Course Name- Science, Technology, Society, AUTUMN 2020
Course Instructor- Madhumita Mazumdar
Course Code- HM 216
Semester-Autumn
Category- HASS Core

NOTE ON COURSE DELIVERY AND EVALUATION FOR THIS SEMESTER

Please note that owing to the constraints to teaching and learning effected by the Covid pandemic, teaching and evaluating methods for this course will be significantly different from previous years. The course will be split into two halves, the lecture component will be completed during the scheduled semester duration but the group project component will be deferred for the Summer Semester 2021. Although broad project guidelines will be given to you before hand it is expected that once the pandemic situation eases and you are able to return to campus, you will meet in groups and carry out field research on the subject you choose. Group Project reports will have to be submitted toward the end of the summer semester and a scheduled end-sem exam will also be conducted in accordance with the exam schedule of summer semester 2021.

There will be no scheduled examination this semester and all of you will get an I grade at the end of it. However you will be marked for in-class participation and this will constitute 10% of your overall grade. 40% will be accorded to your group projects and 50% to a scheduled end-sem exam at the end of the summer semester.

Course Introduction
This course is designed to encourage students to understand, explore and analyze ways in which science and technology relate to society. Science and technology studies (STS) is a growing field of study around the world that seeks to understand how science and technology shape human lives and livelihoods and how society and culture, in turn, shape the development of science and technology.

**Course Objectives and Outcomes**

By focusing attention on science and technology as *human institutions*, situated in wider historical, social, and political contexts, STS seeks to provide insights into the deep relationship between science and technology and such basic categories of social thought as race, gender, class, the environment, democracy and development and human rights among others. This course in other words, intends to introduce students to some of the key philosophical, sociological and historical approaches towards understanding the workings of science and technology in our times.

By the end of the course it is expected that students will be raising questions and finding their own answers to the meanings of science and technology in their varied epistemological, social, political and cultural contexts. They will be able to generate critical discussion around the impact of STS studies on their received ideas about science and reflect upon their own responsibilities in communicating these ideas to society at large.

**Course Structure and Content**

The course will be organized around two basic units. The first unit will introduce students to the historical and sociological approaches to the understanding of science and technology. They will be introduced to the ideas and works of some of the key thinkers and writers in this field and the nature of contemporary debate on the subjects raised by them. By the end of this segment they would be able to explore their own answers to questions such as a) what are the questions that STS studies raise about science and technology that compel us to question our received ideas and
assumptions? b) How have the questions and problems raised by historical and sociological studies of science and technology impacted on our understanding of the career of modern science in India? c) In what ways does politics and culture work to define our received images of science and technology?

Following this broad introduction to STS, students will be introduced to one of the major fields of research within it i.e. Social Studies of Technology. In this section students will be encouraged to take the theoretical questions raised in Unit One and pursue a field based research study as a Group Project. The focus will be on the “Lives of Digital Technologies in contemporary India. Students will have to identify research themes that illuminate ways in which digital technologies have mediated our lives in spheres of learning, work, social relationships, leisure and consumption and politics.” This year these themes will have to be studies in the context of the extraordinary phenomenon of the Covid pandemic. Details of how the projects should be carried out will be provided as we reach that state.

Unit One

Introduction to STS as a field of study and research in the twentieth century

- Historical, Anthropological and Sociological Approaches to Science and Technology and Society.
- The growth and identity of Modern Science and Technology in India

Unit Two : Project based studies of the Lives of Digital Technologies in contemporary India.

Course material will be provided to you in the form of e-resources, books, articles, talks etc. These will be kept in a common repository that can be accessed by all.

Class Organization

The entire class will be randomly broken up into groups of 15 students on an average and each student assigned to a group will continue to remain in it throughout the
semester. The group leader (either elected or volunteered) must provide the name, ID numbers and @mail addresses of all members by the second week of the course. It will the responsibility of the selected individual to interface with the faculty on behalf of the group, make sure the assigned tasks are undertaken efficiently and on time. TAs for the course will coordinate all Group related issues.

**EVALUATION**

*Please refer to note at the top.*

**Select readings:**

- Haraway, D Simians, Cyborgs & Women New York 1989
- Kuhn, T The Structure of Scientific Revolutions New York 1967
- Bose, D.M., S.N.Sen and B.V. Subarayappa (ed) A Concise History of Science in India, (New Delhi, 1971)
- Chakrabarti, Pratik, Western Science in Modern India, Metropolitan Methods, Colonial Practices, (New Delhi 2004)
- ------------------------, The Nation and its Fragments: Colonial and Post-Colonial Histories, (Delhi, 1995)
- Chowdhury, Indira, Frail Hero, Virile History: Gender and the Politics of Culture in Colonial Bengal, (New Delhi, 1997)
- Dasgupta Subrata, Jagadish Chandra Bose: An Indian Response to Western science, (Delhi, 1999)
- Edney, Matthew, Mapping an Empire: The Geographical Construction of British India, 1765-1843, (Chicago, 1997)
• Habib, S.Irfan and Dhruv Raina ,(eds) Situating the History of Science :Dialogues with Joseph Needham, (Delhi, 1999)
• Harrison, Mark, Public Health in British India : Anglo-Indian Preventive Medicine,1859-1914,(Cambridge,1954)
• Deepak Kumar , (ed) Science and Empire : Essays in Indian Context, (Delhi, 1991)
• Deepak Kumar ,Science and the Raj, 1857-1905, (Delhi, 1995)
• Nandy, Ashis, Alternative Sciences : Creativity and Authenticity in Two Indian Scientists (Delhi, 1995)
• ----------------, Science, Hegemony and Violence,

• Gyan Prakash,Another Reason: Science and the Imagination of Modern India (Delhi,1999)
• 
• Raina,Dhruv Images and Contexts :The Historiography of Science and Modernity, (Delhi,2003)
• Said, Edward Orientalism (London,1985)
Shapin Steven, The Scientific Revolution
• Shapin Steven, A Social History of Truth
• Venkatraman, G. A Journey into Light (Delhi,1998)
Visvanathan, Shiv, Organizing for Science : the Making of an Industrial Research Laboratory ( Delhi,1985)
• Visvanathan Shiv, A Carnival For Science; Essays on Science, Technology and Environment

Reading tips

Find answers to the following questions
• What is the reading about?
• Why and how the reading fits into the course theme and sequence of lecture?
• What is the specific argument the author intends to communicate?
• What methodology does he deploy to build up his argument?
• What are author’s sources and points of reference?
• Can you relate the author’s views with your own understanding of the issue?
• How do you reflect upon the reading? What are your points of agreement and disagreement?
Honors Code:

 Academic dishonesty cheating, plagiarism or any kind of deceit- will not be tolerated, and will result in a zero for the assignment. If you have any questions about what constitutes plagiarism, please ask. All ideas and words that you did not generate yourself must be cited in your papers. I do not anticipate this scenario for the work required in this class, but in extreme cases I reserve the right to assign a failing grade for the course or a specific assignment.