Social & Professional Issues in IT (2-1-0)

Evaluation:

	Theory	Practical	Total
Sessional	50		50
Final	50	-	50
Total	100	-	100

Objectives:

The objective of this course is to provide the knowledge to handle social, professional and legal issues that arise in the professional working environment.

Course Contents:

1. History of Computing **4 hrs**

- 1.1. Prehistory of Computing
- 1.2. History of Computer Hardware
- 1.3. History of Software: Programming Languages and Operating Systems
- 1.4. History of Networking
- 1.5. Pioneers of Computing

2. Social Context of Computing **5 hrs**

- 2.1. Society and Technology
  - 2.1.1. Impact of Technology on Society and Vice Versa
  - 2.1.2. Using Technology for Poverty Alleviation
  - 2.1.3. Health Related Issues for an IT Professional
- 2.2. Internet and Society
  - 2.2.1. Digital Divide and Bridging the Digital Divide
  - 2.2.2. Governance of Internet
- 2.3. E-Governance and E-Government Systems

3. Computer Ethics and Ethical Theories **3 hrs**

- 3.1. Philosophical and Professional Ethics
- 3.2. Moral and Legal Issues
- 3.3. Descriptive and Normative Claims
- 3.4. Ethical Relativism
- 3.5. Utilitarianism and Deontological Theories
- 3.6. Rights

4. Professional Ethics **3 hrs**

- 4.1. Profession

- 4.1.1. Job and Occupation
- 4.1.2. Characteristics of Profession
- 4.1.3. Engineering and Computing as a Profession

4.2. Professional Responsibilities and Rights

- 4.2.1. Conflict of Interests and Whistleblowing

4.3. Professional Code of Ethics

- 4.3.1. Code of Ethics of Nepal Engineering Council
- 4.3.2. Code of Ethics of IEEE and ACM

4.4. Hacker Ethics and Netiquette

5. Risk and Responsibilities **3 hrs**

5.1. Computer Liability

- 5.1.1. Malfunction of Computers
- 5.1.2. Safety in Critical Systems
- 5.1.3. Accuracy vs. Democracy in Internet
- 5.1.4. Misinterpretation of Information and its Liability

5.2. Values in Design

- 5.2.1. Software and Design Problems
- 5.2.2. Hardware Design Issue
- 5.2.3. Elimination of Hardware

5.3. Professional Responsibilities of Computer Users

- 5.3.1. Responsibility and Accountability

6. Privacy **3 hrs**

6.1. Privacy and its Value

6.2. Privacy Risks

- 6.2.1. Government Information
- 6.2.2. Consumer Information

6.3. Privacy of Consumer Information

- 6.3.1. Databases and Personal Records
- 6.3.2. E-mail Privacy
- 6.3.3. Web Privacy

6.4. Protecting Privacy

6.5. Offensive Speech and Censorship in Cyberspace

6.6. Anonymity

7. Computer and Cyber Crimes **4 hrs**

7.1. Introduction to Computer Crime and Cyber Crime

7.2. Types of Computer Crimes

- 7.2.1. Traditional Computer Crimes and Software Piracy
- 7.2.2. Computer Frauds and Digital Forgery
- 7.2.3. Phishing
- 7.2.4. Unauthorized Access: Hacking, cracking

7.2.5. Denial of Service
7.2.6. Computer Invasion of Privacy
7.2.7. Harmful Content Crime
7.2.8. Online Pornography
7.2.9. Online Harassment
7.2.10. Cyber Stalking and Online Scams
7.2.11. Spams
7.2.12. Malicious Programs: Viruses, Worms, Trojan Horses
7.2.13. Cyber Terrorism
7.3. Introduction to Digital Forensics

8. Intellectual Property and Legal Issues 5 hrs

8.1. Intellectual Properties
8.1.1. Copyright
8.1.2. Patent
8.1.3. Design
8.1.4. Trademark
8.1.5. Trade-secrets
8.1.6. IPR in Nepal: "Copyright Act", and "Patent, Design and Trademark Act"
8.2. IT Related Laws in Nepal
8.2.1. IT Policy of Nepal
8.2.2. Right to Information Act
8.2.3. Electronics Transaction Act and Rules
8.2.4. Secure Password Practices Issued by GoN

Text Books:

1. Johnson, D. G., *Computer Ethics*, Pearson Education Asia, Third Edition, 2001, ISBN: 81-7808-306-X.
2. IT Policies, Laws and Acts of the Government of Nepal. Available at: www.lawcommission.gov.np and www.cca.gov.np

References:

1. Hussain, K. M., and Hussain, D. S., *Computers; Technology, Applications, and Social Implications*, PHI, New Delhi, ISBN: 81-203-0620-1.
2. Sara Baase, *A Gift of Fire: Social, Legal, and Ethical Issues for Computers and the Internet*, latest Edition, Prentice Hall
3. Articles collected from various Journals and Periodicals, such as IEEE-Computer, BYTE, ACM Periodicals, etc.
4. IT Policies and Laws of the local government
5. International IT Policies and Laws (Source: ISO, SEI, IEEE, etc.)