WILMINGTON UNIVERSITY

COLLEGE OF BUSINESS

BASIC COURSE INFORMATION

COURSE TITLE: **Forecasting for Business Analytics**

COURSE NUMBER: **BBA 360**

PRE-REQUISITE(S):   **BBA 350**

COURSE DESCRIPTION:

This course provides knowledge of how to choose an appropriate time series forecasting method, fit the model, evaluate its performance, and use it for forecasting. The course will focus on the most popular business forecasting methods: regression models, smoothing methods including moving average (MA) and exponential smoothing, and autoregressive (AR) models. It will also discuss enhancements such as second-layer models and ensembles, and various issues encountered in practice.

MAJOR INSTRUCTIONAL GOALS:

GOAL A:

Identify and understand the key concepts and components of business forecasting

> **Learning Objectives:** The student will:
>
> A-1   Describe the key concepts and components of business forecasting
>
> A-2   Differentiate among different business forecasting models and their applicability to various business situations
>
> A-3   Describe how business forecasting can help business managers better manage their decision making from tactical and strategic perspectives

GOAL B:

Identify, collect, evaluate, and organize relevant business forecasting data

> **Learning Objectives:** The student will:
>
> B-1   Identify techniques for identifying and collecting forecasting data
>
> B-2   Identify required data formats for selected business forecasting techniques

GOAL C:

Critically analyze business problems and develop hands-on expertise in selecting and applying the appropriate forecasting methodologies given the business context

> **Learning Objectives:** The student will:

C-1 Develop and utilize naive forecasting models

C-2 Develop and utilize moving average forecasting models

C-3 Develop and utilize exponential smoothing forecasting models

C-4 Decompose time series into trend, seasonal, cyclical, and irregular variation components

C-5 Develop and utilize simple and multiple linear regression forecasting models components

C-6 Develop and utilize ARIMA (Box-Jenkins) forecasting models

GOAL D:

Develop an understanding of how to interpret the results of business forecasts and communicate actionable insights to business decision makers

Learning Objectives: The student will:

D-1 Measure and interpret forecasting errors

D-2 Compare the results for different forecasting models

D-3 Communicate results, along with strengths and weaknesses of different forecasting models to decision makers

GOAL E:

Demonstrate proficiency in the use of spreadsheet software (Microsoft Excel) for business forecasting

Learning Objectives: The student will:

E-1 Use Excel to develop and utilize a variety of business forecasting models

E-2 Develop a thorough knowledge of available Excel functions and tools to clean, logically reference, transform, and manipulate data

E-3 Gain hands-on experience using general business forecasting software, such as ForecastX

GOAL F:

Exercise critical thinking strategies including problem solving, analysis, and evaluating possible alternatives for business forecasting problems

Learning Objectives: The student will:

F-3 Recognize and identify possible alternatives to solve a business forecasting problem