# HS 602: Science and Technology in India's Development

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Course outline: Spring Semester, 2017-18

* Introduction to Science, Technology and Society Studies: Selected Theoretical Approaches and Paradigms (DP)
* Science and Technology and their linkages to social and economic relations in ancient and medieval India (AK)
* Introduction of modern science and technology in the colonial period and their socio-economic implications (AK)
* Debates and Developments in science and technology and their relationship to socio-economic systems in the post-independence period (DP)
  + The emergence of big science and technology; economic growth and heavy industries strategy
  + Planning and S & T, growth and nature of science and technology organizations in India; scientific human resources; science and technology policies; innovation systems and policies
* Technology absorption and assimilation; creation of a dual society
* Debates on technology choice and technology transfer; appropriate technology, technology for basic needs, technology and self reliance, technology and people's participation
* Inequality and S & T: Gender, Caste, Class, and Religion (DP and AR)
* Ethics and Politics of Science and Technology for Development: Selected cases
* Pluralistic views of S & T; debates on indigenous knowledge, peoples' science movement, alternative models with respect to science, technology and development

List of references

1. Alvares, C.A., Homo Faber; Technology and Culture in India, China and The West from 1500 to The Present Day.
2. Aurora, G.S., Scientific Community in India
3. Behari, Bepin, Economic growth and technological change in India
4. Chattopadhyaya, Debiprasad, History of science and technology in ancient India, formation of the theoretical fundamentals of natural science
5. Desai, Ashok V ed., Technology absorption in Indian industry
6. Dunn, P.D. Appropriate technology
7. Kumar, Deepak, Science and the Raj, 1857-1905
8. Kumar, Deepak, Science and Empire (relevant essays)
9. Baber, Zaheer, Science of empire: scientific knowledge, civilization, and colonial rule in India
10. Gadgil, Madhav and Guha, Ramachandra, Ecology and equity: the use and abuse of nature in contemporary India
11. Pal, Yash, Ashok Jain and Subodh Mahanti ed., Science in Society: some perspectives
12. Rahman, A. & Others., Science and Technology in India
13. Rahman, A. Sharma, K.D., Science policy studies
14. Shiva, Vandana, Violence of the green revolution: third world agriculture, ecology and politics
15. Visvanathan, Shiv, Organizing for Science
16. Zachariah, Mathew Sooryamoorthy, R., Science for social revolution? Achievements and dilemmas of a development movement-the Kerala Sastra Sahitya Parishad

The readings are indicative and includes only books available in IITB Central Library. You are free to read other books / articles that refer to topics taught in the class room. Specific readings on topics discussed in class will be uploaded on Moodle or handed out in class.