

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 (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 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; <u>TLA1, TLA3</u>	CLO1
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; <u>TLA1, TLA3</u>	CLO2, CLO3

<p>Week 3 Lessen 1 & 2 (1.5 each)</p>	<p>Freedom of Speech</p> <ol style="list-style-type: none"> 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? <p>Ref. A Gift of Fire – Fourth Edition (Chapter 3)</p>	<p>Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P;</p> <p><u>TLA1, TLA3</u></p>	<p>CLO2</p>
<p>Week 4 Lessen 1 & 2 (1.5 each)</p>	<p>Computer Crime</p> <ol style="list-style-type: none"> 1. Introduction 2. Hacking 3. Identity Theft and Credit Card Fraud 4. Whose Laws Rule the Web? <p>Ref. A Gift of Fire – Fourth Edition (Chapter 5)</p>	<p>Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P;</p> <p><u>TLA1, TLA3</u></p>	<p>CLO3</p> <p><u>Class Test# 1</u> (Either online or onsite based on Wk1-Wk3 discussion) based on CLO1, CLO2, CLO3</p>
<p>Week 5 Lessen 1 & 2 (1.5 each)</p>	<p>Ethics</p> <ol style="list-style-type: none"> 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 <p>Ref. Handout</p>	<p>Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P;</p> <p><u>TLA1, TLA3</u></p>	<p>CLO2, CLO3</p> <p><u>Assignment:</u> - Privacy - Computer Crime - Ethics</p> <p>Due: Week-11</p>
<p>Week 6 Lessen 1 & 2 (1.5 each)</p>	<p>Review</p> <ol style="list-style-type: none"> 1. Review for the MID Term Examinations 2. Problem solving Session <p>Ref. Contents of Week 1 – Week 6</p>	<p>Online/Onsite discussion; Review Feedback online; Using Interactive content e.g. Voice over PPT, PPT, Video, H5P;</p> <p><u>TLA2, TLA4</u></p>	<p>CLO1, CLO2, CLO3</p> <p><u>Class Test# 2</u> (Either online or onsite based on Wk4-Wk5 discussion) based on CLO2, CLO3</p>

Week 7	Midterm Exam Week Topics: Week 1 – Week 5		
Week 8 Lessen 1 & 2 (1.5 each)	Intellectual Property <ol style="list-style-type: none"> 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; <u>TLA1, TLA3</u>	CLO4
Week 9 Lessen 1 & 2 (1.5 each)	Errors, Failures, and Risks <ol style="list-style-type: none"> Failures and Errors in Computer Systems Case Study: The Therac-25 Increasing Reliability and Safety 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; <u>TLA1, TLA3, TLA4</u>	CLO5
Week 10 Lessen 1 & 2 (1.5 each)	Professional Ethics and Responsibilities <ol style="list-style-type: none"> 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; <u>TLA1, TLA3</u>	CLO3
Week 11 Lessen 1 & 2 (1.5 each)	Evaluating and Controlling Technology <ol style="list-style-type: none"> 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; <u>TLA1, TLA3</u>	CLO5 <u>Class Test# 3</u> (Either online or onsite based on Wk8-Wk11 discussion) based on CLO3, CLO4, CLO5

Week 12 Lessen 1 & 2 (1.5 each)	Work and Wealth <ol style="list-style-type: none"> 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; <u>TLA1, TLA3</u>	CLO5 <u>Presentation:</u> Topics will be provided as Individual or Group.
Week 13 Lessen 1 & 2 (1.5 each)	Review <ol style="list-style-type: none"> 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		

Text Book:

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

Reference Books:

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.