Statistics

Introduction

In general, progress of sciences including statistics has become a basis of the 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.

The contribution of statistics in the growth of modern technology has been known and confessed as "basic 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 Statistics based on ICT.

Mission

The mission of Statistics Program 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 and Computer Science 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.

Student Outcomes

After completing the study, graduates are:

1. Able to perform the experimental design, collection and generate data (in survey, experiments or simulations), organizing data, analyzing data using statistical techniques, and valid conclusion by using at least one statistical software;
2. Able to resolve the problem assessment (estimation), testing hypothesis, prediction, and forecasting on several fronts, using data and statistical methodologies (methods and models) and presenting it in a form that easily understood by the description of the user;
3. Able to analyze some alternatives solution in statistical field to solve the problems and able to present the conclusions analysis in order to making the right decision;
4. Able to implement statistical models into software solutions needed.

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	CHAR6013	Character Building: Pancasila	2	20
	STAT6026	Probability and Statistics	2	
	COMP6047	Algorithm and Programming	4/2	
	MATH6038	Calculus I*	4	
	MATH6025	Discrete Mathematics*	4	
	English University Courses I			
	ENGL6128	English in Focus	2	
	ENGL6130	English for Business Presentation	2	
2	CHAR6014	Character Building: Kewarganegaraan	2	21
	MATH6015	Applied Linear Algebra*	4	
	MATH6039	Calculus II	4	
	COMP6048	Data Structures	4/2	
	COMP6060	Programming Language Concepts	2	
	LANG6061	Indonesian	1	

Sem	Code	Course Name	SCU	Total
	English University Courses II			
	ENGL6129	English Savvy	2	
	ENGL6131	English for Written Business Communication	2	
3	CHAR6015	Character Building: Agama	2	20
	STAT6018	Statistical Theory I*	4	
	STAT6058	Sampling Techniques*	2	
	STAT6047	Numerical Methods for Statistics*	2	
	STAT6094	Statistical Computing Lab*	2/2	
	ISYS6169	Database Systems	4/2	
4	STAT6016	Simulation Techniques	2	20
	ENTR6003	Entrepreneurship I	2	
	STAT6020	Statistical Theory II	4	
	STAT6011	Design and Analysis of Experiments	4	
	STAT6037	Non Parametric Statistics*	2	
	STAT6085	Regression Analysis*	2/2	
	STAT6044	Categorical Data Analysis	2	
5	STAT6043	Linear Model*	2	22
	STAT6055	Structural Equation Modeling*	2	
	STAT6040	Scientific Computation*	4	
	STAT6053	Multivariate Statistics*	4	
	STAT6054	Econometrics*	2/1	
	STAT6036	Stochastic Process*	4	
	STAT6115	Statistical Quality Control**	2/1	
6	STAT6051	Time Series Analysis*	2/1	22
	ENTR6004	Entrepreneurship II	2	
	STAT6105	Statistical Marketing Research*/**	4	
	STAT6031	Seminar	2	
	MATH6049	Mathematics of Finance*	4	
	STAT6106	Statistical Process Control*	4	
	STAT6050	Survival Analysis*	2/1	
7	**Enrichment Program**		15	15
8	STAT6030	Thesis	6	6
				TOTAL CREDIT 146 SCU

**) This course is delivered in English*

***) Entrepreneurship Embedded*

English University Courses:

-) *For 1st Semester: English University Courses I, student with score BINUS UNIVERSITY English Proficiency Test less than 500 will take English in Focus, and student with score test greater than or equal to 500 will take English for Business Presentation*

-) *For 2nd Semester: English University Courses II, student with score BINUS UNIVERSITY English Proficiency Test less than 500 will take English Savvy, and student with score test greater than or equal to 500 will take English for Written Business Communication*

Enrichment Program (7th Semester):

-) *Student will take one of enrichment program tracks (off campus).*

Enrichment Internship Track

Code	Course Name	SCU	Total
STAT6090	Internship	8	15
STAT6091	Data Analysis in Industry	2	
STAT6092	Statistical Program in Industry	2	
STAT6117	EES in Statistics Industry	3	

Enrichment Entrepreneurship Track

Code	Course Name	SCU	Total
ENTR6292	Business Start Up	8	15
ENTR6206	Business Model & Validation in Statistics	2	
ENTR6207	Launching New Venture in Statistics	2	
ENTR6405	EES in New Business	3	

Enrichment Research Track

Code	Course Name	SCU	Total
RSCH6225	Research Experience	8	15
RSCH6156	Scientific Writing in Statistics	4	
RSCH6210	Global EES in Statistics	3	

Enrichment Community Development Track

Code	Course Name	SCU	Total
CMDV6125	Community Outreach Project Implementation	8	15
CMDV6074	Community Outreach in Statistics Project Design	4	
CMDV6108	Employability and Entrepreneurial Skills in Statistics	3	

Enrichment Study Abroad Track*

Code	Course Name	SCU	Total
Elective courses list for study abroad*			15
GLOB6005	Elective Course for Study Abroad 1	4	
GLOB6006	Elective Course for Study Abroad 2	4	
GLOB6007	Elective Course for Study Abroad 3	4	
GLOB6008	Elective Course for Study Abroad 4	4	
GLOB6009	Elective Course for Study Abroad 5	2	
GLOB6010	Elective Course for Study Abroad 6	2	
GLOB6011	Elective Course for Study Abroad 7	2	
GLOB6012	Elective Course for Study Abroad 8	2	
GLOB6013	Elective Course for Study Abroad 9	2	
GLOB6014	Elective Course for Study Abroad 10	2	
GLOB6015	Elective Course for Study Abroad 11	2	
GLOB6016	Elective Course for Study Abroad 12	2	
GLOB6041	Elective Course for Study Abroad 25	3	
GLOB6042	Elective Course for Study Abroad 26	1	

*)Transferred courses will be transferred based on credit transfer policies on study program with total of 15 credits.

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

No	Code	Course Name	Minimum Grade
1	CHAR6013	Character Building: Pancasila	B
2	ENTR6004	Entrepreneurship II	C
3	COMP6047	Algorithm and Programming*	C
4	COMP6048	Data Structures*	C
5	STAT6026	Probability and Statistics	C
6	MATH6039	Calculus II*	C
7	STAT6020	Statistical Theory II*	C
8	STAT6085	Regression Analysis	C
9	STAT6036	Stochastic Process	C
10	STAT6053	Multivariate Statistics*	C

*) Tutorial & Multipaper