



STARK STATE COLLEGE

GENERAL SYLLABUS

Course Information

Course Name: Advanced Data Analysis and Visualization
Course Number: CIS225

Required Materials

Textbook(s): Business Analytics Communicating with Numbers
 Jaggia, Kelly, Lertwachara, Chen
 ISBN10: 126692602X
 ISBN13: 9781266926020

Required Readings: None

Additional Materials: None

Course Outline/Calendar

The date of coverage and order of coverage may be modified based on the faculty member and events beyond the control of faculty members that interfere with class times and teaching.

Week	Reading / Outline <i>(student should read the entire chapter unless otherwise noted in Brightspace)</i>
1	Introduction / Software Install <i>Key Topics: Gain access to course software</i>
2	Getting Started in Excel and R - Appendix Exercises <i>Key Topics: Review key tasks in Excel, get familiar with R</i>
3	Ch 1 Introduction to Business Analytics <i>Key Topics: Introduction, data types, file formats</i>
4	Ch 2 Data Management and Wrangling <i>Key Topics: data management, inspection, preparation, transforming data</i>
5	Ch 3 Summary Measures <i>Key Topics: measures of location, dispersion, shape, outliers</i>
6	Ch 4 Data Visualization <i>Key Topics: methods to visualize</i>
7	Ch 5 Probability and Probability Distributions

Week	Reading / Outline (student should read the entire chapter unless otherwise noted in Brightspace)
	<i>Key Topics: probability, distributions</i>
8	Exam Chapters 1-5
9	Ch 6 Statistical Inference <i>Key Topics: sampling, estimation, hypothesis testing</i>
10	Ch 7 Regression Analysis <i>Key Topics: linear regression</i>
11	Ch 8 More Topics in Regression Analysis <i>Key Topics: regression models</i>
12	Ch 9 Logistic Regression <i>Key Topics: linear probability</i>
13	Ch 10 Forecasting with Time Series Data <i>Key Topics: Time series forecasting</i>
14	Ch 11 Introduction to Data Mining <i>Key Topics: Principal component analysis</i>
15-16	Exam Chapters 6-11