Lingnan University
Department of Philosophy

Course Title	:	Philosophy of Technology
Course Code	:	PHI3279
Recommended Study Year	:	2-4 Years
No. of Credits/Term	:	3
Mode of Tuition	:	Lecture and Tutorial
Class Contact Hours	:	2 hour Lecture/week; 1 hour Tutorial/week
Category in Major Programme	:	Programme Elective – Philosophy of Natural and Human Sciences Profile
Prerequisite(s)	:	N/A
Co-requisite(s)	:	N/A
Exclusion(s)	:	N/A
Exemption Requirement(s)	:	N/A

Brief Course Description

In this course we will examine the social phenomenon of technology from a philosophical angle. Among the questions discussed will be (1) the question of the exact relationship between a particular society, its institutions, and its technologies; (2) How technologies shape our way of thinking and our perception of the truth; (3) Ethical questions posed by technology, for example whether and how technology affects democracy, or the consequences of the technological divide between technology users and parties which are, for various reasons, excluded from using them.

Aims

The course aims at:

- Providing students with an understanding of some of the main directions in technology studies and the philosophy of technology.
- Presenting some of the classical discussions and arguments related to the relationship between technology and society.
- Enabling students to understand the relationship between technology, science, truth, and self-perception in a historical context.
- Enabling students to understand central moral and political implications of technology, particularly the influence of technology on democracy and issues concerning the technological divide.
- Enabling students to question their own conceptions of technology in an informed, argumentative way.
- Providing students with a broader view of the subject, which, besides Western theories of technology, includes Luddism and classical Eastern approaches to technology.

Learning Outcomes

After completing this course, students will be able to:

1. outline the main theories and approaches in the philosophy of technology
2. appraise the main influences of technology on the development of cultural traditions and patterns of thought
3. evaluate critically the influence of particular technologies on society and the reverse influence of society on technological design
4. reflect on the moral and political implications of technology, and evaluate the usefulness and the dangers posed by particular technologies

Indicative Content
Part I – What is Technology?
1. Introduction – History of Technology (Overview).
2. History and Definitions of Technology.
3. Western and Eastern Technology. The Needham Question

Part II – Technology and Society
4. Technological Determinism
5. Autonomous Technology. Critical Theory of Technology
6. Heidegger and the Phenomenological Approach to Technology
7. Social Constructivism
8. Actor Network Theory

Part III – Technology, Science and Truth
9. Technology and Scientific Truth
10. Technological Approaches to Thinking and Intelligence

Part IV – Moral and Political Dimensions of Technology
11. Technology and Moral Responsibility
12. Technology and Democracy
13. Technology and Being Human
14. Technology and Nature

Teaching Method
Lecture and tutorials, including student presentations, class discussion, small groups assignments, and essay writing. Students keep a journal throughout the course, in which they collect their assignments and notes, and which is later used for grading.

Measurement of Learning Outcomes
- Students will discuss on assigned topics in the tutorials and in a student journal. They are expected to be able to reflect deeply and in an informed manner on the issues related to the session's topic (LOs 1-4).
- Students will write essay assignments. They are expected to be able to integrate what they have learned in class with their own research in news and scholarly publications in order to apprehend concrete situations (LOs 1-4).
- Students will write a Mid-term examination (LO1 and LO3).
- Students will write a Final examination (LOs 1-4).

Assessment
Attendance, in-class participation, student journal: 20% (to assess outcomes 1, 2, 3, 4)
Mid-term examination: 20% (to assess outcomes 1 and 3)
Essay assignments (the instructor will assign either 2 short essays or a longer term paper): 20% (to assess outcomes 1, 2, 3, 4)
Final examination: 40% (to assess outcomes 1, 2, 3, 4)

Required Readings (Selections)
Feenberg, Andrew. [2003a] "What is Philosophy of Technology?" Lecture for the Komaba Undergraduates, San Diego State University, June 2003. Available at: http://www-rohan.sdsu.edu/faculty/feenberg/komaba.htm
Feenberg, Andrew. "From Essentialism to Constructivism: Philosophy of Technology at the Crossroads." 2006. Available at: http://www-rohan.sdsu.edu/faculty/feenberg/talk4.html

Kaplan, David, ed. *Readings in the Philosophy of Technology.* 2nd ed. Lanham: Rowman & Littlefield, 2009 (selected articles)

Winston, M. and Edelbach, R. eds. *Society, Ethics, and Technology.* 2nd ed. Belmont, CA: Thomson, Wadsworth, 2003. (selected articles)

Supplementary Readings

Borgmann, Albert. "Technology and Democracy." In: Kraft, Vig (1988)

Brey, Philip. "Philosophy of Technology Meets Social Constructivism." *Society for Philosophy and Technology* Vol. 2, No. 3-4, 1997

Coeckelbergh, Mark. "The Public Thing: On the Idea of a Politics of Artefacts." Techne Vol.13, No.3, 2009. Available at: http://scholar.lib.vt.edu/ejournals/SPT/v13n3/coeckelbergh.html

Cohen, Adam Max. Technology and the Early Modern Self. New York: Palgrave, Macmillan, 2009. (selected articles)

Dreyfus, H. What Computers Still Can't Do. A Critique of Artificial Reason. Cambridge, Mass.: MIT Press. 1992. (selected articles)

Dreyfus, H. "Heidegger on Gaining a Free Relation to Technology." In: Feenberg, A. and Hannay, A. (eds.) Technology and the Politics of Knowledge. Bloomington, Indiana: Indiana University Press, 1995. Available at: http://www.sfu.ca/~andrewf/drey.pdf

Dreyfus, H. "Intelligence Without Representation" 1998. Available at: http://www.class.uh.edu/ cogsci/dreyfus.html (accessed April 16, 2010).

Dreufus, H. "From Socrates to Expert Systems: The Limits and Dangers of Calculative Rationality." 2004. Available at: http://socrates.berkeley.edu/~hdreyfus/html/paper_socrates.html (accessed April 16, 2010).

Ellul, Jacques. The Technological Society. New York: Vintage, 1967 (selections)

Feenberg, Andrew. "Subversive Rationalization: Technology, Power and Democracy." Inquiry, Vol. 35, No. 3/4, 1992.

Feenberg, Andrew. "The Question Concerning Techn?: Heidegger's Aristotle." 2002. Available at: http://www-rohan.sdsu.edu/faculty/feenberg/tech2a.htm

Feenberg, Andrew. [2003b] "Democratic Rationalization." In: Winston, Edelbach (2003)

Glasersfeld, Ernst von. "An Introduction to Radical Constructivism." In: Watzlawick, P. (ed.) Die Erfundene Wirklichkeit. Munich: Piper 1981. Engl. translation in The Invented Reality. New York: Norton, 1984. Available at: http://anti-matters.org/ojs/index.php/antimatters/article/view/ 88/81

Heidegger, Martin. The Question Concerning Technology and Other Essays. Translated by William Lovitt, NewYork: Harper & Row, 1977

Joerges, Bernward. "Do Politics Have Artefacts?" Social Studies of Science, Vol. 29, No. 3, 1999. Available at: http://sss.sagepub.com/cgi/content/abstract/29/3/411

Jonas, Hans. "Technology and Responsibility. Reflections on the New task of Ethics." In: Winston, Edelbach (2003)

Joy, B. "Why the Future Doesn't Need Us." In: Winston, Edelbach (2003)

Kraft, M. and Vig N. Technology and Politics. Durham, London: Duke University Press. 1988. (selected articles)

Krippendorf, Klaus. "Cybernetics's Reflexive Turns." Cybernetics and Human Knowing, Vol. 15, No. 3-4, 2008. Available at: http://repository.upenn.edu/cgi/viewcontent.cgi?article=1135& context=asc_papers

Law, John. "On Sociology and STS." Version of 15h July 2008. Available at: http://www.heterogeneities. net/publications/Law2008OnSociologyAndSTS.pdf (accessed April 16, 2010).

Law, John. "Notes on the Theory of the of the Actor Network: Ordering, Strategy and Heterogeneity." Available at: http://www.lancs.ac.uk/fass/sociology/papers/law-notes-on-ant.pdf (1992)

Lenat, D. "CYC: Toward Programs With Common Sense." Communications of the ACM 33, No. 8 (1990): 30 ff.

McGinn, Robert. "Technology, Demography, and the Anachronism of Traditional Rights." In: Winston, Edelbach (2003)

Pinch, T. E. and Bijker, W. "The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other." in: Bijker, W. and Hughes, T.P. and Pinch, T.E. eds. The Social Construction of Technological Systems. MIT Press, Cambridge MA., 1989

Postrel, Virginia. "The One Best Way." In: Winston, Edelbach (2003)

Robins, K. and Webster, F. Times of the Technoculture. From the Information Society to the Virtual Life. London, New York: Routledge, 1999 (selected articles)

Roszak, Theodore. The Cult of Information. 2nd ed. Berkeley, CA: University of California Press, 1994 (selected articles)

Sagoff, M. "Genetic Engineering and the Concept of the Natural." In: Winston, Edelbach (2003)

Schummer, Joachim. "Aristotle on Technology and Nature." Philosophia Naturalis, 38, 2001. Available at: http://www.joachimschummer.net/jslit/aristot.htm

Sclove, Richard. "I'd Hammer Out Freedom: Technology as Politics and Culture." In: Winston, Edelbach (2003)

Strong, David. "Technological Subversion." In: Winston, Edelbach (2003)

Teschner, George. "Technological Paradigm in Ancient Taoism." Techne Vol. 13, No. 3, 2009. Available at: http://scholar.lib.vt.edu/ejournals/SPT/v13n3/teschner.html

United Nations. "Globalization and Its Impact on the Full Enjoyment of All Human Rights." In: Winston, Edelbach (2003)

Vig, N. "Technology, Philosophy, and the State: An Overview." In: Kraft, Vig (1988)

Winner, Langdon. "Upon Opening the Black Box and Finding it Empty. Social Constructivism and the Philosophy of Technology." Science, Technology, and Human Values Vol. 18, No. 3, 1993

Winner, Langdon. "Do Artifacts Have Politics?" In: MacKenzie, Wajcman. The Social Shaping of Technology. 2nd ed. Buckingham, Philadelphia: Open University Press. 1999

Winner, Langdon. "Artifacts/Ideas and Political Culture." In: Winston, Edelbach (2003)

Winograd, Terry. "Thinking Machines: Can There Be? Are We?" In: Sheehan, J. and Sosna, M. The Boundaries of Humanity: Humans, Animals, Machines. Berkeley: University of California Press, 1991

Wresch, William. Disconnected. Haves and Have-Nots in the Information Age. New Brunswick, New Jersey: Rutgers 1996 (selected articles)

Zajonc, Arthur. "Buddhist Technology: Bringing a New Consciousness to Our Technological Future." Seventeenth Annual E. F. Schumacher Lecture, Williams College. Williamstown, Massachusetts. 1997. Available at: http://www.smallisbeautiful.org/publications/zajonc_97.html

Important Notes

(1) Students are expected to spend a total of 9 hours (i.e. 3 hours of class contact and 6 hours of personal study) per week to achieve the course learning outcomes.

(2) Students shall be aware of the University regulations about dishonest practice in course work, tests and examinations, and the possible consequences as stipulated in the Regulations Governing University Examinations. In particular, plagiarism, being a kind of dishonest practice, is "the presentation of another person's work without proper acknowledgement of the source, including exact phrases, or summarised ideas, or even footnotes/citations, whether protected by copyright or not, as the student's own work". Students are required to strictly follow university regulations governing academic integrity and honesty.

(3) Students are required to submit writing assignment(s) using Turnitin.

(4) To enhance students' understanding of plagiarism, a mini-course "Online Tutorial on Plagiarism Awareness" is available on https://pla.ln.edu.hk/