

Course Title: □ Technology, Environmentalism and Sustainable Development

Course No: (Optional) □ **Credits:** 4 (four) □

Faculty in Charge: Dr. Rohan D'Souza

Mode of Evaluation: Term Paper: 2 credits □

One tutorial submission: 1 credit

Two written class assignments and class presentations: 1 credit

Instruction Mode: Lecture-cum-seminar. _____

This course is designed for students in the M.Phil/PhD programme. It is intended to be an interdisciplinary effort: aimed at introducing students to specific critical debates in contemporary concerns on technology, environmentalism and sustainable development (**TESD**). The emphasis is on relating issues in technology studies and environmentalism to the broader debate on sustainable development.

Three broad concerns will be addressed:

1) Development and sustainability and the environmental challenge

The notion of 'Sustainable Development' marked a significant moment in questioning ideas on economic development. By taking up the challenge of 'sustainability', enthusiasts for economic growth and national development had to reconsider issues such as ecological limits, technology choices, pathways to modernization and the political consequences following economic growth. The term sustainable development, however, is a much contested, contradictory and often perplexing challenge. This section will look at:

- a) debates on sustainable development (from Stockholm to Rio) □
- b) recent framings of development
- c) explore practices that attempt to forge alternative development outcomes □

2) Environmental politics and the production of nature

Under this theme, the political shaping of the environmental critique/challenge to development and its attempts to define alternatives will be discussed. Writings on formulations such as political ecology, liberation ecology and green development (to name a few) will be explored. To illustrate the many sided aspects of this debate and to work towards an empirical context as well, critical readings on the development and environment tension in India will be explored.

3) Technology and the challenge from non-equilibrium ecology

The study of modern technology as a collection of techniques for domination and as a means for upsetting ecological processes is now well documented. Locating and specifying the democratic possibilities for modern technology, in effect, has become a critical question for the notion of sustainable development. Through this theme, I will be sensitizing students to a range of views by pessimists on modern technology. To also provide context to the explorations on modern technology, we will attempt to club this theme with the debate on non-equilibrium ecology. Since the 1980's a radical challenge has been initiated against what is now termed as the orthodox or classical reading of ecosystem ecology. Advocates for non-equilibrium ecology are credibly arguing that the natural world involves understanding innumerable gradients for recurring change. Thus, instead of trying to seek a balance in nature, ecologists must now try and understand processes involving , oscillations, disturbances and instabilities. Nature in other words is made up of a web of unstable patches rather than a set of ecosystems in balance. Non-equilibrium ecology has consequently posed a whole range of questions to development concerns.

Structure and Teaching Methods for the Course

Students will be required to prepare in advance for the lecture, by reading the articles and books chapters listed in the **course-outline**. Each set of readings will be prefigured with a theme question.

I expect students in this course to be involved in an intense reading and writing effort. Besides class participation, there will also be class assignments (two, 800 words each), one tutorial (with tutorial discussion, 1500-2000 word maximum) and a term paper (submitted at the end of the semester, 2500-3000 words).

First assignment after week two. The second assignment after week four. Tutorial after week-six and title for the term paper after week-ten.

Lectures

#1) Week One

What defines underdevelopment?

Readings

A.N. Agarwala and S.P. Singh, *The Economics of Underdevelopment*, Oxford University Press, Bombay, 1958.

Read essays by Paul A. Baran (pp.75-92); W.W. Rostow (pp. 154-88); Simon Kuznets (pp. 135-153); Henry J. Bruton (pp.219-244); Ragnar Nurkse (pp.256-271); W. Arthur Lewis (pp.400-449); Hollis B. Chenery (pp.450-471)

John Harris, 'Great Promise, hubris and recovery: a Participant's history of development studies' in Uma Kothari (ed.) *A Radical History of Development Studies: Individuals, Institutions and Ideologies*, Zed Books: London, New York, 2005, pp.17-44.

#2) Week Two

Was "progress" the promise of development?

Readings

Michael Cowan and Robert Shenon, 'The Invention of development' in Jonathan Crush, *Power of Development*, Routledge: London, New York, 1995, pp. 27-43.

Christopher Lasch, *The True and only Heaven: progress and its Critics*, W.W. Norton & Company: London, New York, 1991, pp.40-81.

Marshall Sahlins, 'The Original Affluent Society' in Majid Rahnema (with Victoria Bawtree) ed., *The Post-Development Reader*, Zed Books: London, 1997, pp. 3-21.

#3) Week Three

Does the idea of 'Governmentality' help explain the power of development?

Readings

Paul Rabinow, "Introduction" in idem (ed.), *The Foucault Reader*, Pantheon Books: New York, 1984, pp.3-29.

Michel Foucault, "Governmentality" in Graham Burchell, Colin Gordon and Peter Miller (ed.), *The Foucault effect: Studies in Governmentality*, The University of Chicago Press: Chicago, 1991, pp.87-104.

Peter Miller and Nickolas Rose, *Governing the Present*, Polity Press: Cambridge, pp.26-52.

Mitchell Dean, *Governmentality: Power and Rule in Modern Society*, Sage: Los Angeles, London, New Delhi, Singapore, Washington, pp.16-51.

Timothy Mitchell, 'The Object of Development: America's Egypt' in Jonathan Crush, *Power of Development*, Routledge: London, 1995, pp.129-157.

Arturo Escobar, *Encountering Development: the making and unmaking of the Third World*, Princeton University Press: Princeton, New Jersey, 1995, pp.21-54.

#4) **Week Four**

According to Keith Tribe "Classical liberalism called upon the government to respect the market, to refrain from intervention. Neoliberalism deploys the market to measure and assess state activity. It is a sort of permanent economic tribunal confronting government." (p.693) Is Governmentality a critique of neo-liberalism and globalization rather than simply a challenge to the idea of 'development'?

Readings

Keith Tribe, 'The political economy of modernity: Foucault's Collège de France lectures of 1978 and 1979', *Economy and Society*, 38 (4), November 2009: 679-698.

Michel Foucault, 'The Subject and Power' in James D. Faubion (ed.), *Michel Foucault, Power: essential works of Foucault 1954-1984*, vol. 3, Penguin Books, 1984, pp. 326-48.

Andrew McGregor, 'New Possibilities? Shifts in Post-Development Theory and Practice' *Geography Compass*, 3(5), 2009, pp.1688-1702.

Morgan Brigg, 'Post-development, Foucault and the Colonisation Metaphor', *Third World Quarterly*, 23(3), 2002, pp. 421-36.

Vinay Gidwani, 'The Unbearable modernity of "development"? Canal Irrigation and development planning in Western India', *Progress in Planning*, 58, 2002, pp.1-80.

#5) **Week Five**

Do you think that modern technology produces 'docile bodies'?

Readings

Michel Foucault, 'Docile Bodies' in Paul Rabinow (ed.), *The Foucault Reader*, Pantheon Books, New York, 1984, pp.179-187.

Lewis Mumford, *The Pentagon of Power: The Myth of the Machine*, Vol. II, A Harvest/HBJ Book: New York, London, 1970 [1964], pp.130-163.

Karl Marx, *Capital*, Vol. I, Penguin Books in Association with New Left Review: England, 1990 [1867], pp. 492-508.

Wolfgang Schivelbusch, *The Railway Journey: the industrialization of time and space in the 19th Century*, University of California Press: Berkeley, 1986 [1977], pp. 1-44.

Stephen J. Kline, 'What is technology' in Robert C. Scharff and Val Dusek, *Philosophy of Technology: the technological condition and anthology*, Blackwell Publishing: Oxford, 2003, pp. 208-210.

#6) Week Six

Is Fordism, as a technological matrix, different from the Factory?

Readings

Karl Marx, *Capital*, Vol. I, Penguin Books in Association with New Left Review: England, 1990 [1867], pp. 544-610.

Antonio Gramsci, *Selections from the Prison Notebooks*, Orient BlackSwan: Hyderabad, reprint 2010, pp. 277- 318.

David A. Hounshell, *From the American System to Mass Production (1800-1932)*, The John Hopkins University Press: Baltimore, 1984, pp.217-261.

David Harvey, *The Condition of Postmodernity*, Blackwell: Cambridge, 1990, pp.125-40.

Herbert Marcuse, 'The New Forms of Control' in Robert C. Scharff and Val Dusek, *Philosophy of Technology: the technological condition and anthology*, Blackwell Publishing: Oxford, 2003, pp.405-412.

Michel Foucault, 'Panopticism' in Paul Rabinow (ed.), *The Foucault Reader*, Pantheon Books, New York, 1984, pp.206-225.

7) Week Seven

In your opinion, is Mumford's Megamachine different from Marx's large scale Industry?

Readings

David Harvey, *A Companion to Marx's Capital*, Verso: New York, London, 2010, pp. 189-236.

Lewis Mumford, *The Pentagon of Power: The Myth of the Machine*, Vol. II, A Harvest/HBJ Book: New York, London, 1970 [1964], pp.164-196 & 230-262.

Wolfgang Schivelbusch, *The Railway Journey: the industrialization of time and space in the 19th Century*, University of California Press: Berkeley, 1986 [1977], pp. 150-170.

#8) Week Eight

Once the capitalists are gone, advanced technology will provide the objective conditions necessary for “that high stage of development of Communism” What was Lenin, or for that matter Marx, thinking of here? Discuss

(Langdon Winner discussing Lenin in *Autonomous Technology*)

Readings

Edward Tenner, *Why things bite back: technology and the revenge of unintended consequences*, Vintage Books: New York, 1997, pp. 206-67.

Langdon Winner, *Autonomous Technology: technics-out-of-control as a theme in political thought*, MIT Press: Massachusetts and London, 1977, pp.235-305.

David F. Noble: *America by Design: Science, Technology and the Rise of Corporate Capitalism*, Oxford University Press: Oxford, London, Glasgow, pp. 257-320 & 361-370.

Daniel Bell, *The Coming of Post-Industrial Society: a venture in social forecasting*, Basic Books: New York, 1999 [1973], pp. 121-164.

Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society*, Da Capo Press: Boston, 1988 [1950], pp.136-162.

Shoshana Zuboff, *In the Age of the Smart Machine: the future of work and power*, Basic Books: New York, 1988, pp.95-173.

#9) Week Nine

What according to Martin Heidegger is the meaning of ‘Modern technology’

Readings

Michael E. Zimmerman, *Heidegger's Confrontation with Modernity: Technology, Politics and Art*, Indian University Press: Bloomington, 1990, pp. 3-45 & 205-21 & 248-74.

Andrew Feenberg, *Heidegger and Marcuse: The Catastrophe and Redemption of History*, Routledge: New York, 2005, pp. 1-20.

Martin Heidegger, *The Question Concerning Technology and Other Essays*, (Translated and with an introduction by William Lovitt), Harper-Perennial: New York, London, Toronto, Sydney, 1977, pp. xiii-xxxix & 3-35.

10) Week Ten

Do you think Marxist writings on Nature provides greater political clarity on questions of control, domination and exploitation of the natural world?

Readings

Neil Smith, 'The Production of Nature' in idem, *Uneven Development: nature, Capital and the Production of Space*, Basil Blackwell: New York, 1984, pp. 32-65.

David Harvey, 'The Domination of Nature and its Discontents' in idem, *Justice, Nature & the Geography of Difference*, Blackwell Publishers: Oxford UK, 1997 (reprint), pp.120-49.

James O'Connor, 'The Second Contradiction of Capitalism' in idem, *Natural Causes: essays in Ecological Marxism*, The Guilford Press: New York & London, pp. 158-178.

Bruce Braun and Noel Castree (ed.), *Remaking Reality: Nature at the Millennium*, Routledge: New York, 1998, pp.3-42.

#11) Week Eleven

Would you agree with Botkin that we should "begin to observe nature as it is, not as we imagine it to be" in order to conserve or protect nature?

Readings

Ian. Scoones, 'New Ecology and the Social Sciences: What Prospects for a Fruitful Engagement?' *Annual Review of Anthropology*, Vol. 28. (1999), pp. 479-507.

Mark Sagoff, 'Ecosystem design in Historical and Philosophical context' & Ernest Partridge, 'Reconstructing Ecology' in David Pimental, Laura Westra, & Reed F. Noss, *Ecological Integrity: Integrating Environment, Conservation and Health*, island Press: Washington, 2000, 61-78 & 79-97.

Daniel Botkin, *Discordant Harmonies, A New Ecology for the Twenty-First Century* Oxford University Press: New York, 1990, pp.15-49 & 185-92.

#12) Week Twelve

Is there a credible critique of Political Ecology and Environmentalism?

Readings

Richard Peet and Michael Watts , *Liberation Ecologies: Environment, Development, Social Movements*, Routledge: London and New York, 1996, pp. 3-47.

Ashish Nandy, 'Dams and Dissent: India's first modern environmental activist and his critique of the DVC project', *Futures*, 33, 2001, pp.709-31.

Kavita Philip, 'Seeds of neo-Colonialism? Reflections on Ecological Politics in the New World order', *Capitalism Nature Socialism*, 12(2), 2001, pp. 3-47.

Amita Baviskar, 'Red in Tooth and Claw? Looking for Class in struggles over Nature', in Raka Ray & Mary Fainsod Katzenstein (ed.), *Social Movements in India: Poverty, Power and Politics*, Oxford University Press: New Delhi, 2005, pp.161-78.

Bina Agarwal, 'The Gender and Environmental Debate: Lessons from India', *Feminist Studies*, 18(1),1992, 119-58.