



SECOND SEMESTER 2022-2023

Course Handout Part II

16-1-2023

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-in-Charge : 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. It draws from 'Science Technology Studies (STS)'; an emerging area of inquiry that has become popular in recent times in major universities around the world. It focuses on learning alternate ways of thinking about science and technology, in which students are encouraged to question the 'taken for granted' ideas about scientific knowledge and evolution of technological artifacts. The purpose and intent is to constructively probe all forms of knowing including science and critically engage with it. The course offers scope to glean through mutual shaping of society and 'science/technology' and uses several case studies to learn and reflect on how progress is conceptualized.

Text Book:

1. Sismondo, Sergio. 2004. *An introduction to Science and Technology Studies*. UK: Blackwell Publishing.
2. Reference papers to be uploaded on CMS

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
3-10	To get an introduction to conceptual and theoretical	Debates of Rationality- Plato, Descartes, Chomsky.	Reading materials



	debates concerning science and its method: Philosophy and History	Debates over Empiricism- Francis Bacon, John Locke. Evolution of Scientific Method- Galileo, Newton.	
11-20	An introduction to ‘Science and Technology Studies’ (STS)	Understanding growth of science- Popper and Kuhn Criticisms-Paul Feyerabend Synthesis: Lakatos	TB Chapter 2, Reading material
21-25	Gain a perspective on ‘Sociology of Science’	Institutional view of science, Sociology of Knowledge and Introduction to Social Construction	TB-Chapter 3-6
26-32	To critically analyze ‘social constructivist’ framework	Mutual shaping of science, technology and society. Social Construction of Technology; Innovation Studies Actor Network Theory; Laboratory studies	Reading materials, TB Chapter 7,8, 9, 10,11,12
33-39	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 minutes	30	16/03 9.30 - 11.00AM	Closed Book
Assignment		20	TBA	Open Book
Quiz		15	TBA	Closed Book
Comprehensive Examination	3hrs.	35	15/05 FN	Closed Book

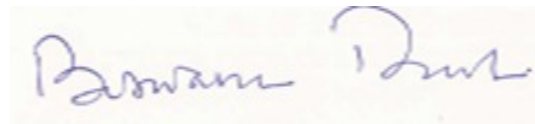
Chamber consultation Hours: Thursday 11-12. Room No. K 131



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

Make-up: The make-up for an evaluation component such as Mid Sem./CE will be given only in genuine cases.

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

