



KINGDOM OF SAUDI ARABIA
 IMAM MOHAMMAD IBN SAUD ISLAMIC UNIVERSITY
 COLLEGE OF COMPUTER AND INFORMATION SCIENCES
 INFORMATION SYSTEMS DEPARTMENT
 MASTER OF SCIENCE IN INFORMATION SYSTEMS

المملكة العربية السعودية
 جامعة الإمام محمد بن سعود الإسلامية
 كلية علوم الحاسب والمعلومات
 قسم نظم المعلومات
 ماجستير العلوم في نظم المعلومات

SYLLABUS

Course Code: IS6114 Course Name: Data Analytics

CREDIT HOURS	4
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PREREQUISITE	None
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Instructor:
Contact information and office hours
Office No: To be announced (TBA)
Office Hours: TBA
E-mail: _____@imamu.edu.sa

COURSE DESCRIPTION
This course introduces concepts and skills that can help the students tackle real-world data analysis challenges. It covers concepts from probability, statistical inference, linear regression, and machine learning. It also helps in development of skills such as R programming, data wrangling, data visualization, predictive algorithm building, file organization with UNIX/Linux shell, version control with Git and GitHub, and reproducible document preparation. The course uses motivating case studies that realistically mimic a data scientist's experience. The statistical concepts used to answer the case study questions are also introduced.

COURSE LEARNING OUTCOMES (CLOs)		Aligned SOs
1	Knowledge and Understanding	
1.1	Articulate the strategic use of data analytics.	K2
1.2	Outline the processes by which data analytics is performed.	K1
2	Skills :	
2.1	Utilize the tools and technologies needed to perform data analytics.	S4
3	Values:	
3.1	Function effectively individually as well as on teams to accomplish a common goal	V3
3.2	Write course project reports abiding all ethical standards using leadership and management talents.	V2



3.3	Demonstrate professionalism and responsibility for maximum impact to achieve desired goal.	V1
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TEACHING Strategies
Class lectures, Assignment, Project explanation session.

No	List of Topics	Contact Hours	Self-Learning
1	Introduction to data analytics	4	
2	Visualizing data distributions	4	
3	Introduction to statistics with R; regression; linear models	8	
4	Introduction to data wrangling	4	
5	Text mining	4	
6	Introduction to Machine Learning	4	
7	Large datasets; clustering	4	
8	Introduction to productivity tools; Git and GitHub	4	
9	Project presentations	4	
Total		40	

TEXT BOOK
Introduction To Data Science: Data Analysis And Prediction Algorithms With R by Rafael A. Irizarry

REFERENCES
Data Analytics: Become A Master In Data Analytics, 2017 by Richard Dorsey ISBN: 1547089296

Course Assessment Methods			
No	Assessment Method	Due Week	% of Total Assessment
1	Quizzes	3	10
2	Assignments	5	10
3	Midterm	8	20
4	Project	10	20
5	Final Exam	11	40