

Lecture Plan

Name of the College: Government College of Arts, Science and Commerce, Sanquelim - Goa

Name of Faculty: Ms. Hema Umesh Sawant

Subject: Geography

Paper code & Title: GOG-112 & Geography of Climate Change

Program: F.Y.B.A.

Division: NIL

Academic year: 2024-25

Semester: I

Total Lectures: 27

Course Objectives:

1. To introduce students to the nature and scope of climate change and its implications for the Earth's systems.
2. To examine the scientific evidence for climate change and the causes and consequences of this phenomenon.
3. To explore the geography of climate change, including its impacts on bio geography, oceanography, atmospheric sciences, and earth system sciences.
4. To evaluate strategies for mitigating and adapting to climate change, including the role of science and technology, economic and political considerations, and international frameworks and agreements.
5. To analyze case studies of climate change impacts and responses, including the social and economic implications of climate change.

Course Outcome:

- By the end of this course, students will be able to:
1. Explain the nature and scope of climate change and its historical context.
 2. Identify the scientific evidence for climate change and the causes and consequences of this phenomenon.
 3. Analyze the impacts of climate change on land, water, and the atmosphere.

4. Evaluate strategies for mitigating and adapting to climate change, including the role of science and technology, economic and political considerations, and international frameworks and agreements.
5. Apply geographic principles and concepts to analyze case studies of climate change impacts and responses, and to assess the social and economic implications of climate change.

Student Learning Outcome:

- Understand the significance of climate change and its implications for the future.
- Contribute to informed decision-making on climate change policies and initiatives.
- Engage in effective climate change communication and advocacy.
- Promote sustainable practices and contribute to a more resilient future.

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
July	15/07/2024	20/07/2024	01 per	Introduction to Syllabus	List the causes of carbon emission.	Google Maps, Videos & PPT	Climatology by D. S. Lal (2011)
				Carbon Cycle: Causes and Consequences			

July	22/07/2024	27/07/2024	week	Mitigation and Adaption Strategies and Approaches	Explore a range of mitigation strategies, such as reducing greenhouse gas emissions, promoting renewable energy, and improving energy efficiency.	Google Maps, PPT & Videos	Climatology by D. S. Lal (2011)
July	29/07/2024	31/07/2024		Greenhouse Effect	Clearly explain the greenhouse effect, including the role of greenhouse gases in trapping heat in the Earth's atmosphere.	Google Maps, PPT & Videos	Climatology by D. S. Lal (2011)
August	01/08/2024	02/08/2024	2 lectures per week	The Role of Science and Technology in Mitigation and Adaption	Write real-world examples of science and technology being used to address climate change.	Websites- UNFCCC (Recent news, reports, updates etc.)	IPCC Sixth Assessment Report (AR6) UNFCCC reports

				UNFCCC	Read and follow the website of UNFCCC	Recent report videos on UNFCCC	
	05/08/2024	10/08/2024		UNFCCC: Need and Importance			
	12/08/2024	17/08/2024		UNFCCC: Role	List out the need of UNFCCC	Google Maps, PPT & Videos	Climatology by D. S. Lal (2011)
	19/08/2024	24/08/2024		IPCC: Role and Purpose	Prepare for the ISA II: Written Test	Google Maps, PPT & Videos	Climatology by D. S. Lal (2011)
	26/08/2024	31/08/2024		ISA II: Written Test IPCC's Contributions to Climate Change Science:	Compare and note the role between IPCC and UNFCCC	Google Maps, PPT & Videos	Climatology by D. S. Lal (2011)
	02/09/2024	07/09/2024		Kyoto Protocol: Historical Development, Provisions and Mechanisms Impact & effectiveness Challenges and Criticisms	List out environmental benefits of the Kyoto Protocol.	Google Maps, PPT & Videos	Climatology by D. S. Lal (2011)
	09/09/2024	14/09/2024			List out emerging trends in climate policy (e.g., carbon pricing, climate finance, technological advancements) and their implications for future climate agreements.		
			2 lectures per week	Kyoto Protocol: Comparism with subsequent agreements Case studies Future Directions		Google Maps, PPT & Videos	Climatology by D. S. Lal (2011)
September	16/09/2024	21/09/2024		Paris Agreement:	Highlight the	Google	Climatology and

October			Historical Context and Development Key provisions and Mechanisms	key figures and leaders who played crucial roles in the development of the Paris Agreement.	Maps, PPT & Videos	Oceanography by Savindra Singh, Physical Geography by Majid Husain & Climatology by D. S. Lal
	23/09/2024	28/09/2024		Analyse the evolution of international climate cooperation, from the Kyoto Protocol to the Paris Agreement.	Google Maps, PPT & Videos	Climatology and Oceanography by Savindra Singh, Physical Geography by Majid Husain & Climatology by D. S. Lal
	01/10/2024	05/10/2024		Challenges and criticism Comparison with previous agreement	PPT & PDF	Climatology and Oceanography by Savindra Singh, Physical Geography by Majid Husain & Climatology by D. S. Lal
	07/10/2024	12/10/2024	2 lectures per week	Discussion on the topic covered		Climatology and Oceanography by Savindra Singh, Physical Geography by Majid Husain & Climatology by D. S. Lal
	14/10/2024	19/10/2024		Revision based on the syllabus covered	PPT & PDF	Climatology and Oceanography by Savindra Singh, Physical Geography by Majid Husain &

	21/10/2024	22/10/2024
Assessment Rubrics	Component	Max Marks
	ISA 1	10
	ISA 2	10
	Practical	NIL
	Project	NIL
	Semester End Exam	80

			Climatology by D. S. Lal
Revision based on the syllabus covered			Climatology by D. S. Lal (2011)