

## COMMON POOL OF GENERIC ELECTIVES (GE) COURSES

(For all the Generic Elective courses offered by your Department, please put it in the format provided below)

### GENERIC ELECTIVES (GE-1): Politics of Nature

#### Credit distribution, Eligibility and Pre-requisites of the Course

| Course title & Code | Credits | Credit distribution of the course |          |                     | Eligibility criteria | Pre-requisite of the course | Department offering the course |
|---------------------|---------|-----------------------------------|----------|---------------------|----------------------|-----------------------------|--------------------------------|
|                     |         | Lecture                           | Tutorial | Practical/ Practice |                      |                             |                                |
| Politics of Nature  | 4       | 3                                 | 1        | 0                   |                      |                             |                                |

#### Learning Objectives

This introductory course familiarizes students with major themes in the history of human inter-action with nature. It studies the long-term transformations made by humans on their surrounding environment and the reciprocal effects of nature on societies. The themes include the inter-actions between humans and other living species, link between imperialism and environmental transformations, profligate use of resources, population growth, increasing urbanisation, carbon emission, and climate crisis. By focusing on the planetary scale of ecological interconnected-ness, the course enables students to understand the social, political, and cultural roots of the current environmental crisis. The course will also elaborate how the interdisciplinary approach enabled the environmental historians to arrive at new methodology in critically understanding the past. It integrates concepts and insights from Anthropology, Historical-Geography, Climate Science, Political Ecology, and Economics. The paper explains the politics of nature in terms of an increasing inequality in access to natural resources and the social responses to the unequal distribution of the effects of environmental degradation. Discussions on the politics

of nature on a planetary scale will encourage students to innovate and suggest policy changes at the national and international level.

### Learning outcomes

Upon completion of this course the student shall be able to:

- Discuss environmental issues within a social and political framework.
- Examine the role of social inequality. How does unequal distribution of and unequal access to environmental resources help understand the environmental crisis of the world - from the global to the local.
- Critique an understanding of environmental concerns based on a narrow scientific/technological perspective.
- Analyse the historical agency of animals.
- Understand how ideas about the environment have evolved in various socio-ecological contexts.
- Examine the complexities of resource distribution and inequalities of resource use, locating these within specific social contexts, with reference to case studies regarding the urban-environmental problems, industrial hazards and the environmental impacts of the mega-infrastructure projects.
- Locate solutions to the contemporary environmental problems within a framework of greater democratisation of resource use.

### SYLLABUS OF GE-1

#### Unit I: Doing Environmental History

1. The themes of Environmental History.
2. Interdisciplinarity; Historical-Geography, Anthropology, Archaeology, and Political Ecology

#### Unit II: Societies and Natural Resources in the Pre-Modern World

1. Human-animal interactions
2. Pre-Industrial Prime Movers and Fuels

#### Unit III: Ecology and Imperial Power in the Early Modern World

1. The Columbian Exchange; Diseases
2. Colonialism and Natural Resources; Ecological Imperialism

#### Unit IV: The Worlds of Fossil Energy

1. Industrial Agriculture Steam Ships and Hydraulic Engineering
2. Cities and Environment; Delhi and Bombay

#### Unit V: The Great Acceleration and the Future

1. Carbon Emission and Environmental Justice; Climate Change
2. The Anthropocene Debate

### Essential Readings

**Unit I.** This unit provides an overview of the major themes of environmental history and elaborates the interdisciplinary approaches developed by the environmental historians to study the past. **(Teaching time: 3 weeks approx)**

- Hughes, Donald (2006), What is Environmental History?. Cambridge: Polity Press. Chapter 1, pp. 1-17 ["Defining Environmental History"]
- McNeil, J. R. and Mauldin, E. S. (2012). A Companion to Global Environmental History. Oxford: Wiley-Blackwell, Introduction pp. xvi-xxiv.
- Conrad, Sebastian (2016), What is Global History. Princeton: Princeton University Press, pp. 1-17 ["Introduction"].
- Bayly, C. A, et al., "AHR Conversation: On Transnational History," The American Historical Review, Vol. 111, No. 5, pp. 1440-64.

**Unit II.** This unit examines human interactions with the environment in pre-modern societies. The two rubrics are aimed to explore how human interaction with animals and the development of energy harnessing technologies transformed social relationships, practices, and ideas. **(Teaching time: 3 weeks approx.)**

- Richard Bulliet. Hunters, Herders and Hamburgers: The Past and Future of Human- Animal Relationships. New York: Columbia University Press, 2005, pp. 205 -224.
- Edmund Burke III. "The Big Story: Human History, Energy Regime and the Environment" in Edmund Burke III and Kenneth Pomeranz, eds., the Environment and World History. Berkeley: University of California Press, 2009. pp. 33-53.
- Smil, Vaclav (1994), Energy in World History. Colorado: Westview, 1994 [Chapter 2 "Energy in Prehistory, pp. 15-27; Chapter 3 "Traditional Agriculture," pp. 28-91; Chapter 4 "Pre-Industrial Prime Movers and Fuel, 92-156].
- Deloche, John (1993), Transport and Communication in India: Prior to Steam Locomotion. New Delhi: Oxford University Press, pp. 227-254.

**Unit III.** : This unit explores how Empires of the New World transferred flora and fauna across continents, affected the demography of local societies and completely transformed landscapes. The second rubric explains how colonialism generated new patterns of consumption by appropriating global resources and fossil fuels for industry, to produce an interconnected but unequal world. **(Teaching time: 3 weeks approx.)**

- Crosby, Alfred W. (1967). "ConquistadoryPestilencia: The First New World Pandemic and the Fall of the Great Indian Empires," The Hispanic American Historical Review, Vol.47(No.3), pp. 321-337.
- Crosby, Alfred W. (1988), "Ecological Imperialism: The Overseas Migration of Western Europeans as a Biological Phenomenon," In Donald Worster, ed., The Ends of the Earth. New York: Cambridge University Press. pp. 104-105.
- Cronon, William (1983), Changes in the Land: Indians, Colonists and the Ecology of New England. New York: Hill and Wang, pp.3-18.

- McNeill, J.R. (2012). "Biological Exchange in Global Environmental History," In J. R. McNeill & E. S. Maudlin, eds., *Companion to Global Environmental History*. Oxford: Blackwell, pp. 433-452.

**Unit IV.** This unit studies the new energy regimes of the modern world, with a special focus on the histories of landscape transformations. It offers a historical perspective on the increasing inequality of access to natural resources, especially in the context of industrialisation of agricultural production, hydraulic engineering, and the urbanization of natural resources. **(Teaching time: 3 weeks approx.)**

- McKittrick, Meredith (2012), "Industrial Agriculture," In J. R. McNeill & E. S. Maudlin, eds., *Companion to Global Environmental History*. Oxford: Blackwell, pp. 411-432.
- Carse, Ashley (2014), *Beyond the Big Ditch: Politics, Ecology, and Infrastructure at the Panama Canal*. Cambridge, MA: The MIT Press, [Chapter 3: "Making the Panama Canal Watershed", pp. 37-58; Chapter 6: "Canal Construction and the Politics of Water", pp. 93- 120; Chapter 13: "A Demanding Environment," pp. 129-222].
- Awadhendra B. Sharan. *In the City, Out of Place: Nuisance, Pollution, and Dwelling in Delhi, c. 1850-2000*. Delhi: Oxford University Press, 2014 [Introduction; Chapter 4: Pollution-page numbers to be added]
- Riding, Tim (2018), "'Making of Bombay Island': Land Reclamation and Geographical Conception of Bombay, 1661-1728," *Journal of Historical Geography*, Vol. 59, pp. 27-39.
- Klein, Ira (1986), "Urban Development and Death: Bombay City, 1870-1914", *Modern Asian Studies*, Vol.20, No.4, pp.725-754.

**Unit V.** This unit introduces the concept of Anthropocene to discuss emergent concerns regarding the influence of humans on the planet's history. This provides a long-term historical perspective on contemporary environmental issues including global warming and the need for innovation and policy change at the national and international levels. **(Teaching time: 3 weeks approx)**

- Carruthers, Jane, (2011), "Recapturing Justice and Passion in Environmental His-tory: A Future Path", *RCC Perspectives*, No. 3, pp. 57-59.
- White, Sam. (2012). "Climate Change in Global Environmental History," In J. R. McNeill and E. S. Maudlin, eds., *Companion to Environmental History*. Oxford: Blackwell, pp. 394-410.
- Lewis, Simon L. and Maslin, Mark A. (2015). "Defining the Anthropocene," *Nature*, Vol. 519, pp. 171-80.
- Moore Jason W. ed., (2016), *Capitalism in the Web of Life: Ecology and the Accumula-tion of Capital*. London: Verso, pp. 169-192 ["Anthropocene or Capitalocene?: On the Nature and Origins of Our Ecological Crisis,"].

### **Suggestive readings**

- Agarwal, Ravi (2010), "Fight for a Forest," In Seminar, No. 613, pp. 48-52 (On Delhi Ridge)
- Bauer Jordan and Melosi, Martin V. (2012). "Cities and the Environment," In J. R. McNeill and E. S. Maudlin, eds., *Companion to Environmental History*. Oxford: Blackwell, pp. 360-376.
- Brooke, John L. (2014), *Climate Change and the Course of Global History: A Rough Journey*. New York: Cambridge University Press, pp. 370-383 ["The Little Ice Age and the Black Death"].
- Bulliet, Richard. (2005), *Hunters, Herders and Hamburgers: The Past and Future of Human-Animal Relationships*. New York: Columbia University Press, pp. 205 -224.
- Byrne, John, Leigh Glover and Cecilia Martinez, eds. (2002), *Environmental Justice: Discourses in International Political Economy*. London: Routledge, pp. 261-291 ["The Production of Unequal Nature"]
- Corona, Gabriella (2008), "What is Global Environmental History?" *Global Environment*, No. 2, pp. 228-249.
- Culver, Lawrence. (2014). "Confluence of Nature and Culture: Cities in Environmental History," In A. C. Isenberg (ed.), *The Oxford Handbook of Environmental History*. New York: OUP, pp. 553-572.
- Fitzgerald, Amy J. (2015). *Animals as Food Reconnecting Production, Processing and Impacts*. Michigan: Michigan State University Press, pp 9-34.
- Grove, Richard H. (1995), *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860*. Cambridge: Cambridge University Press, pp. 16-72 ["Edens, Islands and Early Empires"].
- Lewis, Simon L. and Maslin, Mark A. (2015). "Defining the Anthropocene", *Nature*, Vol.519(12March), 171-80.
- Malm, Andreas. (2016). *The Rise of Steam Power and the Roots of Global Warming*. London: Verso. pp.389-394
- McKenney Jason. (2002). *Artificial Fertility: "The Environmental Costs of Industrial Age Fertilisers"* In Andrew Kimbrell (ed.), *The Fatal Harvest Reader: The Tragedy of Industrial Agriculture*. London: Island Press, pp.121-129
- Mitchell, Timothy. (2011), *Carbon Democracy: Political Power in the Age of Oil*. London: Verso, "Conclusion: No More Counting on Oil," pp. 231-254.
- Moore Jason W. (ed.) (2016) *Anthropocene or Capitalocene?: Nature, History and the Crisis of Capitalism*. Oakland: PM Press. pp. 173-195
- Moore, Jason W (2015), *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. London: Verso, pp. 241-306 ["The Long Green Revolution: The Life and Times of Cheap Food in the Long Twentieth Century", and "Conclusion: The End of Cheap Nature?"]
- Moore, Jason W. (2014), "The Value of Everything? Work, Capital, and Historical Nature in the Capitalist Ecology," *Review (Fernand Braudel Centre)*, Vol. 37, No. 3-4, pp. 245- 292.
- Morrison, Kathleen D. (2015), "Provincializing the Anthropocene", *Seminar*, No. 673, 75- 80.

- Moss, Jeremy (2015), *Climate Change and Justice*: Cambridge: Cambridge University Press, 2015, pp. 1-16 [Introduction: Climate Justice].
- Nunn, Nathan and Qian, Nancy. "The Columbian Exchange: A History of Disease, Food, and Ideas", *Journal of Economic Perspectives*, Vol. 24, No.2 (2010), 163–188.
- Steffen, Will, Crutzen, Paul J and McNeill J. R. (2008). "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature," *Ambio*, Vol. 36, (No.8), 614-21.
- Sutter, Paul S. (2007), "Nature's Agents or Agents of Empire? Entomological Workers and Environmental Change during the Construction of the Panama Canal," *Isis*, Vol. 98, No. 4, pp. 724-753.
- White Jr, Lynn (1974), *Medieval Technology and Social Change*. London: Oxford University Press, pp. q-38.
- सुर्मतगुहा, (2010) "अठारहवीं शताब्दी के महाराष्ट्र में घास और चारे पर र्नयंत्रण: एक ऐतिहासिक अध्ययन", *महेशभारत में पया विवरण के मुिे*, पर्यसिन, र्िल्ली.

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

## GENERIC ELECTIVES (GE-2): Making of Post-Colonial India

### Credit distribution, Eligibility and Pre-requisites of the Course

| Course title & Code           | Credits | Credit distribution of the course |          |                     | Eligibility criteria | Pre-requisite of the course |
|-------------------------------|---------|-----------------------------------|----------|---------------------|----------------------|-----------------------------|
|                               |         | Lecture                           | Tutorial | Practical/ Practice |                      |                             |
| Making of Post-Colonial India | 4       | 3                                 | 1        | 0                   |                      |                             |

### Learning Objectives

This thematic course introduces the students to various perspectives on India's evolving political, economic, social and cultural conditions from the 1940s to the 2000. The course intends to familiarise the students with some select themes pertaining to the gradual historical transformation of political organizations, the emergence of new forms of socio-political mobilization, the patterns of economic development and cultural representation and peoples' movements in the period under study.

### Learning outcomes

The Learning Outcomes of this course are as follows:

- Draw a broad outline of the history of the early years of the Indian Republic, focusing on the framing of the Constitution, the integration of princely states, the reorganization of states and the features of our foreign policy.
- Examine critically patterns of economic development in the early years of Independence and the subsequent shifts and the persistent problems of uneven development.
- Trace a broad history of political organizations at the national level and political developments in the regional contexts.
- Examine issues of critical relevance with respect to the assertions and mobilization in the movements on the questions of caste, tribe and women.

### SYLLABUS OF GE-2

#### Unit I: Laying the Foundation of the Nation State

1. Making of Indian Constitution and its salient features;

2. Integration of princely states, delineating provincial boundaries and the formation of newer states;

#### **Unit II: Political Trajectories.**

1. Politics and Political Parties: I. Congress hegemony and counter-hegemony, the rise of regional political parties; II. left political parties and Left wing political radicalism; III. J.P. movement / Nav Nirman movement, Emergency and Janta interregnum; and IV. Jansangh and Rise of the BJP.
2. Key features of the foreign policy of India.

#### **Unit III: Socio-Economic Development and underdevelopment**

1. Concept of planned economy and the key features of respective five year plans for agrarian, industrial and other sectors;
2. Shift from the model of mixed economy and public sectors to economic liberalization, privatization and globalisation;
3. Discontents amongst peasants and workers and the larger concerns of economic re-distribution, inequality, sustainability and environment.
4. Peoples' Movements for Rights, Liberation and Social Justice: Dalits, Adivasis and women.

#### **Unit IV: Shaping a new public sphere and its discontents**

1. Education, science and technology;
2. Language and Literature;
3. Cinema and visual art.

#### **Practical component (if any) - NIL**

#### **Essential/recommended readings**

**Unit I:** This unit deals with laying the foundations of the Indian republic by discussing key debates in the framing of the Constitution, some aspects of the finally adopted Constitution and amendments within it particularly focusing upon the questions of citizenship, language, fundamental rights, directive principles and the rights of the minorities. The unit also deals with the integration of princely states and the process of delineating or reorganizing the provincial boundaries. **(Teaching Time: 3 weeks approx.)**

- Agnihotri, Rama Kant (2015), Constituent Assembly Debates on Language, EPW, Feb 21, 2015, pp. 47-56.
- Bhargava Rajiv. (ed.), (2009), Politics and Ethics of the Indian Constitution. New Delhi: Oxford University Press.
- Khosla, Madhav. (2020), India's Founding Moment. HUP.
- Ahmad, Aijaz. (1992). "Three World Theory: End of the Debate". In Theory. London: Verso.
- Asha Sarangi, Sudha Pai. (2011), Interrogating Reorganisation of States: Culture, Identity and Politics in India, Routledge India



- Austin, Granville (1999). *The Indian Constitution: Cornerstone of Nation*, New Delhi: OUP [relevant sections].
- Damodaran, A.K (1987), "Roots of Indian Foreign Policy", *India International Centre Quarterly*. Vol.14. No. 3., pp. 53-65
- Dhavan, Rajeev. (2008). "Book Review: Sarbani Sen, *Popular Sovereignty and Democratic Transformations: The Constitution of India*," *Indian Journal of Constitutional Law*, Vol.8, pp.204-220.
- Markovits, Claude. (2004), *A History of Modern India*. Anthem Press. (Chapter 21)

**Unit II:** This unit traces the trends of the emergence of political parties and movements in post-independence India. This unit will also focus on the key features of India's foreign policy in the period under study, including the non-alignment. **(Teaching Time: 4weeks approx.)**

- Bipan Chandra. *In the name of Democracy: JP Movement and the Emergency*. Penguin Random House India. [Relevant chapters].
- Chatterjee, Partha (ed.). (1997). *State and Politics in India*. Delhi: Oxford University Press. [pp. 92-124].
- Francine Frankel et al, (eds.). (2002), *Transforming India: Social and Political Dynamics of Democracy*. Delhi: Oxford University Press. [Relevant chapters].
- Hasan, Zoya. (2004). *Parties and Party Politics in India*. New Delhi: Oxford University Press. Chapters 9 and 10.
- Jaffrelot, Christophe. (1999). *The Hindu Nationalist Movement and Indian Politics 1925 to 1990s*. New Delhi: Penguin. Chapters 3, 5, 7, 11 to 13.
- Chhibber, Pradeep K (1999). *State Policy, Party Politics, and the Rise of the BJP in Democracy without Associations: Transformation of the Party System and Social Cleavages in India*. Ann Arbor: University of Michigan Press. (pp. 159-176).
- Kochanek, Stanley. (1968). *The Congress Party of India: The Dynamics of One-Party Democracy*. Princeton: Princeton University Press. Chapters 1 to 4, 13 and 16.
- Kumar, Ashutosh (ed). (2016), *Rethinking State Politics in India: Regions within Regions*. New Delhi: Routledge India. [Relevant chapters].
- Nirija Gopal Jayal and Pratap Bhanu Mehta (2011) *Oxford Companion to Politics in India* Oxford University Press
- Subhash C. Kashyap, *Our Parliament* (National Book Trust) (Chapter 15).
- Tarlo, Emma. (2003) *Unsettling Memories: Narratives of the Emergency in Delhi*, Berkeley: University of California Press. Introduction and C (2017), Chaptre (2017), r 2.

**Unit III.** This unit deals with the history of economic developments from 1950s till 2000. It focuses on planning, agrarian issue and industrialisation in the first two decades of Independence and goes on to explore the subsequent liberalization of the Indian economy and the concomitant uneven development. It also links this

history with the unrest amongst peasants and workers as well as with the issues of sustainability and environment. **(Teaching Time: 4 weeks approx.)**

- Bhalla, G.S. (2007). Indian Agriculture since Independence, New Delhi: National Book Trust
- Chadha, G.K. Khurana, M.R. (1989). Backward Agriculture, Unrewarded Labour and Economic Deprivation: Bihar's Contrast with Punjab. EPW, Nov 25, 1989, pp. 2617 - 2623
- Partha Chatterjee (ed.) (1997 State and Politics in India. Delhi: OUP) "Chapter-7: Development Planning and Indian State."
- Roy, Tirthankar. Indian Economy after Independence: Economic History of India 1857- 2010. [Chapter-13].
- Singh, Satyajit K. (2010). "State, Planning and Politics of Irrigation Development: A Critique of Large Dams", in Achin Vanaik and Rajeev Bhargava (eds.), Understanding Contemporary India: Critical Perspective (Hyderabad: Orient BlackSwan), pp. 105-148.
- Kohli, Atul (2006). Politics of Economic Growth in India, 1980-2005: Part I & 2 -- The 1980s. EPW, V 41, No 13, April 1-7, 2006, pp 1251-1259; and EPW, Vol. 41, No. 14 (Apr. 8-14, 2006), pp. 1361-1370.
- Frankel, Francine R. (2005). India's Political Economy. New Delhi: OUP. Chapters 1, 3 and 4.
- Prasad, Archana (2003). Preface: Ecological Romanticism and Environmental History. In Against Ecological Romanticism Verrier Elwin and the Making of an Anti-Modern Tribal Identity.
- Sangeeta Dasgupta, Introduction: Reading the Archive, Reframing 'Adivasi' Histories. IESHR, 53, 1, 2016, pp 1-8.
- Gadgil, Madhav and Ramachandra Guha (1994), Ecological Conflicts and the Environmental Movement in India, Development and Change. Vol 25. pp.101-136.

**Unit IV.** Shaping a new public sphere and its discontents: This unit traces the official policies as well as their contestations and alternatives with regard to some key themes of public sphere in post-independence India, such as Education policy: issues of access and participation; role and nature of the intervention of science and technology; politics over Language; emerging trends in Literature; and representations in Cinema and visual art. **(Teaching Time: 4 weeks approx.)**

- Balaran, Rakhee., Mitter, Partha., Mukherji, Parul Dave. (2021) 20th Century Indian Art: Modern, Post- Independence, Contemporary. Thames & Hudson.
- Brass, Paul R. (2005), Language, Religion and Politics in North India. Cambridge University Press, 1974. (Specially Introduction pp 3-50 and Chapters 3-5 pp 119-275).
- Das Gupta, Jyotirindra. (2018), Language Conflict and National Development: Group Politics and National Language Policy in India. University of California Press. First published, 1970.

- Deshpande Anirudh. (2014), Class, Power and Consciousness in Indian Cinema.
- Dwyer, Rachel. (2002). Cinema India: The Visual Culture of Hindu Film. New Jersey: Rutgers University Press.
- Gupta, Vikas. (2014), 'Changing Discourses on Inequality and Disparity: From Welfare State to Neoliberal Capitalism', in Ravi Kumar, (Ed.), Education, State and Market: Anatomy of Neoliberal Impact, Aakaar, pp 19-57.
- Gupta, Vikas. Agnihotri, Rama Kant. and Panda Minati (Ed.), (2021). Education and Inequality: Historical and Contemporary Trajectories. Orient Blackswan. (Relevant Chapters)
- Hasan Zoya. (ed.), (2019), Forging Identities: Gender, Communities, And The State In India. Routledge. Relevant chapters.
- Qaiser, Rizwan. (2013), "Building Academic, Scientific and Cultural Institutions, 1947- 1958", in his Resisting Colonialism and Communal Politics, Delhi, Manohar, (First published 2011). Pp. 179-240.
- Raina, Dhruv. (2006), "Science Since Independence." India International Centre Quarterly 33, no. 3/4: 182–95, <http://www.jstor.org/stable/23006080>.
- Sahu, Sudhansubala. (2018). "Revisiting Television in India," Sociological Bulletin, Vol. 67 (2), August, pp. 204-219.
- Sinha Gayatri. (2009), Art and visual culture in India, 1857-2007. Relevant Chapters.
- Vasudevan, Ravi. (2011), The Melodramatic Public: Film Form and Spectatorship in Indian Cinema. Palgrave Macmillan.

#### **Suggestive readings - NIL**

- Chandra, Bipan. (2008). India Since Independence. Delhi: Penguin
- Guha, Ramachandra. (2008). India After Gandhi.
- रामचंद्रगुहा. (2016). भारतगांधीकेबाबि, र्िल्ली: पेंगुइनबुक्स

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

## GENERIC ELECTIVES (GE-3): Indian Science and Technology

### Credit distribution, Eligibility and Pre-requisites of the Course

| Course title & Code           | Credits | Credit distribution of the course |          |                     | Eligibility criteria | Pre-requisite of the course |
|-------------------------------|---------|-----------------------------------|----------|---------------------|----------------------|-----------------------------|
|                               |         | Lecture                           | Tutorial | Practical/ Practice |                      |                             |
| Indian Science and Technology | 4       | 3                                 | 1        | 0                   |                      |                             |

### Learning Objectives

This course proposes to examine the interlinkages between science and technology with respect to society in India and its historical relevance and evolution. This paper is thematically arranged and provides a historical overview of Indian Science and Technology and acquaints students with historiographical debates. Further this paper takes a brief survey of the material culture as it evolved in Indian history. The students will study the evolution of agriculture in relation to the environment and animals. This paper will also explore the Indian contribution to the development of astronomy and mathematics, medicine, military and warfare technologies.

### Learning outcomes

The Learning Outcomes of this course are as follows:

- Critically understand the evolution of science and technology in India.
- Understand the interrelationship between science, technology and society.

### SYLLABUS OF GE-3

**Unit I:** Historiography of Science and Technology

**Unit II:** The Environment, Agriculture and Animals

**Unit III:** Mathematics and Astronomy: From Aryabhatta to Sawai Jai Singh

**Unit IV:** Patients, Doctors and Medicines

**Unit V:** Military and Warfare Technologies

## Practical component (if any) - NIL

### Essential/recommended readings

**Unit I:** In this unit students will understand the debates pertaining to the historiography of Science and Technology in India. They will also examine and explore the question why science did not flourish in India despite significant scientific developments. Factors like the prevalence of social inequality acting as a barrier to the development of scientific temperament and experimentation will be explored. **(Teaching Time: 3 weeks approx.)**

- Chattopadhyay, D.P. (1986). History of Science and Technology in Ancient India: The Beginnings, Calcutta: Farma KLM Pvt Ltd, pp. 1-54.
- मुले, गुणाकर. (२००५). भारतीरुतहासमेंतवज्ञान. तिल्ली:रात्रीप्रकाशन. (अध्यारुतवज्ञानऔरसमाि; पृष्ठ११-29, ज्योततषकाआरिऔररवकास; पृष्ठ४१-49, वैतिकतगणतकीसमीक्षा; पृष्ठ५0--66).

**Unit II:** In this unit students will explore the process of human settlement, domestication of animals and transformation in the environment due to the advent of agriculture and introduction of new crops. **(Teaching Time: 2.5 weeks approx.)**

- Saxena, R.C. et al. (1994). A Textbook on Ancient History of Indian Agriculture. Secunderabad: Asian Agri-History Foundation (Chapter 5 Crop Domestication and Diffusion, pp. 29-36).

**Unit III:** This unit will trace the development of astronomical and mathematical sciences from Aryabhatta to Sawai Jai Singh. Students will be acquainted with the rich Indian heritage of astronomy and mathematics. **(Teaching Time: 3.5 weeks approx.)**

- Kochar, Rajesh and Jayant Narlikar. (1995). Astronomy in India: A Perspective, New Delhi: INSA, pp. 1-27.
- Bag, A.K. (1995). 'Mathematical and Astronomical Heritage of India' in D.P. Chattopadhyay et. al., Mathematics Astronomy and Biology in Indian Tradition: Some Conceptual Preliminaries, Delhi: Indian Council for Philosophical Research, pp. 110-128.

**Unit IV:** In this unit, students will delve into the diverse healing systems and practices in India. They will explore the emergence of a syncretic culture of health, healing practices and healers. **(Teaching Time: 3 weeks approx.)**

- Majumdar, R.C. (1971). 'Ayurveda: Origins and Antiquity', in D.M. Bose, Concise History of Science in India, New Delhi: Indian National Science Academy, pp. 213-216; 'Ayurveda and its Classical Division', pp. 227-234; 'Ayurveda in the Middle Ages', pp. 262-265.
- Arnold, David (2000). Science, Technology and Medicine in Colonial India, The New Cambridge History of India, Cambridge: Cambridge University Press, pp. 1-9.

- Nanda, Meera. (2016). Science in Saffron, Delhi: Three Essays (Chapter 3, 'Genetics, Plastic Surgery and other Wonders of Ancient Medicines', pp. 93-120).
- Alavi, Seema. (2008). Islam and Healing: Loss and Recovery of an Indo-Islamic Medical Tradition, 1600-1900. New Delhi: Permanent Black (Introduction).

**Unit V:** This unit will examine the emergence of new military technologies and how these changed the course of warfare techniques in medieval times. Further this unit will also explore the advance-ment of military technologies for colonial dominance in the Indian subcontinent. **(Teaching Time: 3 weeks approx.)**

- Khan, I.A. (2004). Gunpowder and Firearms: Warfare in Medieval India. New Delhi: Ox-ford University Press.
- Habib, Irfan. (2008). Technology in Medieval India 650-1750, New Delhi: Tulika, pp. 87- 98.

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

## GENERIC ELECTIVES (GE-4): Media in History

### Credit distribution, Eligibility and Pre-requisites of the Course

| Course title & Code | Credits | Credit distribution of the course |          |                     | Eligibility criteria | Pre-requisite of the course |
|---------------------|---------|-----------------------------------|----------|---------------------|----------------------|-----------------------------|
|                     |         | Lecture                           | Tutorial | Practical/ Practice |                      |                             |
| Media in History    | 4       | 3                                 | 1        | 0                   |                      |                             |

### Print media – Radio Transmission – The Cinematic Turn – Television and Digital Media

#### Learning Objectives:

The course will apprise the students with the elementary outlines of the history of media in India, from its beginnings to contemporary times. The different forms of media – Print, Audio-Visual and Electronic – the modes and methods will be discussed, and the potent ways in which technology and larger socio-political and economic trends intersected will be highlighted.

#### Learning Outcomes:

Upon successful completion of the course, students will be able to:

- Delineate the historical context within which the beginnings of each media platform can be understood.
- Analyze the state's attempts to control and organize media output through laws and policies.
- Explain the conjunctures of technological breakthroughs, advances and larger socio-economic and political matrices.
- Better appreciate the trends in media production, and its efforts in engaging with current ideological and socio-political issues.

### Course Content

#### Unit I: Forms and Contexts

1. Introduction – Types of media to be studied and their unique Indian context and adaptation
2. Significance and impact of media in history

#### Unit II: Press/Print media

1. Press censorship in British India; Vernacular Press Act

2. Role of the Indian press in the freedom movement; views of Leaders,
3. Press in India after independence: The Press Commissions, Contemporary Opportunities and Challenges

### **Unit III: Radio Transmission**

1. Radio Transmission in Colonial India – Foundation, Inter-war years; AIR Programming, Expansion and broadening of listenership base
2. Establishment and Expansion of Akashvani after 1947 – The Keskar years; Classical vs. Popular; Radio Ceylon and Vividh Bharati
3. Government Policies and Bandwidth matters since the 1970s – end of License Raj; FM Radio Wave; Community Radio; Podcasts

### **Unit IV: The Cinematic Turn**

1. Cinema during Colonial Period - Silent Era, Genres and Censorship
2. Post-Independence Cinema till 1980s- Nation Building, Mainstream cinema and Parallel Cinema
3. Era of Liberalization, Globalization and Privatization- Changes in Production, Distribution and Exhibition, Experimental Cinema

### **Unit V: Studying Television and Digital Media**

1. Television in India-The Doordarshan era- Entertainment, Infotainment
2. Rise of the Satellite TV – Soap Operas and 24x7 News, Changes and Effects.
3. Digital Media - Effects of Digital Media-Privacy and Surveillance, Misinformation and Disinformation

### **Essential Readings and Unit-Wise Teaching Outcomes:**

**Unit I:** As the introductory unit, the focus will be on types of media to be studied and their unique Indian context and adaptations. The cross-fertilization between the terrains of technology, circulation of ideas, means and methods of propagation, and patterns of patronage, production and consumption can be elucidated. **(Teaching time: 2week approx.)**

- Sarkar, S. 2015. Modern Times: India 1880s to 1950s: Environment, Economy, Culture. New Delhi: Orient Blackswan.
- Khanna, A. 2019. Words. Sounds. Images: A History of Media and Entertainment in India. New Delhi: Harper Collins.
- Chatterjee, K, 2020. Media and Nation Building in Twentieth-Century India: Life and Times of Ramananda Chatterjee. New Delhi: Routledge.

**Unit II** This unit will give a broad historical overview of the coming of the printing press in the Indian Subcontinent, and discuss aspects of book production under colonial conditions. It aims to make a historical assessment of how Indian readers consume printed contents through well-chosen case studies. **(Teaching time: 3 weeks approx.)**

- Robert Darnton (2002) “Book Production in British India, 1850-1900” Book History, vol. 5, pp. 239-262.
- A.R. Venkatachalapathy (2012) The Province of the Book, Ranikhet: Permanent Black, “Readers, Reading practices, modes of reading” (chapter 7).



- Krishna Murthy, Nadig (1966) Journalism - Origin Growth and Development of Indian Journalism from Ashoka to Nehru, Prasara, University of Mysore.
- Rao, M. Chalapati (1974) The Press. National Book Trust, New Delhi.
- Devika Sethi. 2016. War over Words : Censorship in India, 1930-1960. Cambridge: Cambridge University Press.
- रामशरणजोशी (2012), मीडिया, मिथ और समाज, Shilpayan; First edition.
- रत्नाकरपाण्डेय, हिंदीपत्रकारिता और समाचारों की दुनिया.
- बिपिनचंद्र, मृदुलामुखर्जी, आदित्यमुखर्जी, केएनपन्नीकर, सुचेतामहाजन: भारतका स्वतंत्रता संघर्ष, अध्याय आठ- प्रेस की आज़ादी के लिए संघर्ष।

**Unit III:** The section on Radio will help the students to understand the complex trajectories of the beginnings and development of Radio transmission in India. With its establishment in the colonial period, radio has expanded its reach and remains the most widespread popular medium of entertainment, infotainment and news across the country. The shifts in government policies, technical and programming/content related matters reflect the changing socio-political and economic milieu, and this section will acquaint the students with the same. **(Teaching Time: 3 weeks approx.)**

- Malik, K.K. Mixed Signals: Radio Broadcasting Policy in India.
- Chatterjee, P.C. Broadcasting in India
- Bandopadhyay, P.K. 2015. The Genesis and Growth of Broadcasting in India: From Lionel Fielden to the Present Day. New Delhi: B.R. Publishing Corporation Ltd
- Gupta, P.S. 2001. "Radio and the Raj." Power, Politics and the People: Studies in British Imperialism and Indian Nationalism. New Delhi: Permanent Black, pp 447-80.
- Pinkerton, A. 2008. "Radio and the Raj: Broadcasting in British India, 1920- 1940." Journal of the Royal Asiatic Society, Vol. 18, No. 2, pp 167-91.

**Unit IV:** The unit will focus on the development of Indian cinema during the colonial period and afterwards. The post-independence cinema and the changes brought about in 1990s and after will also be studied. **(Teaching time: 4 weeks approx.)**

- Rangoonwala, Firoze, 75 years of Indian Cinema, Indian Book Company, Delhi, 1975
- Rangoonwala, Firoze, Bhartiya Chalchitra Ka Itihas, Rajpal & Sons, Delhi, 1975
- Kaul, Gautam, Cinema and the Indian Freedom Struggle, Sterling Publishers Pvt. Ltd., Delhi, 1999
- Vasudev, Aruna, Liberty and Licence in the Indian Cinema, Vikas Publishing House Pvt. Ltd., Delhi, 1978
- Sharma, Manoj, National Movement and Currents of Social Reform in Hindi Cinema: 1931-1947, Proceedings of Indian History Congress, Vol. 66, (2005-2006), pp.492-498, JSTOR
- Chatterji, Shoma A. Subject: Cinema, Object: Women: A Study of the Portrayal of Women in Indian Cinema, Parumita Publications, Calcutta, 1998

**Unit V:** The unit will focus on the development of television and spread of its programming. It will also look into the arrival of 24x7 televisions programming and viewing. Digital media will also be discussed and analyzed. **(Teaching time: 3 weeks approx)**

- Conrad, P. (2016). Television: The medium and its manners. Routledge.
- Devi, S. (2022) Media Discourse in Contemporary India: A study of select news channels. Routledge.
- Fiske, J. (2004) Reading Television. Routledge.
- Ghose, B. (2005). Doordarshan Days. Penguin/Viking
- Gray, J., & Lotz, A. D. (2019). Television Studies. John Wiley & Sons

**Suggested Readings:**

- Finkelstein, D. & Peers, D.M. 2000. Negotiating India in Nineteenth Century Media. London: Palgrave Macmillan
- AS Iyengar. Role of Press and Indian Freedom Struggle
- Madan Gopal. Freedom Movement & The Press : The Role of Hindi Newspapers
- Mann, M. 2017. Wiring the Nation: Telecommunication, Newspaper-Reportage, and Nation Building in British India, 1850–1930. New Delhi: Oxford University Press
- Robert Darnton (2001) “Literary Surveillance in the British Raj: The Contradictions of Liberal Imperialism”, Book History, Volume 4, 2001, pp. 133-176.
- Lelyveld, D. 1995. “Upon the Subdominant: Administering Music on All India Radio.” Social Text, Vol. 39, pp 111-27
- Kripalani, C. 2018. “All India Radio’s Glory Days and Its Search for Autonomy” in Economic and Political Weekly, Vol. 53, No. 37, pp 42-50.
- Jhingan, S. 2011. “Re-embodiment the Classical: The Bombay Film Song in the 1950s” in Bioscope, Vol 2, No. 2, pp 157-79
- Vasudev, Aruna, New Indian Cinema, Delhi, MacMillan, 1986
- Thoravel, Yves, The Cinemas of India, Macmillan, Delhi, 2000
- Rini Bhattacharya Mehta & Rajeshwari V. Pandharipande ed, Bollywood and Globalisation; Indian Popular cinema: Nation and Diaspora, Anthem Press, London, 2010
- डॉ. परमवीरसिंह ,भारतीयटेलिविज़नकाइतिहास।एडुकेशनपब्लिशिंग, (२०१७)

**Note:** Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.