



Birla Institute of Technology & Science, Pilani
Hyderabad Campus

FIRST SEMESTER 2019-2020
Course Handout Part II

01-08-2019

In addition to Part-I (General Handout for all courses appended to the time table), this portion gives further specific details regarding the course.

Course No : BITS F399
Course Title : Humanistic Theories of Science and Technology
Instructor : Biswanath Dash

Scope and objective of the course:

This course will introduce ways of considering the interrelationship among three major dimensions of our culture-- science, technology and humanistic orientation. The main focus of the course will be to understand various theories that explain the relationship between science, technology and society. In the process, the students will learn alternate ways of thinking about science and technology, and will be encouraged to question the 'taken for granted' ideas about scientific knowledge and technological artifacts. It offers scope to probe mutual shaping of society and 'science and technology'.

Text Book:

1. Sismondo, Sergio. 2004. *An introduction to Science and Technology Studies*. UK: Blackwell Publishing.

Reference Material: Will be announced in the classroom.

Course Plan:

Lecture No.	Learning Objective	Topics to be covered	Chapter in the Text Book
1-2	Understanding the core concepts	Science, Technology, Humanities : their Interrelationship	TB Chapter 1
3-14	To get an introduction to various conceptual and key theoretical debates concerning science and its method	Rationality- Key thinkers, Plato, Descartes, Chomsky etc. Empiricism- Francis Bacon, John Locke etc.	Reading materials



		Evolution of Scientific Method- Galileo, Newton etc.	
15-20	Develop a perspective on 'Science and Technology Studies' (STS)	Understanding growth of science- Popper and Kuhn Criticisms- Paul Feyerabend Synthesis: Lakatos	TB Chapter 2, Reading material
20-24	Gain a perspective on 'Sociology of Science'	Institutional view of science, Sociology of Knowledge and Introduction to Social construction	TB-Chapter 3-6
25-35	To critically analyze 'social constructivist' framework	Mutual shaping of science, technology and society. Social Construction of Technology; Actor Network Theory; Laboratory studies	Reading materials, TB Chapter 7,8, 9, 10,11,12
36-42	To reflect on critical and cultural studies of science and technology	Gender and science; Public Understanding of Science; Science Communication	TB Chapter 15 and 16, Reading materials

Evaluation Scheme:

Component	Duration	Weightage (%)	Date & Time	Nature of Component
Mid Semester Test	90 min	30	30/9, 3.30 -- 5.00 PM	Closed Book
Assignment 1 & 2		30		Open Book
Comprehensive Examination	3hrs.	40	5/12 AN	Closed Book

Chamber consultation Hours: Thursday 11-12. Room No. K 131

Notices: Notices, if any, will be displayed on Department Notice Board and CMS.

Make-up: For the components of the evaluation, makeup will be allowed on the basis of documented proof to support the case. If you have a personal or medical emergency, provide copies of the appropriate paperwork to



your instructor as soon as you can. Missing a due date, forgetting an assignment, or simply getting behind is not a valid reason.

Academic Honesty and Integrity Policy:

Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

Biswanath Dash

INSTRUCTOR-IN-CHARGE

