Syllabus

1. Course Description

   a. Title of a Course: **ALTERNATIVE INVESTMENTS**

   b. Pre-requisites: The course is an intensive MBA-level introduction program into investment management industry with a particular focus on hedge funds with target audience is comprised of mid- to top-level managers of investment companies and banks, asset managers, pension funds, insurance companies and family office/private asset pools, whose primary focus is portfolio management and investments. It is assumed that students have already accomplished Econometrics of Financial Markets, Fixed Income, Valuation and Risk Management topics before entering this course. They are already familiar with key concepts of Macroeconomics/Financial Economics, valuation of bonds, stocks and pricing of derivatives, modern portfolio theory (MPT). The students are required to have hands-on experience of building and running linear regression models and statistical analysis procedures via Microsoft Excel's Data Analysis Toolpack (Add-In) or any other statistical software (MatLab, R, etc.).

   c. Course Type: Elective

   d. Abstract: Asset management industry is undergoing a major transition: institutional and individual investors have suffered from massive capital loss in classic investment products like long-only mutual funds and pension funds during financial markets turmoil in 2008-09 and now they are allocating more assets into alternative investment (AI) strategies managed under absolute return objective and less correlated with the direction of major asset classes. Hedge funds industry as well as private equity, venture capital, credit derivatives, commodities trading and real estate are booming. This Alternative Investments (AI) course makes a quick hands-on introduction into alternative investments products and strategies, risk-return comparative analysis with classic investment funds and the role of AI in the diversified investment portfolio. AI course is focused on major hedge funds strategies and their risk/return profiles along with risk management techniques. Program of the course has a strong bias towards real life applications of econometric models (via Microsoft Excel Data Analysis Toolpack) where students train financial advisor's day-to-day skills. The course structure and content are derived from well-known

Chartered Alternative Investment Analyst (CAIA) and Chartered Financial Analyst (CFA) programs.

2. Learning Objectives

The major objective of the course is to make a quick but practical overview of the investment management industry and its trends with a particular emphasis on hedge funds, their typical investment strategies, past performance features and risk management issues.

3. Learning Outcomes:

Upon successful accomplishment of the course students:

- can review and run deep qualitative and quantitative analysis of alternative investment strategy or product, build an investment portfolio of alternative products (hedge funds);
- will apply tactical and strategic asset allocation within diversified investment portfolio, assess and adjust Beta and Alpha of the alternative investment strategy;
- can carry out Due Diligence process of a hedge fund/CTA;
- will get familiar with typical hedge fund investment strategies and stylized facts about their past performance;
- will have practical knowledge of risk management methodologies applied to hedge funds space.

4. Course Plan:

Chapter 1. Asset allocation in diversified investment portfolio.
Major asset classes. Strategic and tactical asset allocation. Alpha and Beta of an investment strategy. Passive and active investment management styles. Factor model (W. Sharpe) for active investment strategy. Beta and Alpha drivers. Six types of Alpha drivers. A case of factor analysis for Russian Equity mutual fund (PIF). Passive and active strategies comparison in the long run. Some statistical observations on Balanced strategies' performance. A case of rule-based tactical asset allocation. Separation alpha from beta in active strategy. Mathematics corner: multi-dimensional regression analysis, MS Excel Data Analysis Toolpack.

Chapter 2. Fundamentals of active investment management.
Fundamental characteristics of risk and return for active investment strategy - tracking error, information ratio. Investment strategy breadth. Fundamental law of active management. Cases of its application from financial advisor's perspective. Benchmark selection for AI. "130/30" investment funds. Exchange-traded funds (ETFs).

Chapter 3. Introduction into hedge funds.
History and major facts of hedge funds industry. Major hedge funds investment strategies. Reasoning on hedge funds inclusion into diversified investment portfolio. Performance persistence. Hedge funds myths. In depth review and risk/return analysis of hedge funds strategies: Equity Long/Short, Emerging Markets, Short-selling, Distressed debt, Merger Arbitrage, Regulation D, Event-Driven, Fixed Income Arbitrage, Convertible Bond Arbitrage,

Market Neutral, Relative Value, Global Macro, Funds of Hedge Funds. Benchmark selection. Due Diligence when investing into hedge funds.

Chapter 4. Risk management with hedge funds.
Review of hedge funds research. Empirical distributions of hedge funds returns – stylized facts. Mathematics corner: normal, lognormal sample distributions, fat tails, moments of distribution, hypothesis tests. Value-At-Risk (VaR) of hedge funds. Hedge funds indices. Fees and omissions from hedge funds – a look from options theory. Hedge funds collapses: Amaranth Advisors, Peloton Partners, Carlyle Capital Corporation, Bayou Management, Marin Capital, Long-Term Capital Management, Bernard Madoff.

5. Reading List:

a. Required:
- Athanassiou P. Research handbook on hedge funds, private equity and alternative investments. Edward Elgar. 2012. (ebook)
- Kevin R. Mirabile. Hedge Fund Investing: A Practical Approach to Understanding Investor Motivation, Manager Profits, and Fund Performance John Wiley & Sons. 2013. (ebook)
- Daniel A. Strachman. The Fundamentals of Hedge Fund Management, Second Edition. John Wiley & Sons Incorporated. 2012. (ebook)
- Capocci, Daniel. The Complete Guide to Hedge Funds and Hedge Fund Strategies. Palgrave Macmillan Ltd. 2013. (ebook)
- Solnik B. Global investments. Prentice Hall. 2009.

b. Optional:
- Reilly F. K Investment Analysis and Portfolio Management. Thomson South-Western. 2006.
- Bodie Z. Investments. McGraw-Hill Education. 2014.

c. Internet resources:
- Chartered Alternative Investment Analyst Association: http://caia.org/
- SEEKING ALPHA: http://seekingalpha.com/
- Institutional Investor Magazine: http://www.institutionalinvestor.com/
- Institutional Investor and Hedge Fund Intelligence // http://www.absolutereturn-alpha.com/
- "AllAboutAlpha" (CAIA): // http://www.allaboutalpha.com/
- The Journal of Alternative Investments (CAIA): http://www.iijournals.com/toc/jai/current

6. Grading System:

Students' performance is evaluated on a 10-point mark scale as follows:

Points	Description
10	Distinguished performance
8-9	Excellent performance
6-7	Good performance
4-5	Satisfactory performance
0-3	Fail

The rounding of the definitive performance grade is conducted in accordance with the standard mathematical rounding rules. The rounding of the intermediate grades is not conducted to avoid the rounding bias.

7. Guidelines for Knowledge Assessment

Evaluation of the course accomplishment is based on scoring and credits that students collect during the classes and homework. The final grade consists of two pillars:
• 50% comes from student's home assignments (a case of past performance analysis of Russian mutual fund performed by the student and presented to the group during the classes)
• 50% comes from final test (multiple choice)
Examples of final test questionnaires with answer keys are available for self-assessment before the end of the course.
The course is carried out through in-class presentations and interactive discussions that require review and reading of the recommended industry research pieces and academic papers before attending the classes. It is obligatory for any student to prepare and discuss in class her/his mini-research piece of selected investment fund/hedge fund's past performance and factor model of its drivers. Attending all the classes is not strictly obligatory but all students are involved in interactive discussions during class time; practical mini-research is required to be presented in class.

8. Methods of instruction

The instructors use traditional methods of instruction by providing well-structured reading during contact hours with a lot of illustrations, problems and real case studies and discussing the materials.

9. Special equipment and software support

Not required.