Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav School of Management

Choice Based Credit System (CBCS) in Light of NEP-2020
MBA (Fintech) - IV SEMESTER (2023-2025)

MBAFT401 ARTIFICIAL INTELLIGENCE (AI) IN FINANCE

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAFT401	DSE	Artificial Intelligence (AI) in Finance	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVE

To provide students with understanding of how new technologies are disrupting the financial services industry, driving material change in business models, products, applications and customer user interface.

EXAMINATION SCHEME

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

COURSE OUTCOMES

1. Demonstrate the understanding of artificial intelligence (AI) in the finance industry.
2. Understanding of the concepts, terminologies, and emerging issues in AI to solve complex data science problems within a business-oriented context.
3. Students will learn the different preparatory phases for the construction of AI and machine learning models and the main characteristics of the algorithms, both from a theoretical point of view and through applications.

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COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAFT401	DSE	Artificial Intelligence (AI) in Finance	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE CONTENTS

UNIT I: Introduction to Artificial Intelligence in finance

1. Overview of AI
2. Meaning and scope of Artificial Intelligence
3. Stages of Artificial Intelligence
4. Ethics and risks in AI
5. Emerging AI trends and future developments

UNIT II: Basics of AI

1. Basics of AI and Machine Learning and Deep Learning – Finance
2. Integrating AI at strategic level
3. Infrastructure for AI (prerequisites and challenges)
4. Challenges of traditional banking
5. Online banking
6. Neo banks

UNIT III: Applications of AI in Finance

1. Wealth and Asset Management
2. Insurance
3. Customer services
4. Robotics process automation
5. Credit Scoring
6. Compliance and Fraud detection

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MBAFT401	DSE	Artificial Intelligence (AI) in Finance	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

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UNIT IV: AI Technologies

1. Data Preprocessing
2. Natural Language processing
3. Recommendation engines

UNIT V: Learning methods in AI

1. Linear & Logistic Regression
2. Tree-based methods
3. Other ML algorithms – SVM, KNN
4. Bagging & Boosting concepts

SUGGESTED READINGS

1. Singh, R. (2020). Artificial Intelligence in Banking & Finance, Adhyyan Books
2. Dixon, M., Halperin, I. & Bilokon, P.(2020). Machine Learning in Finance, Springer
3. Marcos, L. (2018).Advances in Financial Machine Learning, Wiley.
4. Marcos, L., Machine Learning for Asset Managers, Cambridge University Press
5. Lantz, Brett (2019). Machine Learning with R: Expert techniques for predictive modeling, 3, Packt Publishing

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Choice Based Credit System (CBCS) in Light of NEP-2020
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MBAFT402 BASICS OF RETAIL BANKING

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAFT402	DSE	Basics of Retail Banking	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVE

To provide students with understanding of how new technologies are helping people in Retail Banking services industry, driving material change in business models, products, applications and customer user interface.

EXAMINATION SCHEME

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

COURSE OUTCOMES

1. Demonstrate the understanding of Retail Banking in the finance industry.
2. Understanding of the concepts, terminologies, and emerging issues in Retail Banking to provide solutions within a business-oriented context.
3. Students will learn the different preparatory phases for the construction of Retail Banking and the main characteristics of the process involved, both from a theoretical point of view and through applications.

COURSE CONTENTS

UNIT I: Introduction to Retail Banking

1. Basics and Concept of Retail Banking
2. Distinction Between Retail and Corporate Wholesale Banking
3. Overview Of Retail products: Customer Requirement, Product Development process, Assets and Liabilities Product
4. Credit Scoring
5. Approval Process of Retail Loans

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COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
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MBAFT402	DSE	Basics of Retail Banking	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

UNIT II: Retail Asset Products

1. Eligibility, Amount, Margin Security, Disbursement, Moratorium.for
2. Home Loans
3. Auto /Vehicle Loans
4. Personal Loans
5. Education Loans
6. Repayment, Collection, Process of Using, Bill Cycle, Eligibility for Credit Cards

UNIT III: Retail Strategies

1. Tie up Process for Retail Loans
2. Delivery Channels, Extension Counters
3. ATM
4. POS
5. Internet and M Banking
6. Compliance and Fraud detection

UNIT IV: New Trends in Retailing Process

1. Insurance
2. Demat Account and Services
3. Online and Phone Banking
4. Property Services and Cross Selling
5. Investment Advisory, Wealth Management

UNIT V: Recovery of Retail Loans

1. Loans Default
2. Rescheduling
3. Recovery Process SARAFAES
4. DRC Act ,Use of Lok Adalat Forum
5. Recovery Agents and RBI Guidelines

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			THEORY			PRACTICAL		L	T	P	CREDITS
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MBAFT402	DSE	Basics of Retail Banking	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

SUGGESTED READINGS

1. Agarwal, O.P. (2012). Fundamentals of Retail Banking, Himalaya Publishing House
2. Khan, MY, (2017). Indian Financial System, Tata McGraw Hill
3. Uppal,RK &Bishnupriya N. (2009).Modern Banking In India, New Century Publications.
4. Uppal,RK., (2009) Banking Services and IT, New Century Publication
5. Guruswamy, S, (2010). Banking In New Millenium, New Century Publication

Choice Based Credit System (CBCS) in Light of NEP-2020

MBA (Fintech) - IV SEMESTER (2023-2025)

MBAFT403 BASICS OF TABLEAU

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAFT403	DSE	Basics of Tableau	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVE

The course objective is to introduce students to the fundamentals of using Tableau Desktop in the context of business and data analytics.

EXAMINATION SCHEME

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of Numerical/Case study problems of 24 Marks which is compulsory.

COURSE OUTCOMES

1. Identify the value and structure of Tableau Software as it applies to data visualization in the industry of business and data analytics.
2. Build interactive tables by connecting, preparing, and customizing data in Tableau.
3. Create data visualizations, dashboards, and Tableau Stories, to communicate analytic insights to the intended audience, such as business stakeholders.
4. Apply Tableau performance optimization to improve the speed of working with large data

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COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAFT403	DSE	Basics of Tableau	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSECONTENT

UNIT I: Introduction to Tableau

1. BI Concepts
2. Basics of TABLEAU
3. Data Visualization
4. Unique Features compared to Traditional BI Tools
5. TABLEAU Overview & Architecture
6. f.File Types & Extensions

UNIT II: Tableau product

1. Desktop
2. Server
3. Publisher
4. Public
5. Reader

UNIT III: Data connections in tableau interface (Joining) Part-1

1. Data Connections in the Tableau Interface
2. Connecting to Tableau Data Server
3. Types of Join
4. When to use Joining

UNIT IV: Data connections in tableau interface (Blending) Part-2

1. Data Blending
2. Use of Data Blending
3. Joining vs. Blending
4. Creating Data Extracts in Tableau
5. Establishing a Connection and Creating an Extract

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAFT403	DSE	Basics of Tableau	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

UNIT V: Organizing and Simplifying Data

1. Filters. Applying Filters, Quick Filters
2. Sorting of Data
3. Creating Combined Fields
4. Creating Groups and Defining Aliases
5. Working with Sets and Combined Sets

SUGGESTED READINGS

1. Murray, D. G. (2013). *Tableau your data!: fast and easy visual analysis with tableau software*. John Wiley & Sons.
2. Sankhe-Savale, S. (2016). *Tableau Cookbook–Recipes for Data Visualization*. Packt Publishing Ltd.
3. Sleeper, R. (2018). *Practical tableau: 100 tips, tutorials, and strategies from a Tableau zen master*. " O'Reilly Media, Inc.".

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Choice Based Credit System (CBCS) in Light of NEP-2020
MBA (Fintech) - IV SEMESTER (2023-2025)

MBAFT404 INTRODUCTION TO PYTHON PROGRAMMING

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAFT404	DSE	Introduction to Python Programming	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVES

The goal of this course is to provide students with an understanding of basic concepts of Python Programming Language along with its features and application areas. It will further help the learner to develop the program for string processing and file organization.

EXAMINATION SCHEME

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of 5 questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

COURSE OUTCOMES

1. Learn the syntax and semantics of the Python programming language.
2. Illustrate the process of structuring the data using lists, tuples
3. Demonstrate the use of built-in functions to navigate the file system.
4. Implement the Object Oriented Programming concepts in Python.

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			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAFT404	DSE	Introduction to Python Programming	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE CONTENTS

UNIT I: Introduction

1. Python variables,
2. Python basic Operators,
3. Understanding python blocks.
4. Python Data Types,
5. Declaring and using Numeric data types: int,
6. float etc

UNIT II: Data Types

1. Entering Expressions into the Interactive Shell
2. The Integer
3. Floating-Point
4. String Data Types, String Concatenation and Replication
5. Storing Values in Variables, Your First Program
6. Dissecting Your Program,

UNIT III: Flow Control

1. Boolean Values, Comparison Operators, Boolean Operators,
2. Mixing Boolean and Comparison Operators,
3. Elements of Flow Control, Program Execution, Flow Control Statements,
4. Importing Modules, Ending a Program Early with sys.exit(),
5. Functions: def Statements with Parameters, Return Values and return Statements,
6. The None Value, Keyword Arguments and print(), Local and Global Scope, The global Statement, Exception Handling, A Short Program: Guess the Number

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
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MBAFT404	DSE	Introduction to Python Programming	60	20	20	-	-	3		-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

UNIT IV: Modules of Python Packages

1. Functions of Python packages
2. Modules of Python packages
3. Simple programs using the built-in functions of packages
4. Matplotlib
5. Numpy
6. Pandas etc.

UNIT V: GUI Programming:

1. Tkinter introduction,
2. Tkinter and Python Programming,
3. Tk Widgets,
4. Tkinter examples.
5. Python programming with IDE.

SUGGESTED READINGS

1. Chun, W. J. (2012). *Core Python Applications Programming*. Pearson Education India.
2. Dierbach, C. (2012). *Introduction to computer science using python: A computational problem-solving focus*. Wiley Publishing.
3. Course, S., & Total, C. I. A. E. S. E. Post Graduate Programme-M. Sc Mathematics Choice Based Credit System (Cbcs Pattern).