

**KARATINA UNIVERSITY**

**SCHOOL OF BUSINESS**

**DEPARTMENT OF BUSINESS AND ENTREPRENEURSHIP**

**MASTER OF SCIENCE IN FINANCE**

**CURRICULUM**

**2015**

**Vision**

To be a University of global excellence, meeting the dynamic needs and development of society

**Mission**

To conserve, create and disseminate knowledge through, training, research, innovation and community outreach

**Core Values**

Equity  
Teamwork

Meritocracy  
Academic Freedom  
Accountability  
Excellence

Probity

**The Philosophy of the University**

Karatina University seeks to create networks that provide an environment that integrates disparate disciplines to conserve, create and disseminate knowledge that promotes development in a dynamic and developing society passionate in community outreach, research and innovation.

The University shall strive to develop programmes that will nurture leadership skills and innovation in all its graduates as well as enable them interact with the world wide community and contributing towards the development of solutions to a broad range of environmental, economics, entrepreneurial, social and scientific issues. This shall be facilitated by encouraging intellectual rigor that shall respect academic freedom and provide the necessary capacity needed by members of the University.

**1.0 Preamble**

Capital is a key factor of production which is responsible for activating the other three: labour, entrepreneurship and land. Capital requires to be harnessed and used thriftily so that the objectives of individuals, households, firms or state are accomplished. Knowledge in finance and investment is essential in delivering this critical role. This program is intent on initiating young minds to the practice of finance and investment who in turn will become professional who can be trusted with taking care of capital resources for this generation and for posterity. It is expected by learning the art and the skills of financial management and investment, the learners will not only display those skills in organisation practice but also exude confidence and integrity in protecting resources bestowed to them in trust. To practitioners, the program will enhance current capacity while aligning their experiences to contemporary global practices. This program will also sharpen minds towards research orientation and seeking innovative solution in the realms of finance and investment.

This programme is suitable for professionals who wish to develop knowledge, understanding and financial management and investment skills. It is expected that financial planners, fund managers, financial analysts, portfolio managers and resource mobilisers among others will be borne by undertaking this program. Analytical skills which are an essential asset for this training will be inculcated. Contact with industry will also be encouraged in this program so that learners can contextualise the knowledge acquired in class in real life work environment. Over and above this, the programme aims at developing managerial skills enabling organizational and contextual linkage to other functional areas within an organisation or an economy. Finanly this program is expected to create a critical mass of experts who can readily support a robust financial system locally of globally.

**1.1 Title of the Programme**

The programme shall be known as Bachelor of Science In Finance and Investment

**1.2 Philosophy of the Programme**

Financial systems are becoming increasingly complex entities which require incisive knowledge and innovative minds to manage which this programme commits to produce.

**1.3 Rationale of the Programme**

Economics as we know it has evolved into a solid area and specialisation of study in finance and investment management. This knowledge is required to create practitioners who are capable of understanding the financial system and analysing its various components to produce information as a basis of providing guidance on sound financial decisions towards timely the implementation of the Kenya Vision 2030 and enhancing Kenya’s position as the regions financial hub.

**1.4 Programme Goal**

The overall objective of the programme is to develop knowledge, business technical and analytical skills accompanied by requisite attitudes in the field of finance and investment management.

**1.5 Expected Learning Outcomes**

At the end of the programme the learner will be expected to;

1. Guide corporate financial decisions towards wealth maximization.
2. Analyse financial market information and provide attendant financial advice
3. Practice fund and portfolio management
4. Forecast and model financial market trends and behavior
5. Carry out financial research and advice policy framework

**1.6 Mode of Delivery of the Programme**

The programme is offered on both full time and part-time basis over a period of 2 years. Each year will comprise of two (2) semesters. The programme shall be delivered through lectures, tutorials, case study analysis, demonstrations, problem solving, case learning and model building, simulations and distance learning.

**1.7 Academic Regulations**

The following academic regulations shall apply for the Bachelor of Finance and Investment Management.

**1.7.1 Admission Requirements**

For admission into the programme, one must meet one of the following academic qualifications:

Candidates must satisfy the minimum entrance requirements for the university as follow:

1. K.C.S.E. with a minimum grade of C+ or 2 principals at A Level with requisite cluster subjects which include in Cluster I (English or Kiswahili) and Cluster II (Mathematics), candidates must have passed the KCSE in Cluster III (any subject in group I or II) and Cluster IV (any subject in group I or group III or any subject in group IV or group V) or
2. Admit K.C
3. Professional certification holders such as CFA, CSIA, CPA among others will qualify for admission to **Year One** of study while being eligible for credit transfers as stipulated in the university policy or
4. Diploma holders with Credit pass in related field, will qualify for admission to **Year One** of study subject while being eligible for credit transfers as stipulated in the university policy, or
5. Diploma holders with Pass will enter in the first year of study.
6. A holder of advanced level certificate with minimum of three subsidiary passes or equivalent.
7. Any other qualification as may be approved by the Karatina University Senate.

**1.7.2 Students Assessment policy**

Assessment of a course shall be composed of Continuous Assessment Test (CAT), Industrial attachment report, project report and end of semester written examination. Continuous Assessment Test (CAT) shall contribute 30% of the total marks and the end of semester University Examination shall contribute 70% of the total marks.

**1.7.3 Grading System**

The students will be graded according to the common university grading system.

**1.7.4** **Examinations Regulations**

Common University undergraduate examination regulations shall apply.

**1.7.5 Graduation Requirements**

For a student to graduate they will be required to have passed a minimum of sixty six (66) and a maximum of seventy two (72) units as shown in the programme structure.

**1.8 Course Evaluation**

Each course shall be evaluated in an objective manner during the semester and at the end of the course. Each student shall be given a unit evaluation form at the end of every semester to assess the quality and effectiveness of the teaching methods and delivery of content.

**1.9 Management and Administration of the programme**

The course shall be managed by the Head of Department under the guidance of the departmental board, school board and the University senate. The directorate of quality assurance shall be involved in ensuring the quality standards are maintained at all times.

**1.10. Duration of Programme**

The duration of the programme extends for a period of two (2) academic years of two semesters each. Each course will comprise of 42 contact hours amounting to 3 units. The learner is expected to undertake a minimum of 42 units during each academic year.

**Course Structure**

The course work is spread over 3 semesters, with six (6) courses in each semester. Each course comprises of three (3) contact hours per week. After the end of the first year, the student is also expected to defend the preliminary research proposal for the thesis. If the preliminary proposal defense is successful, the student will be given a go ahead to develop a full proposal to be defended after the end of the third semester. Thereafter, the student will collect data, conduct analysis and write up the thesis.

|  |  |  |  |
| --- | --- | --- | --- |
| YEAR ONE | | YEAR TWO | |
| Semester 1 | Semester 2 | Semester 3 | Semester 4 |
| 6 Core Courses | 6 Core Courses | 6 Core Courses |  |
|  | Concept paper defense | Development and defense of full proposal | Data collection, analysis and write up of final report |

**Programme Structure**

|  |  |  |  |
| --- | --- | --- | --- |
| **Semester I** | | Credit Hrs | Units |
| MACC 801 Trends in Financial Reporting I | | 42 | 3 |
| MSF 800 Corporate Finance and Valuation | | 42 | 3 |
| MSF 801 Quantitative Finance | | 42 | 3 |
| MBM Business Research methods | | 42 | 3 |
| MSF 802 Theory of Finance | | 42 | 3 |
| MBM Management theory and practice | | 42 | 3 |
| **Semester II** | |  |  |
| MSF 804 Financial modelling and Forecasting | | 42 | 3 |
| MSF 805 Financial Econometrics | | 42 | 3 |
| MSF 806 Asset Management | | 42 | 3 |
| MSF 807 Derivatives & Risk Management | | 42 | 3 |
| MSF 808 Advanced Financial Analysis | | 42 | 3 |
| MSF 809 Proposal writing | | 42 | 3 |
| **Semester III** | |  |  |
| MSF 810 Financial Economics | | 42 | 3 |
| MSF 811 Fixed Income Investment | | 42 | 3 |
| MSF 812 Ethics, Society and the Finance Sector | | 42 | 3 |
| MSF 813 Frontiers in Finance Research Seminars | | 42 | 3 |
| **Semester IV** | |  |  |
| MSF 817 Thesis | |  | 12 |
| **Electives (Any Two)** | |  |  |
| MSF 814E Public Sector Financial Management | | 42 | 3 |
| MSF 815E Project Finance & Infrastructure Investment | | 42 | 3 |
| MSF 816E Money Laundering: Law and Investigations | | 42 | 3 |
| Strategic management | | 42 | 3 |
| Corporate Entrepreneurship | | 42 | 3 |
| **TOTAL** |  |  |  |

**Course Descriptions**

**MACC 801 Trends in Financial Reporting I**

**MSF 800 Corporate Finance and Valuation**

**Course purpose**

This course provides a thorough understanding of the key decisions companies are expected to make leading to maximisation of the wealth of the shareholders while understanding their impacts and intervening environment.

**Course Content**

Corporate financial policies: capital structure and the theory of perfect capital markets; capital structure, taxes and organisation theories; debt, equity and options theory; the design of the capital structure; Equity capital: returning cash to shareholders; distribution in practice: dividends and share buy-backs; share issues; implementing a debt policy; Corporate governance and financial engineering: choice of corporate structure ; initial public offerings (IPOs); corporate governance; taking control of a company; mergers and demergers; leveraged buyouts (LBOs); bankruptcy and restructuring ; Managing working capital, cash flows and financial risks; Valuation: measuring value creation; investment criteria; the cost of capital; risk and investment analysis; valuation techniques.

**Course Texts**

Pierre Vernimmen (2014) Corporate Finance Theory and Practice Fourth Edition John Wiley and Sons, Ltd

**MSF 801 Quantitative Finance**

**Course purpose**

This course provides the grounding required to perform analytical tasks in finance theory. It equips the learners with quantitative basis for solving finance problems.

**Course Content**

Introduction: A Simple Market Model; Risk-Free Assets; Risky Assets; Discrete Time Market Models; Portfolio Management; Forward and Futures Contracts; Options: General Properties; Option Pricing: Bounds on Option Prices European Options in the Binomial Tree Model; Financial Engineering; Hedging Option Positions. Variable Interest Rates; Maturity-Independent Yields Stochastic Interest Rates; Arbitrage Pricing of Bonds

**Course Texts**

Marek Capi´nski and Tomasz Zastawniak (2003) Mathematicsfor Finance: An Introduction to Financial Engineering: Springer

**MBM Business Research methods**

**MSF 802 Theory of Finance**

**Course purpose**

This course will ensure that learners acquire an understanding of the principal objectives of asset management and the linkages between financial risk and portfolio return. Students will develop an understanding of the structure and functioning of capital markets, an appreciation of the valuation methods for securities and to introduce the principles of portfolio theory.

**Course Content**

**Course Texts**

Pierre Vernimmen (2014) Corporate Finance Theory and Practice Fourth Edition John Wiley and Sons, Ltd

**MBM 801 Management theory and practice**

**MSF 804 Financial modelling and Forecasting**

**Course purpose**

This course provides a thorough understanding of implementing financial models. It provides the learner with sufficient tools and expertise to create, manipulate and understand financial data.

**Course Content**

corporate finance and valuation: corporate valuation overview; pro forma financial statement modeling; financial analysis of leasing; portfolio models: calculating efficient portfolios; calculating the variance-covariance matrix; estimating betas and the security market line; efficient portfolios without short sales; the black-litterman approach to portfolio optimization; event studies; valuation of options: the binomial option pricing model; the black-scholes model; option greeks; real options; valuing bonds: duration; immunization strategies; modeling the term structure; calculating default-adjusted expected bond returns; monte carlo methods: generating and using random numbers; an introduction to monte carlo methods; investments; value at risk; options and option strategies; excel techniques: data tables; functions; matrices; arrays; objects and add ins.

**Course Texts**

Benninga S. (2014) **Financial Modeling** Fourth Edition MIT press, London

**MSF 805 Financial Econometrics**

**MSF 806 Asset Management**

**Course purpose**

This course provides a fundamental understanding of the structure and functioning of capital markets, the principles of investment decisions under risk and the optimal allocation among asset classes.

**Course Content**

**Course Texts**

Pierre Vernimmen (2014) Corporate Finance Theory and Practice Fourth Edition John Wiley and Sons, Ltd

MSF 807 Derivatives & Risk Management

**Course purpose**

This course provides a thorough understanding of the key decisions companies are expected to make leading to maximisation of the wealth of the shareholders while understanding their impacts and intervening environment.

**Course Content**

Derivatives and risk management; introduction to derivatives; derivatives products and market structure; OTC derivatives clearing and settlement process; Transaction processing and settlement for OTC instruments; Interest Rates and Financial Derivatives; Convex Optimization; Quadratic Hedging Principles; Quadratic Investment Principles; Risk Measurement Principles; Empirical Methods; Parametric Models and Their Tails; Multivariate Models.

**Course Texts**

Hull, J.C.: Options, Futures, and Other Derivatives, 8th edn. Prentice-Hall, Englewood Cliffs

(2012)

H. Hult et al., Risk and Portfolio Analysis: Principles and Methods, Springer Series

in Operations Research and Financial Engineering, DOI 10.1007/978-1-4614-4103-8 9,

© Springer Science+Business Media New York 2012

Savage, L.J.: The Foundations of Statistics. Wiley, New York (1954)

Resnick, S.I.: Heavy-Tail Phenomena: Probabilistic and Statistical Modeling. Springer, New

York (2007)

Fianacial risk foreasting: The Theory and Practice of Forecasting Market Risk,with Implementation in R and Matlab2011 Jon Danı´elsson John Wiley & Sons Ltd,

**MSF 808 Advanced Financial Analysis**

The aim of this course is to consider advance models of financial analysis as tools of investment decisions, portfolio analysis and management. This will enhance learners understanding and forecasting of financial assets and market trends.

**Course content**

Discounted Cash Flow (DCF) Models: Fundamental Value of Stocks and Bonds; Main Input Factors; Monte Carlo Free Cash Flow to the Firm (MC-FCFF) Models: Standard FCFF Model; Monte Carlo FCFF Models; Beyond Earnings: From Accounting to Economics; Economics to Valuation; Morgan Stanley ModelWare’s Approach to Intrinsic Value: Focusing on Risk-Reward Trade-offs: Linking Fundamental Analysis to the Inputs of the Valuation Model; Linking Business Activity to Intrinsic Value: The ModelWare Profitability Tree; ModelWare’s Intrinsic Value Approach; Treatment of Key Inputs; The Cost of Capital; UBS VCAM and EGQ Regression-based Valuation: Introducing “EGQ” – Where Intrinsic Methods and Empirical Techniques Meet; A Quick Guide to DCF and Economic Profit Analysis; Regression-based Valuation ; UBS Economic Growth Quotient; Understanding Regressions; Leverage Buyout (LBO) Models: IRRs and the Structure of LBO Models; Assumptions of LBO Models; Valuation 101: Approaches and Alternatives: Discounted Cash Flow Valuation; Liquidation and Accounting Valuation; Relative Valuation; Real Option Valuation.

**Course text**

Veibig , J., & Poddig , T. (2008). Discounted Cash Flow (DCF) Models. In J. Viebig, T. Poddig, & A. Varmaz, *Equity Valuation:Models from Leading Investment Banks* (pp. 31-82). West Sussex: John Wiley & Sons Ltd,.

MSF 809 Proposal writing

**MSF 810 Financial Economics**

**Course purpose**

This course is based on the fact that finance is derived from economics. It therefore causes an understanding of the link between financial variables and real variables in an economy and as such establishes the same link on financial decision making effect on the economy.

**Course Content**

Investment decisions under certainty: Intertemporal consumption in autarky; Asset prices and inflation; Valuing financial assets; Uncertainty and risk: State-preference theory; Consumer preferences; Term structure of interest rates; Asset pricing models: Capital asset pricing model; Arbitrage pricing theory; Empirical tests of the consumption-based pricing models; Private insurance with asymmetric information: Insurance with common information; Insurance with asymmetric information; Derivative securities: Option contracts; Forward contracts; Corporate finance: Capital structure choice Dividend policy and Project evaluation and the social discount rate.

**Course Texts**

Jones, C. (2008) Financial Economics or Routledge’s Taylor & Francis New York

**MSF 811 Fixed Income Investment**

**Course purpose**

This course provides tools necessary to enable them to understand the problems involved in managing a fixed income portfolio. The focus of this module is on fixed income security markets, pricing and uses for portfolio management or for hedging interest rate risk. It will also cover term structure analysis and the use of fixed income derivative instruments in bond portfolio management.

**Course Content**

**Course Texts**

**MSF 812 Ethics, Society and the Finance Sector**

**Course purpose**

**Course Content**

**Course Texts**

**MSF 813 Frontiers in Finance Research Seminars**

**Course purpose**

**Course Content**

**Course Texts**

**MSF 814E Public Sector Financial Management**

**Course purpose**

This course provides a thorough understanding of the key decisions companies are expected to make leading to maximisation of the wealth of the shareholders while understanding their impacts and intervening environment.

**Course Content**

**Course Texts**

**MSF 815E Project Finance & Infrastructure Investment**

**Course purpose**

**Course Content**

**Course Texts**

**MSF 816E Money Laundering: Law and Investigations**

**MSF 817 Thesis**