# 22CS310 COMPUTING ETHICS

Hours Per Week :						
L	Т	Р	С			
0	2	2	2			

PREREQUISITE KNOWLEDGE: General awareness on ethical guidelines.

#### COURSE DESCRIPTION AND OBJECTIVES:

The course will provide students with an understanding on Engineering Ethics and the nature of moral issues and dilemmas faced by Computer Science and engineers in their professional lives. It will give them an awareness on professional rights and responsibilities of an engineer and acquaint them on the Code of Conduct and Ethics prescribed by professional bodies like IEEE, ACM etc. for its members.

# MODULE - 1

0L+8T+8P=16 Hours

UNIT-1

#### INTRODUCTION

#### Introduction to Sociotechnical Computer Ethics

Introduction: Why Computer Ethics? The Sociotechnical Systems Perspective, Sociotechnical Computer Ethics, Micro- and Macro-Level Analysis.

Ethics and Information Technology

Introduction: Doing Ethics, Ethical Theories and Concepts.

#### UNIT-2

0L+8T+8P=16 Hours

# Ethics in IT Configured Societies

Technology as the Instrumentation of Human Action, Three Features of IT-Configured Activities, IT Configured Domains of Life, Democracy and the Internet.

# Information Flow, Privacy and Surveillance

Introduction: Information Flow with and without Information Technology, why care about Privacy, Is Privacy over? Strategies for shaping Personal Information Flow.

# PRACTICES:

- Surprises about Social Networking
- RFID and caring for the Elderly People
- Turing does not need to know
- Turnitin Dot Com
- Email Privacy and Advertising
- Workplace Spying
- Data Mining and e-Business



Source: Figure 2 from Computer and Information Security Ethics -- Models | Semantic Scholar

# MODULE - 2

#### UNIT-1

#### 0L+8T+8P=16 Hours

0L+8T+8P=16 Hours

#### Digital Intellectual Property

The complexities of Digital Property, Protecting Property rights in Software, The Philosophical Basis of Property, Free and Open Source Software, PS Versus FOSS.

**Introduction:** Law and Order in the Internet, Sociotechnical Order, Online Crime, Hackers and Hacker Ethic, Sociotechnical Security.

#### UNIT-2

#### Professional Ethics

Introduction: Why Professional Ethics, The Paradigm of Professions, Characteristics of Professions, Sorting out Computing and its Status as a Profession, Codes of Ethics, Professional Relationships, A Legal perspective on professionalism in Computing.

#### PRACTICES:

Laboratory session of this course is designed in such a way that the student should complete three projects of the given type by performing the below experiments.

- Obtaining pirated Software Abroad
- Free Software that follows Proprietary Software
- Using Public Domain Software in Proprietary Software
- Wiki Warfare
- Yahoo and Nazi Memorabilia
- Bot Roast
- Software Safety
- Conflicts of Interest
- Security in a Custom Database

# COURSE OUTCOMES:

Upon successful completion of this course, students will have the ability to:

CO No.	Course Outcomes	Blooms Level	Module No.	Mapping with POs
1	Engage in an informed critical reflection on the nature of professionalism and ethical challenges inherent in engineering profession	2	1	8
2	Understand the role of professional bodies, and the code of ethics and industrial standards prescribed for engineers	2	2	8
3	Apply awareness of professional rights and responsibilities of an engineer to conduct themselves ethically within an organization	3	1	8
4	Apply understanding of safety norms to highlight ethical issues in risky situation	3	2	8

#### **TEXT BOOKS:**

1. Deborah G. Johnson, Keith W. Miller and Prentice Hall, "Computer Ethics", 4th Edition, Pearson, 2009.

#### **REFERENCE BOOKS:**

- 1. Charles E. Harris, Michael S. Pritchard and Michael J. Rabins, "Engineering Ethics: Concepts and Cases", 4th edition, Wadsworth Thompson Learning, 2009.
- 2. M. Govindarajan, S.Natarajan and V. S. Senthil Kumar, "Engineering Ethics", Prentice Hall of India, Reprint 2013.