussio n) based on CLO3, CLO4, CLO5
Week 12 Lessen 1 & 2 (1.5 each)	**Work and Wealth** 1. Introduction 2. Automation and Employment 3. Workplace Changes 4. Globalization 5. The Digital Divide 6. The "Winner-Take-All Society" *Ref. Ethics for the Information Age* *– Sixth Edition (Chapter 10)*	Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P; *TLA1, TLA3*	CLO5 ***Presentatio n:*** 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; <u>**TLA2, TLA4**</u>	CLO3, CLO4, CLO5
Week 14		***Final Exam Week*** ***Topics: Week 8 –*** ***Week 13***	

4. Assessment Methods (Grading System)

Numerical Grade	Letter Grade	Grade Point
80-100	A+	4.00
75-79	A	3.75
70-74	A-	3.50
65-69	B+	3.25
60-64	B	3.00
55-59	B-	2.75
50-54	C+	2.50
45-49	C	2.25
40-44	D	2.00
Less than 40	F	0.00

5. Additional Support for Students

- Student Portal: http://studentportal.diu.edu.bd/
- Academic Guidelines https://daffodilvarsity.edu.bd/article/academic-guidelines
- Rules and Regulations of DIU https://daffodilvarsity.edu.bd/article/rules-and-regulation
- Career Development Center: https://cdc.daffodilvarsity.edu.bd/
- For general queries: http://daffodilvarsity.edu.bd/

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.