

MALVIYA NATIONAL INSTITUTE OF TECHNOLOGY, JAIPUR
Department of Humanities and Social Sciences

Course Code	HST410
Course Name	Sociology of Science and Technology
UG	Department of Humanities and Social Sciences
Credit	3 (L-T-P: 2-1-0)
Version	Open Elective
Pre-requisite Course	Nil
Introduction to the Course	Science and Technology are pre-requisite to human existence and its interface plays an overriding role in present complex society. New technologies have transformed the shape and structures of contemporary society, its politics, and economy since the late 18 th century. It is significant for engineering students to study the organic interdependence of science, technology and society. Course includes combinations of reading, lectures, group activities and assignments.
Course Outcomes	At the end of the course, students will be: <ul style="list-style-type: none"> • Familiar with the conceptual and sociological framework of relationship between science, technology and society • Able to explain the interface between science, technology and society and its impact on different socio-cultural institutions and processes • Able to link and reflect on current and ongoing sociological debates on development and role of technology
Syllabus	<p>I. Conceptual Understanding of Science and Technology</p> <ul style="list-style-type: none"> • Meaning of Science and Technology, difference between science and technology, relation between Science and technology and its impact on society • Philosophy of Science and Methods of Science • Science and Technology: Classical and contemporary sociological thought • Technological change and re-conceptualization of Society <p>II. Technological change and Impact on Society</p> <ul style="list-style-type: none"> • Technological change and impact on social structures and processes • Technology and change in sphere of economy and work • Interplay of Technology, polity and power structures • Social movements and role of social media <p>III. Opportunities, Challenges, and Path Ahead</p> <ul style="list-style-type: none"> • Technology, media, identity and global society • Conformity and Deviance and role of Science and Technology • Social inequalities, Social exclusion and Digital divide • Technology and developmental issue • Science and Technology policy of Government of India • Intellectual property rights • Science, technology and ethical issues

Suggested Readings	<p>Bernal, J. D. (1939). <i>The social function of science</i>. New York, Macmillan.</p> <p>Chant, Colin and Besse, Richard. (1989). <i>Science, Technology and everyday life, 1870-1950</i>. London: Routledge.</p> <p>Kuhn, Thomas. (1962). <i>The structure of scientific revolution</i>. University of Chicago Press.</p> <p>Mackenzie, D. and Wajcman, J. (1985) <i>The social shaping of technology</i>. Milton Keynes: Open University Press.</p> <p>Merton, R. K. (1973). <i>Sociology of science, theoretical and empirical investigation</i>. Chicago: University of Chicago Press.</p> <p>Prasad, Rajeshwar (ed.). (1995). <i>Science, Technology and quality of life</i>. Agra: Y. K. Publishers.</p> <p>Wenda K. Bauchspies, Jennifer Croissant, Sal Restivo. (2005). <i>Science, technology and society: A sociological approach</i>. Wiley-Blackwell</p> <p>Wiebe E. Bijker, Thomas P. Hughes, Trevor Pinch (editors) (1989) <i>The social construction of technological systems: New directions in the sociology and history of technology</i>. The MIT Press.</p>
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