WILMINGTON UNIVERSITY
COLLEGE OF BUSINESS
BASIC COURSE INFORMATION

COURSE TITLE: Topics in Finance - Derivatives

COURSE NUMBER: MBA 7800

I. RATIONALE:

This course is designed to familiarize students with derivatives markets and corporate risk management techniques. The recent growth in size and scope of the derivatives markets requires finance professionals understand certain basic concepts relating to these securities. This course offers students the chance to enhance knowledge regarding options, forwards, futures, and swaps. Students will build upon knowledge of economic and financial concepts and expand awareness of the current state of the capital markets and the global macroeconomic environment. Thus, the student will understand these complex tools in context of today’s corporate environment.

II. MAJOR INSTRUCTIONAL GOALS:

GOAL A:
The student will demonstrate knowledge of the role of derivatives and identify and describe the various markets that trade derivative contracts.

Learning Outcomes: The student will:

A-1 Define the role of derivatives in the market place including various perspectives
A-2 Explain the concept of financial engineering.
A-3 Discuss the history of the derivative contracts.
A-4 Explain basic derivative transactions including long and short positions as well as bid-ask spreads.

GOAL B:
The student will demonstrate understanding of basic forward and option contracts and the use of these contracts as managing investment risk.

Learning Outcomes: The student will:

B-1 Define, calculate and graph the payoff of long and short forward and option positions.
B-2 Discuss the importance and impact of interest rates regarding forward contracts.
B-3 Define option terminology and definitions including hedging.
B-4 Describe the process of hedging with forward contracts and methods to deal with quantity uncertainty.
B-5 Calculate the value of a call option and put option using the Black Scholes method.

GOAL C:
The student will demonstrate understanding of basic risk management techniques using options.

Learning Outcomes: The student will:
C-1 Define options as insurance including caps, floors, and covered writing.
C-2 Calculate and graph synthetic option positions, spreads, and collars
C-3 Define and understand option greeks including delta, gamma, theta, vega, and rho.
C-4 Calculate basic volatility positions including straddles, strangles, and butterfly spreads.

GOAL D:
The student will demonstrate understanding of financial forwards and futures.

Learning Outcomes: The student will:
D-1 Calculate the value of a prepaid forward without dividends, with discrete dividends, and continuous dividends.
D-2 Define the process of creating synthetic forward contracts.
D-3 Calculate the number of contracts required for cross-hedging with imperfect correlation.
D-4 Calculate the value of currency prepaid forward and forward contracts.
D-5 Explain covered interest arbitrage.
D-6 Calculate the value of a stock forward without dividends, with discrete dividends, and with continuous dividends.
D-7 Calculate the profit and loss on a Eurodollar futures positions.

GOAL E:
The student will demonstrate understanding of commodity forward and futures contracts.

Learning Outcomes: The student will:
E-1 Interpret the forward curve including the concepts of backwardation and contango.
E-2 Calculate the equilibrium price of a commodity forward
E-3 Define the concept of implied lease rates, carry markets, and convenience yields.
GOAL F:
The student will demonstrate understanding of interest rate forward and futures contracts.

Learning Outcomes: The student will:

F-1 Review and identify bond basics including duration, convexity, strips, implied forward rates, coupon bonds, and zeros from coupons.
F-2 Value forward rate agreements (FRA) under different settlement conditions.
F-3 Discuss convexity bias and tailing.
F-4 Define repurchase agreements.
F-5 Calculate the profit and loss on a Treasury note futures contract.

GOAL G:
The student will demonstrate understanding of swap contracts.

Learning Outcomes: The student will:

G-1 Define swap contracts and discuss settlement structure.
G-2 Compute the market value of a various swap agreements
G-3 Define the swap curve and discuss variance swaps and swaptions.