F1: Fintech Concept/Strategy

Learning Outcome		Topics	Contents
Fintech Concept/Strategy			
1	Explain the evolution of Fintech as well as Fintech Ecosystem and its key elements	Overview of Fintech and Fintech Ecosystem	• History and Evolution of Fintech • Fintech Ecosystem and its key elements ▪ Participants in Fintech ecosystem ▪ Fintech ecosystem development framework
2	Outline and explain the importance of Fintech and its applications	Financial innovation within the Financial Services Industry	• Perspective • Payments industry • Assets under Management • Crowdfunding and P2P lending • Insurtech
3	Identify opportunities and threats to Entrepreneurs in the Fintech space	Entrepreneurship in Fintech	• The development of Fintech as a hotspot for Entrepreneurs • Vital threats to Fintech Entrepreneurship ▪ Financial regulation ▪ Competition from established Institutions ▪ Cyber Risk and Customer Trust
4	Discuss the different Fintech-related regulation in Nigeria	Fintech Regulations	• Overview of Fintech Regulations and Standards • Fintech Regulation in Nigeria ▪ Data protection ▪ Cybersecurity ▪ Fintech Testing

F2: Design Thinking in Financial Services

Learning Outcome		Topics	Contents
Design Thinking in Financial Services			
1	Demonstrate how to apply design thinking to create better and more innovative Solutions	Design Thinking	• Introductions ▪ Definition of terms ▪ Importance – approach ▪ Current challenges • Mindset behind design thinking ▪ Overview of the mindset ▪ The Art of Possible - use design thinking to uncover compelling solutions
2	Explain creativity, solve problems and reduce risk by rapidly testing and implementing solutions that create value	Approach to Financial Services	• Financial services ▪ Definition of terms ▪ Approach to design thinking in financial services • Approaches ▪ Overview and application of the 5 stages of Design Thinking ▪ Stages – Empathy, Define, Ideate, Prototype & Test ▪ Tools and techniques required to apply each stage • Results ▪ How to pitch Design Thinking findings ▪ Ways to embed Design Thinking and get results

F3: Blockchain/Cryptocurrency

Learning Outcome		Topics	Contents
Blockchain			
1	Identify the basic concepts of Blockchain Technology	Introduction to Blockchain	• Overview of Blockchain and Blockchain Technology • Overview of Distributed Ledger Technology and Cryptography
2	Identify the steps in building a Blockchain Technology	Building a Blockchain Technology	• Key development process in Blockchain ▪ Identify a use case ▪ Mechanism ▪ Platform ▪ Node Design ▪ Blockchain Instance ▪ Building the application program interface ▪ Design Admin and User Interface ▪ Adding scalability for future technology
3	Explain use cases for Blockchain Technology and challenges in its application	Practical Application of Blockchain	• Useful applications of Blockchain- major focus on the Banking and Finance sector • Challenges in the application of Blockchain Technology • Opportunity assessments for the application of Blockchain technology
4	Discuss limitations of Blockchain and Distributed Ledger Technology application	Overcoming Limitations of Blockchain	• Technical Challenges • Business Challenges • Government Regulatory Challenges • Privacy Challenges

F3: Blockchain/Cryptocurrency contd.

Learning Outcome		Topics	Contents
Cryptocurrency			
1	Explain the History of Cryptocurrency together with the development of Cryptocurrency Market	Overview of Cryptocurrency	• History of Cryptocurrency • The Cryptocurrency market • Different types of currencies and their different characteristics
2	Explain the basic principles and operation of Cryptocurrencies	Mechanics of Cryptocurrencies	• Working principles of Cryptocurrency • Overview of some forms of Cryptocurrency • Analysis of coin rewards versus transaction fees • Forks to overcome limitation in the Cryptocurrency market
3	Classify regulations and policies around Cryptocurrencies	Regulation of Cryptocurrency market	• Overview of Cryptocurrency Policies and Regulation
4	Demonstrate the key Applications of Cryptocurrency in the Banking and Finance Industry	Cryptocurrency Application in the Banking and Finance industry	• Overview of Cryptocurrency application in finance- payments, transaction speed, trade finance, supply chain, smart contracts, guarantees
5	Discuss the impact and future of cryptocurrencies in the Banking and Finance industry	Impact on Cryptocurrencies in Financial Institutions	• Key constraints to Cryptocurrency market • Market resistance to Cryptocurrency • Financial Institutions' resistance to Cryptocurrency • Regulatory Resistance to Cryptocurrency • Way forward for financial institutions with respect to Cryptocurrency

F4: Introduction to Data Analytics/Artificial Intelligence

Learning Outcome		Topics	Contents
Introduction to Data Analytics/Artificial Intelligence			
1	Understand the fundamental concepts of data analytics and AI.	Introduction to Data Analytics and AI	• Definition and importance of data analytics and AI • Historical development and milestones • Real-world applications and industry examples • Problem-solving methods (search algorithms, constraint satisfaction)
2	Explain Data Cleaning and preprocess	Introduction to Data Cleaning and preprocessing methods.	• Types and sources of data (structured, unstructured, big data) • Data cleaning techniques (handling missing data, outliers, data quality) • Data preprocessing methods (normalization, scaling, feature engineering) • Exploratory data analysis techniques (summary statistics, data distributions)

3	Understand the concept of predictive modeling.
	Apply supervised learning algorithms (e.g., linear regression, decision trees, k-nearest neighbors) for prediction.
		Descriptive and Prescriptive Analysis	• Descriptive Analytics
			  • Measures of central tendency (mean, median, mode)
			  • Measures of variability (variance, standard deviation)
			  • Data aggregation and grouping (pivot tables, groupby)
			• Predictive Analytics
			• Predictive modeling
			• Regression analysis (linear regression, logistic regression)
			• Classification algorithms (decision trees, support vector machines)

4	Problem-Solving with Search Algorithms search)	Introduction to Algorithms	• Problem formulation and state representation • Uninformed search algorithms (breadth-first search, depth-first search) • Informed search algorithms (A*, heuristic)

I1: Data Analytics/Artificial Intelligence/Machine Learning in Finance

Learning Outcome	Topics	Contents
Data Analytics		

1 Explain the overview of Data Analytics concept	The Data Analytics concept	• Overview of Data Analytics
		  ▪ Data Analytics types
		  ▪ Sources and Types of Data Analytics tools
		  ▪ Data Preparation and Cleaning
		• Data-Driven Decision Management

2 Discuss the activities involved in the collection, cleaning and consolidation of Data for Analysis	Data Analytics preparation	• Data Collection • Data Cleaning • Data Consolidation

3 Identify the tools for Data visualisation and tools, and its application	Data Visualisation	• Data visualisation tools and techniques
		  ▪ Tableau
		  ▪ ChartBlocks
		  ▪ Plotly
		• Designing Visuals and infographics for Financial users
		• Scorecard and Dashboards

4 Explain the Big Data concept along with the key tools and techniques in use	The" Big Data" concept	• Overview of Big Data
		  ▪ Characteristics of Big Data
		  ▪ Application of Big Data
		• Big Data Architecture
		• Big Data Tools and Techniques
		  ▪ Hadoop
		  ▪ Apache Spark
		  ▪ Apache Storm

I1: Data Analytics/Artificial Intelligence/Machine Learning in Finance contd.

Learning Outcome		Topics	Contents
Artificial Intelligence/Machine Learning in Finance			
1	Identify technologies that aid Artificial Intelligence	Introduction to Artificial Intelligence Technologies	• Overview of Data and Artificial Intelligence • Overview of Machine Learning, Deep learning and its capabilities • Overview of Natural Language Processing
2	Explain the impact and benefits of Artificial Intelligence in the Banking and Finance industry	Artificial Intelligence Application in the Finance industry	• Finance industry drivers of Artificial Intelligence • Overview of Artificial Intelligence application ▪ Finance Wealth and Asset Management ▪ Insurance ▪ Customer Service ▪ Robotic Process Automation ▪ Credit Scoring and Compliance ▪ Fraud Detection
3	Analyse the process and procedure of machine learning in finance	Machine Learning in Finance	• Introduction to Machine Learning and Finance ▪ Definition of terms ▪ Leasing fundamentals • Origination Phase of the Transaction Lifecycle – value of asset and coverage ratio • Administration and Termination Phases • Jurisdiction Leasing Law • Lease Accounting and Federal Tax • Types of Finance • Identifying Risks - Pre and Post • Reports – leasing agreement, legal opinion and finance documents • Case study

I2: Open Banking/Financial Apps

	Learning Outcome	Topics	Contents
Open Banking/Financial Apps			
1	Explain the concept of Open Banking and its benefits to all the relevant stakeholders	Introduction to Open Banking key	• Overview of Open Banking ▪ The case for the use of Open Banking ▪ Benefits of Open Banking - to the industry, customers and banks
2	Discuss the platforms for Open Banking and resources	Open Banking Model	• Open API platform • Financial Services Resources ▪ Risk Data ▪ Payments ▪ Products ▪ Financial Services Infrastructure/Functions • Open API Resources ▪ Open Data and Open Networks
3	Identify the components of Open Banking	Key Components of Open Banking	• Data Sharing • Financial Accessibility • Pricing • Product Innovation
4	Outline the enablers of Open Banking in Nigeria	Key Enablers of Open Banking	• Appraisal of the key enablers of Open Banking ▪ Open API technology
5	Discuss the stage of the current development of the Open API Standards in Nigeria	Open API Standards for Banking in Nigeria	• Overview of the Standards and Principles guiding API
6	Discuss the responsibilities of regulators in Open Banking	Regulation of Open Banking	• The regulatory landscape for Open Banking in Nigeria
7	Examine financial application in a technological context	Financial Apps	• Introduction • Basic App Design – Intro, AddingChartsRef, Testing Charts • Adding UI - Overview & Add Scene UI, Transaction Scene • Data handling – Building, Wiring Up, Testing & Reading * Summary

I3: Disruptive Innovation

Learning Outcome		Topics	Contents
Disruptive Innovation			
1	Discuss the History and Evolution of Disruptive Innovation	Introduction to Disruptive Innovation	• Overview of Disruptive Innovation • Overview of Digital Disruption • History of Disruption and Innovations
2	Outline and discuss the areas of Disruption in the Banking and Finance Industry	Areas of Disruption in Financial Services	• Areas of Disruption in Financial services ▪ Payments ▪ Insurance ▪ Deposits and Lending ▪ Capital Raising ▪ Investment Management ▪ Market Provisioning
3	Analyse the principles of disruptive innovation	Disruptive innovation Guidelines	• Summary of guiding principles on Disruptive innovation
4	Discuss recent innovative developments in the Banking and Finance Industry	Disruption by Fintech in the Nigerian Banking and Finance Industry	• Overview of the recent Disruption by Fintech in the Nigerian Banking and Finance Industry
5	Analyse responses to Disruption by businesses	Business response to Disruptive Innovation in the Nigerian Banking and Finance Industry	• Overview of business responses to Digital Innovation in the Nigerian Banking and Finance Industry • Collaboration with disruptive technologies

P1: Regulation Technology (RegTech)

Learning Outcome		Topics	Contents
RegTech			

1	Explain the Drivers of RegTech	Introduction to Regulation Technology	• Overview of Regulation Technology
			  ▪ Drivers of Regulation Technology
			  ▪ Regulation Technology Stakeholders

2	Discuss technologies that enable RegTech	Regulation Technology Enablers	• Cloud Computing (IaaS, PaaS, SaaS) • Artificial Intelligence • Blockchain and Distributed Ledger Technology • Other technologies
3	Discuss challenges in RegTech compliance	Compliance Challenges in Regulation Technology	• Risk Management • Stress Testing • Regulatory Reporting • Client on-boarding and KYC: Identification of client and legal persons • AML and CFT: Payment transactions' monitoring, tracing and auditing • Conduct monitoring (bribery/corruption risk, market surveillance, customer protection) • Trading in Financial Markets' compliance (best execution, margin computation) • New regulation identification and related impact analysis • Data protection compliance and other applications

P2: Future Trends in Fintech

Learning Outcome	Topics	Contents
Future Trends in Fintech		
1 Identify digitilisation as a trend fact for financial services	Trends in Banking	• Hybrid cloud services • API platforms • Robotic process automation (RPA) • AI-driven technologies • Instant payments • Blockchain adoption • Security advancements
2 Analyse the tendencies and disruptive technologies and innovations	Trends Shaping Fintech	• AI Competencies ▪ Business Analytics ▪ Risk Management ▪ Social and emotional intelligence ▪ Logical reasoning and self-learning ▪ Navigation and mobility ▪ Online trading • Other trends