College of Science
Vice Dean Academic Affairs
Study Plans
Study Plan of Statistic Program

Study Plan of Operations Research Program

Department of Statistics and Operations Research Study Plan of Operations Research Program Bachelors' Degree	
Common First Year Courses	32
University Requirements Courses	8
Compulsory Courses Within the Department	60
Compulsory Courses Outside the Department	15
Elective Courses from Within the Department	12
Elective Courses from Outside the Department	9
Total Credit Hours	136

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Common First Year Courses (32 credit hours) A student chooses any 8 credit hours from the Islamic studies courses			
Course Code	Course Title	Credit Hours	Pre-requisite
ENG 104 or 105 or 106	English Language	6	-----
ENG 111 or 112 or 113	English Language	6	-----
MATH 101	Differential Calculus	3	-----
STAT 101	Principles of Probability and Statistics	3	-----
CHEM 101	General Chemistry	4	-----
CT 101	Computer Skills	3	-----
ENT 101	Entrepreneurship	1	-----
ARAB 100	Written Skills	2	-----
CI 101	University Skills	3	-----
CHS 101	Fitness and Healthy Culture	1	-----
Total Credit Hours		32	

University Requirement (8 credit hours) A student chooses any 8 credit hours from the Islamic studies courses			
Course Code	Course Title	Credit Hours (Lect. + Exer. + Pract.)	Pre-requisite
IC 100	Studies in the Prophet Biography	2 (2 + 0 + 0)	-----
IC 101	Principles of Islamic Culture	2 (2 + 0 + 0)	-----
IC 102	Family in Islam	2 (2 + 0 + 0)	-----
IC 103	Economic System in Islam	2 (2 + 0 + 0)	-----
IC 104	Islamic Political System	2 (2 + 0 + 0)	-----
IC 105	Human Rights	2 (2 + 0 + 0)	-----
IC 106	Medical Jurisprudence	2 (2 + 0 + 0)	-----
IC 107	Professional Ethics	2 (2 + 0 + 0)	-----
IC 108	Current Issues	2 (2 + 0 + 0)	-----
IC 109	Development Role of Women	2 (2 + 0 + 0)	-----

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Compulsory Courses Within the Department (60 Credit hours)			
Course Code	Course Title	Credit Hours (Lect. + Exer. + Pract.)	Pre-requisite (Co-requisite)
OPER 100	Introduction to Operations Research	4 (3 + 2 + 0)	STAT 101 MATH 101
OPER 213	Linear Programming	4 (3 + 2 + 0)	OPER 100 (MATH 244)
OPER 313	Integer Programming	3 (2 + 2 + 0)	OPER 213
OPER 322	Inventory Control	3 (2 + 2 + 0)	OPER 213
OPER 331	Non-Linear Optimization	4 (3 + 2 + 0)	OPER 213 MATH 201
OPER 351	Network Analysis	3 (2 + 2 + 0)	OPER 213
OPER 371	Stochastic Processes and Queueing Models	4 (3 + 2 + 0)	STAT 215 MATH 201
OPER 385	Decisions and Game Theory	3 (2 + 2 + 0)	OPER 213
OPER 435	Computational Methods in Operations Research	3 (2 + 0 + 2)	OPER 331
OPER 441	Modelling and Simulation	4 (3 + 2 + 0)	OPER 371
OPER 497	Graduation Project (1)	1 (1 + 0 + 0)	OPER 313 OPER 371
OPER 498	Graduation Project (2)	2 (2 + 0 + 0)	OPER 497
STAT 105	Statistical Methods	4 (3 + 2 + 0)	STAT 101
STAT 215	Probability (1)	4 (3 + 2 + 0)	STAT 101 MATH 111
STAT 328	Statistical Packages	3 (2 + 0 + 2)	STAT 105 CSC 111
STAT 332	Regression Analysis	3 (2 + 0 + 2)	STAT 328 MATH 244
STAT 336	Time Series and Forecasting	3 (2 + 0 + 2)	STAT 332
STAT 340	Theory of Statistics (1)	3 (2 + 2 + 0)	STAT 332
STAT 423	Quality Control	2 (2 + 0 + 0)	STAT 332
Total Credit Hours		60	

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Compulsory Courses Outside the Department (15 Credit hours)			
Course Code	Course Title	Credit Hours (Lect. + Exer. + Pract.)	Pre-requisite (Co-requisite)
MATH 111	Integral Calculus	4 (3 + 2 + 0)	MATH 101
MATH 201	Differential and Integral Calculus	4 (3 + 2 + 0)	MATH 111
MATH 244	Linear Algebra	3 (3 + 0 + 0)	MATH 101
CSC 111	Computer Programming (1)	4 (3 + 2 + 2)	CT 101
Total Credit Hours		15	

Elective Courses from Within the Department (12 credit hours) At least one course from OPER courses			
Course Code	Course Title	Credit Hours (Lect. + Exer. + Pract.)	Pre-requisite (Co-requisite)
OPER 415	Dynamic programming	3 (2 + 2 + 0)	OPER 331
OPER 453	Sequencing and Scheduling	3 (2 + 2 + 0)	OPER 331
OPER 490	Special Applications in Operations Research	3 (2 + 2 + 0)	OPER 331
OPER 492	Pricing and Revenue Management	3 (2 + 2 + 0)	OPER 331
STAT 322	Decisions Theory	2 (2 + 0 + 0)	STAT 215
STAT 331	Sampling Techniques	3 (2 + 2 + 0)	STAT 215
STAT 333	Nonparametric Statistics Methods	3 (2 + 2 + 0)	STAT 105
STAT 337	Design and Analysis of Experiments	3 (2 + 0 + 2)	STAT 328
STAT 339	Data Analysis	3 (2 + 0 + 2)	STAT 332
STAT 362	Reliability Theory	3 (3 + 0 + 0)	STAT 215
STAT 402	Econometrics	2 (2 + 0 + 0)	STAT 332
STAT 429	Statistical Survey Methods	3 (3 + 0 + 0)	STAT 331
STAT 434	Linear Models	3 (3 + 0 + 0)	MATH 244

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Elective Courses from Outside the Department (9 credit hours) A student can choose courses either from the same field or from different fields The student must have completed level 3				
Field	Course Code	Course Title	Credit Hours	Pre-requisite (Co-requisite)
1 Economics	ECON 101	Principles of Microeconomics	3	-----
	ECON 102	Principles of Macroeconomics	3	ECON 101
	ECON 211	Money and Banking	3	ECON 102
2 Management	BUS 101	Principles of Management and Business	3	-----
	BUS 102	Human Resources Management	3	BUS 101
	MIS 201	Management Information Systems	3	BUS 101
	BUS 371	Operations Management	3	BUS 101
3 Finance	ACCT 201	Principles of Accounting and Financial Reporting	3	-----
	FIN 200	Principles of Finance	3	ACCT 201
	FIN 220	Investment Essentials	3	FIN 200
	FIN 240	Principles of Risk and Insurance	3	FIN 200
4 Actuarial Science	ACTU 262	Actuarial Corporate Finance	3	MATH 111
	ACTU 371	Mathematics of Finance	4	MATH 111
	ACTU 471	Financial Derivatives	3	ACTU 371
5 Computer Sciences	CSC 113	Computer Programming (2)	4	CSC 111
	CSC 212	Data Structures	3	CSC 113
	CSC 380	Introduction to Database Concepts	3	CSC 212
6 Industrial Engineering	IE 214	Industrial Operations Management (1)	3	STAT 101
	IE 314	Industrial Operations Management (2)	3	IE 214
	GE 402	Engineering Projects Management	3	-----
	GE 403	Engineering Economy	2	-----

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Curriculum Study Plan Table

Common First Year Courses					
Level	Course Code	Course Title	Credit Hours (Lect. + Exer. + Pract.)	Pre-requisite (Co-requisite)	Credit Hours
1	ENG 104 or 105 or 106	English Language	6	-----	**16**
	MATH 101	Differential Calculus	3	-----	
	ENT 101	Entrepreneurship	1	-----	
	CHEM 101	General Chemistry	4	-----	
	ARAB 100	Written skills	2	-----	
2	ENG 111 or 112 or 113	English Language	6	-----	**16**
	CI 101	University skills	3	-----	
	CT 101	Computer Skills	3	-----	
	STAT 101	Principles of Probability and Statistics	3	-----	
	CHS 101	Fitness and healthy culture	1	-----	
Total Credit Hours			32		

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Study Plan for Operations Research Program					
Level	Course Code	Course Title	Credit Hours (Lect. + Exer. + Pract.)	Pre-requisite (Co-requisite)	Credit Hours
3	OPER 100	Introduction to Operations Research	4 (3 + 2 + 0)	STAT 101 MATH 101	**18**
	STAT 105	Statistical Methods	4 (3 + 2 + 0)	STAT 101	
	MATH 111	Integral Calculus	4 (3 + 2 + 0)	MATH 101	
	CSC 111	Computer Programming (1)	4 (3 + 2 + 1)	CT 101	
	University Requirement		2		
4	OPER 213	Linear Programming	4 (3 + 2 + 0)	OPER 100 (MATH 244)	**17**
	STAT 215	Probability (1)	4 (3 + 2 + 0)	STAT 101 MATH 111	
	STAT 328	Statistical Packages	3 (2 + 0 + 2)	STAT 105 CSC 111	
	MATH 244	Linear Algebra	3 (3 + 0 + 0)	MATH 101	
	Elective from Outside the Department		3		
5	OPER 313	Integer Programming	3 (2 + 2 + 0)	OPER 213	**18**
	OPER 351	Network Analysis	3 (2 + 2 + 0)	OPER 213	
	OPER 385	Decision and Game Theory	3 (2 + 2 + 0)	OPER 213	
	MATH 201	Differential and Integral Calculus	4 (3 + 2 + 0)	MATH 111	
	Elective from Outside the Department		3		
	University Requirement		2		
6	OPER 322	Inventory Control	3 (2 + 2 + 0)	OPER 213	**17**
	OPER 331	Non-Linear Optimization	4 (3 + 2 + 0)	OPER 213 MATH 201	
	OPER 371	Stochastic Processes and Queueing Models	4 (3 + 2 + 0)	STAT 215 MATH 201	
	STAT 332	Regression Analysis	3 (2 + 0 + 2)	STAT 328 MATH 244	
	Elective from Outside the Department		3		
7	OPER 435	Computational Methods in Operations Research	3 (2 + 0 + 2)	OPER 331	**18**
	OPER 441	Modelling and Simulation	4 (3 + 2 + 0)	OPER 371	
	OPER 497	Graduation Project (1)	1 (1 + 0 + 0)	OPER 313 OPER 371	
	STAT 423	Quality Control	2 (2 + 0 + 0)	STAT 332	
	Elective from Inside the Department		3		
	Elective from Inside the Department		3		
	University Requirement		2		

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8	OPER 498	Graduation Project (2)	2 (2 + 0 + 0)	OPER 497	**16**
	STAT 336	Time Series and Forecasting	3 (2 + 0 + 2)	STAT 332	
	STAT 340	Theory of Statistics (1)	3 (2 + 2 + 0)	STAT 332	
	Elective from Inside the Department		3		
	Elective from Inside the Department		3		
	University Requirement		2		
Total Credit Hours			104		