

DSEF002 – Security Analysis and Portfolio Management

**Masters of Commerce
Semester II
DSE – Finance
DSEF002- Security Analysis and Portfolio Management**

Course Type/ Course Code	Course Title	Lectures	Tutorials	Practical	Credit	Pre-requisites
DSE- DSEF02	Security Analysis and Portfolio Management	3	1	0	4	NIL

Objective: The course aims to equip the students with essential tools, techniques, models, and investment theory necessary to analyze securities and portfolios to make sound investment decisions and optimal portfolio choice.

Learning Outcomes: On completion of this course, the student should be able to:

- Test market efficiency and analyze stocks using fundamental and technical analysis.
- Analyze and value fixed income securities.
- Construct and evaluate portfolios using alternative models.
- Apply alternative asset pricing models to determine security and portfolio returns.

Contents:

Unit I (11 hours)

Fixed income securities: types, risk and return of fixed income securities, Bond fundamentals; Types of bonds; Valuation of bonds; Bond yields (yield to maturity, yield to call, realized annual yield); Bond price- yield relationship; Malkiel's theorem; Duration and its determinants; Convexity of a bond, its relationship with duration and determinants; Immunization strategies; Innovations in bond market.

Unit II (11 hours)

Efficient Market Hypothesis (EMH)- Forms of market efficiency and their implications, Empirical testing, Stock market anomalies; Approaches to security valuation; Fundamental analysis- Economy, Industry, Company Analysis (EIC framework); Technical analysis – Odd lot theory; Dow theory; Analyzing charts, patterns and indicators, Elliott wave theory: Impulse & corrective waves.

Unit III (12 hours)

Setting portfolio objectives, Risk-return analysis and impact of taxes and inflation, utility analysis, traditional and modern portfolio theory, single- and multi-index models, constant correlation models; Alternative portfolio selection models – safety first model, skewness preference model, and stochastic dominance models.

Standard Capital Asset Pricing Model (CAPM), non-standard forms of CAPM; Asset pricing theory and its extensions; Fama-French three factor and five factor models; Carhart Model; empirical tests of asset pricing models.

Unit IV (11 hours)

Simple buy and hold strategy, active portfolio management – Treynor – Black and Black Litterman models; Portfolio performance evaluation (Sharpe index, Treynor Index, Jensen's alpha, sortino ratio, Information ratio and Fama's decomposition measure).

Futures- features, types and payoffs; Pricing of stock/market index futures; Options- features, types, styles, payoffs. Innovations in the derivatives market.

Tutorial Exercise: Students would be asked to create a portfolio of securities (fixed and equity) and analyze its performance using spreadsheets. They would be required to construct optimal portfolio strategies and value stock/market index, futures & options using spreadsheets and track it on real time virtual platforms.

Suggested Readings:

- Bodie, et al. (2020). *Investments*. McGraw Hill.
- Chandra, P. (2021). *Investment Analysis and Portfolio Management*. Tata McGraw Hill.
- Elton, E. & Gruber (2014). *Modern Portfolio Theory and Investment Analysis*. John Wiley and Sons.
- Farrell, J.L. (1996). *Portfolio Management: Theory and Application*. McGraw-Hill.
- Francis, J. and Ibbotson, R. (2002). *Investments: A Global Perspective*. Prentice Hall.
- Fischer, Donald E. & Ronald J. Jordan (2018). *Security Analysis and Portfolio Management*. PHI Learning.
- Grinold & Kahn (1999). *Active Portfolio Management*. McGraw Hill Professional.
- Haugen, R.A. (2000). *Modern Investment Theory*. Pearson Education.
- Hull, J.C. & Basu (2022). *Options, Futures and Other Derivatives*. Pearson.
- Mayo, Herbert B. (2006). *Investments*. Thomson South Western.
- Reilly, Frank K. & Brown, Keith C. (2012). *Investment Analysis and Portfolio Management*. Cengage Learning.
- Sharpe, William F. & Alexander, Gordon J. (2002). *Investments*. PHI Learning.