



BMIS 650

Quantitative Analysis

Resources:

IBM SPSS Grad Pack (available from vendors at the link below)

<http://www-01.ibm.com/software/analytics/spss/products/statistics/gradpack/>

Click on the “Buy” tab and select a vendor. I purchase mine from On the Hub.

Various Reading Posted on Moodle

Course Objectives: The first and primary goal of this class is to help students think correctly about quantitative information and how it is used and potentially misused. A secondary goal of the course is to provide students with some understanding of “Big Data”; the two IBM documents will address this. The third goal of the course is to provide students with some hands-on experience with business analytics in a software environment that they will likely encounter in their careers. For this course, we will use IBM’s SPSS analytics software. The full version is available for about \$100 (it’s a 12-month license) to college students. See the IBM link above, select the Buy tab and vendors for the Grad Pack are listed. It is imperative that you purchase the IBM SPSS Statistics **Premium GradPack, the one that includes the forecasting module** and have it loaded and ready to go on the first day of class. We will learn how to think about quantitative phenomena and how to crunch some numbers.

Evaluation: The evaluation in the class will be through cases that require you to analyze data, come to conclusions and answer questions based on quantitative data.

A	93% and above	B -	80% to 82%	D+	67% to 69%
A-	90% to 92%	C+	77% to 79%	D	63% to 66%
B+	87% to 89%	C	73% to 76%	D-	60% to 62%
B	83% to 86%	C-	70% to 72%	F	Below 60%

Class Pre-Work: Prior to class, participants must complete the tutorials and/or case studies listed in parentheses for each weekly topic. Within SPSS, click on Help and then Topics. In the left-hand menu, expand the Case Studies or Tutorial topics to find each assigned topic.

Tentative Schedule

Week 1: January 22	SPSS Introduction and Descriptive Statistics (Tutorial: Introduction, Reading Data, Using Data Editor, Examining Summary Statistics; Case Studies: Base=> Frequencies, Descriptive)
Week 2: January 29	Descriptive Statistics, Data Transformation in SPSS (Tutorial: Creating and Editing Charts; Case Studies: Exploratory Data Analysis)
Week 3: February 5	Cross Tabulation/Tables (Assessment 1) (Tutorial: Crosstabulation Tables; Case Studies: Analysis of Cross-Classification using Crosstabulation)
Week 4: February 12	Regression/Discriminant Analysis (Case Studies: Linear Regression)
Week 5: February 19	President's Day No Class
Week 6: February 26	Regression/Discriminant Analysis (Case Studies: Discriminant Analysis)
Week 7: March 5	Regression/Discriminant Analysis (Assessment 2) (Case Studies: Select Predictors)
Week 8: March 12	Forecasting (Forecasting Option: Bulk Forecasting, Using Expert Modeler)
Week 9: March 19	Forecasting (Forecasting Option: Seasonal Decomposition)
March 26-30	Spring Break
Week 10: April 2	Forecasting (Assessment 3) (Forecasting Option: Uncovering causal relationships)

Assignments: Students will complete three assessments. Each assessment will involve an analysis of a data set and an understanding of the meaning and application of the analysis. Each assessment will be completed outside of class time and will involve the analysis of a data set with answers being entered into Moodle. The assessment can be completed any time beginning Wednesday at noon until the following Monday at 8:00 am MST of the week in which the assessment is scheduled. Each assessment will be worth 1/3 of your final grade.

Mission Statement: *The University of Montana's College of Business is a collegial learning community dedicated to the teaching, exploration, and application of the knowledge and skills necessary to succeed in a competitive marketplace.*

As directed by the Provost, the following paragraph is to be inserted in all syllabus material:

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at <http://www.umt.edu/SA/VPSA/index.cfm/page/1321>.