CURRICULUM STRUCTURE BASED ON THE LEARNING OUTCOMES

Intended Learning Outcome (ILO) of Statistics Study Program, Universitas Brawijaya

Indicator	Description
ILO1	The students are able to master basic scientific concepts and statistical analysis methods applied on computing, social science, humanities, economics, industry and life science.
ILO2	The students are able to arrange and/or choose an efficient data collection/ data generated design that applies in surveys, experiments or simulations.
ILO3	The students are able to manage, analyze, and complete the real case using statistical method on computing, social humanities, economics, industry and life science that helped by software, then present and communicate the results.
ILO4	The students are able to master at least two statistical software, including based on open source.
ILO5	The students are able to apply logical, critical, systematic, and innovative thinking independently when applied to science and technology that contain humanities values, based on scientific principles, procedures and ethics with excellent and measurable results.
ILO6	The students are able to take appropriate decisions to solve the problems expertly, based on the information and data analysis.
ILO7	The students are able to improve and develop a job networks, then supervise and evaluate the team's performance they lead.
ILO8	The students are able to apply and internalize the spirit of independence, struggle, entrepreneurship, based on values, norms, and academic ethics of Pancasila in all aspects of life.

Curriculum Structure of Undergraduate of Statistics Study Program

ELECTIVE COURSES		
Optimization Technique, Fuzzy Logic Models, Artificial Neural Network Model, Management Information System, Data Structure, Advanced Computational Statistics, Simulation Method, Capita Selecta of Computational Statistics, Bayesian Analysis, Big Data Analysis	Operation Research, Advanced Data Analysis, Econometrics, Advanced Econometrics, Microeconomics, Macroeconomics, Forecasting Methods, Advanced Regression Analysis, Reliability Analysis, Advanced Statistics Quality Control, Decision Theory, Capita Selecta of Statistical Economics, Consultant Statistics, Actuarial Science,	Stochastic Process, Exploratory Data Analysis, Capita Selecta of Life Sciences, Response Surface, Biometrics, Analysis of Variance, Survival Analysis, Sciences

	Nonlinear Time Series Analysis, Smoothing Method, Industrial Statistics, Social Statistics, Multivariate Analysis II, Measurement Design, Risk Theory	
THEORY AND COMPUTATION	**SOCIAL – HUMANIORA AND ECONOMY – INDUSTRY**	**NATURAL SCIENCE**
SCIENCE GROUP		
COMPULSORY COURSES		
Community Development Participation, Internship, Final Project Indonesian, English, Scientific Research and Writing Method, Statistics Method I, Statistics Method II, Mathematical Statistics I, Mathematical Statistics II, Introduction to Numerical Analysis, Introduction to Probability Theory, Mathematics I, Mathematics II, Matrices and Vector Spaces, Statistical Quality Control, Linear Programming, Computational Statistics, Introduction to Linear Models, Categorical Data Analysis, Introduction to Regression Analysis, Introduction to Experimental Design, Sampling and Survey Techniques, Non-Parametric Statistics, Time Series Analysis, Multivariate Analysis I, Introduction to Set and Logic, Introduction to Experimental Design, Basic Programming, Database, Introduction to Life Sciences, Introduction to Economics, Mathematics, Introduction to Management, Data Mining, Financial Mathematics Religion, Pancasila, and Citizenship		