Title (Units): **GTSC2006 Becoming Critically Thoughtful Cyberworld Citizens (3,2,1)**

Course Aims: To learn the theoretical and practical issues of contemporary information technology, security and privacy from different perspectives in the fields of philosophy, religion, social sciences, and law, so that students gain perspectives on how to become responsible cyber-citizens.

Prerequisite:

Course Intended Learning Outcomes (CILOs):
Upon successful completion of this course, students should be able to:

No.	Course Intended Learning Outcomes (CILOs)
	Knowledge
1	Describe key development trends in the cyber-world and information technology, and how these trends shape our way of life.
2	Identify ethical concepts and critical thinking methods especially those that are of special significance for science and technology.
	Professional Skill
3	Analyze key social, philosophical and religious issues brought about by the development of cyber-world and information technology within an ethical framework.
4	Evaluate social, philosophical and religious issues relating to the cyber-world with a critical thinking mindset and value perspective so as to become an ethical and responsible cyber-world citizen.

Calendar Description: This course introduces students to the theoretical and practical issues of contemporary information technology, security, and privacy from different perspectives in the fields of philosophy, religion, social sciences, and law. This course will provide students with the opportunity for challenging discussions and explorations of the complex social, philosophical and religious issues introduced by the cyber-world, so that students gain perspectives on how to become responsible cyber-citizens. It begins by providing students with a brief introduction to philosophical and religious concepts, ethical theories, and critical thinking. Supported by numerous case studies and discussion sessions, audio-visual materials and special seminars and forums, this course covers a wide range of topics including computer security, privacy, big-data, AI, robots, net neutrality, intellectual property right, intellectual commons, and freedom of speech that would enhance the student's interaction with and participation in the larger society through the cyber-world. The interesting evolution of the cyber-world or cyber-space from private relationship domains into the unique public arena will be explored. Social and ethical issues including professional ethics, cyber-crime, cyber-law, the digital divide, as well as others introduced by emerging cyber-technologies will be discussed. Throughout the course, students will be urged to reflect on whether the cyber-world and related technologies are neutral.

Teaching and Learning Activities (TLAs):

CILOs	Type of TLA
1-4	Interactive lectures will be delivered to introduce key development trends in information technology. The lectures will also present philosophical and religious concepts, issues and critical thinking methods relating to science and technology. Through lectures, students are able to acquire basic knowledge to analyze issues in the cyber-world and cyber-ethics.
1, 3	Movies and other audio-visual materials will be used to stimulate students to reflect on current issues and development trends.
1-4	Special seminars or forums will be delivered by guest speakers on specific topics or recent development of the cyber-world, and the philosophical, technical, legal, and religious impacts they bring forth. They aim to help students to explore the issues from multiple perspectives (i.e., IT professionals, regulators, and pressure groups for users' rights), and to encourage them to develop an inquisitive mind.

4	Discussions and computer augmented learning sessions will be held to help students to explore, experience and reflect on complex social, philosophical and religious issues in the cyber-world. A lab session exploring critical and responsible Generative AI use and familiarization with AI technologies arranged for these learning sessions.

Assessment:

No.	Assessment Methods	Weighting	CILOs to be addressed	Description of Assessment Tasks
1	In-class discussion	25%	3, 4	In-class discussions will assess students' skills in analyzing problems and issues of cyber-space. The discussions consist of class-wide and small group debates and analyses conducted and submitted during the tutorials and are based on the assignments and questions provided in advance for the class.
2	Case presentation	25%	1-3	Presentation will assess the levels in which students can assess their ability to articulate critical issues of the cyber-world, and to develop their own ethical reflection on how to behave as cyber-citizens. Presentation consists of (i) supervised group work and brainstorming session to identify critical topics, (ii) individual and groupwork on presentations, and (iii) in-class presentations, including Q&A, feedback, and summary debates.
3	Peer response and assessment	25%	3, 4	Peer response and assessment will assess students' analytical ability and familiarity with issues of cyber-space, and their integrated ethical and technological viewpoints. This assessment includes a test on students' learning in the augmented learning sessions concerning effective and responsible use of AI technologies.
4	Reflective journal	25%	1-4	Reflective journal will assess the students' ability to reflect on individual learning process through an analysis of selected topics of the course and engagement with a critical analysis of cyber-world issues with ethical and value perspective.

Assessment Rubrics:

Excellent (A)

- Achieve the four CILOs, demonstrating a good mastery of the theoretical and practical issues of contemporary information technology, security and privacy from different perspectives in the fields of philosophy, religion, social sciences, and law
- Have a solid understanding of ethical concepts and critical thinking methods especially those that are of special significance for science and technology
- Able to produce high quality analysis on social, philosophical and religious issues brought about by the development of cyber-world and information technology within an ethical framework
- Able to give an in-depth evaluation of social, philosophical and religious issues relating to the cyber-world with a critical thinking mindset and value perspective so as to become an ethical and responsible cyber-world citizen

Good (B)

- Achieve the four CILOs, demonstrating a good understanding of the theoretical and practical issues of contemporary information technology, security and privacy from different perspectives in the fields of philosophy, religion, social sciences, and law
- Have a good understanding of ethical concepts and critical thinking methods especially those that are of special significance for science and technology

- Able to produce analysis on social, philosophical and religious issues brought about by the development of cyber-world and information technology within an ethical framework
- Able to give an evaluation of social, philosophical and religious issues relating to the cyber-world with a critical thinking mindset and value perspective so as to become an ethical and responsible cyber-world citizen

Satisfactory (C)

- Achieve most of the four CILOs, with a minimal level of understanding of the theoretical and practical issues of contemporary information technology, security and privacy from different perspectives in the fields of philosophy, religion, social sciences, and law
- Have a basic level of understanding of ethical concepts and critical thinking methods especially those that are of special significance for science and technology
- Able to conduct analysis on social, philosophical and religious issues brought about by the development of cyber-world and information technology within an ethical framework
- Demonstrate an acceptable evaluation of social, philosophical and religious issues relating to the cyber-world with a critical thinking mindset and value perspective so as to become an ethical and responsible cyber-world citizen

Marginal Pass (D)

- Achieve some of the four CILOs, with a minimal level of understanding of the theoretical and practical issues of contemporary information technology, security and privacy from different perspectives in the fields of philosophy, religion, social sciences, and law
- Have a minimal level of understanding of ethical concepts and critical thinking methods especially those that are of special significance for science and technology
- Able to conduct very basic analysis on social, philosophical and religious issues brought about by the development of cyber-world and information technology within an ethical framework
- Demonstrate a minimally acceptable evaluation of social, philosophical and religious issues relating to the cyber-world with a critical thinking mindset and value perspective so as to become an ethical and responsible cyber-world citizen

Fail (F)

- Achieve less than of the four CILOs, and have little understanding of the theoretical and practical issues of contemporary information technology, security and privacy from different perspectives in the fields of philosophy, religion, social sciences, and law
- Unable to demonstrate a satisfactory level of understanding of ethical concepts and critical thinking methods especially those that are of special significance for science and technology
- Unable to conduct basic analysis on social, philosophical and religious issues brought about by the development of cyber-world and information technology within an ethical framework
- Unable to demonstrate an acceptable evaluation of social, philosophical and religious issues relating to the cyber-world with a critical thinking mindset and value perspective so as to become an ethical and responsible cyber-world citizen

Course Content and CILOs Mapping:

Content		**CILO No.**
I	Religious and Philosophical Theories and Critical Thinking in a Technological World	1, 3, 4
II	Social and Technological issues of the Cyber-world: An Overview	2, 3, 4
III	Computer Security and the Nature of Cyberspace as Public Space	1, 2, 3, 4
IV	Privacy and Its Impact on Public Responsibility in Cyber-space	1, 2
V	Professional Ethics in the Information Age	1, 2, 3, 4
VI	Freedom of Speech in the Cyber-space	1, 3, 4
VII	Politics and the Cyber-world as Public Domain	1, 2, 3, 4
VIII	Cyber-crime, Cyber-law and Cyber-legislation for the Cyber-Public	1, 3, 4
IX	Intellectual Property Right and Intellectual Commons in the Cyber-world	1, 3, 4

X	Emergence of Cyber-groups and Cyber-communities and Their impact on Real Society	2, 3, 4
XI	Digital Divide and Efforts of Making an Undivided Society	1, 2, 3, 4

References:

- Artificial Intelligence and Privacy − Issues and Challenges. Office of the Victorian Commissioner, 2023. https://ovic.vic.gov.au/privacy/resources-for-organisations/artificial-intelligence-and-privacy-issues-and-challenges/.
- Abbott, Ryan. The Reasonable Robot. Artificial Intelligence and the Law. Cambridge, Mass.: Cambridge University Press, 2020.
- Awad, Edmond et al. Computational Ethics. Trends in Cognitive Sciences 26(5), 2022, pp. 388-405.
- Boulos, Pierre. Understanding Cyber Ethics in a Cyber World. Dubuque: Kendall Hunt Publishing, 2008.
- Curran, James, Natalie Fenton, and Des Freedman. Misunderstanding the Internet. Milton Park: Routledge, 2016.
- Mill, John Stuart. All Minus One. John Stuart Mill′ s Ideas on Free Speech, Illustrated, Heterodox Academy 2021.
- Quinn, Michael J. Ethics for the Information Age. 7th ed. New York: Pearson, 2016.
- Sandler, R.L. Introduction: Technology and Ethics. In: Sandler, R.L. (eds) Ethics and Emerging Technologies. Palgrave Macmillan, London, 2014. https://doi.org/10.1057/9781137349088_1.
- Spector, J. M., Ma, S. Inquiry and critical thinking skills for the next generation: from artificial intelligence back to human intelligence. Smart Learning Environments 6(8), 2019. https://doi.org/10.1186/s40561-019-0088-z.
- Tavani, Herman T. Ethics and Technology: Controversies, Questions, and Strategies for Ethical Computing. 5th ed. Hoboken: Wiley, 2015

Course Content:

Topic

I. Religious and Philosophical Theories and Critical Thinking in a Technological World

II. Social and Technological issues of the Cyber-world: An Overview

III. Computer Security and the Nature of Cyberspace as Public Space

IV. Privacy and Its Impact on Public Responsibility in Cyber-space

V. Professional Ethics in the Information Age

VI. Freedom of Speech in the Cyber-space

VII. Politics and the Cyber-world as Public Domain

VIII. Cyber-crime, Cyber-law and Cyber-legislation for the Cyber-Public

IX. Intellectual Property Right and Intellectual Commons in the Cyber-world

X. Emergence of Cyber-groups and Cyber-communities and Their impact on Real Society

XI. Digital Divide and Efforts of Making an Undivided Society