Statistics

Introduction

In general, progress of sciences including statistics has become a basis on industrial and technological revolution. Growth in statistics has in fact brought various new areas of technological and interdisciplinary sciences. By the presence of medium computers, simulation and statistical modeling, it brought also new study areas like quality operation, best quality, forecasting, biostatistics, risk analysis of consumer satisfaction and others.

Contribution of statistics in the growth of modern technology has been known and confessed as "basis science". The role of technology in global information era which is of vital importance can give an answer to super highway information", so that we are able to reduce our left behind achievements in sciences and technology and then face global competition. In dealing with new technology, statistics students will be able to yield a new breakthrough in facing global competition challenge.

Vision

A world class department in Computational Statistics based on ICT.

Mission

The mission of Statistics Department is to contribute to the global community through the provision of world-class education by :

1. Educating students with fundamental knowledge & skills to apply Computational Statistics using ICT in acquiring business information for a career as a market researcher or business analyst.
2. Providing solid learning experience through creating the most creative and value-added talents of leaders for global community as well as conducting professional services to improve the quality of life.
3. Providing high impact research that positively contributing to the quality of life in Indonesia and the international community

Program Objective

The objectives of the program are :

1. To provide students with a solid knowledge ranging from Fundamental Statistics to Computational Statistics and Database Technology
2. To provide students with abilities conduct statistical analysis and marketing research to solve problem in related fields to be successful market researcher
3. To prepare students with necessary skills in developing database and be expert in data mining to be excellence business analyst

Graduate Competency

At the end of the program, graduates will be able to :

1. Able to apply, analyze and solve problems using Fundamental Statistics.
2. Able to interpret, analyze, and create statistical solution in form of algorithm, using appropriate Database Technology.
3. Able to recognize, apply, and appraise statistical process
4. Able to apply, analyze, formulate and evaluate problem in marketing research using advanced Computational Statistics.
5. Able to create and assess innovative database solution in order to solve real problems in economics and business.
6. Able to design, and evaluate data warehouse and data mining.

Prospective Career of the Graduates

The graduates of the study program Statistics are able to follow careers in :

1. General (Lecturer, Business consultant, Surveyor and Pollster)
2. Business (Quantitative credit analyst, forecasting analyst)
3. Management (Quality operation procedure analyst, Sale forecast analyst, Profit growth analyst, Export-Import analyst, Business index analyst)
4. Computer (System simulation, Pattern recognition, Image processing)
5. Research (LIPI, BPPT, BPS, R&D Department, BEI)

Curriculum

Statistics study program curriculum is developed according to the national curriculum of Statistics Studies, while the local substances are developed according to the ACM (American Computing Machineries), standard curriculum, and market demand. As a result, statistics graduates are expected to be able to compete nationally and internationally.

Course Structure

Sem	Code	Course Name	SCU	Total
1	CB412	CB: Self Development	2	20
	K0424	Calculus I	4	
	T0016	Algorithm and Programming	4/2	
	T0604	Introduction to Information Technology	4	
	K0144	Discrete Mathematics	4	
2	CB422	CB: Spiritual Development	2	20
	K0034	Applied Linear Algebra	4	
	G1372	English Entrant	2	
	T0026	Data Structures	4/2	
	I0262	Probability and Statistics	2	
	K0434	Calculus II	4	
3	G1382	English in Focus	2	20
	I0372	Matrix Algebra for Statistics	2	
	I0164	Statistical Theory I	4	
	I0512	Statistical Computing Lab	2	
	T0044	Object Oriented Programming	2/2	
	I0522	Numerical Methods for Statistics	2	
	I0422	Non Parametric Statistics	2	
	I0642	Sampling Techniques	2	
4	CB432	CB: Interpersonal Development	2	20
	I0533	Regression Analysis	2/1	
	EN001	Entrepreneurship I	2	
	J0594	Economics Theory	4	
	I0542	Operations Research	2	
	I0184	Statistical Theory II	4	
	I0633	Statistical Quality Control	2/1	
5	CB442	CB: Professional Development	2	20
	I0414	Stochastic Process	4	
	I0482	Linear Model	2	
	I0593	Econometrics	2/1	
	I0563	Time Series Analysis	2/1	
	I0662	Interdisciplinary Seminar*	2	
	I0054	Design and Analysis of Experiments	4	

Sem	Code	Course Name	SCU	Total
6	I0652	Statistical Marketing Research	2	20
	K0654	Mathematics of Finance	4	
	I0584	Multivariate Statistics	4	
	EN002	Entrepreneurship II	2	
	Elective Courses			
	I0152	Simulation Techniques	2	
	I0492	Categorical Data Analysis	2	
	I0572	Risk Theory	2	
	I0612	Structural Equation Modeling	2	
	I0622	Statistical Data Mining	2	
	I0552	Survival Analysis	2	
	T1404	Mobile Programming	2/2	
7	I0605	Actuarial Mathematics	4/1	20
	T0773	Database Design	2/1	
	I0674	Interdisciplinary Project *	4	
	Elective Courses II*			
	T0152	Programming Language Concepts	2	
	T0264	Artificial Intelligence	4	
	T0053	Web Programming	2/1	
	T1392	Advanced Object Oriented Programming	2	
	T0233	Data Warehouse	2/1	
	T0206	Database Systems	4/2	
8	I0336	Thesis/Final Project	6	6
	Elective Courses			
	G1402	English for Business Presentation	2	
	G1412	English for Written Business Communication	2	
			TOTAL CREDIT 146	

*) Entrepreneurship Embedded
**) Student choose 8 credits from elective course I
***) Student choose 8 credits from elective course II

Student should pass all of these quality controlled examinations as listed below:

No	Code	Course Name	Minimum Grade
1	CB412	CB: Self Development	B
2	EN002	Entrepreneurship II	C
3	K0434	Calculus II*	C
4	I0184	Statistical Theory II*	C
5	I0533	Regression Analysis	C
6	I0414	Stochastic Process	C
7	I0584	Multivariate Statistics*	C
8	I0633	Statistical Quality Control	C
9	T0016	Algorithm and Programming*	C
10	T0026	Data Structures*	C