



GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Integrated MCA 9th Semester

Branch: MCA Integrated

Subject Name: Ethics in Computing

Subject Code: 2698603

With effective
from academic
year 2022-23

Teaching Scheme			Credits	Examination Marks				Total Marks	
L	T	P		C	Theory		Tutorial/ Practical		
					University exams (ESE)	Progressive Assessment (PA)	External Practical /viva Exam(ESE)		Internal evaluation Practical /viva Exam(PA)
4	0	0	4	70	30	0	0	100	

Pre-requisites:

Attitude to learn

Course Objectives:

At the end of the course students will be able to explain various ethical and societal aspects in the field of computing

Course Outcome (COs):

At the end of the course (theory) students will be able to –

- CO1. Discuss general concepts related to moral, law, and professional ethics
- CO2. Discuss ethical aspects related to computing and information technology
- CO3. Discuss societal aspects related to computing and information technology
- CO4. Discuss the impact of new technological development on society and ethics

Course Content:

Unit No.	Content	Hrs
1	History of Computing: Evolution of computing and information technology, internet, World Wide Web; Emergence of social and ethical problems in computing, Need of computer ethics education	2
2	Morality and the law: Morality, law, etiquettes and manners	2
3	Ethics and Ethical Analysis: Definition, Ethical Theories, Functional definition of ethics, Ethical reasoning and decision making, Codes of ethics, Reflection on Computer Ethics, Technology and Values	3
4	Ethics and the Profession: Evolution of Professions, Ethical Professions – education and licensing, Professional decision making and ethics, Professionalism and ethical responsibilities	3
5	Anonymity, Security, Privacy, and Civil Liberties: Anonymity, Security, Privacy, Ethical and legal framework for information	3
6	Intellectual Property Rights (IPR) and Computer Technology: Definition, Computer products and services; Foundation of Intellectual Property (IP); Ownership; IP crimes, Protection of ownership rights; Protecting computer	3



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	software under the IP; Transnational issues and IP	
7	Social Context of Computing: The digital divide; Obstacles to overcoming digital divide; ICT in the workplace; Employee monitoring; Workplace, Employee, Health and Productivity	3
8	Software Issues – Risks and Liabilities: Definitions; Causes of software failures; Risk; Consumer protection; Improving software quality; Producer protection	3
9	Computer Crimes: History of computer crimes; Types of computer system attacks; Motives of computer crimes; Costs and social consequences; Computer crime prevention strategies	3
10	New Frontiers of Computer Ethics – Artificial Intelligence; Virtualization and Virtual reality; Cyberspace	6
11	Cyberbullying: Definition; Types of cyberbullying; Areas of society affected by cyberbullying; Legislation against cyberbullying; Effect of cyberbullying; Dealing with cyberbullying	3
12	IoT Growth, Challenges, and Security; Ethical, privacy, and security issues in social network ecosystem; Mobile system and their social, ethical, and security issues; Computer crime investigation and ethics; Biometric technologies and ethics	10
	Total Hours:	44

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	S Level
25	75	0	0	0	0

Legends used are as below –

R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate S: Synthesis as per Revised Bloom's Taxonomy

Text Books:

1. Ethical and Social Issues in Information Age (6th Edition) by Joseph Migga Kizza, Springer Publication, Texts in Computer Science
2. ACM Code of Ethics and Professional Conduct available at <https://ethics.acm.org/>

Reference Books:

1. Engineering Ethics for a Globalized World by Collen Murphy, Paolo Gadoni, Hassan Bashir, Jr. Charles E. Harris, and Eyad Masad; Springer Publication
2. Engineering Ethics: Concepts and Cases (6th Edition) by Jr. Charles E. Harris, Michael S. Pritchard, Ray W. James, Elaine E. Englehardt, Michael J. Rabins; Cengage Publishing