

ME2207 - Renewable Energy Meteorology

COURSE LESSON PLAN			
STUDY PROGRAM: METEOROLOGY			
FACULTY/SCHOOL: FACULTY OF EARTH SCIENCES AND TECHNOLOGY			
INSTITUT TEKNOLOGI BANDUNG			
Course Code: ME2207	Credits: 2	Semester: 4	Course Type: Compulsory course
Course Name	Meteorologi Energi Terbarukan		
	Renewable Energy Meteorology		
Related Course			
Study Materials	Atmospheric dynamics and general circulation.		Expose
	Formation and variation of wind, solar radiation, and rainfall.		Expose
	Measurement and analysis of wind, solar radiation, and rainfall data.		Explore
	Conversion of renewable energy potential into electrical energy.		Expose
	Challenges and opportunities in renewable energy development.		Explore
Learning Outcomes			
Code			
PLO-2.2		Able to demonstrate understanding of basic meteorological knowledge to explain weather or climate phenomena.	
PLO-2.3		Able to explain the fundamental principles of weather observation, including types, functions, and measurement standards of weather and climate parameters.	
PLO-5.2		Possesses good knowledge of the contribution of meteorology in addressing climate change, environmental sustainability, hydrometeorological disasters, and renewable energy.	
Code	CO	Elements of Course Learning Outcomes (CO)	
2.2	01	Students are able to explain the basic concepts and spatiotemporal variations of wind dynamics in the atmospheric boundary layer, the physics of solar radiation reaching Earth’s surface, and the hydrological processes of rainfall in a catchment area.	
2.3	02	Students are able to explain the concepts and instrumentation for measuring wind, solar radiation, and rainfall.	
5.2	03	Students are able to analyze wind, solar, and water energy potential using observational and/or reanalysis data.	
5.2	04	Students are able to understand the challenges and opportunities of meteorological renewable energy development now and in the future.	
Learning Methods		In-person and Online, Synchronous, Individual and Group	
Learning Modalities		Group Discussion, Case Study, Collaborative Learning, Cooperative Learning, Guest Practitioner Lectures	
Assessment Method			