

Bachelor's degree in Science (Statistics)

The plan of study for the Department of Statistics and Operations Research

Specialization: Statistics

Degree: Bachelor of Science

Preparatory Year (31 credit hours)				
Course Code	Title	Credit Hours	Pre-requisite(s)	Co-requisite(s)
ENG 140	English Language 1	8		
ENG 150	English Language 2	8		
MATH 140	Introduction to Mathematics	2		
MATH 150	Differential Calculus	3		
CT 140	Computer skills	3		
CI 140	Learning, Thinking and Research Skills	3		
CHS 140	Health and fitness	2		
MC150	Communication skills	2		
Total		31		

University requirements (8 credits hours)

A student chooses 8 credits hours from the Islamic Culture courses

Compulsory Requirements Within the Department (57 credits)				
Course Code	Title	Credit Hours	Pre-requisite(s)	Co-requisite(s)
STAT 100	Introduction to Statistics	3	MATH 150	
OPER 100	Introduction to Operations Research	4	MATH 150	STAT 100
STAT 105	Statistical Methods	4	STAT 100	
STAT 215	Probability (1)	4	STAT 100 + MATH 111	
STAT 223	Theory of Statistics (1)	3	STAT 215	
STAT 315	Probability (2)	3	STAT 215 + MATH 207	
STAT 326	Theory of Statistics (2)	3	STAT 222 + MATH 207	STAT 315
STAT 328	Statistical Packages	3	STAT 105	
STAT 333	Nonparametric Statistical Methods	3	STAT 105	
STAT 331	Sampling Techniques	3	STAT 223	
STAT 332	Regression Analysis	3	STAT 328 + MATH 244	
STAT 401	Econometrics	3	STAT 332	
STAT 436	Time Series and Forecasting	3	STAT 332	
STAT 437	Design and Analysis of Experiments	3	STAT 328	

STAT 438	Multivariate Statistical Methods	3	STAT 332	
STAT 439	Data Analysis	3	STAT 436 + STAT 438	
STAT 441	Quality Control	3	STAT 326	
STAT 497	Graduation Project (1)	1	STAT 332	Stat 436 + Stat 438
STAT 498	Graduation Project (2)	2	STAT 497	
Total		57		

Compulsory Requirements Outside the Department (17 credits)				
Course Code	Title	Credit Hours	Pre-requisite(s)	Co-requisite(s)
MATH 111	Integral Calculus	4	MATH 150	
MATH 207	Advanced Integral and Differential Calculus	3	MATH 111	
MATH 244	Linear Algebra	3	MATH 111	
CSC 201	Computer Programming	4		
CSC 202	Computer Programming using MATLAB	3	CSC 201	
Total		17		

Elective Requirements From Within the Department Group A (student selects 14 credit hours from this group)				
Course Code	Title	Credit Hours	Pre-requisite(s)	Co-requisite(s)
STAT 231	Population study "Demography"	2	STAT 100	
STAT 325	Decisions Theory	3	STAT 223	
STAT 362	Reliability Theory	3	STAT 223	
STAT 399	Longitudinal Data Analysis	3	STAT 332	
STAT 406	Survival Analysis	3	STAT 223	
STAT 431	Insurance Methods	3	STAT 326	
STAT 432	Survey Methods	2	STAT 331	
STAT 434	Linear Models	3	MATH 244	
OPER 213	Linear Programming	4	OPER 100	MATH 244
OPER 322	Inventory Control	3	OPER 213 + MATH 207	
OPER 351	Network Analysis	3	OPER 213 + CSC 202	
OPER 441	Modelling and Simulation	4	STAT 215 + CSC 201	
OPER 472	Stochastic Processes and Queues	4	OPER 213 + STAT 215	

**Elective Requirements From Outside the Department
Group B (student choose 9 credit hours from this group)**

Course Code	Title	Credit Hours	Pre-requisite(s)	Co-requisite(s)
MATH 160	Computational Mathematics	2	CT 140 & MATH 111	
MATH 225	Introduction to Differential Equations	4	MATH 207	
MATH 352	Numerical Analysis	4	MATH 160 & MATH 244	
MATH 382	Real Analysis I	4	MATH 207	
MGT 101	Principles of Management and Business	3		
MGT 102	Human Resources Management	3	MGT 101	
MGT 103	Entrepreneurship	3	MGT 101	
MGT 104	Principles of Public Administration	3		
MGT 319	Management of Small and Medium Size Businesses	3	MGT 101	
MGT 371	Operations Management	3	MGT 101	
MIS 201	Management Information Systems	3	MGT 101	
ACCT 201	Principles of Accounting and Financial Reporting	3		
ACCT 202	Principles of Cost Managerial Accounting	3	ACCT 201	
ACCT 311	Accounting for Government and Non-Profit Organizations	3	ACCT 201	
ACCT 317	Intermediate Accounting (1)	3	ACCT 201	
ACCT 318	Intermediate Accounting (2)	3	ACCT 317	
ECON 101	Principles of Microeconomics	3		
ECO N 102	Principles of Macroeconomics	3	ECON 101	
ECO N 201	Microeconomics Analysis	3	ECON 102	
ECON 202	Macroeconomics Analysis	3	ECON 102	
ECON 211	Money and Banking	3	ECON 102	
ECON 314	Islamic Economics	3	ECON 102	
ECON 317	Managerial Economics	3	ECON 102	
ECON 318	Transportation and Insurance Economics	3	ECON 102	
MKT 201	Principles of Marketing	3	MGT 101 & Econ 101	
FIN 200	Principles of Finance	3	ACCT 201	
FIN 210	Corporate Finance	3	FIN 200	
FIN 220	Investment Essentials	3	FIN 200	
FIN 230	Financial markets and institutions	3	FIN 200	
FIN 240	Principles of Risk & Insurance	3	FIN 200	
FIN250	International Finance	3	FIN 200	
QUA 127	Mathematics of Finance	3	MATH 140	

Study Plan

Level I		
Course Code	Title	Credit Hours
ENG 140	English Language (1)	8
MATH140	Introduction to Mathematics	2
CI 140	Learning ,Thinking and Research Skills	3
CHS 140	Health and Fitness	2
Total		15

Level II		
Course Code	Title	Credit Hours
ENG150	English Language (2)	8
MATH150	Differential Calculus	3
CT140	Computer Skills	3
MC150	Communication Skills	2
Total		16

Level III		
Course Code	Title	Credit Hours
STAT100	Introduction to Statistics	3
OPER100	Introduction to Operations Research	4
MATH111	Integral Calculus	4
	University requirement	2
	University requirement	2
	Optional decision from Group B	3
Total		18

Level IV		
Course Code	Title	Credit Hours
STAT105	Statistical Methods	4
CSC 201	Computer Programming	4
MATH244	Linear Algebra	3
MATH207	Advanced Integral and Differential Calculus	3
	University requirement	2
	University requirement	2
Total		18

Level V		
Course Code	Title	Credit Hours
CSC 202	Computer programming using MATLAB	3
STAT215	Probability(1)	4
STAT223	Theory of Statistics(1)	3
STAT328	Statistical Packages	3
	Optional decision from Group B	3
Total		16

Level VI		
Course Code	Title	Credit Hours
STAT315	Probability (2)	3
STAT326	Theory of Statistics (2)	3
STAT333	Nonparametric Statistical methods	3
STAT331	Sampling techniques	3
STAT332	Regression analysis	3
	Optional decision from Group B	3
Total		18

Level VII		
Course Code	Title	Credit Hours
STAT436	Time Series and Forecasting	3
STAT437	Design and Analysis of Experiments	3
STAT438	Multivariate Statistical Methods	3
STAT 498	Graduation Project (1)	1
	Optional from Group A	7
Total		17

Level VIII		
Course Code	Title	Credit Hours
439STAT	Data Analysis	3
441 STAT	Quality Control	3
499 STAT	Graduation Project (2)	2
401STAT	Econometrics	3
	Optional from Group A	7
Total		18

Analyzing the Statistics Curriculum					
Course Type		Credit Hours		Percentage	
Preparatory Year			31		23%
University Requirements			8		6%
Required Courses Inside Dept.	Statistics	53	57	39%	42%
	Operations Research	4		3%	
Required Courses Outside Dept.	Mathematics*	10	17	7%	12%
	Comp. Programming	7		5%	
Elective Courses Inside Dept.	Statistics and Operations Research		14		10%
Elective Courses Outside Dept.			9		7%
Total			136		100%

* In addition to two courses given in preparatory year.