

GOVERNMENT POLYTECHNIC GARIYABAND

GARIYABAND (C.G.)

LESSION PLAN

SESSION - JAN-JUNE 2025

NAME OF FACULTY : CHANDRESH KUMAR DEWANGAN

DESIGNATION : LECTURER (MECHANICAL)

DEPARTMENT : MINING ENGINEERING

COURSE : BASIC NON CONVENTIONAL ENERGY

COURSE CODE : 2000279(037)

SEMESTER : II

SOURCES

SESSION STARTS FROM : 17.03.2025

Lecture No.	Unit No.	Topic to be Covered	Planned Date	Execution Date	Remarks
1	1	Energy Scenario – Global & Indian	14.03.2025	21/03/25	Lecture + PPT + Discussion
2	1	Conventional vs Non-Conventional Energy Sources	15.03.2025	22/03/25	Lecture + PPT + Discussion
3	1	Advantages & Limitations of Renewable Energy	21.03.2025	28/03/25	Lecture + PPT + Discussion
4	1	Environmental Impact of Energy Use	22.03.2025	29/03/25	Lecture + PPT + Discussion
5	1	Energy Conservation & Management	28.03.2025	04/04/25	Lecture + PPT + Discussion
6	1	Revision (Unit 1)	29.03.2025	05/04/25	Lecture + PPT + Discussion
7	2	Solar Radiation & Measurement	04.04.2025	11/04/25	Lecture + PPT + Discussion
8	2	Solar Collectors – Types & Working	05.04.2025	12/04/25	Lecture + PPT + Discussion
9	2	Flat Plate Collector – Construction & Applications	11.04.2025	19/04/25	Lecture + PPT + Discussion
10	2	Solar Water Heater System	12.04.2025	02/04/25	Lecture + PPT + Discussion
11	2	Solar Photovoltaic System – Principle	18.04.2025	03/05/25	Lecture + PPT + Discussion
12	2	Solar PV Components & Applications	19.04.2025	09/05/25	Lecture + PPT + Discussion
13	2	Solar Energy Storage Systems	25.04.2025	10/05/25	Lecture + PPT + Discussion
14	2	Numericals & Applications of Solar Energy	26.04.2025	27/06/25	Lecture + PPT + Discussion
15	3	Wind Energy – Basics & Availability	02.05.2025	28/06/25	Lecture + PPT + Discussion
16	3	Wind Turbine – Types & Construction	03.05.2025	07/07/25	Lecture + PPT + Discussion
17	3	Horizontal & Vertical Axis Wind Turbines	09.05.2025	14/07/25	Lecture + PPT + Discussion
18	3	Wind Power Plant Layout	10.05.2025	17/07/25	Lecture + PPT + Discussion
19	3	Performance of Wind Turbine	16.05.2025	17/07/25	Lecture + PPT + Discussion

GOVERNMENT POLYTECHNIC GARIYABAND

GARIYABAND (C.G.)

LESSON PLAN

SESSION - JAN-JUNE 2025

NAME OF FACULTY : CHANDRESH KUMAR DEWANGAN

DESIGNATION : LECTURER (MECHANICAL)

DEPARTMENT : MINING ENGINEERING

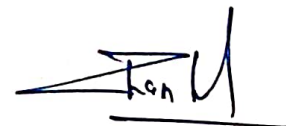
COURSE : BASIC NON CONVENTIONAL ENERGY SOURCES

COURSE CODE : 2000279(037)

SEMESTER : II

SESSION STARTS FROM : 17.03.2025

Lecture No.	Unit No.	Topic to be Covered	Planned Date	Execution Date	Remarks
20	3	Numericals on Wind Energy	17.05.2025	21/07/25	Lecture + PPT + Discussion
21	4	Biomass Energy – Sources & Conversion	23.05.2025	28/07/25	Lecture + PPT + Discussion
22	4	Biogas Plant – Construction & Working	24.05.2025	28/07/25	Lecture + PPT + Discussion
23	4	Types of Biogas Plants	30.05.2025	—	Lecture + PPT + Discussion
24	4	Biofuels – Biodiesel & Ethanol	31.05.2025	—	Lecture + PPT + Discussion
25	4	Waste to Energy Concept	06.06.2025	—	Lecture + PPT + Discussion
26	4	Applications & Case Studies	07.06.2025	—	Lecture + PPT + Discussion
27	5	Geothermal Energy – Principle & Applications	13.06.2025	—	Lecture + PPT + Discussion
28	5	Tidal & Wave Energy	14.06.2025	—	Lecture + PPT + Discussion
29	5	Ocean Thermal Energy Conversion (OTEC)	20.06.2025	—	Lecture + PPT + Discussion
30	5	Hydrogen Energy & Fuel Cell	21.06.2025	—	Lecture + PPT + Discussion
31	5	Small Hydro Power Plant	27.06.2025	—	Lecture + PPT + Discussion
32	5	Final Revision & Model Paper Discussion	28.06.2025	—	Lecture + PPT + Discussion


Chandresh K. Dewangan
Lecturer (Mechanical)


Principal
Govt. Polytechnic
Gariyaband

GOVERNMENT POLYTECHNIC GARIYABAND

GARIYABAND (C.G.)

LESSION PLAN

SESSION - JAN-JUNE 2025

NAME OF FACULTY : CHANDRESH KUMAR
DEWANGAN

DESIGNATION : LECTURER (MECHANICAL)

DEPARTMENT : MINING ENGINEERING

COURSE : BASIC NON CONVENTIONAL ENERGY
SOURCES (LAB)

COURSE CODE :
2000291(037)

SEMESTER : II

SESSION STARTS FROM : 17.03.2025

Practical No.	Unit No.	Experiment / Activity	Planned Date	Execution Date	Remarks
1	1	Energy Scenario & Audit Study – Activity 1 (Hour 1)	18.03.2025	18/03/25	Activity / Calculation / Demonstration (1 hr)
2	1	Energy Scenario & Audit Study – Activity 2 (Hour 2)	18.03.2025	18/03/25	Activity / Calculation / Demonstration (1 hr)
3	1	Energy Scenario & Audit Study – Activity 3 (Hour 1)	25.03.2025	01/04/25	Activity / Calculation / Demonstration (1 hr)
4	1	Energy Scenario & Audit Study – Activity 4 (Hour 2)	25.03.2025	01/04/25	Activity / Calculation / Demonstration (1 hr)
5	1	Energy Scenario & Audit Study – Activity 5 (Hour 1)	01.04.2025	08/04/25	Activity / Calculation / Demonstration (1 hr)
6	1	Energy Scenario & Audit Study – Activity 6 (Hour 2)	01.04.2025	08/04/25	Activity / Calculation / Demonstration (1 hr)
7	2	Solar Energy System Study / Calculation – Experiment 1 (Hour 1)	08.04.2025	15/04/25	Activity / Calculation / Demonstration (1 hr)
8	2	Solar Energy System Study / Calculation – Experiment 2 (Hour 2)	08.04.2025	15/04/25	Activity / Calculation / Demonstration (1 hr)
9	2	Solar Energy System Study / Calculation – Experiment 3 (Hour 1)	15.04.2025	22/04/25	Activity / Calculation / Demonstration (1 hr)
10	2	Solar Energy System Study / Calculation – Experiment 4 (Hour 2)	15.04.2025	22/04/25	Activity / Calculation / Demonstration (1 hr)
11	2	Solar Energy System Study / Calculation – Experiment 5 (Hour 1)	22.04.2025	06/05/25	Activity / Calculation / Demonstration (1 hr)
12	2	Solar Energy System Study / Calculation – Experiment 6 (Hour 2)	22.04.2025	06/05/25	Activity / Calculation / Demonstration (1 hr)
13	2	Solar Energy System Study / Calculation – Experiment 7 (Hour 1)	29.04.2025	13/05/25	Activity / Calculation / Demonstration (1 hr)
14	2	Solar Energy System Study / Calculation – Experiment 8 (Hour 2)	29.04.2025	13/05/25	Activity / Calculation / Demonstration (1 hr)
15	3	Wind Energy System Analysis – Experiment 1 (Hour 1)	06.05.2025	24/05/25	Activity / Calculation / Demonstration (1 hr)

GOVERNMENT POLYTECHNIC GARIYABAND

GARIYABAND (C.G.)

LESSON PLAN

SESSION - JAN-JUNE 2025

NAME OF FACULTY : CHANDRESH KUMAR
DEWANGAN

DESIGNATION : LECTURER (MECHANICAL)

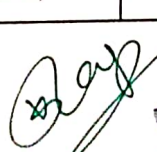
DEPARTMENT : MINING ENGINEERING
COURSE : BASIC NON CONVENTIONAL ENERGY
SOURCES (LAB)

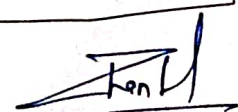
COURSE CODE :
2000291(037)

SEMESTER : II

SESSION STARTS FROM : 17.03.2025

Practical No.	Unit No.	Experiment / Activity	Planned Date	Execution Date	Remarks
16	3	Wind Energy System Analysis – Experiment 2 (Hour 2)	06.05.2025	24/06/25	Activity / Calculation / Demonstration (1 hr)
17	3	Wind Energy System Analysis – Experiment 3 (Hour 1)	13.05.2025	18/07/25	Activity / Calculation / Demonstration (1 hr)
18	3	Wind Energy System Analysis – Experiment 4 (Hour 2)	13.05.2025	18/07/25	Activity / Calculation / Demonstration (1 hr)
19	3	Wind Energy System Analysis – Experiment 5 (Hour 1)	20.05.2025	18/07/25	Activity / Calculation / Demonstration (1 hr)
20	3	Wind Energy System Analysis – Experiment 6 (Hour 2)	20.05.2025	18/07/25	Activity / Calculation / Demonstration (1 hr)
21	4	Biogas / Biomass System Study – Experiment 1 (Hour 1)	27.05.2025	25/07/25	Activity / Calculation / Demonstration (1 hr)
22	4	Biogas / Biomass System Study – Experiment 2 (Hour 2)	27.05.2025	25/07/25	Activity / Calculation / Demonstration (1 hr)
23	4	Biogas / Biomass System Study – Experiment 3 (Hour 1)	03.06.2025	25/07/25	Activity / Calculation / Demonstration (1 hr)
24	4	Biogas / Biomass System Study – Experiment 4 (Hour 2)	03.06.2025	25/07/25	Activity / Calculation / Demonstration (1 hr)
25	4	Biogas / Biomass System Study – Experiment 5 (Hour 1)	10.06.2025	—	Activity / Calculation / Demonstration (1 hr)
26	4	Biogas / Biomass System Study – Experiment 6 (Hour 2)	10.06.2025	—	Activity / Calculation / Demonstration (1 hr)
27	5	Hydrogen / Tidal / OTEC Study – Experiment 1 (Hour 1)	17.06.2025	—	Activity / Calculation / Demonstration (1 hr)
28	5	Hydrogen / Tidal / OTEC Study – Experiment 2 (Hour 2)	17.06.2025	—	Activity / Calculation / Demonstration (1 hr)


Principal
Govt. Polytechnic
Gariyaband


Chandresh K. Dewangan
Lecturer (Mechanical)