

Courses

This table aims to give detailed information related to the subjects the students need to take every semester

Semester 1

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Islamic Religion Education	2	Compulsory	-
2	Civics Education	2	Compulsory	-
3	Pancasila	2	Compulsory	-
4	Calculus I	3	Compulsory	-
5	Statistical Methods I	3	Compulsory	-
6	Linear Algebra for Statistics	3	Compulsory	-
7	Programming Algorithm	2	Compulsory	-
8	<i>Business Environment</i>	2	Compulsory	-
9	Practicum of Programming Algorithm	1	Compulsory	-

Semester 2

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Exploratory Data Analysis	2	Compulsory	-
2	Calculus II	2	Compulsory	Passed Calculus I
3	Statistical Methods II	3	Compulsory	Passed Statistical Methods I
4	Introduction to Probability	2	Compulsory	-
5	Database	2	Compulsory	Passed Programming Algorithm
6	Information Technology and Big Data	2	Compulsory	-
7	Disaster Management	2	Compulsory	-

8	Official Statistics	3	Compulsory	-
9	Practicum of Exploratory Data Analysis	1	Compulsory	Currently/have taken Exploratory Data Analysis
10	Practicum of Database	1	Compulsory	Currently/have taken Database

Semester 3

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Multivariable Calculus	3	Compulsory	Passed Calculus II
2	Sampling Technique	3	Compulsory	Passed Statistical Methods I
3	Applied Regression Analysis	2	Compulsory	Passed Statistical Methods II
4	Introduction to Mathematical Statistics I	3	Compulsory	Passed Introduction to Probability
5	Geographic Information Systems	2	Compulsory	Passed Database
6	Management Information Systems	2	Compulsory	Passed Database
7	Statistical Quality Control	3	Compulsory	Passed Statistical Methods II
8	Practicum of Applied Regression Analysis	1	Compulsory	Currently/have taken Applied Regression Analysis
9	Practicum of Management Information Systems	1	Compulsory	Currently/have taken Management Information Systems
10	Practicum of Geographic Information Systems	1	Compulsory	Currently/have taken Geographic Information Systems

Semester 4

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Islam Ulil Albab	3	Compulsory	-
2	Design of Experiment	2	Compulsory	Passed Statistical Methods II
3	Introduction to Mathematical Statistics II	3	Compulsory	Passed Introduction to Mathematical Statistics I
4	Categorical Data Analysis	3	Compulsory	Passed Statistical Methods II
5	Statistical Computing	2	Compulsory	Passed Programming Algorithm
6	Introduction to Stochastic Process	3	Compulsory	Passed Introduction to Probability
7	Modern Prediction & Machine Learning	3	Compulsory	Passed Database
8	Practicum of Statistical Computing	1	Compulsory	Currently/have taken Statistical Computing
9	Practicum of Design of Experiment	1	Compulsory	Currently/have taken Design of Experiment

Semester 5

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Entrepreneurship	2	Compulsory	-
2	English	2	Compulsory	-
3	Bahasa Indonesia for Scientific Communication	2	Compulsory	Passed Statistical Method I
4	Applied Multivariate Statistics	2	Compulsory	Passed Introduction to Mathematical Statistics I

5	Time Series Analysis	2	Compulsory	Passed Applied Regression Analysis
6	Statistical Consulting	3	Compulsory	Passed Statistical Method II
7	Data Visualization	2	Compulsory	Passed Exploratory Data Analysis
8	Practicum of Applied Multivariate Statistics	1	Compulsory	Currently/have taken Applied Multivariate Statistics
9	Practicum of Time Series Analysis	1	Compulsory	Currently/have taken Time Series Analysis
10	Practicum of Data Visualization	1	Compulsory	Currently/have taken Data Visualization

Semester 6

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Islam Rahmatan Lil 'Alamin	3	Compulsory	-
2	Internship	4	Compulsory	Have taken at least 80 credits
3	Final Project 1	3	Compulsory	Have taken at least 90 credits

Semester 7

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Community Development Participation	2	Compulsory	Have taken at least 90 credits
2	Comprehensive Test	1	Compulsory	Have taken at least 120 credits

3	Final Project 1	6	Compulsory	Currently/have taken Final Project I
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Scientific Interest Compulsory Courses

Semester 4

No	Subject	Credit	Prerequisite
1	Data Engineering (DS)	3	-
2	Remote Sensing in Statistics (SK)	3	Passed Disaster Management
3	Business Decision Analysis (BS)	3	Passed Statistical Method II
4	Life Insurance I (AK)	3	Passed Introduction to Probability
5	Work Measurement & Methods (ID)	3	-
6	Introduction to Bioinformatics (BIO)	3	-

Semester 5

No	Subject	Credit	Prerequisite
1	Business Intelligence (DS)	3	Passed Database
2	Introduction to Spatial Statistics (SK)	3	Passed Disaster Management
3	Econometrics for Business (BS)	3	Passed Applied Regression Analysis
4	Life Insurance 2 (AK)	3	Passed Life Insurance I
5	Production Planning & Control (ID)	3	Passed Statistical Method II
6	Introduction to Linux and Shell Scripting (BIO)	3	Passed Database

Semester 6

No	Subject	Credit	Prerequisite
1	Artificial Intelligence for Data Scientist (DS)	3	-
2	Spatial Data Science (SK)	3	Passed Geographic Information Systems
3	Marketing Research & Strategy (BS)	3	Passed Statistical Method II

4	General Insurance (AK)	3	Passed Introduction to Probability
5	Total Quality Management (ID)	3	Passed Statistical Quality Control
6	Health Analytics and Data Mining (BIO)	3	-

Elective Courses

Odd Semester (3, 5, 7, and so on)

No	Subject	Credit	Prerequisite
1	Nonparametric Statistics	3	Passed Statistical Method II
2	Simulation Techniques	3	Passed Programming Algorithm
3	Financial Analysis	3	-
4	Advanced Official Statistics	3	Passed Official Statistics
5	Financial Statistics	3	Passed Introduction to Probability
6	Project Management	3	-
7	Engineering Economics	3	Passed Introduction to Probability
8	Facility Planning and Layout Design	3	-
9	Managerial Accounting	2	-
10	Hydrology and Climatology	2	-
11	Cost Accounting	2	-
12	Introduction to Management	2	-
13	Psychometrics	2	-

Even Semester (4, 6, 8, and so on)

No	Subject	Credit	Prerequisite
1	Operations Research	3	Passed Introduction to Mathematical Statistics I
2	Production Systems	3	Currently/have taken Production Planning & Control
3	Introduction to Survival Analysis	3	Passed Introduction to Probability

4	Model Reliability Computation	3	Passed Introduction to Mathematical Statistics I
5	Response Surface Methodology	2	Passed Applied Regression Analysis
6	Applied Modern Multivariate Statistics	2	Passed Applied Multivariate Statistics
7	Trending Topics on Statistics	3	Passed Statistical Method II
8	ANACOVA Computation	2	Passed Statistical Method II
9	Actuarial Advanced	3	-
10	R for Transcriptomics Data Analytics	3	-
11	R for NGS Data Analytics	3	-
12	Success Skill	1	-

Table of List of Compulsory Student Activities

No	Activity	Credit (skp)
1	Islamic Basic Values Training	20
2	Qur'anic Personal Development Training	20
3	Career and Self Development Training	5
4	Islamic Leadership and Da'wa Training	5