

Course title: Introduction to Carbon Markets				
Course code: DSE 302	No. of credits: 4	L-T-P distribution: 45-15-00	Learning hours: 60	
Pre-requisite course code and title (if any): UBA 102, Marketing Management -I				
Department: Department of Policy and Management studies				
Course coordinator (s):		Course instructor (s):		
Contact details:				
Course type	Core	Course offered in: Semester 6		
Course Description :				
<p>This course introduces undergraduate students to the fundamentals and working mechanisms of carbon markets, carbon pricing, and GHG accounting, with practical reference to the evolving Indian and global context. Students learn carbon trading, project cycle, offsetting, compliance vs. voluntary markets, and MRV processes through case studies and simplified hands-on exercises. The course is designed for careers in sustainability consulting, climate policy, ESG reporting, and green innovation roles.</p>				
. Course Objectives				
By the end of this course, students will be able to:				
<ul style="list-style-type: none"> - Explain basic concepts of climate change and carbon emissions. - Describe the architecture and governance of global and Indian carbon markets. - Understand market-based instruments (MBIs): carbon taxes, emissions trading systems, and offset markets. - Calculate simple carbon footprints using standard frameworks and tools. - Interpret key aspects of Indian carbon market design and business implications for companies. - Appreciate the role of carbon management in sustainable business decision-making. 				
Course content				
Module	Topic	L	T	P
1	<ul style="list-style-type: none"> - Foundations of Climate Change & Carbon Markets - Climate science basics (GHG, greenhouse effect, global warming) - Role of carbon in climate policy and business - Introduction to carbon markets: global and Indian context 	9	0	
2	<ul style="list-style-type: none"> - Climate Policy, Global Agreements & India's Commitments - UNFCCC, Kyoto Protocol (basics), Paris Agreement - India's climate policies: NDCs, NAPCC, sectoral emissions, ministries - Net Zero 2070 roadmap – simplified - India sectoral emissions profile (case) 	10	0	
3	<ul style="list-style-type: none"> - Market-Based Instruments & Carbon Pricing Tools - Market failure & externalities (concepts for carbon markets) - Carbon tax vs. Emission Trading Systems (ETS) - Compliance vs. voluntary carbon markets - Carbon credits, offsets, Internal Carbon Pricing (ICP) - EU ETS, China ETS, voluntary markets (case studies) 	9	0	
4	<ul style="list-style-type: none"> - Carbon Footprint Assessment (Basic Tools & Methods) - What is a carbon footprint? Scopes 1, 2, 3 (simplified) - GHG Protocol basics – Corporate Standard & Value Chain - Simple carbon footprint calculation (product, event, organisation) - FMCG, manufacturing, hospitality cases - Hands-on: Calculate personal/campus carbon footprint 	8	0	0

5	Evolving Carbon India's Market & Business Implications - PAT, REC, ESCerts - Indian Carbon Market (ICM) design, phases, compliance - Green Credit Programme (GCP) - Role of BEE, MoEFCC, Industry - Business opportunities: carbon neutrality, CSR, ESG - Future trends: Article 6, voluntary markets, credits, new mechanisms	9	0	0
	Total	45	15	60
Evaluation Criteria				
<ul style="list-style-type: none"> • Continuous Assessment (Class participation, discussions, strategy news analysis & presentations) – 20% • Mid-Term Written Exam – 30% • End-Term Written Exam – 50% 				
Learning Outcomes				
By the end of this course, students will be able to:				
Articulate main concepts in climate science and carbon market operation				
- Interpret international and Indian climate policy architecture				
- Explain how market mechanisms and carbon trading work				
- Calculate and analyze basic carbon footprints				
- Understand evolving structure of India's carbon market				
- Relate carbon management decisions to sustainable business practice				
Pedagogical Approach				
- Classroom lectures				
- Short case studies (India-focused)				
- Group discussions & concept mapping				
- Hands-on carbon footprint exercises				
- Guest sessions from industry (optional)				
Materials				
Textbooks:				
Core Texts:				
- Kolstad, C. Environmental Economics (simplified chapters)				
- UNDP. Carbon Handbook (selected sections)				
- World Bank. State and Trends of Carbon Pricing (summaries)				
Web Resources:				
- BEE – National Carbon Market Scheme				
- UNFCCC climate basics				
- MoEFCC GHG Inventory				
- ICAP ETS briefings				
8. Additional Optional Readings				
- Stephan & Lane: The Politics of Carbon Markets				
- Macinante: Effective Global Carbon Markets				
- Articles from Energy Policy, Climate Policy, Applied Energy				
Additional information (if any)				
Student responsibilities: Attendance, timeline adherence for assignments, come prepared with readings / cases according to the session plan and as and when provided				

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Course Reviewers: Prof. Ruchi Jain, Professor and Director of Amity School of Business, Noida.

Dr.Shampy Kamboj , Assistant Professor , NIT Hamirpur.