Faculty of Management Studies

Banasthali Vidyapith, Banasthali

Minutes of the Board of Studies held on 26.12.2019 at 3:00 P.M in the Pragya Mandir Conference Hall, BanasthaliVidyapith.

PRESENT

1.	Prof. Harsh Purohit	-	Convener
2.	Shri Abhishek Pareek	-	Internal Member
3.	Dr. Abhinav Nigam	-	Internal Member
4.	Ms. Akansha Mer	-	Internal Member
5.	Smt. Anita Shou	-	Internal Member
6.	Dr. Ankita Pareek	-	Internal Member
7.	Dr. Ankur Joshi	-	Internal Member
8.	Prof. Ashutosh Pareek	-	Internal Member
9.	Dr. Bal Gopal Singh	-	Internal Member
10.	Dr. Jitendra Singh Rathore	-	Internal Member
11.	Dr. Khyati Kochhar	-	Internal Member
12.	Dr. Kirti Udayai	-	Internal Member
13.	Ms. Madhulika Singh	-	Internal Member
14.	Dr. Megha Aggarwal	-	Internal Member
15.	Dr. Neelni Giri Goswami	-	Internal Member
16.	Dr. Neerja Dixit	-	Internal Member
17.	Ms. Neha Joshi (Choksi)	-	Internal Member
18.	Dr. Nishtha Pareek	-	Internal Member
19.	Shri Nitin Bansal	-	Internal Member
20.	Dr. Peeyush Bangur	-	Internal Member
21.	Shri Piyush Kumar	-	Internal Member
22.	Ms. PriyankaTyagi	-	Internal Member
23.	Dr. Priyanka Vijay	-	Internal Member
24.	Dr. Raghubir Singh Chauhan	-	Internal Member
25.	Dr. Reeta	-	Internal Member
26.	Dr. Richa Chauhan	-	Internal Member
27.	Dr. Ruchi Maheshwari Bangur	-	Internal Member
28.	Dr. Shabnam Siddiqui	-	Internal Member
29.	Dr. Shaheema Hameed	-	Internal Member
30.	Dr. Urvashi Bhamboo	-	Internal Member
31.	Dr.Vandana	-	Internal Member
32.	Dr. Dewakar Goel	-	External Member
33.	Prof.J K Jain	-	External Member

NOTE: Shri Shrikant Pareek (External Member), Dr. Meenakshi Rohella (Internal member),Dr. Meghadeepa Chakraborty (Internal member), Dr. Pawandeep Kaur Bindra (Internal member) Dr. Shikha Singh (Internal member), Shri Soumitra Bhattacharya (Internal member) and Ms. Stuti Ghosh (Internal member) could not attend the meeting.

At the outset, the convener appreciated the presence of the external members Dr. Dewakar Goel and Prof. J K Jain and wished that their vast experience would be instrumental in giving new insights in area of business management. The convener appraised the members about the progress of the Faculty of Management Studies since its inception in 1996 and its uniqueness. The members were informed about the achievement of the NRC under the ARPIT training scheme of MHRD, and its leaner enrolment being amongst the top 10 NRCs of India. The members appreciated establishment of NRC in management at Banasthali Vidyapith and its uniqueness. Furthermore the convener requested Shri Abhishek Pareek CEO of Atal Incubation Centre to showcase the working and achievement of the centre. Shri Abhishek Pareek informed the members about the functioning of AIC and unique business models of various startups.He also shared the efforts that are made for ensuring funding for the startups and the upcoming programmes in the AIC. The members were informed about the progress AIC has made since the setup and these were welcomed by the members.

Dr. Goel and Prof. J K Jain appreciated the work done at FMS-WISDOM in consonance with the ideology of Banasthali Vidyapithin all walks of education and also encouraged the members to take further innovative steps for the future growth of the students. The members appreciated the words of wisdom shared by the external members.

1. The Board took up the minutes of its last meeting held on December 27, 2018
   The Board resolved that the minutes to be confirmed.
2. The board reviewed the existing panel of examiners and suggested to update the list of the examiners for each examination up to and inclusive of all Master's degree examination keeping in view the by-law 15.03.02 of the Vidyapith. Updated panel has been sent to the examination and secrecy section.
3. The board reviewed the study/curricula, scheme of examination and proposed revisions in various courses of study as follows:

3 I. BBA/ B.Com/ B.A

i.	First Semester Curriculum	No Change
ii.	Second Semester Curriculum	Change [a]
iii.	Third Semester Curriculum	Change [a]
iv.	Fourth Semester Curriculum	No Change
v.	Fifth Semester Curriculum	Change [b]
vi.	Sixth Semester Curriculum	Change [b]

The Board reviewed the Objectives, Scheme, Syllabi and Learning outcomes of BBA/ B.A (Management)/ B.Com. and the following changes were recommended:

(a) In B.Com/BBA II/III semester, revision in the syllabus of Business Communication (Course Code: TSKL 101) was proposed. Board discussed the revision proposed and agreed upon the suggested syllabus. Board also recommended implementing the proposed revision in syllabus of Business Communication by II/ III Semester Examination, April, 2021.

(b) It was resolved to recommend to enrich the list of Discipline Electives in BBA/B.Com V semester and VI semester, the following subjects were introduced enriching the list of Discipline Electives:

       i. *BBA/ B.Com III Year*
          1. *Fundamentals of Human Resource Management (New Code)*(Newly introduced)
          2. *Retail Environment in Management (Course Code: MGMT 208)*(Newly introduced)
          3. *Risk Management and Insurance (Course Code: MGMT 312)*(Newly introduced)

The board unanimously resolved and recommended that all the changes proposed in the syllabi of BBA/B.Com/BA must be implemented for all the semesters with effect from 2020-2021
The revised syllabus, learning outcome, list of suggested reading and suggested e learning material is enclosed and Marked as **Annexure IV for B.B.A., B.Com and B.A. (Management).**

3 II MBA/ M.Com

i.	First Semester Curriculum	Change [a]
ii.	Second Semester Curriculum	Change [b]
iii.	Third Semester Curriculum	No Change
iv.	Fourth Semester Curriculum	No Change

The Board resolved to recommend that to streamline the topics of the subjects offered in MBA certain reshuffling is required, while the board resolved to propose addition in few subjects offered in M.Com. The Board resolved to implement all the below mentioned changes w.e.f. 2020-21 academic year in all the semesters.

(a) Board evaluated the syllabusof *People Management (Course Code: MGMT 425) and Organization Development and Change Management (Course Code: MGMT 424)* of MBA I and II semester and proposed that some topics needs to shuffled amongst the sections to streamline the content of the section. The changes so suggested were evaluated and the board resolved to recommend them.

(b) Board reviewed the syllabus of *Application Software for Accounting (Course Code: COM 404)* of M.Com II Semesterand found that the course requires some modification in the content owing to the changing Accounting scenario. The Board recommended to makethe modifications in the syllabus of *Application Software for Accounting of M.ComII Semester*.

(c) Board Reviewed the syllabus of *Advance Investment Management(Course Code: COM 506)* of M.Com III semester and proposed that some topics needs to shuffled amongst the sections to streamline the content of the section. The changes so suggested were evaluated and the board resolved to implement the same

(d) In view of the tech strides and fast changing business scenario of Management education the board resolved to recommend that the Vidyapith should consider to introduce specialization in Business Analytics and Data Science in MBA. The board thus evaluated the scope of MBA in Data Analytics and proposed to start the same as Minor Specialization from the upcoming academic year 2020-2021. The detailed curriculum structure for MBA in Business Analytics and Syllabi for various courses to be offered under the specialization are enclosed herewith and marked as **Annexure V**

The board resolved and recommended that all the changes proposed in the syllabi of MBA/M.Com should be implemented for all the semesters with effect from academic session 2020-2021 and also to start MBA in Data Analytics as a Specialization from the academic session 2020-2021. The specialization may be offered as micro masters (major)/ major/ minor.
The revised and proposed new changes in the MBA and M.Com Programme are enclosed herewith and marked as **Annexure II.**

4. The board reviewed the Programme Educational Objectives, Programme Outcome and Learning outcomes of all courses, and resolved that all the mentioned points are synchronized with the current offering of the courses and need not require any change.

5. The board reviewed and resolved that all the online courses offered in all the programmes are updated and are in line with the course, thus no changes for the academic year are required.

6. Board reviewed the curriculum for the courses running in the other programmes of the Vidyapith. Following suggestions were given.

Bachelor of Business Administration and Bachelor of Laws		
MGMT 107	Management Principles for Law	No Change
ECO 105	Micro Economics	No Change
ECO 103	Macro Economics	No Change
MGMT 108	Organizational Behaviour and Behavioural Psychology	No Change
ECO 205	Theories of Development and Indian Economics	No Change
MGMT 204	Business Strategy	No Change
COM 104	Financial Accounting	No Change
MGMT 207	Principles of Marketing Management	No Change
MGMT 301	Advertisement and Media Management	No Change
MGMT 307	Management Accounting	No Change
MGMT 302	Audit Practices	No Change
MGMT 303	Business Ethics	No Change
Bachelor of Commerce and Bachelor of Laws		
COM 104	Financial Accounting	No Change
COM 106	Principles and Practices of Banking for Law	No Change
COM 102	Cost Accounting for Law	No Change
COM 105	Management of Financial Institution and Services	No Change
COM 202	Corporate Accounting and Auditing	No Change
COM 206	Fundamentals of Insurance	No Change
COM 208	Legal Environment for Business	No Change
ECO 105	Micro Economics	No Change
COM 309	International Business and Trade	No Change
ECO 103	Macro Economics	No Change
ECO 205	Theories of Development and Indian Economics	No Change
MGMT 306	International Finance	Change [a]
Bachelor of Technology (BT, CE, CS, IT, EEE, ECE, EIE, MCTR)		
MGMT 209	Entrepreneurship	No Change
MGMT 310	Principles of Management	No Change
Bachelors of Computer Application		

| MGMT 101 | Accounting and Financial Principles | No Change |
| MGMT 106 | Management Principles | Change [b] |

(a) The Board reviewed the Syllabus of *International Finance (Course Code: MGMT 306)* of B.Com LLB VI Semester suggested major changes in the syllabus. The board recommended that the subject to be renamed as "*Corporate Finance for Law"*The changes to be implemented from the academic session 2020-2021

(b) The board reviewed the syllabus of *Management Principles (Course Code: MGMT 106)* of BCA and suggested minor changes in the syllabus. The board recommended that the new syllabus must be implemented from academic session of 2020-2021.

The board unanimously resolved and recommended that all the changes proposed in the syllabi must be implemented with effect from academic session 2020-2021

The changes made in the syllabi of the courses running in the other programmes of the Vidyapith are enclosed and marked as **Annexure II**

7. Board reviewed the reports received from the examiners of different examination for the year of 2018-2019. Most of the examiners during 2018-19 recommended the inclusion of indirect questions in classroom discussion and improvement in presentation of answers. The examiners mainly commented that many a times the students' answers were diffused or were not to the point. Resolved to recommend that on the whole the report of the examiners is satisfactory but faculty members should look for further improvement. A new format for Examiners Report is also proposed.

   The detailed report and new format for examiner report is enclosed and marked as Annexure VI.

8. The board evaluated the semester and periodical examination papers and observed that the question papers of 2018-19 were a combination of implied and direct questions which gave students a good option. In some subjects the committee pointed out that the question papers were too direct. A detailed analysis of past papers has been carried. It is pointed out that inclusion of case studies is comparatively less in papers, and the same must be increased. While the committee shared concern on some papers of 2018-19 academic year, on the whole the committee appreciated the papers and their content. The board reviewed that the quality of question papers in some papers is better in periodicals as compared to the semester exams.

   The Board resolved to recommend that although the report is satisfactory but the faculty members should review the model papers and suggest inclusion of case study based question in all courses under MBA and M.Com. In UG programmes in courses like HRM, Marketing Management, Personal Finance, Income Tax, Bhartiya Prabandhan, Emerging Banking Services etc. case study should be the part of model paper. Furthermore in all courses a question related to relevant current affairs should be included in the model paper, with

exception to courses like Financial management, Accounts, Cost Accounts, Goods and Service Tax etc.,

The details are enclosed and marked asAnnexure VI.

9. In line with the Bye-laws: 9.2.03, 'Members co-opted by the Faculty concerned from amongst persons who are the members of the Board of Studies in a subject in which there is Post graduate Teaching, following persons are recommended:

    a. **Shri Shankar Kumar**
       Advisor at Deutsche Gesellschaftfür Internationale Zusammenarbeit (GIZ) GmbH
       Mobile: 98114-35719 email : shankar.kumargiz.de

    b. **Prof. J K Jain**
       Professor, Dr. H S Gaur Vishwavidyalaya, Sagar, MP
       Res: 117 JK House, Manorama Colony, Sagar-1-MP
       Mobile: 94254-36471, Email: dr.jinendrakumarjain@gmail.com

    c. **Dr. Karunesh Saxena**
       Director and Chairman, Faculty of Management Studies
       Mohal Lal Sukhadiya Univeristy, Udaipur, Rajasthan
       Mobile: 99280-74007, Email: ksfmsudr@gmailcom

10. The board reviewed the progress of the department in view of the roadmap prepared for the department in the board of studies conducted on 27 December 2018. The members appreciated the progress of the department in the area of research and how the things are taking shape in the academic session. The members were apraised about the growth and the goals of the department. A one page report of this is enclosed and marked as Annexure VII

11. The board reviewed the syllabi of the Research Entrance Examination of Commerce and Management and resolved that the same is as per the requirement of the subjects concerned.

12. The board resolved that the question bank of the research entrance test needs to be reviewed for the BRET and course work examination on research methodology. The board recommended the formation of a committee to carry out the work of preparing a new question bank and submit the same. The new question bank prepared and enclosed in the sealed envelope marked Confidential and Annexure III with the signature of the Convener.

13. The board resolved that from the upcoming semester the Vidyapith may consider to give students an option of open book test in one of the periodicals, wherein it was proposed that the students may be allowed to refer any book of their choice to answer the question in the periodical question paper.

   The meeting ended with a vote of thanks to the chair

Dy. Registrar
Banasthali Vidyapith
(Rajasthan)

Annexure- V

Business Analytics courses in prominent institutions

Foreign Institutes Offering Business Analytics: MS in Data Analytics

1. Massachusetts Institute of Technology
2. University of Texas and Austin
3. University of Southern California
4. Simon Business School @University of Rochester
5. Columbia University
6. University of Minnesota
7. Boston School

Curriculum Summary: Mostly the universities offer the courses in the regular class mode and the contents include Python, R, Marketing Analytics, EViews, SPSS, Financial Analytics, and Information Analytics.

Indian Universities and Institutions offering Business Analytics: MBA/PGDBM/Certification

1. IIM Bangalore
2. IIM Calcutta
3. LBSIM Delhi
4. SP Jain Institute of Management
5. IIM Lucknow
6. IBS
7. XLRI Jamshedpur
8. MDI Gurgaon
9. IPES (Hyderabad)
10. IIT Kahragpur etc.

Curriculum Summary: Offering the curriculum in regular class mode and the mostly the subject offered are Business Intelligence, Predictive Analytics, Marketing Analysis, Simulation Modelling, HR Analytics, Project Management, Financial Analytics, Operations and Supply Chain Analytics etc.

Summary of the Courses: Mostly all the universities and institutes in foreign countries and in India are offering the course of Business Analytics in regular class mode, while Columbia University in collaboration with EdX is also offering it through online mode. While in India IIM Kashipur and IIM Kozikode are offering various certificate courses in business analytics through the mode of E-Classes where a student needs to attend the E-Classes on the weekends. Thus it can be said that we can plan to offer the course in both ways that is in regular class mode and in hybrid manner that is a combination of e-resources and regular classes.

BANASTHALI VIDYAPITH

Draft Proposal

Introducing Business Analytics as a specialization in MBA

MODE 1: Permitting major/minor specialization as Micro Masters

PROGRAMME STRUCTURE

Regular MBA structure with permission to undertake following courses online:

Micro Masters Mode (edX and Columbia University)

Sr. No	Name of the Course	Duration	URL	Equivalent Credit
01	Analytics in Python	8 hrs* 12 Weeks	https://www.edx.org/micromasters/columbiax-business-analytics	4 Credits
02	Data, Models and Decisions in Business Analytics	8 hrs* 12 Weeks	https://www.edx.org/micromasters/columbiax-business-analytics	4 Credits
03	Marketing Analytics	8 hrs* 12 Weeks	https://www.edx.org/micromasters/columbiax-business-analytics	4 Credits
04	Demand and Supply Analytics	8 hrs* 12 Weeks	https://www.edx.org/micromasters/columbiax-business-analytics	4 Credits

MODE 2: Permitting major/minor specialization in regular classroom

I Semester:

S. N.	Course Name	L	P	C
1	Financial and Cost Accounting	4	0	4
2	Indian Ethos and Human Quality Development	4	0	4
3	Information Technology & MIS	4	0	4
4	Managerial Economics	4	0	4
5	Marketing Management	4	0	4
6	People Management	4	0	4
7	Quantitative Research Techniques	4	0	4
8	Computer Lab-I (Excel and SPSS)	0	6	3
		28	6	31

II Semester:

S. No.	Course Name	L	P	C
1	Major Specialization Elective-I	4	0	4
2	Major Specialization Elective-II	4	0	4
3	Major Specialization Elective-III	4	0	4
4	Minor Specialization Elective-I	4	0	4
5	Business Environment and Operations	4	0	4
6	Financial Management	4	0	4
7	Computer Lab II (EViews and R)	0	6	3

III Semester:

S. No.	Course Name	L	P	C
1	Reading Elective*	0	0	2
2	Major project	0	56	28
		0	56	30

*Adding following as a Reading Elective:

S. No.	Course Name	L	P	C
1	Data Visualization for Analytics	0	0	2

IV Semester:

S. No.	Course Name	L	P	C
1	Corporate Governance and Strategy	4	0	4
2	Indigenous Management System	4	0	4
3	Major Specialization Elective-IV	4	0	4
4	Minor Specialization Elective-II	4	0	4

Major/Minor Specialization Electives

S. No.	Course Name	L	T	P	C
1	*Financial Analytics* **(Minor as Well)**	4	0	0	4
2	*Predictive Analysis (Using R)*	4	0	0	4
3	*Programming Analytics*	4	0	0	4
4	Marketing Analytics **(Minor as Well)**	4	0	0	4

COMPUTER LAB I

	L	T	P	C
Max. Marks : 100	4	0	0	4
(CA: 40 + ESA: 60)				

Course Objective:

- To understand the basics of excel and its use for analysis.
- To learn to apply various formulas for analysis using excel.
- To understand the basics of SPSS and its applicability in data analysis.

Course Content:

Use of Excel: Introduction to MS Excel, Quick review on MS Excel options, Ribbons, Worksheets and Tools. Difference between Excel 2007, 2010 and 2013.Saving Excel file as CSV, Macro enable sheet, PDF and Older version.Using Excel shortcuts with full list of Excel shortcuts. Copy, Cut, Paste, Hide, Unhide, Delete and Link the Data in Rows, Columns and Sheets. Using paste special options.Formatting cells, rows, columns and sheets.Protecting and Unprotecting cells, rows, columns and sheets with or without password.Page layout, themes, background, and printer properties.Inserting pictures, hyperlinks, header/footers, shapes, and other objects in the worksheets.

Advances in Excel: Working with function, Data Validations, Working with Templates, Sorting and Filtering data and working with Reports.

SPSS: Introduction-Data Entry, Data Editor, Basic Calculations, Recoding, Missing values, Split file, Weighted Cases, Using EXCEL Data. Descriptive Statistics-Data Entry, Frequencies, Descriptive, Cross Tabs, Exploratory, Custom Tables.Visual Statistics-Chart Builder, Histograms, Box Plots, Bar Charts, Cluster Bar, Stacked Bar, Error bar, Line charts, Pie charts, Editing graphs and Axes, Statistical Testing-Parametric vs. Non parametric, Logic, Confidence Intervals, Power of the test, Normal Curve, Normality Test, Homogeneity of variance, Bootstrapping. T-Test-One Sample, Independent Sample, Paired Sample. Analysis of variance-General linear Model, Key Terms, Uni-variate, Multivariate, Repeated Measures, Contrasts, Multiple pairwise comparisons, Main effects, conditional means. Non Parametric Tests-Mann Whitney U test, Wilcoxon Signed ranks test, Kruskal Wallis Test, Friedman Test. Chi square Test-Test of Independence, 2x2 Cross tabulation, Layered cross tab, Goodness of fit. Linear Correlation and Regression.Pearson Correlation, Spearman Correlation, Kendall Tau B, Scatter Plots, Partial correlation, Linear Regression, Logistic Regression. Advanced Analysis-Factor Analysis, Reliability Analysis, Cronbach Alpha.

Learning Outcomes:

Upon completion of the course, the student will be able to

- Use excel for data analysis and interpretation
- Use SPSS for finding statistical results and future forecasting of business
- Apply the skill attained for better performance of their job of analysis

Suggested Readings:

1. Whigham, D. (1998). Quantitative business methods using Excel (6 ed). Oxford University Press.
2. Kumar, B. (2017). Mastering MS Office: Computer Skill Development- Be future Ready (1 ed). New Delhi: V&S Publishers.
3. McCormick, K. (2017) SPSS Statistics for Data Analysis and Visualization, (5 ed). Wiley: Delhi

COMPUTER LAB II

Max. Marks : 100	**L**	**T**	**P**	**C**
(CA: 40 + ESA: 60)	**4**	**0**	**0**	**4**

Course Objective:

- To understand the basics of EViews and its use for analysis.
- To learn to apply various formulas for analysis using EViews.
- To understand the basics of R and its applicability in data analysis.

Course Content:

EViews: Overviews of the EViews desktop: The EViews Desktop, EViewsWorkfiles, EViews objects. Workfiles and Workfile pages - getting data into EViews: How EViews understands/organizes data: The structure of a Workfile, Creating blank Workfiles for three types of data structures, Bringing data into blank Workfiles, Creating Workfiles by reading data in EViews., Creating Workfile pages. EViews Samples: refining your analysis: Changing the sample, Key Sample functions and if statements. Series and Groups: EViews data objects: Creating new Series and Groups, Data analysis in one click: Series and Group menu items, Auto-Series. Estimation in EViews: a first look: Specifying and estimating an Equation, Equation objects, Equation output, Multiple regression analysis. Introduction to other EViews objects: Graph objects, Table objects, Text objects, Spool objects.

Advances in EViews: Data manipulation: functions everyone should know: Basic operators and mathematical functions, Descriptive statistic functions, Statistical distribution functions, Time series functions, Cumulative and moving statistic functions, Group functions. Date functions: manipulating dated data: Basic date functions. Dummy variables: Creating dummy variables using Samples, Creating dummy variables using date functions, Creating dummy variables using other EViews functions. Frequency conversion and data merging: Page links in EViews, Frequency conversion: High to Low, Frequency conversion: Low to High, General match-merge data copying, Data match-merging. Graphing data in EViews: Graphs and Graph objects, Basic graphs of single and multiple series, Analytical graphs, Categorical graphs, Basic graph customization .Analyzing your data in EViews: basic statistics: Calculating basic statistics: Histograms, stats tables, stats by classification, one-way and N-way tabulations, covariance analysis, Simple hypothesis and distributional tests, Odds and ends: the Series Proc menu (Generate by Classification, Resample and Interpolate).

Introduction to R programming: Installation, getting Started R, RStudio, Data Types in R: Constants, vectors, matrix, data frames, lists, Data Handing in R, Working with functions, summary measures, Data Visualization using R : Base, lattice and ggplot packages, Statistical Analysis using R: Probability Distribution using R, Statistical Analysis using R Hypothesis Testing -I Parametric, Analysis of Variance : One way and two-way ANOVA, Hypothesis Testing -II Non Parametric, Logistic Regression, Reproducible research using Rstudio knitr and markdown packages, Reproducible research using Rstudio: bookdown packages and blogs, website, Time Series Analysis, Factor Analysis.

Learning Outcomes:

Upon completion of the course, the student will be able to

- Use EViews for data analysis and interpretation
- Use R for finding statistical results and future forecasting of business
- Apply the skill attained for better performance of their job of analysis

Suggested Readings:

1. Griffiths, W. (2008). Using EViews for Principles of Econometrics (1ed). Wiley, New Delhi.
2. Agung, G.N. (2013). Panel Data Analysis using EViews(1 ed). Wiley, New Delhi.
3. Wickham, H. (2016) R for Data Science: Import, Tidy, Transform, Visualize, and Model Data, (1ed). "O'Reilly Media, Inc.Delhi
4. Grolemund, G., (2014). Hands-On Programming with R: Write Your Own Functions and Simulations, (1 ed),"O'Reilly Media, Inc. Delhi

Financial Analytics

Course Objective:

1. To understand the various statistical tools used for financial analysis
2. To understand the aspects of Time Series analysis and important aspect of Financial Analysis.
3. To understand the aspects of VAR and its related calculations.

Note: The paper will contain three questions from every section aggregating nine questions. Candidates are required to attempt total six questions, taking two questions from each section.

Course Content:

Section A

Introduction: Nature and scope of applying Econometrics in Finance; Understanding the structure of data for analysis and applications; Data Generating Process; Financial Time Series & their characteristics; Asset returns; Distributional properties of returns; Stylized facts of Financial Time Series.

Regression Analysis – A review: Correlation vs. Causation vs. Regression; Regression Model: Linear Functional relationship between variables; Assumptions of Regression Model; Estimating the Regression Model; Goodness-of-Fit of the Model; Diagnostic check and Model Significance; Dummy Variables; Violations of OLS assumptions – Detection, Tests, and Consequences-Heteroscedasticity, Autocorrelation, and Multi-Collinearity.

Event Study Analysis: Outline of an Event Study; Measuring Normal Performance – Constant Mean Return, Market Model; Measuring Abnormal Returns – Estimation of Market model, Statistical properties of abnormal returns; Aggregation of Abnormal returns. Sensitivity to Normal Return Model.

Compulsory Assignment: Testing CAPM, testing time series return persistence, Market timing analysis or Style analysis, Testing various trading strategies success.

Section B

Introduction to Time Series: Basic Concepts - Stochastic Processes; Stationary Processes; Purely Random Processes; White Noise Processes; Definition of Stationary Time Series; Importance of Stationary Time Series; Tests of Stationarity- Graphical Method; Autocorrelation Coefficient &Correlogram; Unit Root tests –Dickey Fuller Test, Augmented Dickey-Fuller Tests, Phillips-Perron Unit root test; Transforming Non-Stationary Time Series into Stationary Time Series - Trend Stationary and Difference Stationary Stochastic Process.

Smoothing of Time Series: Averaging Methods – Mean; Moving Average; Exponential Smoothing Methods – Single Exponential Smoothing; Holt's Linear Model; Holt-Winters' Model.

Univariate Time Series Modelling & Forecasting: Autoregressive models; Moving Average Models; ARMA models; Autoregressive Integrated Moving Average (ARIMA) Models; Box-Jenkins Methodology – Identification, Estimation & Diagnostic Checking.

Measuring Volatility in Financial Time Series: Volatility – Meaning & Measurement – Historical Volatility, Implied Volatility, EWMA, Autoregressive models; Econometric models of volatility – ARCH & GARCH models; Estimation of ARCH/GARCH models; Extensions of GARCH models -Asymmetric GARCH; EGARCH; GARCH in mean; Testing for ARCH/GARCH effects; Stochastic volatility models; multivariate GARCH modelling. Percentage change in volatility.

Compulsory Assignment: Forecasting of stock returns, macroeconomic variables, Estimating and forecasting volatility of major stock indices. **Preparation of research paper will be start after the completion of GARCH Model.**

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Section C

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Vector Auto regression (VAR) Models: Estimation of VAR; Forecasting with VAR; VAR and Causality tests, VARs with exogenous variables; Impulse responses and variance decomposition; Stationarity and unit-root testing.

Co-integration: Meaning, concept of Spurious Regression; Co-integration – Definition & testing for co-integration; Testing for Co-integration - Engle-Granger Test, Johansen Test; Error Correction Models.

Switching Models: Concept of Switching models; Modelling seasonality in financial data; Markov Switching models; Threshold Autoregressive models, Estimation of Threshold Autoregressive model, Specification tests.

Panel Data: Introduction; Unit root tests; Pooling of data; Panel Data techniques – Fixed Effects and Random effects models; Suitability of these models.

Conducting Empirical research in Finance: Selecting a topic; Research proposal; Literature review; Getting the data; Selecting the technique and computer software; Presenting the research findings – Research reports.

Compulsory Assignment: Testing capital structure theories (Panel Data). Research papers finalized and send to SCOPUS/Web of Science/ABDC/ABS indexed Journal.

Suggested Readings:

1. Gujarati, Damodar N, and Dawn C. Porter. Basic Econometrics. Boston, Mass: 7 ed. McGraw-Hill, 2009.
2. Jeffrey M. Wooldridge. Introductory Econometrics A Modern Approach 5th ed. South western Cengage learning, 2013.
3. Baltagi, B. H. Econometric Analysis of Panel Data. 3rd ed. John Wiley & Sons. 2005.

Data Visualization for Analytics

Course Objective:

1. Examine, navigate, and learn to use the various features of Tableau
2. Assess the quality of the data and perform exploratory analysis
3. Create and design visualizations and dashboards for your intended audience
4. Combine the data to and follow the best practices to present your story

Note: The paper will contain nine questions. Candidates are required to attempt any five questions.

Course Content:

Introduction to Tableay, Visual Literacy, Visual Analysis, Visualizations for Business, Visualizations of Tomorrow

Learning Resources

- https://www.edx.org/course/data-visualization-a-practical-approach-for-absolu
- https://www.coursera.org/specializations/data-visualization?ranMID=40328&ranEAID=fDhiRyMTeO8&ranSiteID=fDhiRyMTeO8-eYX.zyE5eYZ6CxgvDABIng&siteID=fDhiRyMTeO8-eYX.zyE5eYZ6CxgvDABIng&utm_content=1&utm_medium=partners&utm_source=linkshare&utm_campaign=fDhiRyMTeO8
- https://www.pluralsight.com/courses/data-visualization-using-tableau-public?clickid=THBQQbwStxyJRvk0ElylqXhuUknR0xV-fXYkzU0&irgwc=1&mpid=1252819&utm_source=impactradius&utm_medium=digital_affiliate&utm_campaign=1252819&aid=7010a000001xAKZAA2

Marketing Analytics

Max. Marks : 100   **L T P C**
(CA: 40 + ESA: 60)   **4 0 0 4**

Course Objectives:

1. To understand the scope of marketing Analytics.
2. To understand the functionalities of Big Data in Marketing Analytics.
3. To understand the customer perspective behind any purchase decision.
4. To understand the impact of advertising and media on the market and analyse the same for future forecast.

Note: The paper will contain three questions from every section aggregating nine questions. Candidates are required to attempt total six questions, taking two questions from each section.

Course Content:

Section A

Big Data, Opportunity and Challenges, Analytics Overview of Analytics, Marketing Analytics, The Data – Information – Knowledge Continuum,Demand forecasting using expert modeler, building the basic model, an additive model with trends and seasonality, Forecasting new product sales – The Bass Diffusion Model. Conjoint Analysis: Products, Attributes, and levelsPrice Sensitivity Analysis, Value Based Pricing, Developing a Conjoint Simulator

Logistic Regression: Logistic Regression Model, Maximum Likelihood Estimate of Logistic Regression Model

Discrete Choice Analysis: Random Utility Theory, Discrete Choice and Price Elasticity, Incorporating Price and Brand Equity into Discrete Choice Analysis, Dynamic Discrete Choice Modelling, Dynamic Pricing Model for profit optimization.

Section B

Cluster Analysis, Using Conjoint Analysis to Segment a Market, Using Classification trees for segmentation, constructing a decision tree model

Correspondence Analysis: is a versatile andeasily implemented analytical method that can do much to assist marketers in detecting and explaining relationships among complex marketing phenomena.

Basic Customer Lifetime Value Calculation Template, An explicit model for multiplier with fixed margins, Calculating Lifetime Customer value with varying margins Allocation of Marketing Resources: Resource Optimization between Customer Acquisition and Customer Retention, Customer Churn Model, Modelling the Relationship between Spending and Customer Acquisition and Retention, Basic Model for Optimizing Retention and Acquisition Spending, Market Basket Analysis and Lift, RFM Analysis and Optimization of Mail CampaignsAllocating Retail Space and Sales Resources

Digital Analytics: Advertising: Media Selection Models, Pay per Click (PPC) Online Advertising, Text Mining: Giving Structure to Unstructured Text, Applying Text Mining in Real Life, Sentiment Analysis,Viral Marketing, Networks, Importance of a node, Watt's model, Model building for viral marketing,

Learning Outcomes:

- To understand how to develop analytics model and apply them to marketing problems,
- To understand the potential of analytics and data for gaining actionable insights and supporting marketing decisions;
- To deepen the participants' understanding of how these vast quantities of data can be used to enhance the efficacy of the marketing efforts (current customer retention, new customer acquisition, and overall customer base value maximization).

Suggested Readings:

1. Hair, Black, Babin and Anderson (2010) Multivariate Data Analysis: A Global Perspective, 7th Edition, Pearson
2. Farris, Bendle, Pfeifer and Reibstein Marketing Metrics: The Definitive Guide to Measuring Marketing Performance, 2nd Edition,
3. Wayne L. Winston (2014) Marketing Analytics, 1st Edition, Wiley India, New Delhi
4. Richard M. Johnson, Sawtooth Software, Ketchum Kathleen A. Olberts, Chevron Chemical Company, San Ramon (1996), Using Conjoint analysis in pricing studies: Is one price variable enough? , Sawtooth Software