

H.L.G. GOVT. COLLEGE TAURU, DISTT. NUH (HRY.)

P.G. DEPARTMENT OF GEOGRAPHY

Lesson Plan for the Session 2025-26 Odd Semester (under NEP-2020)

Name of Teacher: **Dr. Rajpal Bhiduri**, Assistant Professor of Geography

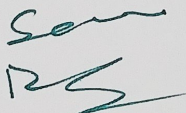
Learning Objectives	Theory Paper	The main objectives of the course are designed to address emerging areas of recent technique-based, skill-oriented theoretical learning. It aims to build professional competence and enhance students' understanding and abilities Drone Technology in as per the requirements of present modern era. The course also provides strong theoretical knowledge of Sensing techniques remotely via various sensors of Satellites & GPS etc. for the Geospatial studies and analysis, in line with the objectives of intensive learning under NEP-2020.
Learning Outcomes	Theory Paper	- The students will be able to understand the fundamentals and significance of Drone technique. - They will learn different functions and controls of flying UAVs. - They will learn about the Drone survey, data handling and utilization of Drone/UAV data. - They will learn and understand the significance of the applications of UAVs in different fields.
Teaching Methodologies used	Latest	ICT Based teaching-learning; PPT, A/V lectures, Field based and Laboratory teaching, UAV's, field works, Assignments, lab tests and Project.

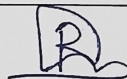
PG DIPLOMA IN RS & GIS 1ST SEM.

Paper: Theory- Fundamentals of Drone Technology

Sr	Class & Paper	Month/ week	Topic/Chapters to be Covered	Academic activities to be organized
1	Fundamentals of Drone Technology Theory Paper PGDRS03 (days 4-6)	Aug. 2025	- Drone (UAV) Technology: Concept, - Principles, - Historical development - Global and India specific, - Components, - Classification and characteristics, - Payload and Range, - Sensors; - Significance of Drone technology.	In class Group Discussion Educational Movie Tree Plantation Familiarization with drone technology and its functions, Lab & Field work
2	Fundamentals of Drone Technology Theory Paper PGDRS03 (days 4-6)	Sept. 2025	- Flight Planning and Functions: - Fundamentals, assembling of parts and Calibration, - Softwares and their integration, - Drone stabilization- Process and benefit, - Basic Flying Controls, - Flight Paths, Flying Conditions; - Advance Functions: GPS Navigation, - Obstacle Avoidance, - Intelligent Flight Modes, - Return Home and Waypoint Navigation.	Familiarization with drone technology planning and its functions, Lab & Field work Essay writing Chart making Competition Class Tests Quiz contest

3	Fundamentals of Drone Technology Theory Paper PGDRS03 (days 4-6)	Oct. 2025	✚ Drones Aerial Surveying and Data Acquisition: ✚ Concept, Data Products, ✚ Data Acquisition Techniques and Tools, ✚ Drone Data Accuracy and Error, ✚ Workflow diagram of Drone survey; ✚ Data Processing and Visualisation, ✚ Drone and GIS Softwares, ✚ Drone Mapping and Data Analysis; ✚ Drone safety and Deep Learning.	Familiarization with drone aerial surveying, data accuracy and Drone safety and Deep Learning, Lab & Field work Poster making Ext. Lecture Project Work Assignments Class Tests
4	Fundamentals of Drone Technology Theory Paper PGDRS03 (days 4-6)	Nov. 2025	✚ Applications of UAVs in civil sectors: land use land cover (LULC) study, ✚ Modern Agriculture, ✚ Forestry, ✚ Disaster Management, ✚ Water Resources, ✚ Environment, Tourism, Media and Photography. ✚ Application of UAVs in security and warfare; ✚ Surveillance, ✚ Drone attacks and Drone Strikes: ✚ major incidents- Global and India specific, ✚ Role of UAVs in war; ✚ Drone Policy of India.	Familiarization with drone technology application and its functions in different fields, Lab & Field work Essay writing Debate Competition Assignments Class Tests
5	Fundamentals of Drone Technology Theory Paper PGDRS03 (days 4-6)	Dec. 2025	✚ Revision of syllabus ✚ Assignments ✚ Class Tests	Assignments Class Tests


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 (Signature)
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