WILMINGTON UNIVERSITY

COLLEGE OF BUSINESS

BASIC COURSE INFORMATION

COURSE TITLE: **Predictive Analytics**

COURSE NUMBER: **BBA 350**

PRE-REQUISITE(S): **BBA 305 and MAT 312**

COURSE DESCRIPTION:

Students in this course will utilize the data modeling methodologies of least squares and logistic regression, as well as synthesize statistical results into an actionable set of findings and recommendations to guide business decision making. Students will build statistical models and implement regression analysis in real-world problems from business, economics, and marketing research and consumer behavior. Topics include multiple regression models utilizing first-order, second order and interaction models with quantitative and qualitative variables, regression pitfalls, and residual analysis. Students will acquire skills not only in the mechanics of regression analysis but also in deciding on appropriate models, interpreting results, and diagnosing problems.

MAJOR INSTRUCTIONAL GOALS:

GOAL A:

Master the use of linear and logistic regression techniques to discover the relationships between variables in complex data

Learning Objectives: The student will:

A-1 Utilize regression results to develop predictive models

A-2 Analyze model fit in the context of linear and logistic regression

A-3 Interpret coefficients in the context of linear and logistic regression

A-4 Utilize confidence intervals and statistical significance

A-5 Utilize regression capabilities of statistical software such as Microsoft Excel, R, SPSS, and/or SAS/JMP to build statistical models

GOAL B:

Assess data for adherence to the underlying assumptions of linear regression and develop models to correct for violations of assumptions

Learning Objectives: The student will:

B-1 Use analysis of residuals to assess the underlying assumptions required for regression to provide unbiased estimates of coefficients and variances

B-2 Appropriately interpret the results of residual analysis and other statistics to identify violations to the underlying assumptions of regression

B-3 Utilize data transformations and modified regression methodologies, e.g. weighted least squares, to enable analysis of data that does not conform to the underlying regression assumptions

GOAL C:

Build models using the principles of model building and utilize appropriate methodologies within the context of the available data

Learning Objectives: The student will:

C-