

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



MASTER SYLLABUS

FSMA420 – FINANCIAL DERIVATIVES

Prepared By: Umesh Kumar

**SCHOOL OF BUSINESS & LIBERAL ARTS
BUSINESS DEPARTMENT**

SPRING 2019

- A. **TITLE:** Financial Derivatives
- B. **COURSE NUMBER:** FSMA420
- C. **CREDIT HOURS:** Three lecture hours per week for 15 weeks (3 credits)
- D. **WRITING INTENSIVE COURSE:** No
- E. **GER CATEGORY:** None
- F. **SEMESTER(S) OFFERED:** Spring
- G. **COURSE DESCRIPTION:** This course examines the dramatic growth of the derivatives markets in the last two decades. This growth, triggered by deregulation, globalization, increased uncertainty and volatility, has empowered enterprises to successfully manage their financial price risk. Topics to be covered include: the use of derivatives for risk protection, cash flow modification, arbitrage, and investment.
- H. **PRE-REQUISITES/CO-COURSES:**
 a. Pre-requisite (s) - Junior level status in Financial Services or permission of the instructor
 b. Co-requisite (s): None
 c. Pre- or co-requisite (s): None
- I. **STUDENT LEARNING OUTCOMES:**

<u>Course Student Learning Outcome [SLO]</u>	<u>PSLO</u>	<u>GER</u>	<u>ISLO</u>
a. Evaluate various derivative instruments utilized by financial managers	2	None	2 [CA]
b. Analyze how and where derivatives may be utilized to protect against risk	2	None	2 [PS]
c. Demonstrate how derivatives may be used to modify cash flows emanating from or required for a specific instrument or project	1	None	2 [CA]
d. Utilize derivatives for investment purposes	1	None	2 [IA]
e. Evaluate, analyze and compare the solution to a specific problem with and without the use of derivatives	2	None	2 [IA]

KEY	<u>Institutional Student Learning Outcomes [ISLO 1 – 5]</u>
ISLO #	ISLO & Subsets
1	Communication Skills Oral [O], Written [W]
2	Critical Thinking <i>Critical Analysis [CA] , Inquiry & Analysis [IA] , Problem Solving [PS]</i>
3	Foundational Skills

	<i>Information Management [IM], Quantitative Lit./Reasoning [QTR]</i>
4	Social Responsibility <i>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</i>
5	Industry, Professional, Discipline Specific Knowledge and Skills

J. ! **APPLIED LEARNING COMPONENT:** Yes ___ X ___ No _____

K. ! **TEXTS:**

Hull, J. (2014). Fundamentals of Futures and Options, 8e, ISBN: 0132993341 ,Upper Saddle River, New Jersey, Prentice Hall.

L. ! **REFERENCES:** The Wall Street Journal, The New York Times, Financial Times, plus, various on-line financial analytics, databases, news sources, and calculators.

M. ! **EQUIPMENT:** SUNY Canton e-mail address and access to internet is required for research portions of the course requirements.

N. ! **GRADING METHOD:** A-F

O. ! **SUGGESTED MEASUREMENT CRITERIA/METHODS:**

- Exams
- Quizzes
- Homework
- Participation

P. **DETAILED COURSE OUTLINE:**

- I. Structure of option pricing
 - A. Regulated Exchanges
 - B. Over the Counter Markets
 - C. Stock, Interest Rate Options
- II. Principles of Option Pricing
 - A. Black-Scholls Model
 - B. Binomial Pricing
- III. Basic Option Principles and Strategies
 - A. Calls
 - B. Puts
 - C. Spreads
 - D. Combinations
 - E. Hedging
- IV. Advanced Option Strategies
 - A. Synthetics
 - B. Structured Products
- V. Greeks
 - A. Delta

- B. Gamma
- C. Theta

VI. Fundamentals of the Future Markets

- A. Regulated Futures Contracts
- B. Stock Index Futures
- C. Interest Rate Futures
- D. Commodity Futures
- E. Foreign Exchange Futures

VII. Future Contracts and Portfolio Management

- A. Hedging techniques
- B. Alternative asset allocation

VIII. Interest Rate Swaps

- A. Interest Rate Options
- B. Interest Rate Swap Pricing

IX. Other Derivative Assets

X. Introduction to Financial Engineering

- A. Contemporary Issues
- B. Risk Management

Q. **LABORATORY OUTLINE:** None.