QUANTAMENTALS (AC317)

**Course duration:** 54 hours lecture and class time (Over three weeks)

**Summer School Programme Area:** Accounting

**LSE Teaching Department:** Department of Accounting

**Lead Faculty:** Dr Jose Carabias Palmeiro (Dept. of Accounting OLD.2.13)

**Pre-requisites:** Introductory Accounting (including basic financial analysis) and Finance and Econometrics at undergraduate level. Previous exposure to Matlab or R programming languages would be a plus.

**Course Aims, Learning Outcomes and Topics Covered:**
This quantitative equity research course focusses on understanding the main fundamental drivers of equity prices, the role of accounting information in capturing those fundamentals and the extent to which the equity market impounds this accounting information fully into stock prices. We will adopt a rigorous, research-based, approach towards understanding the existing sources of predictability in equity markets and use the same approach to refine existing and develop new fundamental-based trading strategies. The course is highly applied and students will be using real data from financial statements and stock prices to back-test and assess the performance of trading strategies. We will cover all aspects from trading strategy design, data collection, trading strategy back-testing and implementation using computers and state-of-the-art programming languages. This course will be of particular interest to those students thinking in developing their careers in quantitative equity research teams in sell-side investment banks or buy-side quantitative asset management firms. The course will also be useful for those students thinking in conducting academic research on fundamental analysis and stock return predictability.

In terms of the **learning outcomes**, after successful completion of the course students should be able to:

i. Describe the main fundamental drivers of stock prices within a “Quantamental” analysis framework
ii. Apply their acquired “Quantamental” skills to analyse existing models of stock price behaviour and implement those models
iii. Criticize existing and propose new models of stock market behaviour
iv. Empirically test the proposed models of stock market behaviour and interpret the results from the empirical analysis
v. Design and “back test” new quantitative equity trading strategies
vi. Evaluate the economic significance and communicate the main findings of the “back tested” results.

Some of the **topics covered include**:

i. Financial Statements Analysis and Valuation;
ii. Econometrics for Testing Rational Expectations;
iii. Trading Strategies such as Earnings Momentum, Quality, Value, etc;
iv. Introduction to Programming;
v. Data Collection and Analysis.

Core Textbook:

Teaching Arrangements:
Teaching arrangements consist of both lectures and classes.

Formative Assessment:
Format: Valuation Quiz
Date: Friday 22nd June
Feedback/results due: Monday 25th June

Summative Assessments:
The precise time and location of the examinations will be circulated during the programme.

Format and weighting: Mid-session examination (50%)
Date: Wednesday 27th June
Results due: Monday 2nd July

Format and weighting: Two hour final examination (50%)
Date: Friday 6th July
Results due: Within a week of the exam

Schedule of Lectures and Classes (Provisional for 2018):

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<td><strong>Monday 18th June</strong></td>
<td>Lecture 1</td>
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<td><strong>Tuesday 19th June</strong></td>
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Detailed Course Outline

**Lecture 1. Introduction to Financial Statements**

**References**

**Lecture 2. Pricing Book Values**

**References**

**Lecture 3. Pricing Earnings**

**References**

**Lecture 4. Financial Statement Analysis**
Analysis of Profitability; Analysis of Growth and Sustainable Earnings.

**References**

Lecture 5. Statistical Tools
Basic Regression Analysis; Regression Analysis and Forecasting; Regression Analysis diagnostics.

Lecture 6. Tests of Market Efficiency
Tests of Market Efficiency; Forecasting as the Key Principle in Fundamental Analysis; The role of Earnings Announcements to Understand How the Market Process Information; The Importance of an Alternative Hypothesis for Market Expectations about Firm Fundamentals; Introduction to Matlab.

References

Lecture 7. Implementation Trading Strategies
From Signal Extraction to Portfolio Construction and Strategy Returns; Portfolio Turnover; Trading Costs; Data Traps in Backtesting; Implementation of Trading Strategies using Matlab.

References

Lecture 8. Earnings Momentum
Time-series Properties of Quarterly Earnings; Naïve Market Earnings Expectations About the Time-series Properties of Quarterly Earnings; Standardized Unexpected Earnings and Future Stock Returns; Delayed response to information or risk?

References

Lecture 9. Accrual Anomaly (Quality Investing)
Earnings components: accruals and cash-flows; Differential time-series properties of accruals and cash-flows; Naïve market earnings expectations about the time-series properties of accruals and cash-flows; Accruals and future stock returns; Earnings fixation or risk?

References


Lecture 10. Contrarian Investment and Naïve Extrapolation of Long-term Earnings Growth

References

Lecture 11. Enhancing the Returns of Existing Trading Strategies: The Role of Fundamental Analysis
Separating Winners from Losers among High Book-to-Market Stocks: the F-score; Separating Winners from Losers among Low Book-to-Market Stocks: the G-score;

References

Lecture 12. Extensions
Combining Earnings Momentum and Accrual Anomaly; Revenue Surprises; Analysts’ Recommendations; Twitter and Earnings Announcement Returns; Macroeconomic News and Earnings Momentum; Frontiers in Quantitative Investment.

References

Credit Transfer: If you are hoping to earn credit by taking this course, it is advisable that you confirm it is eligible for credit transfer well in advance of the start date. Please discuss this directly with your home institution or Study Abroad Advisor. As a guide, our LSE Summer School courses are typically eligible for three or four credits within the US system and 7.5 ECTS in Europe. Different institutions and countries can, and will, vary. You will receive a digital transcript and a printed certificate following your successful completion of the course in order to make arrangements for transfer of credit. If you have any queries, please direct them to summer.school@lse.ac.uk

Course content is subject to change. Last updated: January 2018