

JEE 696 Greenhouse Gas Measurement, Mitigation and Monitoring Technology (Semester 1/2024)

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Monday morning (9.00 am – 12.00 pm)

Lecture #	Module	Topic	Expected outcome	Instructor
1 (26 Aug 24)	1. Basic understanding of state of knowledge and current development related to climate change and climate actions	1. State of Knowledge on Climate Change	Understand the objectives and expected outcomes of the course, big picture of climate change and how the knowledge gained from the class fits into that big picture of climate change solution.	AC
2 (2 Sep 24)		2. Climate change policy, greenhouse gas emission and reduction targets (UNFCCC, IPCC, and related international agreements) 3. GHG Emissions: Sources, Sinks and Sectors, IPCC Guidelines for national GHG inventories	Understand the mechanism and aims that the world communities are using to drive cooperations towards emission mitigation.	AC
3 (9 Sep 24)	2. Energy sector	Energy sector: Basic data needs	Understand and able to apply the methodology to measure and estimate greenhouse gas emissions from sources in energy sector.	AP
4 (16 Sep 24)		Energy sector: emission estimate		AP
5 (23 Sep 24)		Energy sector: Mitigation-baseline, measures, and impacts		AP
6 (30 Sep 24)	3. IPPU and waste sector	Waste sector: Basics and emission estimate	Understand and able to apply the methodology to measure and estimate greenhouse gas emissions from sources in IPPU and waste sector.	KW
		Waste sector: Mitigation measures and impacts		KW
7 (7 Oct 24)		Industrial process sector: Basics and emission estimate		AC/Invited
8 (21 Oct 24)	4. AFOLU sector	AFOLU sector: Basics and emission estimate	Identify key sources and how to estimate greenhouse emissions from AFOLU sector.	AC
9 (28 Oct 24)		AFOLU sector: Basics and emission estimate		
10 (4 Nov 24)		AFOLU sector: Basics and emission estimate		
11 (11 Nov 24)		AFOLU: Mitigation measures and its impacts		
12 (18 Nov 24)		AFOLU: Mitigation measures and its impacts		
13 (25 Nov 24)	5. Market and mechanisms	Carbon neutrality, net zero emission concepts	Applied the knowledge to estimate carbon credit, estimate the baseline and mitigation impacts	
14 (2 Dec 24)		Carbon footprint: Scope and estimate		
15 (9 Dec 24)		Carbon credit: Concept and implications		