AMRITA VISHWA VIDYAPEETHAM
DEPARTMENT OF MANAGEMENT, KOCHI
MBA PROGRAMME 2016-18

QUANTITATIVE EQUITY PORTFOLIO MANAGEMENT (FI635E)

Trimester VI (January-April 2018)

Instructor: P. HARISH KUMAR, Ph.D., CFA hkuma2001@gmail.com

Course Outline and Session Plan

COURSE DESCRIPTION

This course is an introduction to quantitative equity portfolio management as practiced by investment management firms for managing low frequency equity strategies. These strategies are typically used to manage multi-billion dollar institutional and retail equity funds.

The course covers several strategies that are used by quantitative investment management practitioners. It makes use of a software called Alphabeta to elucidate these concepts. The students will imbibe these methods through hands-on application of the software. Some of the strategies we cover include behavioral finance (momentum), valuation, pairs trading and accruals.

We will apply statistical analysis to elucidate methods used by practitioners in the field. A basic knowledge of financial statements and statistics is required for the course.

Course Objectives

The goal of the course is to impart an understanding of how quantitative equity portfolios are managed in practice.

The student will have a grasp of the following concepts used in quantitative equity investment management:

- Stock selection
- Portfolio Construction
- Risk management
- Portfolio rebalancing and attribution

The course objectives support the program level learning goal of "CRITICAL AND INTEGRATIVE THINKING".

Learning Expectations

During the course, the students are expected to demonstrate the highest levels of involvement in terms of efforts, quality of work and conduct. They should prepare in advance for all the classes and contribute to the overall learning in the class.

Course objectives and Outcomes

LG / CO	Critical and integrative Thinking	Effective written and oral communication	Societal and Environmental Awareness	Ethical Reasoning	Leadership
CO1: Knowledge	3	2	1	2	1
CO2: Skill sets	3	1	1	2	1
CO3: Solving problems	3	1	1	2	1

Course contributes mostly to: Employability/ Skill Development/Value-add

Assessment

Assignments and quizzes	20%
Project	30%
Mid-term examination	20%
End-term examination	30%

Course materials and
Recommended Textbooks

Equity Management: The art and science of modern quantitative investing, 2nd edition – Bruce I. Jacobs, Kenneth N. Levy, McGraw Hill, 2017

Quantitative Momentum: A Practitioner's guide to building a momentum based stock selection system – Wesley R. Gray, Jack R. Vogel, John Wiley and Sons Inc., 2016

Quantitative Value: A Practitioner's guide to automating intelligent investment and eliminating behavioral– Wesley R. Gray, Tobias E. Carlisle, John Wiley and Sons Inc., 2013

Reference

Quantitative Equity Portfolio Management: An Active Approach to Portfolio Construction and Management - Ludwig B Chincarini, Daehwan Kim, McGraw-Hill Library of Investment and Finance, 2006

The instructor will use publicly available materials including Alphabeta app and online videos to illustrate concepts.

Session Plan

Session 1, 2	Introduction to Markets, Getting familiar with Alphabeta
	Stock market concepts, Risk, Return
Session 3, 4	Discussion of Equity investment strategies- Behavioral
	Lab experiment # 1 – Introduction to Momentum
Session 5	Discussion of Equity investment strategies- Behavioral
	Lab experiment # 2 – Risk/Return, Neutrality etc.
Session 6	Discussion of Equity investment strategies- Behavioral
	Lab experiment # 3 – Grouping, Diversification etc.
Session 7, 8	Discussion of Equity investment strategies- Valuation
	Lab experiment # 7-Book to market value etc.
Session 9	Discussion of Equity investment strategies– Valuation
	Lab experiment # 8-Earning to market value etc.
Session 10	Discussion of Equity investment strategies- Valuation
	Lab experiment # 9-Book vs earnings to market value etc.
Session 11	Discussion of Equity investment strategies– Valuation
	Combining Ratios etc.
Session 12	Mid Term
Session 13, 14	Discussion of Equity investment strategies– Accruals
	Lab experiment # 10-Accruals as quality of earnings etc.
Session 15, 16	Discussion of Equity investment strategies - Pairs Trading Strategy
	Lab experiment # 4-Correlation, Relative Value etc.
Session 17	Discussion of Equity investment strategies - Pairs Trading Strategy
	Lab experiment # 5- Z scores, Sector Neutrality etc.
Session 18	Discussion of Equity investment strategies - Pairs Trading Strategy
	Lab experiment # 6 – Review of theory and research etc.
Session 19, 20	Discussion of Other Equity Investment strategies
Session 21, 22, 23	Competition / Project
Session 24	Finals

Total no. of sessions 24

Assignments

- The class will do the assignments in groups of convenient size**.**
- All the members of the group will read, discuss and analyse the assignments and make presentations.
- The groups shall present copies of brief summary of their work prior to the discussions.
- Assessment will be based on the quality of the content, presentation and preparation by individual members and the team dynamics.

Instructor Bio

Dr. Kumar has worked in Wall Street for over 15 years as an investment management professional.He has managed US $10 billion in global equities and alternative investment strategies. Most recently, he was the Head of Growth Equities and lead Portfolio Manager at Madison Square Investors where he managed mutual funds, 130/30 and equity market neutral strategies. Dr. Kumar received a Ph.D. and M.Phil. from the Graduate School of Business at Columbia University, New York, a Master's degree from the University of Colorado at Boulder, and a Bachelor’s degree from Birla Institute of Technology and Science in Pilani, India. Dr. Kumar is a CFA charter holder. Dr. Kumar is currently a visiting professor of finance at the Amrita School of Business, Amrita Vishwa Vidyapeetham in Coimbatore, India.