MBA: BANKING TECHNOLOGY
DEGREE PROGRAMME

CURRICULUM & COURSE STRUCTURE

(2018-19 onwards)
MBA: BANKING TECHNOLOGY

REGULATION

PROGRAMME:

MBA Banking Technology (Interdisciplinary Programme between Computer Science & Engineering and Management)

DURATION:

Two Years (Four Semesters including Winter Project, Summer Project, Bank Internship for two Months and Final Project for three Months in a specialized Elective Stream)

INTAKE:

72 students (+ 5 Industry Sponsored)

ELIGIBILITY:

Under Graduates with 55% marks in one of the following degree or equivalent.

- BE/B.Tech (CSE/IT/ECE/EEE/E&I/IMCE)
- BSE-CSE/IT
- BCA/B.Com Computer Applications
- Any other degree with University Recognized PGDCA

SELECTION CRITERIA:

All India Admission Test along with Group Discussion and Personal Interview for short listed candidates.

ACADEMIC PROGRAMME:

CBCS Mode, Hard core & Soft Core: 90 – 110 Credits.

Pedagogy Consists of Class Room Teaching, Problem Solving, Computer Lab Practicals, Case Study Discussion, Industry Visits, Industry Mini-Projects, Assignments, Participation in Conventions of Professional Bodies, Role Play, Internship in Banks, Project Work Report and Development of Hardware Devices and Software Packages.

EVALUATIONS:

Internal Assessments – 40 percentages of Marks, External Assessments – 60 percentage of Marks. Internals based on two Term Tests, Written Assignments / field study & seminar Presentations in every Paper. End Semester Exam Consists of 3 hours written test with 3 sections A, B and C. Section C will be a case study.
Computer Lab Practical Exam:

Internal Evaluation consists of 1 hour written test, 1 hour Programming / Data analysis followed by a Viva with External Examination.

Winter, Summer and Final Project works are guided by Faculty Members and evaluated by one or two External Examiners. Project Reports are presented in a Public Presentation and a Viva is conducted for every Candidate.

The Final Project is divided into Phase 1 & Phase 2 Components. Phase 1 consists of an exhaustive review of 20 papers, designing of Syllabus for Phase 1 Components and a Test on it. Phase 2 Consists of a survey / industry internship, software development, Data Analysis, development of a model and preparation of a Project report adapting approved session Methodology or Software Project management methodology

Comprehensive Viva:

Every Semester ends with a Comprehensive Viva Examination Conducted by two external experts (1 from Academic & 1 from industry) Industry Visits, Banking Internship and Final Projects.

All students are expected to take up a compulsory industry visit or field study in every semester. Fifteen days of winter Project is to be conducted on any manufacturing units with the focus to learn different functional areas of management. Students may also take up studies to document successful entrepreneurship in MSNE sectors.

The banking internship is to be carried out for two months during summer vacation and physically participate in the front and back office of a bank branch. Attendance is compulsory and a work dairy is to be maintained. A report is to be summited on different bank operations listed in the syllabus.

The department may conduct an annual industry trip to financial capital or software development Centre’s. An Annual Industry Interface Meet is to be organized for understanding the contemporary development in business. An Annual Alumni Meet is to be organized to get the feedback and to develop placement contacts.

Students have to finance themselves to participate in campus-based activities, industry tour and industry visits, Project work and internship visits and preparation of project reports.

Laboratory:

The department shall maintain a computer lab with one or two servers, licensed software for organizing computer lab practical such as Oracle, Rational Rose, BI tools, Data bases like CMIE, BLOOMBERG, India stat, Capitalite etc. Accounting software Tally, Statistical Software SPSS, Data mining software and other general software like Linux, Visual studio, Java, SQL Server, Turbo C++, MS-Office should be made available. Computer lab should be connected with dedicated intranet and internet and with Wi-Fi facilities for enabling students to use laptops. All students are expected to buy a laptop and use it for both class rooms and lab related works.
## MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
### REVISED COURSE STRUCTURE
#### (2018-19 onwards)

### Non-Credit Bridge Courses:
- MBAB: Basics of Business Environment  Hard Non Credit
- MBAB: Basics of Computer Programming  Hard Non Credit
- MBAB: Basics of Economics  Hard Non Credit

#### I SEMESTER
- MBAB 700: Management Concepts & Organizational Behavior  Hard 3 Credits
- MBAB 701: Quantitative Techniques for Management  Hard 3 Credits
- MBAB 702: Accounting and Finance for Bankers  Hard 3 Credits
- MBAB 703: Banking Principles and Practices  Hard 3 Credits
- MBAB 704: System Analysis and Design and Agile Software Development  Hard 3 Credits
- MBAB 705: Data Centre Management and Cloud Computing  Hard 3 Credits
- MBAB 706: Business Communication Lab  Hard 2 Credits
- MBAB 707: Modeling and Design Lab  Hard 2 Credits
- MBAB 708: Seminar & Comprehensive Viva  Hard 2 Credits

#### II SEMESTER
- MBAB 750: Banking Operations and Management  Hard 3 Credits
- MBAB 751: Entrepreneurship and Startups  Hard 3 Credits
- MBAB 752: Security Analysis and Portfolio Management  Hard 3 Credits
- MBAB 753: Financial Statement Analysis  Hard 3 Credits
- MBAB 754: Banking Technology Management  Hard 3 Credits
- MBAB 755: IT Infrastructure Management for Banks  Hard 3 Credits
- MBAB 756: Banking Technology Lab  Hard 2 Credits
- MBAB 757: Corporate Finance Lab  Hard 2 Credits
- MBAB 758: Value Added Course  Soft 2 Credits
- MBAB: Elective 1: Paper – I  Soft 3 Credits
- MBAB: Elective 2: Paper – I  Soft 3 Credits
- MBAB 761: Seminar & Comprehensive Viva  Hard 2 Credits

#### III SEMESTER
- MBAB 800: Financial Management  Hard 3 Credits
- MBAB 801: International Banking and Financial Services  Hard 3 Credits
- MBAB 802: Merchant Banking and Financial Services  Hard 3 Credits
- MBAB 803: Strategic Management  Hard 3 Credits
- MBAB 804: Information Security for Banks  Hard 3 Credits
- MBAB 805: Data Warehousing and Applied Data Mining  Hard 3 Credits
- MBAB 806: Business Intelligence Lab  Hard 2 Credits
- MBAB 807: Stock and Forex Trading Lab  Hard 2 Credits
- MBAB 808: Bank Internship  Hard 3 Credits
- MBAB: Elective I: Paper – 2  Soft 3 Credits
- MBAB: Elective II: Paper – 2  Soft 3 Credits
- MBAB 811: Seminar & Comprehensive Viva  Hard 2 Credits
IV SEMESTER
MBAB : Elective I: Paper – 3                                      Hard 3 Credits
MBAB : Elective I: Paper – 4                                      Hard 3 Credits
MBAB : Elective II: Paper – 3                                      Hard 3 Credits
MBAB : Elective II: Paper – 4                                      Hard 3 Credits
MBAB 850: Final Project & Viva                                    Hard 6 Credits
MBAB 851: Seminar & Comprehensive Viva                         Hard 2 Credits

ELECTIVE STREAMS

(Every Student has to take 4 papers out of 10 listed papers from two Elective Streams)

INFORMATION TECHNOLOGY STREAM
MBAB 901  Service Oriented Architecture                              Soft 3Credits
MBAB 902  Design Patterns                                           Soft 3Credits
MBAB 903  Smart Banking Technologies                               Soft 3Credits
MBAB 904  Software Project Management                              Soft 3Credits
MBAB 905  Secure Electronic Payment Systems                      Soft 3Credits
MBAB 906  Block Chain and Cryptography                            Soft 3Credits
MBAB 907  Machine Learning                                         Soft 3Credits
MBAB 908  Data Science and Business Data Analytics                Soft 3Credits
MBAB 909  Information Systems Control and Audit                  Soft 3Credits
MBAB 910  Data Visualization and Reporting                        Soft 3Credits

BANKING AND FINANCE STREAM
MBAB 911  Treasury Management                                      Soft 3Credits
MBAB 912  Cyber Crimes and IT Laws                                 Soft 3Credits
MBAB 913  Rural Banking and Micro Finance                         Soft 3Credits
MBAB 914  Risk Management in Banks                                Soft 3Credits
MBAB 915  Central Banking & Monetary Policy                       Soft 3Credits
MBAB 916  Financial Modeling using Spreadsheet                   Soft 3Credits
MBAB 917  Treasury and Fixed Income Securities                    Soft 3Credits
MBAB 918  Global Financial Markets & Instruments                 Soft 3Credits
MBAB 919  Financial Derivatives                                   Soft 3Credits
MBAB 920  International Financial Management                     Soft 3Credits
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME

**BRIDGE COURSES – NON CREDIT**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBAB</td>
<td>Basics of Business Environment</td>
<td>Hard Non Credit</td>
</tr>
<tr>
<td>MBAB</td>
<td>Basics of Computer Programming</td>
<td>Hard Non Credit</td>
</tr>
<tr>
<td>MBAB</td>
<td>Basics of Economics</td>
<td>Hard Non Credit</td>
</tr>
</tbody>
</table>

* to be organized in the first month of I semester Programme
MBAB : BASICS OF BUSINESS ENVIRONMENT

Learning Objectives

- Introduce the students to understand basics of Business
- Provide an overview on Indian Industrial environment
- A prelude to institutional environment for Industrial Finance

- What is Business? Differences between Trade/Commerce/Aids to trade
- Nature of Business : Manufacturing – Services – trading – Banking – Commission Agency, etc
- Types of Organizations – Sole trader – Partnership – Company form – Cooperatives
- Business Organisations – Company form – Formation – Board of Directors – Memorandum of Association – articles of Association
- Business Combinations – Cartels – Mergers & Takeovers
- Foreign Trade – Exports – Imports – Special Economic Zones – EOUs
- Indian Industrial Policy – IPRs – Public Vs Private Sector – Privatization
- Top Business Houses – Product Concentration – Entry of MNCs
- Business Environments: Internal and External: Legal-Political-Economic-Cultural-Geographical-
- Indian Banking – Public Sector Banks – Private Sector Banks – Foreign Banks – RBI – Credit creation by Banks – RBI Credit Policy

Basic Text Book and References

MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
I SEMESTER
(BRIDGE COURSES– NON CREDIT)

MBAB : BASICS OF COMPUTER PROGRAMMING

Learning Objectives
- Introduce the students to understand basics of Computer Programming

A. Introduction to Imperative Programming using C
   1. Data Types, Constant, Variables, Assignment Statement, I/O Functions
   2. Control and Loop Statements– Arrays, Functions
   3. Structure and Union –File Functions– Sample Programs

B. Introduction to Object Oriented Programming using C ++
   4. Class, Constructor, Destructor, Data & Method Visibility
   5. Operator Overloading–Function Overloading–Friend Function–Virtual Functions
   6. Template Class– Abstract Class –IO Streams– Sample Programs

C. Introduction to Client-side Scripting languages
   7. HTML
   8. Java Script
   9. Sample Application

D. Introduction to Server-side Scripting Language
   10. JSP
   11. JDBC in JSP
   12. Sample Applications

Basic Text Books & References
4. Bruce W. Perry, Java Servlet & JSP Cookbook, O’Reilly Media, 2004
Learning Objectives

- Introducing the concepts of Economics
  
  o Economic Logic and Different Concepts of Economics
  o Theory of Firm and Concept of Profit Maximization
  o Factors of Production and Market Mechanism
  o Production and Consumption Theories
  o Cost and Revenue Curves and Break Even Analysis
  o Market Structures and Basic Characteristics
  o Pricing of Factors of Production and Pricing Policies
  o Macro Economics, Concept of GDP and National Income
  o Functions of Money, Demand for Money and Supply
  o Interest Rate, Inflation, Aggregate Income
  o General Theory of Income and Employment
  o Real Market and Money Market Equilibriums
  o Wealth of Nations and International Trade
  o Trade Cycles, Growth and Welfare state
  o Open Economy, Globalization

Basic Text Book & References

4. Kajal Laturi, G.S.Maddala Introduction to econometrics, Wiley 2009
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME

I SEMESTER

MBAB 700: Management Concepts & Organizational Behavior Hard 3 Credits
MBAB 701: Quantitative Techniques for Management Hard 3 Credits
MBAB 702: Accounting and Finance for Bankers Hard 3 Credits
MBAB 703: Banking Principles and Practices Hard 3 Credits
MBAB 704: System Analysis and Design and Agile Software Development Hard 3 Credits
MBAB 705: Data Centre Management and Cloud Computing Hard 3 Credits
MBAB 706: Business Communication Lab Hard 2 Credits
MBAB 707: Modeling and Design Lab Hard 2 Credits
MBAB 708: Seminar & Comprehensive Viva Hard 2 Credits
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
I SEMESTER
MBAB 700: MANAGEMENT CONCEPTS AND ORGANIZATIONAL BEHAVIOUR

Prerequisites:

Learning Objectives:
- To Introduce basic management concepts and the principles and
- To impart the necessary skills to manage various functions of business organizations

Learning Outcomes:
- Helps the students to deal with complex management decision making process

Unit I
Management Process: Nature and Purpose; Functions of Management; Evolution of Management Thought; Management Approaches; Management and Society; External Environment, Social Responsibility and Ethics – Managerial Skills - Qualities of a Good Manager; - Introduction to Strategic Management.

Unit II
Planning: Nature and Purpose; Objectives - Strategies, Policies and Planning Premises Types of Plans; Steps in Planning; Management by Objectives; Strategic Planning Process; Decision Making Process.

Unit III
Organizing: Nature of Organizing - Organizational Structure; Organization Levels and Span of Management; Basis of Departmentation; Line and Staff Relationship; Decentralization and Delegation of Authority; Effective Organizing and Organizational Culture; Staffing Systems Approach – Selection, Appraisal and Training - Communication Process; Types of Communication; Barriers to Effective Communication; Motivation Theories: Maslow, Herzberg, McGregor. Approaches and Styles of Leadership.

Unit IV
Direction and Control Process: Requirements for Effective Control; Control Techniques; Role of Information Technology; Management Information System; Management by Exception; Overall Control and toward the Future through Preventive Control -Controlling and Challenges.

Unit V
Organizational Behavior: The concept and significance of organizational behavior – Skills and roles in an organization- Classical and modern theories of organizational structure- organizational design-Understanding and Managing individual behavior personality-perception- Values – Attitudes – learning – Motivation.

Text Book and References:
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
I SEMESTER
MBAB 701: QUANTITATIVE TECHNIQUES FOR MANAGEMENT

Hard Core 3 Credits
(SPSS + LINDO Software based) Problem
Solving 60% Lab exercises 40%

Prerequisites
• Basics of Statistics

Learning Objectives
• To introduce the application of basic statistical methods in business decision making.
• To familiarize the students with OR techniques required for Management Science.

Learning Outcomes
• Helps the students to find the appropriate solutions for business problems by using statistics and OR techniques


Basic text book and References:

2. Gupta, S P., Statistical Method, Sultan Chand, New Delhi, 7th Edition
3. Arora&Arora, Statistics for Management, S Chand & Co, New Delhi
4. Kothari C. R., Quantitative Techniques, Vikas, New Delhi
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
I SEMESTER
MBABT 702: ACCOUNTING AND FINANCE FOR BANKERS

Hard Core 3 Credits
Theory 30% Problems 50% Lab 20%

Prerequisites: Basic Business and mathematical Understanding

Learning Objectives: Prepare Students -
1. To familiarise basic concept of Accounting and Finance
2. To measure Income, Expenditure, Assets and Liabilities
3. To prepare Financial Statements
4. To understand Reporting standards
5. To understand the role of Information Technology in the process of preparing accounts

Learning outcome: Students who complete this course can Understand and Prepare Financial Statements

Unit I: BASIC ACCOUNTING MODEL

Unit II: MEASURING AND REPORTING INCOME
Income measurement – Accrual Accounting – Adjustment process – Post-closing Trial Balance and Reversing Entries – Income measurement for a Merchandising organisation – Worksheet for a merchandising organisation – Preparation of Final Accounts.

Unit III: MEASURING AND REPORTING ASSETS
Internal Control system – Cash Receivables – Cash and Cash Equivalents – Bank Reconciliation – Trade Receivables.

Unit IV: MEASURING AND REPORTING LIABILITIES

Unit V: REPORTING STANDARDS AND COMPUTERIZATION
Accounting standard (Ind-AS) - Generally Accepted Accounting Principles (GAAP) - International Financial Reporting Standards (IFRS) – eXtensible Business Reporting Language (XBRL).
Computerised Accounting – Terms used in Computerised Accounting – Accounting Software – ERP Accounting – Core Banking Software and its components.

Text Books:

References:
- Jain S P and K L Narang, Advanced Accounts, Kalyani Publishers, Ludhiana 2018
- https://onlinecourses.nptel.ac.in
- https://swayam.gov.in/course
- http://www.iibf.org.in
- https://students.icai.org
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
I SEMESTER
MBAB 703: BANKING PRINCIPLES AND PRACTICES

Hard Core
3 Credits

Prerequisites
- Basics of Banking

Learning Objectives
- To introduce the Indian Banking and Financial system
- To expose the developments taking place in the banking industry in the recent times in India
- To introduce the legal and regulatory aspects of banking in India

Learning Outcomes
- Helps the students to comply with banking regulations in the banking sector.

Unit – 1

Unit - 2
Functions of Banks- Deposits types – Concept of CASA - KYC Guidelines - Different Deposit Products -Services Rendered by Banks – Opening of Accounts for Various Types of Customers - Minors - Joint Account Holders -HUF -Firms - Companies - Trusts - Societies - Govt. and Public Bodies etc.

Unit-3

Unit – 4

Unit – 5
Ancillary Services of Banks - Remittances, Safe Deposit Lockers- Merchant Banking - Credit Information Bureau (India) Limited- Fair Practices Code for Debt Collection - Banking Codes and Standards Board of India - Financial Inclusion, SHGs - Lead bank Scheme - Financial Innovation- ADR & GDR.

Reference Books:
2. IIBF, Legal and Regulatory Aspects of Banking, 3rd Edition, MacMillan Education. 2015
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
I SEMESTER
MBAB 704: SYSTEM ANALYSIS AND DESIGN AND AGILE SOFTWARE DEVELOPMENT

Prerequisites:

- Basic knowledge of system analysis and design.

Learning Objectives:

- To teach techniques and approaches to students so that they may analyze and develop business systems more effectively and efficiently using OO Methodology and Agile Methodology.

Learning Outcomes:

- Helps the students to develop the business systems using UML and Agile Methodology

Unit I

Unit II

Unit III

Unit IV

Unit V

Text Books and Reference Books

8. The art of Agile Development, James Shore and Shane Warden, O’ Reiely, 2012
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
1 SEMESTER
MBAB 705: DATA CENTRE MANAGEMENT AND CLOUD COMPUTING

Hard Core
3 Credits

Prerequisites:
- Fundamentals of Operating Systems, Memory Management

Learning Objectives:
- Understanding of Storage Technology, Networked Storage, characteristics of a Data Center
- Understanding technologies required to build classic (traditional), virtualized, and cloud data center environments. These technologies include compute, storage, networking, desktop and application virtualization.

Learning Outcomes:
- Helps the Students to gain knowledge in data centre management.

Unit I: Introduction To Storage Technology: Review data creation and the amount of data being created and understand the value of data to a business, challenges in data storage and data management, Solutions available for data storage, Core elements of a data center infrastructure, role of each element in supporting business activities.

Unit II: Storage Systems Architecture: Hardware and software components of the host environment, Key protocols and concepts used by each component, Physical and logical components of a connectivity environment, Major physical components of a disk drive and their function, logical constructs of a physical disk, access characteristics, and performance Implications, Concept of RAID and its components, Different RAID levels and their suitability for different application environments, Compare and contrast integrated and modular storage systems, high-level architecture and working of an intelligent storage system.

Unit III : Information Availability, Monitoring & Managing Data center : The reasons for planned / unplanned outages and the impact of downtime, Impact of downtime - Difference between business continuity (BC) and disaster recovery (DR), RTO and RPO, Single points of failure in a storage infrastructure and solutions to mitigate these failures, Architecture of backup/recovery and the different backup/ recovery topologies, replication technologies and their role in ensuring information availability and business continuity, Remote replication technologies and their role in providing disaster recovery and business continuity capabilities. Key areas to monitor in a data center, Industry standards for data center monitoring and management, Key metrics to monitor for different components in a storage infrastructure, Key management tasks in a data center.

Unit IV: Networked Storage and Virtualized Data Centre: Evolution of networked storage, Architecture, components, and topologies of FC-SAN, NAS, and IP-SAN, Benefits of the different networked storage options. CAS for long-term archiving solutions. The appropriateness of the different networked storage options for different application environments. Virtualization of core technologies in a data center – Fundamental concepts of compute, storage, networking, desktop and application virtualization. Securing Storage and Storage Virtualization - block-level and file-level virtualization technologies and processes.


Basic Text Book and References:
1. EMC Corporation, Information Storage and Management, Wiley, India.(Text Book)
5. Additional resource material on —www.emc.com/resource-library/resource-library.esp
7. Cloud Computing For Dummies Author: Halper Fern, Kaufman Marcia, Bloor Robin, Hurwit Judith, Publisher: Wiley India Pvt Ltd (2009 )
8. Toby Velte, Anthony Velte, Robert Elsenpeter, Cloud Computing, A Practical Approach
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
I SEMESTER
MBAB 706: BUSINESS COMMUNICATION LAB

Prerequisites:
- Basics of English Grammar

Learning Objectives:
- To develop effective communication skills and interpersonal relations
- To motivate and manage life incidents

Learning Outcomes:
- Helps the students to have communication skill, writing of business correspondence, and to interact with different levels of managers/authorities.

Unit I: Development of competency/proficiency and Practice on- Oral/spoken communication skill & testing – voice and accent, voice clarity, voice modulation & intonation, word stress etc. Feedback& questioning technique: Objectiveness in argument (Both one on one and in groups- Effective Communication -Development Etiquette and manners. Study of different pictorial expression of non-verbal communication and its analysis

Unit II: Concept of Effective Communication Components of Effective Communication- Conviction, confidence & enthusiasm, Listening Communication Process & Handling them KISS (keep it short & simple) in communication – composing effective messages Barriers to Communication- Listening -it’s importance, Good and bad listening Non-Verbal Communication – its importance and Nuances : Facial Expression, Posture, Gesture, eye contact, Appearance (Dress Code)

Unit III: Self Management: Self Evaluation- Self discipline- Self criticism- Recognition of one’s own limits and deficiencies -Independency etc. Thoughtful & Responsible Self Awareness- Self Management Identifying one’s strength and weakness- Planning & Goal setting Managing self –emotions, ego, pride- Time Management Technique, Discipline& Punctuality Act in time on commitment- Quality /Productive time.

Unit IV: Interpersonal Skill Development - Interpersonal Skill Development Positive Relationship- Positive Attitudes- Empathise : comprehend other- opinions points of views, and face them with understanding Mutuality- Trust- Emotional Bonding- Handling Situations (Interview)

Unit V: Motivation/ Inspiration: Ability to shape and direct- working/process methods according to self defined criteria. Motivate customers- Ability to think for oneself- Apply oneself to a task- independently with self motivation. Motivation techniques- Motivation technique based on needs-and field situation- Idealising
Prerequisites:
- Basics of Object oriented Concepts

Learning Objectives:
- This course gives a hands-on-experience to the students to build and manage the financial information systems using object-oriented design by applying established design principles using UML diagrams.
- Design and Develop Financial Information Software applying Object Oriented Modeling approach using typical Case Tool as given below:

Learning Outcomes:
- Helps the students to design and develop systems using UML and Agile Methodology

Problem Statement
1. Study of the problem
2. Identify project scope
3. Objectives and infrastructure

Business modeling and requirements specification
1. Prepare Software Requirements Specification
2. The specification language
3. Unified Modeling Language (UML)

UML
1. Design data dictionary
2. Use case diagrams
3. Activity diagrams

Build and Test
1. Class diagrams
2. Sequence diagrams
3. Collaboration diagrams
4. Add interface to class diagrams

Software Implementation
1. Coding
2. Use tools for automatic code generation from system specifications.

Agile Software Development using Agile tools
1. Agile Management practices and principles
2. Agile development practices and principles
Learning Objectives:

To evaluate the comprehensive Understands of Theoretical concepts of all subjects of that semester. All subjects in final comprehensive viva.

To evaluate the Communication Skill of the MBA Students.

Glossary of Terms:

Every Student shall prepare a list of Technical Terms for every Hard core and elective subjects registered in the given semester. (All Subjects in case of final semester) (Minimum of 100 concepts per subject to be compiled)

Test on Concepts:

A comprehensive Viva would contain two components. Phase I is a written test on concepts for 1½ hrs to be answered in one-two sentences. These papers will be evaluated by External Examiners (Test paper contain at least 10 concepts per subjects)

Seminar:

Students have give a seminar on the relevant contemporary topic.

VIVA by External Experts:

A student ability to comprehend and apply the theoretical concepts to practical Business operations will be tested by two external Examiners (Mostly one Academician and other Industry expert). They will conduct either individual / group viva on a comprehensive Business situation requiring the applications of Knowledge acquired in the core subjects.

Division of Marks:

Test: 20
Viva: Communication - 20
Domain Knowledge - 20
Seminar - 20
Group participation - 20
**MBA: BANKING TECHNOLOGY DEGREE PROGRAMME**

**II SEMESTER**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBAB 750</td>
<td>Banking Operations Management</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 751</td>
<td>Entrepreneurship and Startup</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 752</td>
<td>Security Analysis and Portfolio Management</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 753</td>
<td>Financial Statement Analysis</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 754</td>
<td>Banking Technology Management</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 755</td>
<td>IT Infrastructure Management for Banks</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 756</td>
<td>Banking Technology Lab</td>
<td>Hard 2</td>
</tr>
<tr>
<td>MBAB 757</td>
<td>Corporate Finance Lab</td>
<td>Hard 2</td>
</tr>
<tr>
<td>MBAB 758</td>
<td>Value Added Course</td>
<td>Soft 2</td>
</tr>
<tr>
<td>MBAB</td>
<td>Elective 1: Paper – 1</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB</td>
<td>Elective 2: Paper – 1</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 761</td>
<td>Seminar &amp; Comprehensive Viva</td>
<td>Hard 2</td>
</tr>
</tbody>
</table>
Prerequisites
• Basics of Banking

Learning Objectives:
• To introduce the overview of risk management in Banks
• To explain the various aspects of guidelines governing Indian Banks
• To expose various management aspects of banks in India

Learning Outcomes:
• Helps the students who join the banking the industry to excel in the industry

Unit – 1

Unit – 2

Unit – 3

Unit – 4
Branding and Strategies - Retail Banking: Approach, Products, Marketing - Promotion and delivery channels of banking Products and services - Traditional and modern – Bancassurance -Direct selling agents - Customer Relationship Management- eCRM.

Unit – 5

Reference Books:
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
II SEMESTER
MBABT 751: Entrepreneurship and Startups

Hard Core
3 Credits

Prerequisites:
Not required

Learning Objective:
- To create a learning experience to enable the students to face the challenges of starting new ventures.
- To prepare the students for starting new business and the skills for managing existing family business.

Learning Outcomes:
- Helps the students to become entrepreneurs in different fields.

Unit I: Evaluating Entrepreneurial Career Options and Startup Opportunities

Unit II: Role of Government:

Unit III: Understanding Startup Finances and Capital Requirements
An Overview of Startup Finances and Sources of Investment Capital - Developing Financial Projections—How to Forecast Expenses and Revenue Case Discussion: Raising Seed Financing Workshop: Capitalization and Ownership for New Ventures

Unit IV: Developing and Presenting Startup Business Plan
The Venture Communication -Communication for Startups □ Examining Sample Business Plans and Executive Summaries Workshop: Business Plan Critique The Art of the Venture Presentation Developing Entrepreneurial Marketing: Competencies, Networks and Frameworks Gathering Resources

Unit V: Launching and Managing the Startup Enterprise □ Maintaining Competitive Advantage The Changing Role of the Entrepreneur: Mid-Career Dilemmas □ What to Expect During the “Launch Stage” Where to Focus First? The Imperatives of the Launch Stage □ Legal Issues Facing Entrepreneur □ Building Your Team

Text Books and References:
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
II SEMESTER
MBAB 752: SECURITY ANALYSIS AND PORTFOLIO
MANAGEMENT

Hard Core
3 Credits

Prerequisites
• Basics of Finance

Learning Objectives
• To provide the basics of investment analysis, fundamental and technical analysis about the
  companies and markets.
• To impart the knowledge and skills to value and price the equity using different models.

Learning Outcomes
• Helps the students to start stock broking firm also to join financial consultancy firms

Unit I Investment: Meaning–Features - Alternatives - Investment, Speculation and
Gambling – Indian Capital Market – Primary Market and Secondary Markets – Processes
of Buying and Selling Securities – Secondary Markets – Types – Stock Exchanges –
OTCEI – Depository – Role of SEBI in security markets.

Systematic and Unsystematic Risk

Unit III: Fundamental Analysis: Meaning–Importance–Objectives – Analysis of
Analysis: Meaning – Difference between fundamental analysis and Technical analysis -
The Dow Theory – Technical indicators – Charting Techniques – Stock market indicators

Unit IV: Portfolio Analysis: Portfolio Returns and Risk–Mean Variance Criterion–
Markowitz Diversification – Efficient Frontier – Dominance Principle – Optimum
Portfolio – Utility Theory

Unit V: Asset Pricing Model: Capital Market Theory–Capital Asset Pricing Model
CAPM normalies

Text Books and References:
2. Reilly Brown, Investment Analysis and Portfolio Management, Cengage Learning 8th
   Edition 2006
   Cliffs, New Jersey, Prentice Hall Inc, 2004
4. Elton, Edwin J and Gruber, Martin J., Modern Portfolio Theory and Investment Analysis,
   John Wiley, NY, 2001
Prerequisites: Basic knowledge on Financial Accounting

Learning Objectives: Prepare Students -
1. To learn how to compare companies financially
2. To analyze profitability, Liquidity and Solvency issues
3. To analyze and interpret Financial statements for Managerial Decision Making
4. To analyze and interpret Financial statements for Investment and Lending Decision Making
5. To understand the role of Information Technology for analyzing Financial Statements

Learning outcome: Students who complete this course can develop a more efficient and effective approach to researching, interpreting, and analyzing financial statements

Unit I: FINANCIAL ANALYSIS TOOLS AND TECHNIQUES

Unit II: RATIO ANALYSIS
Forecasting Financial Statements - One Year Projection – Sensitivity Analysis – Contribution Margin Analysis - Projecting Financial Flexibility – Multiyear Projection

Unit III: FUND AND CASH FLOW ANALYSIS

Unit IV: COST-VOLUME-PROFIT ANALYSIS

Unit V: BUDGETARY CONTROL AND VARIANCE ANALYSIS

Text Books:

References:
- Maheswari S N, Management Accounting, Sultan Chand & Sons, New Delhi, 2015
- Jain S P and K L Narang, Advanced Accounts, Kalyani Publishers, Ludhiana 2018
- https://onlinecourses.nptel.ac.in
- https://swayam.gov.in/course
- http://www.iibf.org.in
- https://students.icai.org
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME  
II SEMESTER  
MBAB 754: Banking Technology Management

**Prerequisites**
- Basics of Banking and IT

**Learning Objective:**
- Understanding of Core Banking and Technologies involved in it.
- Understanding of Banking Channels and Payments gateways.
- Lab Practices on Banking Technology

**Learning Outcomes**
- Helps the students to gain knowledge about CBS components and other banking software

**Unit I: Branch Operation and Core Banking**
Introduction and Evolution of Bank Management – Analysis of Rangarajan Committee Reports - Technological Impact in Banking Operations – Total Branch Computerization - Concept of Opportunities – Centralized Banking – Concept, Opportunities, Challenges & Implementation.

**Unit II: Delivery Channels**

**Unit III: Back office Operations**

**Unit IV: Inter bank Payment System - INFINET**

**Unit V: Contemporary Issues in Banking Techniques**
Block Chain and Bit-coin – Crypto currency - Analysis of Recent Core Banking Software-Case study.

**Text Books and References:**
1. Financial Services Information Systems-Jessica Keyes Auerbach publication; (March 24, 2012)
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
II SEMESTER
MBAB 755: IT Infrastructure Management for Banks

Hard Core
3 Credits

Prerequisites:
- Basic knowledge of principles and practices of Computer System Security.

Learning Objectives:
- To expose the emerging areas of IT Infrastructure and its Management focuses on the IT governance and risk management.
- To understand the risk management framework, IT infrastructure management, ITIL service delivery and other frameworks.

Learning Outcomes:
- Students gain knowledge in IT infrastructure management services.


Unit II: Data Centre Management: Data Center Basics – Data Center Architecture – Data Center Design – Data Center Network Design - Data Center Maintenance – Data Center HVAC– Data Center consolidation


Unit V: Continual Service Improvement principles - Continual Service Improvement processes – Continual Service Improvement methods and techniques – Implementing Continual Service Improvement.

Text Books and References:
2. EMC, Information Storage Management: —Storing, Managing and Protecting Digital Informationl, Wiley 2009
Prerequisites
- Computer Programming knowledge to develop banking softwares

Learning Objectives:
- This lab imparts knowledge of design and development of banking software like Mobile Banking, Internet Banking, ATM system and Financial Middleware. Also, it focuses on a detailed study on the recent core banking software.

Learning Objectives:
- Helps the student to build a solution for Banking systems

Lab Exercises
Design and Develop the following Banking Software using the appropriate technologies:

- Mobile Banking
  - Balance Enquiry
  - Cheque Book Request
  - Stop Cheque
  - Credit/Debit Notification
  - Bill Payment

- Internet Banking
  - Electronic Funds Transfer
  - Account Management
  - Loan Application
  - Registering of new bank services
  - Customer Information Management

- ATM system
  - Balance Enquiry
  - Withdrawal
  - Deposit
  - Pin change
  - Mini statement

- Financial Middleware
  - Design of Online Banking Middleware
  - ATM Middleware
  - Mobile Middleware
  - Banking Software Middleware

- Case Study on the recent Core Banking Software.
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
II SEMESTER
MBAB 757: Corporate Finance Lab

Prerequisites:
- MS. Excel

Learning Objectives:
- Gives the hands on experience using real live data also it will help the students to give financial consultancy firms.

List of Practical

Based on Annual Reports of Companies:
- Analysis of Financial Statements based on the any five select annual reports, Important Ratios, Funds Flow Analysis statements, Examining the trends over a period of time, Comparison between cross category ratios, cross sectional analysis

CMIE Based:
- Extraction of Industry wise data on select fundamentals
- Extraction of Company specific data
- Annual data on select indicators across companies in a given industry
- Data on select Big Business Houses in India
- Data on Capital structure designs of select industries
- Sector wise Stock Price Indices
- Company specific Price charts and identification of events

Excel Based Exercises:
- Estimation of Daily Returns, Weekly Returns, Monthly, Quarterly and Half yearly returns
- Calculation of Geometric Mean and Standard deviation to returns
- Estimation of Beta for select stocks in select industries
- Working out leads and lags in the stock

SPSS Based Exercises:
- Calculation of correlation between funds and stock returns
- Estimation of Multiple Regression Equation between select firm values and market returns
- Dummy value regressions, step-wise regressions
- Multivariate Analysis : Factor Analysis and Principle Component Analysis
- Discriminate functions and Credit Rating
- Cluster Analysis and Data distances
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
II SEMESTER
MBAB 758: Value Added Course

Student has to register and complete a certification course offered by any one of the following online platforms:

- Swayam Platform (Approved by MHRD)
  - https://swayam.gov.in/
- NPTEL (Funded by MHRD)
  - http://nptel.ac.in/
- National Institute of Securities Markets (http://www.nism.ac.in/)
- NCFM (https://www.nseindia.com/education/content/nse_certification.htm)
- Indian Institute of Banking and Finance (http://www.iibf.org.in/)
- ISACA (https://www.isaca.org/)
- PMI
Learning Objectives:
To evaluate the comprehensive understanding of theoretical concepts of all subjects of that semester. All subjects in final comprehensive viva.
To evaluate the Communication Skill of the MBA Students.

Procedure:

Glossary of Terms:
Every Student shall prepare a list of Technical Terms for every Hard core and elective subjects registered in the given semester. (All Subjects in case of final semester)
(A minimum of 100 concepts per subject to be compiled)

Test on Concepts:
A comprehensive Viva would contain two components. Phase I is a written test on concepts for 1½ hrs to be answered in one-two sentences. These papers will be evaluated by External Examiners (Test paper contain at least 10 concepts per subjects)

Seminar:
Students have give a seminar on the relevant contemporary topic.

VIVA by External Experts:
A student ability to comprehend and apply the theoretical concepts to practical Business operations will be tested by two external Examiners (Mostly one Academician and other Industry expert). They will conduct either individual / group viva on a comprehensive Business situation requiring the applications of Knowledge acquired in the core subjects.

Division of Marks:
Test: 20
Viva: Communication - 20
Domain Knowledge - 20
Seminar - 20
Group participation - 20
# MBA: BANKING TECHNOLOGY DEGREE PROGRAMME

## III SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBAB 800</td>
<td>Financial Management</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 801</td>
<td>International Banking and Financial Services</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 802</td>
<td>Merchant Banking and Financial Services</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 803</td>
<td>Strategic Management</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 804</td>
<td>Information Security for Banks</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 805</td>
<td>Data Warehousing and Applied Data Mining</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB 806</td>
<td>Business Intelligence Lab</td>
<td>Hard 2</td>
</tr>
<tr>
<td>MBAB 807</td>
<td>Stock and Forex Trading Lab</td>
<td>Hard 2</td>
</tr>
<tr>
<td>MBAB 808</td>
<td>Bank Internship</td>
<td>Hard 3</td>
</tr>
<tr>
<td>MBAB</td>
<td>: Elective I: Paper – 2</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB</td>
<td>: Elective II: Paper – 2</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 811</td>
<td>Seminar &amp; Comprehensive Viva</td>
<td>Hard 2</td>
</tr>
</tbody>
</table>
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
III SEMESTER
MBBT 800: FINANCIAL MANAGEMENT

Hard Core 3 Credits
Theory 30% Problems 50% Lab 20%

Prerequisites: Basic knowledge on Finance and Accounting

Learning Objectives: Prepare Students -
1. To learn Financial Planning and Objectives
2. To understand the concept of time value of money
3. To understand the cost of capital and Leverage
4. To learn Capital Budgeting and Lease Financing
5. To learn working capital management and Dividend Decisions
6. To understand the role of Information Technology for Financial Management

Learning outcome: Students who complete this course can manage the sources of raising the funds and effective utilizations of funds

Unit I: FINANCIAL MANAGEMENT


Unit II: COST OF CAPITAL, LEVERAGE AND CAPITAL STRUCTURE


Unit III: CAPITAL BUDGETING


Unit IV: LEASE FINANCE AND DIVIDEND DECISIONS


Unit V: MANAGEMENT OF WORKING CAPITAL


Text Books:

References:
https://onlinecourses.nptel.ac.in
https://swayam.gov.in/course
http://www.iiibf.org.in
https://students.icai.org
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME

III SEMESTER

MBAB 801: INTERNATIONAL BANKING AND TRADE FINANCE

*Hard Core 3 Credits*

**Prerequisites:** Basic of Banking and Finance

**Learning Objectives:**
- To understand the structure of Global Financial Systems
- To learn about the Euro currency transactions and the role played by International Financial Institutions
- To develop the skills to handle the Forex transactions
- To associate with activities of a Bank for Ex-Im Trade and cross country transactions.

**Learning Outcomes:** Helps the students to be successful in the International banking dealing with Cross-border transactions.


**Basic Text Books and References:**
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME  
III SEMESTER  
MBAB 802: Merchant Banking and Financial Services  

**Prerequisites:** Basic knowledge on Business and Finance  
**Learning Objectives:** Prepare Students -  
- To learn various Financial services  
- To learn the role and Functions of Merchant Bank  
- To understand the role of Financial Regulators  
- To learn the functions of Rating Agencies  
**Learning outcome:** Students who complete this course can understand the role and functions of Merchant Bank and various fund based and fees based financial services and regulators  

**Unit I: FINANCIAL SERVICES**  

**Unit II: MERCHANT BANKING**  

**Unit III: FUND BASED FINANCIAL SERVICES**  

**Unit IV: FINANCIAL INTERMEDIATION**  
Depository Institutions - Characteristics and role of financial intermediaries - Depository Institutions and financial services- NSDL – CDSL - Non-Depository institutions and their role - Clearing Corporation of India Ltd, Discount and Finance House of India Ltd - Role of governance and regulatory bodies.  

**Unit V: FINANCIAL REGULATORS**  
Types – Role – Functions - Ministry of finance (MOF), Ministry of corporate affairs (MCA), Reserve Bank of India (RBI) - its role as regulator - Security Exchange Board of India (SEBI) and its role as regulator-SEBI Guidelines on merchant bankers –SEBI Guidelines on Issue managers- SEBI Guidelines for Mutual Funds- SEBI Guidelines for Secondary Markets - Insurance Regulatory and Development Authority (IRDA) - its role as regulator - Recent developments in financial regulations.  

**Text Books:**  
2. Thummuluri Siddaiah, Financial Services, Pearson India, 2012  

**References:**  
5. https://certifications.nism.ac.inhttps://onlinecourses.nptel.ac.in  
6. https://swayam.gov.in/course  
7. http://www.iibf.org.in  
8. https://students.icai.org
**MBA: BANKING TECHNOLOGY DEGREE PROGRAMME**
**III SEMESTER**
**MBAB 803: Strategic Management**

**Prerequisites:**
- Basics of Management concepts

**Learning Objectives:**
- To make the students understand the strategic management process in a business organisation
- To help the students to identify and link the strategy formulation
- To develop learning and analytical skills of the students to solve the business cases.

**Learning Outcomes:**
- Helps the students to deal with strategic decision making process

**Unit-I:**
Strategic Thinking – Emerging Approaches - Levels of Strategy - Strategic Decision Making – Benefit and risks of strategic management – Ethics and corporate social responsibility.

**Unit -II:**

**Unit -III:**

**Unit -IV:**
Strategic Choice- Generic strategies – Corporate level strategies- Business Level Strategies-Functional Strategies – Tailoring strategies to fit specific industry and company situations.

**Unit-V:**

**References:**
5. Strategic Management and Business Policy – Azhar Kazmi
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
III SEMESTER
MBAB 804: Information Security for Banks

Prerequisites
Basic knowledge of principles and practices of Computer System Security.

Learning Objectives
The course provides the knowledge of protecting the computer systems against attacks and intrusions, and gaining protection from physical and technical measures.

Learning outcome
Gains knowledge in identifying the weakest component in the computer systems and helps in providing a countermeasures for it.

Unit I: Introduction to Information Security

Unit II: Data, Network and Operating System Security

Unit III: Securing Infrastructure Services

Unit IV: Security Operations and Physical Security

Unit V: Recent Trends in Security
Case Studies: Analyze Information security for Banking Systems, Casestudy on INFINET etc.

References:
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
III SEMESTER
MBAB 805: DATA WAREHOUSING & APPLIED DATA MINING

Hard Core
3 Credits

Prerequisites:
Relational Data Base Management System, Statistics and Algorithms

Learning Objectives:
The main purpose of the course is to develop and gain an understanding of the principles, concepts, functions and uses of data warehouses, data modelling and data mining in business.

The course focuses on data model for data warehouses and implementing data warehouses: data extraction, cleansing, transformation and loading, data cube computation, materialized view selection, OLAP query processing.

Learning outcome:
On successful completion of the course, the students will be able to Use current techniques, skills, and tools necessary for extraction, transformation, loading and mining of data.

1. The Business Dimensional Lifecycle – Project Planning and Management – Dimensional Modelling – Advanced Dimensional Modelling.

2. Data Warehouse architecture – Back room technical architecture – architecture for the front room – infrastructure and metadata – selecting the products.

3. Aggregates – physical design – data staging – planning the deployment – maintaining and growing the data warehouse.


Basic Text Books and References:
2. Han, Jiawei; Kamber, Micheline, —Data mining: concepts and techniques, Morgan Kaufmann Publishers, 2012. (Text Book)
Prerequisites:
RDBMS, Data warehouse and Data Mining

Learning Objectives:
This lab imparts the practical knowledge of the techniques and tools to provide effective business intelligence. It enables the students to leverage data warehousing and data mining to solve business problems faster by using online analytical processing, data warehousing and data mining tools. Also, this lab offers a comprehensive knowledge and strategic analysis of the data mining and warehousing technologies.

Learning outcome:
On successful completion of the course, the students will be able to use current techniques, skills, and tools necessary for business intelligence to make suitable decisions.

- Defining Business Requirements
  - Dimensional Analysis
  - Developing Information Packages
  - Requirements Definition

- Architecture and Infrastructure Specification
  - Metadata definition
  - Multi-Dimensional Modeling
    - Star Schema
    - Snow Flake Schema

- Extraction, Transformation and Loading
  - Defining rules for ETL
  - Usage of ETL Tools

- Information Delivery – OLAP, ROLAP and MOLAP

- Data Mining – Usage of Data Mining Tools
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
III SEMESTER
MBAB 807: Stock and Forex Trading Lab

Hard Core 2 Credits

Prerequisites: Basic knowledge on Financial Market Operation

Learning Objectives: Prepare Students -
- To introduces the operations of Securities market
- To understand the Trading process, settlement and legal frameworks

Learning outcome: Students who complete this course can do stock and Forex trading


UNIT-4 - CLEARING, SETTLEMENT AND RISK MANAGEMENT - key terminologies used in clearing and settlement process - transaction cycle - settlement agencies -clearing and settlement process – Risk management in Trade and settlement – Depositories and their Roles.

Legal Frameworks – SEBI - Role of SEBI regarding the protection of investor - FEDAI Regulations – Role of RBI.

Unit -5 - FUNDAMENTAL VALUATION CONCEPTS - Time value of money – Fundamental Analysis - understanding financial statements - Ratio analysis – Economic Analysis - Technical analysis – Different Techniques

Market Capitalization and calculation of Market Capitalization - Index – Types – Calculation of Index – Market return and Beta Calculation

Text Books:
2. Sid Bhattacharjee, Generate Daily Income from Financial Market, Partridge India, 2014 November

References:
2. V. A. Avadhanli, Investment and Securities Market in India, Himalaya Publishing House.
4. Ravi Puliani and Mahesh Puliani, Manual of SEBI, Bharat Publication
Learning Objectives:

Banking Internship is to be carried out for 2 months in a Bank Branch. Students should attend to different regular activities of a Bank. All public sector/Private Sector bank branches with different operations like different deposit accounts, Credit facilities for Agricultural Loans, Educational Loans, Working capital Trade credit etc are the Branches where students should undertake this Internship. Minimum 45 Physical attendance for Full day is Mandatory. A report is to be prepared on the following topics with copies of forms, documents of that given bank duly certified by the Branch Manager is to be submitted and it will be evaluated by 2 DGM/AGM level Bank officers. A viva will be conducted to evaluate the Knowledge and skills learned by students during 2 months Long Internship.

- Practicing the formalities regarding opening a Savings Bank Account
- Practicing the formalities regarding opening a Current Account - Practicing the formalities regarding opening Term Deposits - NRE / FCNR accounts opening formalities –
- Administration of Cash Departments in the Branch - Securities aspects in the Bank branch Activities regarding withdrawal of cash - List of activities carried out Teller / Cash Counter - Procedures for calculation of interests on deposits and loan account - Inward and outward
- Bills Collection activity - Clearing House Operations. – MICR clearing, High value clearing and RTGS - Electronic Funds Transfer, DD, Mail Transfer, Telegraphic / Telephonic transfer - Different types of crossing cheque and activities associated with them - Extension of Bank overdraft facility in SB and CD accounts –
- Procedure to be followed for sanctioning a gold loan - Appraisal of loan application of ISB loan - Sanctioning of working capital credit line - Formalities associated with documentation of Security - Agency Services: Issue of drafts - Periodic Payments - Merchant Banking activities:
- Bankers to IPO issues - Treasury operations: Barriers to Government - List of subsidiary books operated and writing final ledger - Checking the balances - Day-to-day vouching procedures - Miscellaneous services offered by banks - Gift Cheques, Pay orders, Bankers Cheque. - Power of Attorneys - Forex closing accounts and activating dormant deposits - Discounting bills and cheques - Locker facility – safe deposit services - Loan against securities / deposits / LIC policies - Advances against hypothecation of goods - Advances against book debts and supply bills - LC / LG facilities / documentation - Precautions for averting frauds / Preventive vigilance
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
III SEMESTER
MBAB 811: SEMINAR & COMPREHENSIVE VIVA

Hard Core
2 Credits

Learning Objectives:
To evaluate the comprehensive Understands of Theoretical concepts of all subjects of that semester. All subjects in final comprehensive viva.
To evaluate the Communication Skill of the MBA Students.

Procedure:

Glossary of Terms:
Every Student shall prepare a list of Technical Terms for every Hard core and elective subjects registered in the given semester. (All Subjects in case of final semester)
(A minimum of 100 concepts per subject to be compiled)

Test on Concepts:
A comprehensive Viva would contain two components. Phase I is a written test on concepts for 1½ hrs to be answered in one-two sentences. These papers will be evaluated by External Examiners (Test paper contain at least 10 concepts per subjects)

Seminar:
Students have give a seminar on the relevant contemporary topic.

VIVA by External Experts:
A student ability to comprehend and apply the theoretical concepts to practical Business operations will be tested by two external Examiners (Mostly one Academician and other Industry expert). They will conduct either individual / group viva on a comprehensive Business situation requiring the applications of Knowledge acquired in the core subjects.

Division of Marks:
Test: 20
Viva: Communication - 20
Domain Knowledge - 20
Seminar - 20
Group participation - 20
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME

**IV SEMESTER**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBAB</td>
<td>Elective I: Paper – 3</td>
<td>Soft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MBAB</td>
<td>Elective I: Paper – 4</td>
<td>Soft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MBAB</td>
<td>Elective II: Paper – 3</td>
<td>Soft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MBAB</td>
<td>Elective II: Paper – 4</td>
<td>Soft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MBAB 850</td>
<td>Final Project &amp; Viva</td>
<td>Hard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>MBAB 851</td>
<td>Seminar &amp; Comprehensive Viva</td>
<td>Hard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
IV SEMESTER
MBAB 850: FINAL PROJECT AND VIVA

Hard Core
6 Credits

Guidelines:
- The Final Project has two Phases.
- In Phase I students under the guidance of Faculty in-charge(s) of the given project work, carry out the background work, identify a tentative Title for the Project work, Review 20-25 Research papers, prepare a Review Paper.
- A public presentation on broad areas of proposed work to be made by students before starting II phase.
- Presentations would be evaluated by the Committee of Internal Faculty
- The division of Marks for Phase I and Phase II components is 40% and 60% respectively
- Final Project Work must be in the inter-disciplinary area of Banking/Finance and IT.
- Students should be in regular contact with their Faculty guide(s) and submit a rough draft of the Report by the First week of April; Project work will be evaluated by two external examiners in a Public presentation.

Final Project Report must contain the following Components: (75-100 Pages)
1. Title Page (Soft Binding)
2. 4-5 Chapters (Back ground work, Methodology/Algorithm/Mathematical Model)
3. The final project report should be prepared by following the template provided by the department.

Division of Marks:
- Phase I: Compilation of Research Papers and Presentation (Internal Assessment): 40 Marks
- Phase II:
  - Final Project work Report (External Evaluation): 30 Marks
  - Presentation and Viva (External Evaluation): 30 Marks
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME  
IV SEMESTER  
MBAB 851: SEMINAR & COMPREHENSIVE VIVA  

Learning Objectives:  
To evaluate the comprehensive Understands of Theoretical concepts of all subjects of that semester. All subjects in final comprehensive viva.  
To evaluate the Communication Skill of the MBA Students.

Procedure:

Glossary of Terms:  
Every Student shall prepare a list of Technical Terms for every Hard core and elective subjects registered in the given semester. (All Subjects in case of final semester)  
(A minimum of 100 concepts per subject to be compiled)

Test on Concepts:  
A comprehensive Viva would contain two components. Phase I is a written test on concepts for 1½ hrs to be answered in one-two sentences. These papers will be evaluated by External Examiners (Test paper contain at least 10 concepts per subjects)

Seminar:  
Students have give a seminar on the relevant contemporary topic.

VIVA by External Experts:  
A student ability to comprehend and apply the theoretical concepts to practical Business operations will be tested by two external Examiners (Mostly one Academician and other Industry expert). They will conduct either individual / group viva on a comprehensive Business situation requiring the applications of Knowledge acquired in the core subjects.

Division of Marks:
Test: 20  
Viva: Communication - 20  
Domain Knowledge - 20  
Seminar - 20  
Group participation - 20
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME

ELECTIVE STREAMS

(Every Student has to take 4 papers out of 10 listed papers from two Elective Streams)
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME

ELECTIVES

INFORMATION TECHNOLOGY STREAM

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBAB 901</td>
<td>Service Oriented Architecture</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 902</td>
<td>Design Patterns</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 903</td>
<td>Smart Banking Technologies</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 904</td>
<td>Software Project Management</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 905</td>
<td>Secure Electronic Payment Systems</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 906</td>
<td>Block Chain and Cryptography</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 907</td>
<td>Machine Learning</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 908</td>
<td>Data Science and Business Data Analytics</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 909</td>
<td>Information Systems Control and Audit</td>
<td>Soft 3</td>
</tr>
<tr>
<td>MBAB 910</td>
<td>Data Visualization and Reporting</td>
<td>Soft 3</td>
</tr>
</tbody>
</table>
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
ELECTIVE: SOFTWARE ENGINEERING AND TECHNOLOGY
STREAM
MBABT 901: SERVICE ORIENTED ARCHITECTURE

Soft Core
3 Credits

Project Based: Theory 20% Mini Project 80%

Prerequisites:
- Basics of Computer Architecture

Learning Objective:
- Understanding of SOA and BSB
- Practical on SOA

Learning Outcomes:
- Helps the students to develop software systems using SOA


3. Service Enablement - Basic web services elements - Core web services standards stack - The Importance of WSDL - The design of SOAP - The use of registries via UDDI - The basic concepts of service orientation - Distributing Services Across a Network - Aligning functional and non-functional requirements - The role of Intermediaries in Service Networks - Modelling SOA building blocks - Using UML to analyse and design interfaces - Generating a domain model - Implementing and realizing Use Cases - Showing web service collaboration - Usage of communication diagrams.


5. SOA in Banking Domain - Banking business processes – SOA in Core Banking - Software – Case Studies.

Basic Text Books and References Books

MBA: BANKING TECHNOLOGY DEGREE PROGRAMME  
ELECTIVE: SOFTWARE ENGINEERING AND TECHNOLOGY STREAM  

MBABT 902: DESIGN PATTERNS

Soft Core 3  
Credits  
Project Based: Theory 20% Mini Project 80%

Prerequisites
Knowledge in OO Concepts

Learning Objectives
Introduction of Design Patterns and Understanding of Design Patterning and its Mining  
Practicing of Application of Design Patterns

Learning Outcomes
Helps to develop software patterns

1. Introduction to Design Patterns: Design Patterns Arose from Architecture and Anthropology – Architectural to Software Design Patterns – Advantages of Design Patterns – Adapter Pattern – Strategy Pattern – Bridge Pattern – Abstract Factory Pattern


3. Values of Patterns - Observer Pattern - Categories of Patterns - Template Method Pattern – Applying the Template Method to the Case Study - Using Template Method Pattern to Reduce Redundancy


5. Case Studies - What to Expect from Design Patterns - The Pattern Community An Invitation – A Parting Thought – Banking Case Study

Basic Text Book and References


3. Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides, —Design Patterns: Elements of Reusable Object-Oriented Software”, Addison-Wesley, 2013.

4. Eric Freeman, Elisabeth Freeman, Kathy Sierra, Bert Bates, —Head First Design Patterns”, O'Reilly Media, Inc., 2012.

5. Elizabeth Freeman, Eric Freeman, Bert Bates and Kathy Sierra, —HeadFirst Design Patterns, O’Reily, 2010.
MBA: BANKING TECHNOLOGY DEGREE
PROGRAMME

ELECTIVE: SOFTWARE ENGINEERING AND TECHNOLOGY STREAM

MBABT 903: SMART BANKING TECHNOLOGIES and INTERNET OF THINGS

Soft Core
3 Credits

Prerequisites:
• Knowledge in Banking technology

Learning Objectives:
• Introduction on Smart Banking & IoT
• Understanding of Smart Banking Technologies & IoT
• Practices on Smart Banking Technology & IoT.

Learning Outcomes:
• Applying internet of things in Banking Applications

4. Internt of Things - Introduction to IoT Defining IoT, Characteristics of IoT, Physical design of IoT, Logical design of IoT, Functional blocks of IoT, Communication models & APIs - Design challenges, Development challenges, Security challenges, Other challenges - Home automation, Banking and Other Industry applications, Surveillance applications, Other IoT applications

Basic Text Books and References Books
2. RFID, Steven Shepard, McGraw Hill 2014
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME  
ELECTIVE: SOFTWARE ENGINEERING AND TECHNOLOGY STREAM  

MBAB 904: SOFTWARE PROJECT MANAGEMENT  

**Prerequisites:**  
Basic knowledge of Software Design principles  

**Learning objectives:**  
To study the project management concepts.  

**Learning outcome:**  
Gaining knowledge on Software project management principles and practices.  

**Unit I:**  

**Unit II:**  

**Unit III:**  
Project Schedule planning - Top down and bottom up planning – initial and final project schedule plans – types of activity relationships – estimating the duration of an activity – critical path – identifying milestones – activity responsibility matrix – project check list.  

**Unit IV:**  
Project tracking - Overview of project progress – project outlook – occurrence of tracking – tracking meetings – tracking meeting agenda - tracking meeting ground rules – recovery plans – the role of escalations. Project estimation – Processes and activities.  

**Unit V:**  

**Basic Text Books & References:**  
MBAB 905: Secure Electronic Payment Systems

**Prerequisites:**
Basic knowledge of principles and practices of Computer System Security.

**Learning Objectives:**
- Introduction on E-Commerce related security.
- Understanding in Security Algorithms and Architectures.
- Understanding and Practices on E-Payment and Digital Money.

**Learning outcome:**
Gaining knowledge on IT Infrastructure Management and its frameworks.


**Text Books, References and Online Resources:**
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
ELECTIVE: SOFTWARE ENGINEERING AND TECHNOLOGY STREAM

MBAB 906: BLOCK CHAIN AND CRYPTOGRAPHY

Prerequisites:
• Computer Networks and security systems

Learning Objectives:
• Knowledge about Block Chain and its usages in projects
• Knowledge about Crypto currencies and implementation

Learning Outcomes:
• Helps the students to develop a secure systems using block chain and cryptographic concepts.

Unit I:
**Block Chain** - Introduction to crypto economics - Byzantine agreement - Extensions of BFT (Ripple, Stellar) - Blockchain Dynamics - Public and private blockchains - Hard and soft forks - Sharding Side chain - Verifiers – trust, cost and speed - Proof of work and other models.

Unit II:
**Smart Contracts** - Distributed Virtual Machines, Smart Contracts, Oracles - Basics of contract law - Smartcontracts and their potential Trust in Algorithms, - Integration with existing legal systems - OpenZeplin, OpenLaw- Writing smart contracts.

Unit III
**Cryptography and Other Technologies**: Application of Cryptography to Blockchain - Using hash functions to chain blocks - Digital Signatures to sign transactions - Using hash functions for Proof-of-Work. - Putting the technology together – examples of implementations with their tradeoffs.

Unit IV
**Implementation**: Supply Chain and Identity on Blockchain - Blockchain interaction with existing infrastructure – Trust in blockchain data - Scaling Blockchain – reading and writing data. Differentiate nodes, sparse data and Merkle trees - Fixing on the fly – Layer 2 solutions - Lightning and Ethereum state channels

Unit V
**Bitcoin** - The big picture of the industry – size, growth, structure, players - Bitcoin versus Cryptocurrencies versus Blockchain - Distributed Ledger Technology (DLT) - Strategic analysis of the space –Major players: Blockchain platforms, regulators, application providers, etc. - Bitcoin, HyperLedger, Ethereum, Litecoin, Zcash.

Text Books and Reference Books:
1. *Blockchain Revolution: How the Technology Behind Bitcoin and Other Cryptocurrencies Is Changing the World*, Don Tapscott and Alex Tapscott, Portfolio, 2018
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
MBAB 907: Machine Learning Techniques

Prerequisites:
Statistics, Algorithms

Learning Objectives:
To understand the concepts of machine learning
To appreciate supervised and unsupervised learning and their applications
To understand the theoretical and practical aspects of Probabilistic Graphical Models
To appreciate the concepts and algorithms of reinforcement learning
To learn aspects of computational learning theory

Learning outcome:
Upon completion of this course, the student should be able to
• Design a neural network for an application of your choice
• Implement probabilistic discriminative and generative algorithms for an application of your choice and analyze the results
• Use a tool to implement typical clustering algorithms for different types of applications
• Design and implement an HMM for a sequence model type of application
• Identify applications suitable for different types of machine learning with suitable justification


Text books and References:
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
MBABT 908: DATA SCIENCE AND BIG DATA ANALYTICS

Prerequisites:
Statistics, Operating Systems, DBMS

Learning Objectives:
- This course provides practical foundation level training that enables immediate and effective participation in big data and other analytics projects.
- It provides grounding in basic and advanced analytic methods and an introduction to big data analytics technology and tools, including MapReduce and Hadoop.
- To learn about the extraction and mining tools for social networks.
- To gain knowledge on web personalization and web visualization of social networks.

Learning outcome:
- On successful completion of the course, the students will be able to use current techniques, skills, and tools necessary for managing and doing analytics on big data.
- Design extraction and mining tools for social networks.
- Develop personalized web sites and visualization for social networks.

Unit I - Introduction to Big Data Analytics, Overview of Data Science: Big Data Overview, State of the Practice of Analytics, Big Data Analytics in Industry Verticals, Overview of Data Analytics Lifecycle, Discovery, Data Preparation, Model Planning, Model Building, Communicating Results and Findings, Operationalizing.

Unit II - Advanced Analytics and Statistical Modeling for Big Data – Technology & Tools:
Learning various tools to perform Analytics on Unstructured data using MapReduce Programming paradigm. Use Hadoop, HDFS, HIVE, PIG and other products in the Hadoop ecosystem for unstructured data analytics. Effectively use advanced SQL functions and Greenplum extensions for in-database analytics. Use MADlib to solve analytics problems in-database. Apache Spark.

Unit III - Advanced Analytics and Statistical Modeling for Big Data – Theory and Methods:
Examining analytic needs and select an appropriate technique based on business objectives; initial hypotheses; and the data’s structure and volume. Apply some of the more commonly used methods in Analytics solutions Explain the algorithms and the technical foundations for the commonly used methods. Explain the environment (use case) in which each technique can provide the most value. Use appropriate diagnostic methods to validate the models created. Use R and in-database analytical functions to fit, score and evaluate models.

Unit IV - Using R for Initial Analysis of the Data: Introduction to Using R Initial Exploration and Analysis of the Data Using R, Basic Data Visualization Using R. How to use the R package as a tool to perform basic data analytics, reporting, and apply basic data visualization techniques to sample data. Apply basic analytics methods such as distributions, statistical tests and summary operations, and differentiate between results that are statistically sound vs. statistically significant. Identify a model for sample data and define the null and alternative hypothesis.

Unit V - Endgame - Operationalizing an Analytics Project: The various tasks needed to operationalize an analytics project. Deliverables of an analytics lifecycle project. Framework for creating final presentations for sponsors and analysts. Evaluation of data visualization and ways to improve – Application of these concepts to a big data analytics problem in the final lab. Case Study: Social Network Mining and Analysis using Text Mining.

Basic Text Books and References Books:
- Agile Analytics: A Value-Driven Approach to Business Intelligence and Data Warehousing, Author: Ke W. Collier Publisher: Pearson Education (2012),
- MapReduce Design Patterns, Author: Donald Miner, Publisher: O'Reilly (2012), ISBN-13:- 9789350239810
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
MBABT 909: INFORMATION SYSTEMS CONTROL AND AUDIT

Soft Core
3 Credits

Prerequisites:
Basics of Information System

Learning Objectives:
This course focuses on the audit and control aspects of information systems.
This course emphasizes on the management control framework, data resource
management controls, application control framework and processing controls.

Learning outcome:
It enables student to carry out projects which will provide experience in audit and
control.

Unit I: Introduction – Overview of Information Systems Auditing – Need for Control and
Audit of Computers – Effects of Computers on Internal Controls – Effects of Computers on
Auditing – Foundations of Information Systems Auditing - Conducting an Information
Systems Audit – Audit risks – Types of Audit Procedures – Auditing around or through the
computer.

Unit II: Management Control Framework – Top Management Controls – Systems
Development Management Controls – Programming Management Controls

Unit III: Data Resource Management Controls – Security Management Controls – Operations
Management Controls – Quality Assurance Management Controls

Unit IV: The Application Control Framework – Boundary Controls – Input Controls –
Communication Controls

Unit V: Processing Controls – Database Controls – Output Controls

Basic Text Book and Reference Books:

   book)
2. Dube, D.P. and Gulati V.P., —Information System Audit and Assurance (Including
3. Frederick Gallegos, Daniel P. Manson, Sandra Senft, and Carol Gonzales
   Gallegos, — Information Technology Control and Audit, Auerbach Publications,
   0-470-10485-9
Prerequisites:
Data warehousing and Data Mining

Learning Objectives:
- To introduce visual perception and core skills for visual analysis
- To understand visualization for various analysis
- To understand issues and best practices in information dashboard design

Learning outcome:
On successful completion of the course, the students will be able to use current techniques, skills, and tools necessary for visualizing data output and preparing business intelligence reports.


Text Books and References:
5. Ben Fry, "Visualizing data: Exploring and explaining data with the processing environment", O'Reilly, 2008.
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME

ELECTIVES

BANKING AND FINANCE STREAM

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBAB 911</td>
<td>Treasure Management</td>
<td>Soft 3Credits</td>
</tr>
<tr>
<td>MBAB 912</td>
<td>Cyber Crimes and IT Laws</td>
<td>Soft 3Credits</td>
</tr>
<tr>
<td>MBAB 913</td>
<td>Rural Banking and Micro Finance</td>
<td>Soft 3Credits</td>
</tr>
<tr>
<td>MBAB 914</td>
<td>Risk Management in Banks</td>
<td>Soft 3Credits</td>
</tr>
<tr>
<td>MBAB 915</td>
<td>Central Banking &amp; Monetary Policy</td>
<td>Soft 3Credits</td>
</tr>
<tr>
<td>MBAB 916</td>
<td>Financial Modeling using Spreadsheet</td>
<td>Soft 3Credits</td>
</tr>
<tr>
<td>MBAB 917</td>
<td>Treasury and Fixed Income Securities</td>
<td>Soft 3Credits</td>
</tr>
<tr>
<td>MBAB 918</td>
<td>Global Financial Markets &amp; Instruments</td>
<td>Soft 3Credits</td>
</tr>
<tr>
<td>MBAB 919</td>
<td>Financial Derivatives</td>
<td>Soft 3Credits</td>
</tr>
<tr>
<td>MBAB 920</td>
<td>International Financial Management</td>
<td>Soft 3Credits</td>
</tr>
</tbody>
</table>
Prerequisites:
• Basics of Treasuries

Learning Objective:
• To understand cash, risk and markets, treasury activities.
• To understand the complexity of instruments, systems and interactions with the business, both operationally and strategically

Learning Outcomes:
• Helps the students to work in the treasuries division of the banks.

1. Positioning Treasury and Manage Accounting: What should invest in? How to fund these investments? How to manage the risk of our choices?-CRR-SLR-FOREX-Tresury activities

2. Treasury and Corporate Strategy: Business strategy-Financial strategy-Corporate strategy- Corporate Funding -Strategic and financial risk management-Risk management system-Financing guidelines and policies


4. Cash and Liquidity Management: Cash and liquidity forecasts-Cash management-Organizing and managing borrowing facilities-Cash flow modeling- Cash Management-Components-Day-to-day cash control-Money at the bank-Receipts-Payments control-Short-term investments-Short-term borrowings


Basic Text Book & References:
4. Website of National Stock Exchange,
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
ELECTIVE: BANKING OPERATIONS STREAM
MBAB 912: CYBER CRIMES AND IT LAWS

Soft Core
3 Credits

Prerequisites: Basics of IT Laws
Learning Objective:
To make the students understand the importance of cyber security in banks and familiarize with various kinds of cyber crimes with particular reference to banking operations and services today and make them understand the basics of cyber forensics, investigation and cyber security so that the students acquire necessary knowledge and understanding of cyber crimes in banks and the relevant legal framework to deal with such issues.

Learning Outcomes:
Helps the students to deal with cyber crimes related problems occurring in the banks.

1. Fundamentals of Criminal Behaviour and cyber crime:
Nature and fundamental principles of crime – Theories of Criminal Behaviour - Cyber crimes – definition, scope and growing dimensions – Cyber Criminals and characteristic- Nature and Types of cyber crimes - Cyber Crime Techniques; Computer insecurity and computer attacks; Internet Crimes and Internet Frauds; Computer Hacking and Hackers; Social Engineering; Digital signatures and forgery.

2. Emerging Banking Environment and Vulnerability:
Development in Banking Industry and Banking operations – Payment and Settlement; E-commerce, Online Banking and Crimes; Banking Software crimes, Computer Hacking – browsing, password cracking, session hijacking, man in the middle attack, Website hacking, DOS, DDoS, Source code theft - On-line banking crimes and Frauds - Spamming – Phishing - identity theft, cyber money laundering, intercepting electronic communication, Accounting frauds, forgery and counterfeiting; Vulnerability in Banks - Bank Failure and its impact on the system.

3. Cyber Forensics and Investigation:

4. Cyber Security in Banks:

5. Cyber Crimes and Legislative Framework:

Books and References:
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
ELECTIVE: BANKING & FINANCE
MBBT 913: RURAL BANKING AND MICRO FINANCE

Soft Core 3 Credits

Prerequisites: Basics of Banking Concepts.

Course Objective
The objective of this course is to expose students to the key issues linked to rural banking including the challenges in Indian context. It also discusses the initiatives of the government for inclusive financial system such as micro finance.

Learning Outcomes:
Helps the students to join the rural banks and micro finance institutions.


2 Agricultural Economy: Agriculture Economy-Structure and characteristics of Indian agriculture- Role of agriculture in economic development-agriculture-industry linkages -constraints to agriculture development- Emerging issues in Indian Agriculture- Rural infrastructure; Transport, Power- Markets and other services

3 Rural Financing and Development Policy- policies and programmes for rural farm and non-farm sectors. Economic reforms and its impact on rural economy- Regulation of Rural Financial Services; - NABARD, RBI- role, refinance support. Lead bank approach, State level and- District level Credit committees- subsidy-linked credit programmes of the Government- -Priority Sector Financing

4 Micro Finance: Genesis and evolution of microfinance- different models of microfinance operating in India; - Bank Linkage Programme (SBLP) as an innovative strategy of microfinance evolved in India - SME Finance; Definition of SME .Importance to Indian economy- Financing of SME- Revival of sick units; revival package- and implementation, Stressed assets under rehabilitation.

5 Problems and prospects in Rural Banking: Problems of Rural branches of Commercial banks- transaction costs and risk costs- Technology based Financial Inclusion- Emerging trends in rural banking-financing poor as bankable opportunity- Micro Credit, Self- Help Groups / NGOs, linkages with banking, latest guidelines of GOI and RBI

Text Books and References:

1. **Introduction and Overview:** Risk definition - BIS – Basel Committee – Basel I, II and III norms; Risk Process- Risk Organization - Key risks-Credit risk, market risk, operational risk, liquidity risk, legal risk, interest rate risk and currency risk – Concept of ALM for Banks.

2. **Credit Risk:** Definition - - Framework for risk management - RBI guidelines for risk management - Risk rating and risk pricing - Methods for estimating capital requirements -Credit risk - standardized approach and advanced approach - Credit rating /scoring - Credit Bureaus - Stress test and sensitivity analysis - Internal Capital Adequacy Assessment Process (ICAAP) - Structured products.

3. **Operational Risk:** Definition - RBI guidelines for Operational risk - Types of operational risk - Causes for operational risk - Sound Principles of Operational Risk Management (SPOR) - Identification, measurement, control / mitigation of operational risks; Organizational set up and Policy requirements; Strategic approach and key responsibilities of ORM; Capital allocation for operational risk, methodology and qualifying criteria for banks for the adoption of the methods; Computation of capital charge for operational risk.

4. **Market risk:** Definition - Liquidity risk - Interest rate risk - foreign exchange risk - ALM organization - ALCO - Simulation, Gap, Duration analysis, Linear and other statistical methods of control: Price risk (Equity) - Commodity risk - Treatment of market risk under Basel- Standardized duration method- Internal measurement approach – VaR.


**TEXT BOOK AND REFERENCES:**

1. Foundations of Banking Risk: An Overview of Banking, Banking Risks, and Risk-Based Banking Regulation by GARP (Global Association of Risk Professionals).
Prerequisites: Basics of Banking

Learning Objective
The objective of this course is to expose students to the theory and functioning of the monetary Policy and the role of Central Banks in the Economy. It also discusses the conduct of monetary policy and its effect on interest rates, credit availability, price and inflation.

Learning Outcomes:
Helps the students to comply with norms of RBI which is important to take banking decisions.

1. Introduction: Understanding money- Concept-functions of money-kinds money of measurement-theories of money supply determination-savings-investments-role of debit card-credit card-plastic money-electronic money

2. Central Banking System: RBI as Central Bank- structure-functions-working-reforms-current regulatory structure- reserve system- balance sheet; goals, targets, indicators

3. Monetary Theory: Reserve system-money creation-money multiplier-money supply-The Level of Prices and the Value of Money- money supply-money demand, and monetary equilibrium-Quantity theory-inflation-classical theory of money-modern theory of money and income

4. Central Banking and Monetary Policy- Functions-goals-targets-indicators and instruments of monetary control-monetary management in an open economy-Tools of monetary policy- conduct of monetary policy-effect of monetary injection-current monetary policy of India.


Text Books and References:
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
ELECTIVE: BANKING & FINANCE
MBABT 916: FINANCIAL MODELING USING SPREADSHEET

SOFT CORE
3 Credits

Prerequisites: Basic knowledge on Finance and Business Statistics
Learning Objectives: Prepare Students -
- To learn the various Financial Analysis
- To understand the methods of various Financial Analysis
Learning outcome: Students who complete this course can Analyze and Built Financial Model

Unit I: Financial Models

Unit II: Corporate Financial Models
Calculation of Time value of Money - Cost of Capital – Leverage Analysis - Capital Budgeting – Financial analysis of Leasing

Unit III: Portfolio Models

Unit IV: Derivatives & Option Pricing Models and Bonds
Introduction to Options – Binomial Option Pricing Model - Black Scholes Model - Option Greeks - Calculation of Bond Duration - Returns – Modeling the Term Structure.

Unit V: Statistical Models
Application of Statistical tools for Financial calculations and Model Building through Excel Addon.

Text Books and References:
2. Scott Proctor, Building Financial Models, Wiley India private Ltd, 2013
4. Alastair L. Day, Mastering Financial Modelling in Microsoft Excel, 2/E pearson
7. Craig W. Holden, Excel Modeling in Investments, 2/E, Pearson
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
ELECTIVES: BANKING & FINANCE
MBABT 917: TREASURY AND FIXED INCOME SECURITIES

Soft Core
3 Credits

Theory 60% Problems 40%

Prerequisites:
- Basics of treasuries and Debt. instruments

Learning Objectives
- To introduce the basics of debt markets and treasury operations.
- To provide the skills required to calculate yields, bond values etc.

Learning Outcomes:
- Helps the students to work in the treasury divisions of the banks.


Basic Text Book & References:

MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
ELECTIVE: BANKING AND FINANCE
MBAB 918: GLOBAL FINANCIAL MARKETS

Prerequisites:
- Completed a Course on Indian Financial System
- Completed a course on Indian Banking System

Learning Objectives
- To introduce the basic concepts of international financial system, institutions involved, instruments traded and the nature of short term and long term markets operate in it.
- To highlight the role and functioning of different international financial institutions facilitating the working of global financial markets

Learning Outcomes
- Helps the students to work in the global financial consultancy firms.


Basic Text Books and References :
MBA: BANKING TECHNOLOGY DEGREE PROGRAMME
ELECTIVE: BANKING & FINANCE
MBABT 919: FINANCIAL DERIVATIVES

Soft Core  3 Credits
Theory 20% Problems 80%

Prerequisites
Basics of derivatives

Learning Objectives
To provide the basics of working of financial derivatives markets, pricing of futures, options etc.
To impart skills required for calculating option prices, VaR, Margin trading, algorithm trading and risk measurement.

Learning Outcomes
Helps the students to be placed in banking and financial consultancy firms.


4. Swaps: Meaning–Mechanics of interest rate swaps–Valuation of interest rate swaps–Currency swaps–Valuation of currency swaps

5. Trading & Clearance: Trading system: Trader Workstation–Clearing entities

Basic Text Book & References:

2. Baye and Jansen, —Money, Banking and Financial Markets- An economics approach, AITBS Publishers & Distributors, Delhi, 1996
MBAB 920: INTERNATIONAL FINANCIAL MANAGEMENT

Pre Requisites:
- Completed Basic Course in Indian Financial System
- Completed a Course in Financial Management

Learning Objectives
- To introduce the concepts like Forex risk, different type of exposures and strategies adapted by MNCs.
- To provide the skills required for managerial positions in an finance division of an MNC.

Learning Outcomes
- Helps the students to join MNC’s.

Unit I: Globalization and Multinational Finance

Unit II: Foreign Exchange Markets
- Exchange Rate Determinants – International Parity Relationships and Forecasting Foreign Exchange Rates – Currency Derivatives Market – Linkage Between Euro Dollar Market and Derivatives Prices

Unit III: Exposure Management

Unit IV: Financial Management in MNCs

Unit V: Multinational Capital Budgeting

Basic Text Books:

References:
11. http://nifm.ac.in/sites/default/files/Syllabus_PGDM_FM_0.pdf