

Course Title: Data and Information Ethics**Course Code: CSE510**

Exam Hours: 2

Credits: 3

CIE Marks: 60**SEE Marks: 40****Course Description** (from syllabus)/Rational:

This course provides an introduction to critical and ethical issues surrounding data, information and society. It blends social and historical perspectives on data with ethics, policy, and case examples to help students develop a workable understanding of current ethical issues in data science. Ethical and policy-related concepts addressed include: research ethics; privacy and surveillance; data and discrimination; and the “black box” of algorithms. Importantly, these issues will be addressed throughout the lifecycle of data — from collection to storage to analysis and application. Course assignments will emphasize researcher and practitioner reflexivity, allowing students to explore their own social and ethical commitments.

Course Learning Outcomes (COs) after successfully completing this course, a student will be able to:

CLO1	Interpret and comply with the professional codes of conduct and ethical frameworks as an ICT professional
CLO2	Describe and comply with the legislation related to ICT and Computer Science and Engineering
CLO3	Interpret, apply, and justify the standard ethical frameworks within computing
CLO4	Analyze, evaluate and formulate documents, terms and policies related to computing profession, in accordance with the legal frameworks; demonstrate these knowledge and write report justifying the actions and policies

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

PO's/ CO's	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CLO1				2								
CLO2		3										
CLO3				2								
CLO4		3										

Teaching and Learning Activities (TLAs):

TLA1	Lectures once a week using multimedia and board and marker 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 in order to reach each student in a class for every topic.

Course Plan/Lesson Plan

Week	Lesson	Topic	Teaching and Learning Activities (TLA's)	Assessment (Asg./CT/Mid/Final)
1	Les. 1 (Theory)	a. Introduction and motivation b. Course outline discussion c. Real-life application discussion	TLA1	None
2, 3	Les. 2, 3 (Theory)	a. Computer and Information Ethics at Stanford Encyclopedia of Philosophy b. ACM Code of Ethics and Professional Conduct	TLA1, TLA2	MCQ for overall assessment of class prior to class test
4	Les. 4 (Theory)	a. Software Engineering Code of Ethics and Professional Practice	TLA2, TLA4, TLA1	Class Test # 1
5	Les. 5 (Theory)	a. Data Protection Act b. Computer Misuse Act c. Impact of the Computer Misuse Act	TLA1, TLA2, TLA2	
6	Les. 6 (Theory)	a. Copyright b. Designs and Patents Act c. Freedom of Information Act d. Security of Internet Communications	TLA1, TLA2	
7	Midterm Examination			
8	Les. 7 (Theory)	a. Bangladesh: Information Communication Technology Act of 2006 and its amendment in 2013	TLA3, TLA4, TLA1	Class Test # 2
9	Les. 8, 9 (Theory)	a. Bangladesh: Copyright Act of 2000 b. Bangladesh: Telecommunication Regulatory Act of 2001 c. Pornography: Pornography Act 2012	TLA3, TLA4, TLA1	Team Project Presentation
10	Les. 10 (Theory)	Ethical Frameworks: a. Deontological Ethics (Duty-based ethics) b. Utilitarian ethics (Outcome-based ethics) c. Aristotelian ethics (Virtue ethics)	TLA1, TLA3, TLA2	
11, 12	Les. 11, 12 (Theory)	Applications of Ethical Frameworks: a. Deontological Ethics (Duty-based ethics) b. Utilitarian ethics (Outcome-based ethics) c. Aristotelian ethics (Virtue ethics)	TLA3, TLA4, TLA1	Class Test # 3
13	Les. 13 (Theory)	a. Assignment with presentation (Analysis, Evaluation, and Design of Terms of Service (ToS), End User License Agreement (EULA), Privacy Policy)	TLA1, TLA2, TLA4	
14	Final Examination			

Textbook

Ethical Data and Information Management: Concepts, Tools and Methods; Katherine O'Keefe

Reference Books

Encyclopedia of Information Ethics and Security, Marian Quigley

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

Program Outcomes and Assessment

Program Outcomes (POs) are narrower statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills and attitudes that students acquire while progressing through the program. The program must demonstrate that by the time of graduation, students have attained a certain set of knowledge, skills and behavioral traits to some acceptable minimum level. The BAETE specifically requires that students acquire the following graduate attributes.

[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] Investigation: 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 instruction.

[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.