

Course Code	BF3224
Course Title	Equity Investing with Big Data
Pre-requisites	AB1201 and BF2201
No of AUs	4 AUs

A) Course Aims

Investment firms increasingly draw from big data as they manage their financial assets. The growing relevance of big data in the investment industry increasingly requires that students who are interested in a career in finance be deeply familiar with big data and the use of big data in investments. The goal of this course is to provide interested students with such knowledge and insight. Students will learn about the different types of big data and how they may be applied to different types of investment styles. Students will learn how to program in SAS. Students will utilize their newly acquired programming skills in a series of hands-on projects with actual, real-world data and learn how to incorporate both structured and unstructured big data into their investment decisions. While the course will focus on equity investing, the knowledge and skills acquired in this course are easily transferable to other financial assets, such as fixed income securities and real estate.

B) Intended Learning Outcomes (ILO)/Objectives

By the end of this course, you should be able to:

1. Describe the main types of trades you can place in financial markets
2. Differentiate the main types of investment styles and analyze stocks within each style
3. Describe the main types of big data; recognize the potential as well as challenges associated with big data
4. Assess what types of big data are most useful for what types of investment styles
5. Assemble structured data from unstructured data with SAS
6. Analyze large datasets with SAS
7. Write a SAS computer program to evaluate a particular dataset's historical usefulness in predicting a stock's performance and develop a program that incorporates a dataset into your investment-decision-making process once the dataset's historical usefulness has been established
8. Construct an optimal portfolio based on either discretionary- or quantitative signals and evaluate your portfolio's performance
9. Explain the hedge fund industry and various trading strategies employed by hedge funds

C) Course Content

1. Trading in Financial Markets
2. Equity Investing – The Discretionary Approach
3. Equity Investing – The Quantitative Approach
4. Main Types of Big Data
5. Using Big Data within the Discretionary- and the Quantitative Approach
6. Optimal Portfolio Construction and Performance Evaluation
7. Hedge Funds
8. Programming in SAS
9. Creating Structured Data from Unstructured Data – Textual Analysis

E) Planned Weekly Schedule

Week	Topic
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Week 1	Trading in Financial Markets
Week 2	The Discounted Cash Flow Approach
Week 3	The Multiples Approach and the Quantitative Approach
Week 4	Overview of Main Types of Big Data and their Possible Uses in Equity Investing – 1
Week 5	Overview of Main Types of Big Data and their Possible Uses in Equity Investing – 2 Evaluating the Usefulness of Big Data
Week 6	Hedge Funds Review
Week 7	Mid-Term Exam
Recess Week	
Week 8	Introduction to SAS – 1
Week 9	Introduction to SAS – 2
Week 10	Hands-on Experience with Sentiment- and Web-Traffic Data
Week 11	Final Project Brief and Consultation
Week 12	Hands-on Experience with Financial Market Data
Week 13	Final Project Presentation