

GENERAL ELECTIVE- CLIMATE CHANGE AND ADAPTATION (GE 15)

| Course title & Code | Credits | Duration (per week) | | | Eligibility Criteria | Prerequisite |
|--------------------------------------|----------|---------------------|----------|--------------------|----------------------|--------------|
| | | Lecture | Tutorial | Practical/Practice | | |
| CLIMATE CHANGE AND ADAPTATION | 4 | 3 | 1 | 0 | Class 12th | NIL |

Learning Objectives:

The course deals with a critical global concern. The key objectives are:

- To explain various dimensions of climate change.
- To develop a detailed analysis of vulnerability and its impacts.
- To discuss the importance of mitigation and adaptation strategies.
- To evaluate the role of global initiatives and policies for climate change.

Learning Outcomes:

On transacting the course students will have an in-depth knowledge of the following:

- Anthropogenic Climate Change and related issues
- Geographic dimensions of vulnerability.
- Impact of climate change, adaptation and mitigation
- Need for effective policy making

Course Outline

Unit 1: Understanding Climate Change: (9 hrs)

- Natural and Anthropogenic causes and evidences

Unit 2: Climate Change and Vulnerability: (9 hrs)

- Physical, Economic and Social Vulnerability

Unit 3: Impact of Climate Change: (10 hrs)

- Ecosystem-Terrestrial and Aquatic; Agriculture and Food Security

Unit 4: Global Initiatives for Adaptation and Mitigation: (9 hrs)

- National and international case studies

Unit 5: Climate Change Policy: (8 hrs)

- Framework from Kyoto to Paris: Role of IPCC;UNFCCC and COPs

Readings

- IPCC. *Climate Change 2022: Impacts, Adaptation, and Vulnerability. SIXTH Assessment Report of the Intergovernmental Panel on Climate Change.* NY, USA:Cambridge University Press, Cambridge, United Kingdom and New York.
- Trevor. M. Letcher (edited) 2009: *Climate Change: Observed impacts on Planet Earth*
- Narain.S 2021:*Climate Change Science and Politics. Centre for Science and Environment*
- Sarah L. Burch and Sara E. Harris: *Understanding Climate Change: Science, Policy and Practice*
- Sen, Roy, S., and Singh, R.B., (2002). *Climate Variability, Extreme Events and Agricultural Productivity in Mountain Regions.* Delhi, India: Oxford & IBH Pub.
- Leary Neil and others, 2008: *Climate Change and Adaptation*
- OECD. (2008). *Climate Change Mitigation: What do we do?* (Organization and Economic Co-operation and Development).
- UNEP. (2007). *Global Environment Outlook: GEO4: Environment for Development.* Nairobi, Kenya: United Nations Environment Programme.
- Reddy M.A, Vijay Lakshmi T “*Climate Change:Vulnerability and Adaptation*”