ME3202 - Weather Forecast

COURSE LESSON PLAN **STUDY PROGRAM: METEOROLOGY** **FACULTY/SCHOOL: FACULTY OF EARTH SCIENCES AND TECHNOLOGY** **INSTITUT TEKNOLOGI BANDUNG**				
Course Code: ME3202	**Credits: 3**	**Semester: 6**	**Course Type: Compulsory course**	
Course Name	Prakiraan Cuaca			
	Weather Forecast			
Related Course	ME3101	Analisis Data Cuaca dan Iklim	*Pre-requisite*	
	ME3102	Metode Prediksi Cuaca Numerik	*Pre-requisite*	
Study Materials	Convection parameterization.		*Expose*	
	Radiative transfer computation.		*Expose*	
	Boundary layer parameterization and other sub-grid scale processes.		*Expose*	
	Fundamentals of data assimilation techniques.		*Expose*	
	The WRF mesoscale weather prediction model developed by collaboration among US institutions including NCAR and NCEP.		*Explore*	
	Post-processing techniques for numerical prediction model output.		*Explore*	
Learning Outcomes				
Code	**LO**			
PLO-3.2	Able to process large-scale digital weather and climate data to understand weather and climate phenomena. (C3)			
PLO-3.3	Able to operate computing devices in accordance with the learned algorithms to solve a standard scientific problem standar dalam bidang meteorologi. (C3)			
PLO-4.1	Able to design a simulation of a weather system and/or its environmental interactions for the application of meteorological knowledge. (C3)			
Code	**CO**	**Elements of Course Learning Outcomes (CO)**		
PLO-3.2	1	Students are able to explain the basic principles and apply parameterization schemes (microphysics, convection, radiation, boundary layer, land surface) essential in weather prediction. (C3)		
	2	Students are able to process large-scale digital WRF model output data to understand simulated weather phenomena. (C3)		
PLO-3.3	3	Students are able to run weather prediction simulations using the WRF model for selected cases. (C3)		
PLO-4.1	4	Students are able to design a numerical weather prediction simulation using the WRF model for selected cases. (C3)		
Learning Methods	Lecture Group Discussion Cooperative Learning Problem-based Learning			
Learning Modalities	Synchronous learning Blended/Online Asynchronous			
Assessment Method	Assessment components: Midterm Examination (30%), Final Examination (30%), Laboratory/Practicum (30%), Assignments (5%), and Quizzes (5%). Grading Scale: 80–100% A (maximum competency) 75–80% AB (very good competency) 65–75% B (good competency) 60–65% BC (satisfactory competency) 55–60% C (minimum competency) 45–54% D (below minimum competency) <45% E (far below minimum competency)			