



**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, Pilani**  
**Pilani Campus**  
**AUGS/ AGSR Division**

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**SECOND SEMESTER 2020-21**  
**COURSE HANDOUT**

**Date: 17.01.2021**

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 F214  
**Course Title** : Science, Technology and Modernity  
**Instructor-in-Charge** : SUNITA RAINA

**Instructor(s)** : None  
**Tutorial/Practical Instructors:** None

**1. Course Description:**

This course explores the interaction between science, technology and modern society. We will understand how scientific discoveries and technological developments have influenced and shaped modern societies, and how the beliefs and values of modernity in turn shape sciences and technologies.

**2. Scope and Objective of the Course:**

The course will begin with an overview of the "Scientific Revolution" of the 16th and 17th century that set the stage for the emergence of modernity as a social condition. The focus will then shift to the interplay of science, technology and development. The later part of the course will focus on the role of science and technology in the process of globalization. Finally, we will discuss the critique of the dominant view of science, technology and modernity.

**3. Text Book:**

Jacob, Margaret. 1997. *Scientific Culture and the Making of the Industrial West*. New York: Oxford University Press.

**4. Reference Book:**

Friedman, Thomas L. 1999. *The Lexus and the Olive Tree*. New York: Anchor Books.



## 5. Course Plan:

Module Number	Lecture Sessions	Text Book and Ref. material	Learning Outcome
1. Introduction and overview of the course	Concepts of 'Science,' 'Technology' and 'Modernity'	Relevant readings	Philosophical understanding of the core concepts.
2. Historical Context of the "Modern" world	Renaissance; Scientific Revolution; Science and religion; Enlightenment project; Industrial Revolution;	Relevant readings	Learning the historical origins of modernity
3. Enlightenment Promise of 'Progress'	Technology and progress; Technology and social change; Technology and politics; Approaches to technical policymaking;	Relevant readings	Understanding modern technology within social context
4. Science, Technology and Development	Dominant view of S&T led development; Technologies of production; Environmental Crisis; Appropriate Technology Movement; Intermediate Technology;	Relevant readings	Understanding the role of science and technology in international development
5. Science, Technology and Globalization	S & T in the first globalization; S & T in the second globalization: Information Technology Revolution; Military Technology;	Relevant readings	Learning about the role of science and technology in the process of globalization
6. Major Critiques of the Dominant View	Feminist critique; Post-modern Critique	Relevant readings	Understanding the discontents of modernity.



**6. Evaluation Scheme:**

<b>Evaluation Component</b>	<b>Weightage (%)</b>	<b>Duration (Minutes)</b>	<b>Date of Evaluation</b>
Mid-semester Test	35	90	Will be announced by AUGSD-AGSRD
Other Evaluation Components	25	As desired by the Instructor	Evenly spaced throughout the semester (To be completed ten days before the last day of classwork)
Comprehensive Examination	40	120	Will be announced by AUGSD-AGSRD

**7. Notices:** Notices concerning the course will be communicated to students through email.

**8. Make-up Policy:** For the components of the evaluation, makeup will be allowed on the basis of documented proof to support the case. If you have a 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.

**9. Note (if any):** Please be aware that cutting and pasting from websites is considered plagiarism. Students are advised to document all sources. If you are not sure that you need to document a source, then please ask the instructor. Any hint of plagiarism in an assignment will fetch a zero.

**10. Consultation Hour:** TBA; or by prior appointment.

**Instructor-in-charge**  
Sunita Raina