Course Descriptions
(Approved in AC Meeting # 31 dated 28-Dec-2023)

Bachelor of Business Administration
Bachelor of Science (Accounting and Finance)
Bachelor of Science (Business Analytics)
Bachelor of Science (Financial Technology)
(Approx. 150 words each)

AF1001- Fundamental of Accounting
This is an introductory course that focuses on the fundamental concepts, principles, and practices of financial accounting. It lays the foundation for all subsequent accounting courses and a knowledge base for finance courses. The course is designed to take the student through the whole accounting cycle and to develop skills in the basic application of financial accounting principles; enabling the preparation of financial reports such as the income statement and statement of financial position. Initial and subsequent measurements of some core elements of financial accounting, such as inventory, property, plant, and equipment, and intangible assets, are also covered in the course. More importantly, the course aims to enable an understanding of the role of accounting as an information system that assists financial statement users in assessing business performance and facilitates their decision-making.

CS1001- IT in Business
This course is designed for computer literacy and efficient use in handling daily business activities. It covers the introduction of computer generations and their evolutionary changes, the most popular concepts, and components of computers. The course covers the basic concepts of office automation, an introduction to hardware, software, data management, network management, management information systems, and an introduction to artificial intelligence. The teaching pedagogy includes models, graphics, presentations, mini-case studies, and practical work. In the practical portion, components of MS Office, commonly used commands and functions of the Windows operating system, and some data analysis tools are covered.

CL1001- IT in Business – Lab
This course covers the working knowledge of the common software used to run a business through different globally-used software programs developed by Microsoft Corporation. It equips the students with knowledge of specialized domains. It also covers emerging concepts like Business Intelligence and techniques to incorporate these in a particular work environment. Students learn to create different technical documents effectively and efficiently, using state-of-the-art software. This course also equips students with skills in Microsoft Windows operating system, MS Office Suite, creating technical documents, working with databases, and basic website development. Moreover, the course teaches about the incorporation of business intelligence for making a business more profitable and helps cope with the challenges associated with the use of information technology in business.

MG1001- Fundamental of Management
This course provides the foundation for understanding management theories and practices to build advanced concepts in subsequent courses of the degree program. It covers the historical roots of contemporary theories of management and develops an understanding of the four basic management functions, including planning, organizing, leading, and controlling, along with the essential components of each function. The course further enhances students' conceptual underpinnings of the global business environment, corporate culture, workforce diversity,

business ethics, and corporate social responsibility. It attempts to help students identify, correlate, and apply modern management concepts for effective decision-making. The learning outcomes of the course consist of students' ability in planning, goal-setting, strategy formulation, designing structures, managing human resources, leading teams, and controlling resources.

AF1002- Financial Accounting
This course builds on the concepts developed in the "Fundamentals of Accounting" course by introducing International Financial Reporting Standards to students and discussing their applicability to financial statements. The activities and events of a business entity are summarized by the financial accounting process into published financial statements, to be used by external users such as investors and creditors. Such users need to understand both the financial accounting process and its outputs to make investing or lending decisions. The primary objective of the course is to familiarize students with the concepts of company financial statements. Therefore, students learn how to read, understand, and use published financial statements for decision-making. In addition, the course also discusses the formulation of cash flow statements and the statement of changes in equity.

FL1002- Financial Accounting - Lab
This course is a practical application of financial accounting concepts through Microsoft Excel and the accounting software QuickBooks. In addition to processing the accounting cycle, it covers creating and maintaining company accounting information, customers and vendors, inventory, and payroll. The course also focuses on the generation of accounting and financial reports and their application for business decisions. The course aims to develop an understanding of basic accounting concepts for use in a computerized accounting environment, record business transactions in the accounting system and carry it through the accounting cycle for information generation.

MG1002- Marketing Management
This course comprehensively provides a deep understanding of the core concepts and practices that drive successful marketing strategies in today's fast-paced business world. The course introduces the students to the marketing environment for analyzing the impact of internal and external factors on a business's marketing decisions focusing on concepts of market segmentation, targeting, and positioning. The course further concentrates on the marketing mix- product development, pricing strategies, distribution channels, and promotional tactics. Consumer behavior analysis is a central theme as well, providing valuable insights into customers' needs, wants, and purchasing behavior. Students also explore the significance of evolving digital marketing and social media strategies in the digital landscape. Finally, students expand their horizons to ethical considerations in marketing by examining the ethical dimensions of marketing decisions and their impact on society and business sustainability.

MT1002- Business Math-I
Mathematics is used to solve a wide range of practical business problems. This course is designed to introduce and reinforce the essential and basic mathematical skills needed to understand, analyze, and solve mathematical problems related to business, economics and finance. The course at length covers basic and intermediate understanding of mathematical concepts and their application in business world. The course provides the students with an informal non-intimidating presentation of the mathematical principles, techniques and applications most useful for business students. This familiarity assists them to become a better critic and use basic mathematical tools for business decision making.

SS1006- English – II

The English II course is aimed at familiarizing students with diverse forms of public speaking. It is designed to equip students with oral and socio-linguistic skills for academic and non-academic purposes. It emphasizes effective oral communication relevant to socio-business situations. The course orients understanding and implementation of the basic action steps, including researching and organizing speech, listening and responding, delivering through effective verbal and non-verbal messages, and preparing impactful presentational aids. The lectures and laboratory components focus on the production, delivery, and assessment of the following: the impromptu, individual, and group presentations. Moreover, the informative and persuasive presentations evaluated as summative assessments formalize the significance of well-researched speech content and assist students practice critical listening skills. Thus, this course of English II aims to enhance the confidence of students to speak publicly with a focus on individual and group presentations.

SL1006- English – II – Lab

The English II Lab course is dynamically aligned with the English II curriculum, employing the flipped classroom learning and Computer Assisted Language Learning (CALL) model to cultivate a nuanced understanding and application of verbal and non-verbal communication within a professional framework. This course is dedicated to honing students' proficiency in speaking and listening skills, emphasizing the application of business-specific vocabulary and language proficiency in simulated business and management science scenarios. Through a range of targeted activities such as speeches, debates, role-plays, graded presentations, and practical scenarios, students are provided with authentic learning experiences to develop effective presentation techniques and communication competencies essential for success in professional settings. The principal goal of the lab course is to equip students with the requisite competence in oral communication, thereby refining their speaking and listening capabilities crucial for professional advancement.

SS1007- Islamic Studies/Ethics

This course aims to introduce the students to the academic study of the basics of Islam and help them become better citizens and good human beings. Denoting a religious system grounded upon certain normative revealed sources (Quran and Sunnah), as well as a civilization unfolding over time as a complex network of cultures shaped by historical contingencies, this course remains indifferent to the personal beliefs of the students, to any sectarian identity they espouse, and any doctrinal point of view they hold. This course also provides advanced knowledge of Islam, including a thematic study of the Quran and Sunnah, theological, jurisprudential, historical, contemporary, and spiritual issues.

SS1013- Ideology and Constitution of Pakistan

The course is designed to acquaint the student with the rationale of the Ideology of Pakistan. It deals in detail with the salient aspects of the Pakistan Movement, focusing on the vision of the founding fathers. It also familiarizes students with the core provisions of the Constitution of the Islamic Republic of Pakistan concerning the fundamental rights and responsibilities of Pakistani citizens. This course rigorously explores Pakistan's historical, geographical, socio-cultural, political, and economic dimensions, charting its journey from ancient civilizations to its present status as an independent nation. Substantial focus is placed on the post-independence era, encapsulating the political, economic, and social transformations within Pakistan. Students critically analyze the nation's encountered challenges and prospects, inclusive of the influences

of global geopolitics on its trajectory. Contemporary issues including climate change, diplomacy, and the use of the role of the digital economy will be explored.

SS1015- Pakistan Studies

Pakistan Studies course provides a comprehensive exploration of the multifaceted elements shaping Pakistan. This rigorous course delves into Pakistan's historical, geographical, socio-cultural, political, and economic dimensions, tracing its evolution from ancient civilizations to its present status as an independent nation. Beginning with a detailed study of the pre-independence era, it scrutinizes the rich cultural fabric of contemporary Pakistan. Students explore ancient civilizations like the Indus Civilization, foundational to the Subcontinent's cultural heritage. The course intricately examines the Pakistan movement, analyzing socio-political factors leading to its independence in 1947. A significant focus is on the post-independence era, encompassing political, economic, and social transformations. Students critically analyze challenges, considering the impact of global geopolitics. Through lectures, readings, discussions, and projects, the course fosters critical thinking, research skills, and a nuanced understanding of historical and contemporary events. It aims to instill a profound national identity, civic responsibility, and global awareness in students.

SS1016- English - I

This English I reading and writing skills course is an introductory course aimed at practicing, developing and refining students' reading and writing skills for academic purposes. The course on English I aims to enhance students' study skills including time management, note-taking, and motivational skills. It attempts to enhance academic reading skills with particular emphasis on vocabulary development, critical reading, and analytical comprehension. Furthermore, the course prepares students to achieve proficiency in assessing the writing situations and exploring new ideas. With the emphasis on orientation and practice of source-based writing, the students are thereby guided to demonstrate progress in drafting a range of writing patterns, from developing academic paragraphs to writing advanced essays. This English I course approaches the study of writing with a focus on audience, authorial voice, and style. It emphasizes all the necessary steps of the writing process and the context governing the process.

SL1016- English - I – Lab

English I Lab course aligns with essential reading and writing skills modules selectively covered in English I course. It delves into enhancing relevant study skills, academic comprehension and composition skills. The course centers on various reading strategies tailored for understanding diverse academic texts. The course further aims at enhancing the art of source citation and refine their academic writing prowess, progressing from fundamental paragraph structures to advanced essay writing and text analysis. Through practical exercises and authentic learning experiences of Computer Assisted Language Learning (CALL) model, students hone their ability to comprehend academic content effectively while mastering the skills required for precise and articulate academic expression. The course attempts to enhance students' dynamic writing style through task-based, technology enhanced, and communicative methods and collaborative approaches. This lab course provides a comprehensive foundation for students to navigate and excel in their academic writing endeavors.

AF2001- Corporate Accounting-I

This comprehensive course offers broad knowledge and skills in accounting and financial reporting necessary for accuracy and compliance in practices. Students gain a deep understanding of recognition and measurement issues related to tangible non-current assets, including the categorization and accounting for assets held for sale, and the allocation of

impairment losses to cash-generating units. Students also learn to account for government grants, borrowing costs, and investment properties in financial statements. They develop skills to analyze and evaluate annual financial statements- distinguishing provisions, allowances, contingent assets, liabilities, principles of inventory valuation, and taxation accounting. The course also covers changes in accounting estimates, policies, and error correction and explores the adaptation and use of accounting standards among registered corporations in Pakistan.

MG2001- Organizational Behaviour
This is an interdisciplinary course encompassing concepts from psychology, sociology, social psychology, anthropology, and economics, aimed at developing an understanding of why people behave differently in their jobs, organizations, and workgroups. The course lays the foundations for the three levels of an organization: the individual level- personality, values, perception, motivation, decision-making, and ethics; the group behavioral level comprising teamwork, conflict, negotiation, communication, and leadership; and the organizational level involving the dimensions of corporate culture, politics, power, health and safety, and stress management. This course aims to inculcate a positive and ethical approach to managing a diverse workforce and to demonstrate analytical and problem-solving skills in work-related situations to attain maximum organizational productivity.

AF2002- Corporate Accounting-II
This comprehensive course covers a wide range of topics in financial accounting and reporting. The course gives a deep understanding of alternative cost measures such as historical cost, fair/current value, net realizable value (NRV), and value in use while exploring associated issues and problems. Students learn to prepare an entity's financial statements following the prescribed structure and content, including the statement of changes in equity, and analyze these statements to interpret results. It also focuses on taxation, both current and deferred, in compliance with relevant International Financial Reporting Standards (IFRS). Students explore the importance of identifying and reporting continuing and discontinued operations, as well as the accounting for non-current assets held for sale.

AF2003- Management Accounting
This course provides in-depth financial information to facilitate management in effective planning and control. Keeping in view the day-to-day operations of a business, Management Accounting plays a vital role in the form of the application of effective and efficient tools such as budgetary control systems, variance analysis, and performance evaluation of the entity. This course provides a framework to make forecasts, prepare budgets, and analyze control activities performed within the organization. Furthermore, it aims to develop an understanding of decision-making techniques through effective tools for practical application. This course equips students with a basic application of these techniques.

MG2003- Consumer Behavior
This course delves into understanding the various factors that shape consumers' preferences, attitudes, and purchase decisions. It is a course that examines how individuals, groups, and organizations make decisions regarding the acquisition, usage, and disposal of goods, services, experiences, and ideas. The course covers topics such as perception, learning, motivation, personality, and lifestyle, which help explain why consumers choose certain products or brands over others. Additionally, it explores the impact of social and cultural influences on consumer behavior, including family, reference groups, social class, and culture with an emphasis on developing a variety of useful skills. This text prepares readers for careers in brand management, advertising, and consumer research.

CS2003- Data Structures and Business Application

The Data Structures and Business Applications course is structured in a way to equip students with core concepts and business perspective of essential data structures. Special emphasis on time and space complexities is placed for data structure. Big O and big Omega concepts are taught for structures like arrays, linked lists, stacks, queues, trees, heaps, hashes etc. Students learn about searching and sorting algorithms applicable to data structures like AVL trees, BSTs, graphs including BFS and DFS graph data structures. Students are taught how to insert elements into data structures and how to balance elements using different sorting techniques. At the end of the course students are given a capstone project that tests the understanding of concepts and application of the abovementioned concepts. Through this holistic approach, students gain the necessary skills and knowledge required to compete and excel in today's competitive business environment.

CL2003- Data Structures and Business Application – Lab

The course on Data Structures and Business Applications provides a comprehensive exploration of fundamental data structures and their practical applications in business-oriented software development. Through a combination of theoretical concepts and hands-on programming exercises, students gain a deep understanding of data organization, algorithmic efficiency, and problem-solving strategies. The course also integrates Object-Oriented Programming (OOP) principles, emphasizing how data structures enhance code modularity, reusability, and maintainability in real-world business scenarios. By the end of the course, students are equipped with the skills to design efficient algorithms, implement data structures, and apply OOP concepts to address complex challenges in business application development.

AF2004- Business Finance

This course serves as a foundation for essential principles and concepts in finance within a business context. It covers financial statement analysis, time value of money, risk and return, and capital budgeting. Students develop skills in evaluating investment opportunities, assessing financial performance, and making informed decisions. The course also explores financial markets, basic instruments, and planning techniques. The course outcomes include a solid understanding of business finance, active participation in financial discussions, and contribution to decision-making processes within organizations. The course fosters critical thinking and problem-solving abilities, ensuring a deeper grasp of financial strategies and their impact on organizational success. It is to provide a strong foundation for pursuing advanced finance courses and excelling in diverse financial roles in the business world.

MT2004- Business Math-II

Mathematics is used to solve a wide range of practical business problems. This course is designed to introduce and reinforce essential and advanced mathematical skills needed to understand, analyze, and solve complex mathematical problems related to business, economics, and finance. The course at length covers advanced topics of mathematical concepts and their application in the business world. The course provides students with an informal, non-intimidating presentation of the mathematical principles, techniques, and applications mostly useful for critically analyzing complex business problems and providing relevant solutions. These techniques make them become better critics and use mathematical tools for business decision-making, especially in the context of economics, management, and finance.

AF2005- Cost and Management Accounting

This course covers the application of accounting principles and methodologies to business decision problems. It provides key skills for planning and control through the use of cost accounting concepts and practices. The main focus of the course is to understand the concepts of costing and pricing of goods and services for application to managerial decisions regarding strategy formulation, budgeting, and production planning. It also enables an understanding of trade-offs and competitive behavior, how management accountants collect and use information needed for several strategic decisions and teaches several alternative costing methods suitable for different types of manufacturing organizations, including those dealing with joint and byproducts. In addition, the planning and control functions and the importance of performance measurement are taught in this course.

BA2006- Fundamentals of Business Analytics
This course is an introduction to business analytics, an area of business administration that considers the extensive use of data, methods, and fact-based management to support and improve decision-making. It uses data and models to explain the performance of a business and how it can be improved. This course discusses the benefits of employing analytics and a structured approach to problem-solving in management situations. It covers managerial statistical tools in descriptive and predictive analytics, including regression. It also covers forecasting, risk analysis, simulation, data mining, and decision analysis. This course provides students with the fundamental concepts and tools needed to understand the emerging role of business analytics in organizations, the application of basic business analytics tools in a spreadsheet environment, and communication with analytics professionals to effectively use, and interpret results of analytic models for making better business decisions.

MG2008- Data Analysis for Business I
This course provides students with a comprehensive understanding of statistical concepts and their application in the business environment. The students learn the fundamental principles of descriptive and inferential statistics and how to analyze and interpret business data using statistical techniques. The course emphasizes upon practical applications of statistics in various business contexts to support decision-making and problem-solving. It is aimed at acquiring the basic techniques- data collection, presentation, analysis, and interpretation of results through different methods. Diverse statistical techniques are covered to equip students with an understanding of various business situations and solutions to the managerial issues that are raised while using specific techniques.

MG2009- Data Analysis for Business II
This course builds upon the foundation of business statistics and focuses on the principles and techniques of statistical inference. In this course, students learn how to make inferences and draw conclusions about population parameters based on sample data. The course covers estimation, hypothesis testing, and the application of various statistical methods to real-world business scenarios. It helps students learn advanced-level research skills to better perform market research and analyze various forms of big data available in the firms. The statistical skills are taught with available real-time data through manipulation in advanced industry software. Most of the statistical skills of this course are also practiced in the lab. The course also aligns with the needs of the industry for data analysts.

LG2009- Data Analysis for Business II – Lab
Data Analysis for Business-II Lab is designed to complement and enhance the theoretical concepts covered in the Data Analysis for Business-II course. The course is designed in such a way that it covers some parts of descriptive statistics, data visualization, basic decision-making,

and drawing conclusions based on the data. The focus of this lab is to prepare data analysts through hands-on experience in fully equipped labs. Moreover, this lab provides students with hands-on experience while applying advanced data analysis techniques and translating theoretical knowledge into actionable insights using real-world datasets. This lab is an integral part of the overall learning experience while providing them an opportunity to apply their understanding of statistical inference including hypothesis testing, analysis of variance, regression analysis, and correlation testing. The lab is concerned with both theory and practice: the theory serves to sharpen analytical skills, and the practice will give experience in the application of the principles and techniques to real-world business problems.

MG2010- Business Communication

Effective communication is a skill, and hence it can be learned. Students will be exposed to theories and concepts that underlie effective oral and mainly written communication skills. The course will develop advanced written communication skills by focusing on the three-step writing process so that students can apply them effectively in a practical business environment. They will learn the skills to improve team collaboration and acquire techniques to advance interpersonal skills, especially listening. Further, business communication is basically all about creating effective employment communication with the help of written and video resumes and how one should conduct oneself professionally during interviews both emotionally and physically. Also, marketing one's qualities at an interview. The course also includes inculcating salary negotiation, conflict resolution, emotional intelligence, and fine dining etiquette. In short, this course will help the student to introspect and acquire/polish the skill set which will help them get into his/her prospective career. The course will also offer a realistic approach to the business communication environment so that students can collect, organize, analyze, and present information in an understandable and logical order. Application of concepts to practical case studies will help the students handle real-life communication barriers in the future. Latest communication mediums will be emphasized so that students can make efficient use of social media and visual media.

MG2011- Environmental Sciences and Sustainability for Business

This course explores the intersection of environmental science and sustainable business practices, emphasizing the importance of sustainability in the corporate world. Students will gain a comprehensive understanding of environmental issues, climate change, environmental regulations, and ethical considerations, with a focus on how businesses can contribute to sustainable development. The objectives encompass the cultivation of a knowledgeable human resource base capable of environmental decision-making, addressing the climate change issues, and facilitating the business sustainability. The teaching is highly participative and includes interactive lectures. In addition, guest lectures by practitioners, experts, and researchers will be arranged to provide a holistic understanding of this course. This course will encourage students to develop their analytical and critical evaluation skills through analyzing case studies and proposing solutions. Additionally, it will enhance their team building, management skills, and communication abilities by working in group assignments. Overall, by taking this course, students will be able to identify and understand the theoretical and practical application of an integrated environmental sciences and business sustainability approach.

MG2012- Business Economics

This course introduces the fundamental principles and applications of economics in a business context. It explores the decision-making processes of firms and individuals, analyzing how they operate within competitive markets and respond to changes in economic conditions. Students will gain an understanding of key economic concepts, such as supply and demand,

pricing strategies, market structures, and the role of government in business activities. The course emphasizes both microeconomic and macroeconomic perspectives, focusing on how businesses optimize their resources, maximize profits, and make strategic decisions. Key topics covered include consumer behavior, production theory, cost analysis, market competition, pricing models, and the economic environment in which businesses operate. Students will learn to apply economic tools and frameworks to solve practical business problems and analyze real-world case studies. This course aims to equip students with the critical thinking skills necessary for informed decision-making in the dynamic and competitive world of business.

CS2012- Introduction to Object Oriented Programming

This course equips the students with the fundamental understanding of principles and applications of object-oriented programming in software development. It encompasses the discussion of essential concepts such as classes, objects, inheritance, polymorphism, and encapsulation using a programming language such as Java or Python. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software. The course involves hands-on exercises and projects to help develop proficiency in designing, implementing, and debugging object-oriented programs in solving real-world problems in the context of financial technology applications. Furthermore, the course involves study of advanced programming topics with logical structures of data, their physical representation, and the design of computer algorithms operating on the structures. The course covers program specifications, correctness and efficiency, data abstraction, and algorithm analysis.

CL2012- Introduction to Object Oriented Programming - Lab

This course equips students with a fundamental understanding of object-oriented programming (OOP) principles and their applications in product development. It covers essential OOP concepts such as classes, objects, inheritance, polymorphism, and encapsulation, with an emphasis on separating interface from implementation. Students will learn syntax, and control structures, in C++, applying these skills to develop business-oriented software solutions. The course explores algorithm analysis, searching and sorting techniques, and data abstraction, ensuring efficiency and correctness in program design. Hands-on exercises and projects will enable students to analyze business requirements, design scalable solutions, and implement robust software architectures.

CS2013- Introduction to Database Systems

This course introduces students to the fundamental principles and concepts of database management systems (DBMS) and their applications in fintech. Students will learn about data modeling, relational database design, query languages (such as SQL), database normalization, and transaction management. Through practical exercises and projects, students will gain hands-on experience in designing, implementing, and querying databases to store and retrieve financial data efficiently and securely. The course will also introduce the concepts of database evaluation, assessment, and governance issues for business needs, as well as database privacy, security, and visualization for managerial applications. Students will gain hands-on experience in database systems by understanding basic database concepts, conceptual modeling, relational data models, relational theory and languages, Database design, query processing and optimization, introduction to transaction processing and concurrency, database security. The involvement of these concepts in the development of payment, lending, investment and other platforms will also be the subject matter of this course.

CL2013- Introduction to Database Systems – Lab

This lab provides students with hands-on experience in database management systems (DBMS) and their applications in financial technologies. Students will engage in practical exercises to design and implement relational databases, create entity-relationship (ER) diagrams, and write SQL queries for data manipulation, querying, and optimization. The labs focus on building proficiency in database normalization, advanced SQL operations (e.g., joins, subqueries), indexing, query optimization, and transaction management, ensuring efficient and secure database performance. Through real-world scenarios, students will explore database privacy and security measures, as well as visualization techniques for managerial applications. The course also introduces NoSQL databases, enabling students to work with modern data management solutions for unstructured data. In the final weeks, students will apply their skills to practical fintech scenarios, such as payment, lending, and investment platforms, culminating in projects involving data warehousing, business intelligence tools, and big data technologies for financial problem-solving.

CS2016- Programming for Business

The course aims to equip students with the basic computing concepts and to provide them the ability to analyze the given requirements for solving problems in different domains while implementing the solutions on a computer system. It emphasizes on developing an algorithm and applying the basic programming constructs like control structures, arrays, functions, pointers, dynamic memory allocation, etc. The students will learn the syntax of the C++ and Python programming language for the implementation. Furthermore, the course covers the fundamental principles of Exploratory Data Analysis (EDA), fostering an understanding of data-driven problem-solving methodologies. Students are exposed to real-world scenarios in which organizations face issues that can be solved via computational solutions. Students learn how to identify the fundamental challenges in a business problem and transform them into algorithmic solutions via practical activities. This includes understanding the problem's requirements, constraints, and objectives, as well as developing efficient methods to obtain the required results.

CL2016- Programming for Business – Lab

This lab is designed to provide students with hands-on experience in implementing computing concepts and developing algorithmic solutions to real-world problems. Through practical exercises, students will work on analyzing requirements, designing algorithms, and applying basic programming constructs such as control structures, arrays, functions, pointers, and dynamic memory allocation. The lab sessions focus on mastering the syntax and implementation of both C++ and Python programming languages. Students will gain practical exposure to Exploratory Data Analysis (EDA) techniques, fostering a data-driven approach to solving computational problems. Emphasis is placed on transforming business challenges into algorithmic solutions by understanding requirements, constraints, and objectives. Each lab is structured around practical problem-solving tasks, culminating in a final project where students design, implement, and present solutions to complex real-world scenarios. This hands-on approach ensures students develop critical programming, analytical, and problem-solving skills essential for tackling business and computational challenges.

SS2018- Sociology

This course provides a comprehensive understanding of society from various sociological perspectives. Students analyze society through the lenses of prominent sociologists and learn to assess the transition of societies across different stages, preparing them to thrive in multicultural environments. Emphasizing group dynamics, the course equips students with leadership styles to enhance teamwork. It enables them to categorize organizations based on

structure and bureaucratic style. Through an understanding of socialization habits and their underlying causes to facilitate better interactions, students are encouraged to positively impact social institutions and work towards their improvement. The course delves into the impact of social change on individual choices and promotes gender equality in the workforce. The course identifies and approaches solutions for pertinent social issues in Pakistani society and aims to provide students with valuable insights into its complexities.

SS2019- Psychology
This course studies the fundamental concepts of psychology and their applications in both personal and professional spheres. Students gain insights into different types of intelligences and their significance in real-life scenarios. The course explores learning theories and develops an understanding of these theories in shaping marketing strategies and influencing consumer behavior. Emphasizing the impact of motivation on daily life and organizational success, the course aims to enhance emotional intelligence and critical thinking skills in the workplace. Students acquire knowledge about attitudes, their formation, and methods of alteration. They explore the relationship between stress and job performance, along with effective coping strategies. The course focuses on personality development, effective communication, and critical analysis, promoting the cultivation of effective leadership qualities and professional success.

SS2041- Critical Thinking
This course equips students with the skills to pose relevant questions, logically critique arguments, and analyze prevalent issues in the workplace and daily life. This course is structured into six segments. Beginning with an introduction to critical thinking basics, it progresses to examining language pitfalls that impact effective thinking. Subsequent sections address fallacies in thinking, introduce the essential process of argument analysis and evaluation, explore traditional topics in informal logic such as inductive reasoning, and conclude with broader intellectual debates like modernism vs postmodernism and traditionalism. The course also delves into philosophical concepts from thinkers like Michel Foucault and Rene Guenon. This course, in the era of artificial intelligence and widespread misinformation, aims to enhance the ability of students to engage in critical reasoning across various professional and personal situations.

SS2043- Civics and Community Engagement
This course aims to impart community and social service training to undergraduate students. This course will serve as a training to the students to serve the community and offer their services for the betterment of humanity. The objectives of the course include understanding SDG's and the role of youth, it will help student think on a strategic level to develop, implement and execute plans for national and societal benefits, it will further help students work in groups to achieve community oriented societal ideas. The course aims to practically engage students for approximately 32 hours in social and community services; services at different hospitals, charitable organizations, orphanages, old homes etc. Climate change and environmental protection will also be focused upon. Lastly, domain specific adaptation of ideas in providing community service solutions will also be done so as to build a better connection between the degree and community at large.

AF3001- Financial Management
This is an advanced course building upon the foundations of "Business Finance." Students delve deeper into financial decision-making and management within a business context. This course covers capital structure, cost of capital analysis, financial planning, working capital

management, and dividend policy. Advanced investment appraisal, mergers, acquisitions, international financial management, and risk strategies are also covered. Case studies and simulations are used to enhance analytical skills to tackle complex financial challenges. Ethical considerations and corporate governance discussions offer a holistic perspective in gaining a comprehensive understanding of financial strategies, empowering students to contribute significantly to business success in various financial roles.

FL3001- Financial Management – Lab

Financial Management Lab is the extension of the financial management course for further enrichment of students' practical skills and decision-making abilities. It is based on the principle of information, skills, and behavior; the information is passed to them in the shape of lecture/demonstration, skill is developed through experiential learning and the knowledge shapes their behavior accordingly in day-to-day life. Since this lab runs in parallel with the financial management course, however, in the initial weeks, this lab is built upon the knowledge acquired in the "business finance" course because there was no lab associated with business finance (introductory course of finance). This lab provides hands-on experience in applying financial theories in real-world scenarios. It also enables them to deepen their understanding of financial management and prepare for diverse roles in the financial world.

In this lab, students learn a variety of techniques that allow them to solve business problems relating to cost, revenue, profit, risk-return, financial planning, and decision-making while using application processing software so that they are equipped with current technological needs. The overriding goal of the course is to make students better decision-makers in a business or institutional context but the principles and techniques are also applicable to personal financial and economic decisions.

BA3001- Machine Learning for Business Analytics

This course introduces students to data mining and business analytics techniques that will enable them to draw actionable insights from data. Many decisions in professional and private life are taken on the basis of data that come from all sorts of information systems. Machine learning (ML) have become widely used and sought after in data rich business environment. They are indispensable for making business decisions with leveraging big data across all areas of business operations. The unit introduces students to foundations of ML and AI by building solid understanding of underlying concepts, algorithms and techniques. This is supported by hands on experience with current platforms and tools such as TensorFlow and Keras. The students are exposed to real life scenarios of ML and AI applications to implement analytical solutions to generate meaningful business insights. This unit covers supervised and unsupervised ML as well as introduces students to deep learning, and applications in natural language and image processing. Upon completion of the unit, the graduates are able to develop and evaluate business solutions to optimize business operations and offer benefits and cost savings to businesses in achieving competitive advantage.

BL3001- Machine Learning for Business Analytics – Lab

This lab is designed to provide students with practical, hands-on experience in implementing machine learning (ML) techniques for solving real-world business problems. Students will work extensively with Python programming to perform data preprocessing, cleaning, and visualization, laying the groundwork for ML model development. The labs focus on building and implementing essential machine learning algorithms such as linear regression, decision trees, and support vector machines, specifically tailored to business analytics scenarios. Students will engage in end-to-end processes, from loading and cleaning datasets to training, testing, and evaluating machine learning models for actionable insights. By the end of the

course, students will have hands-on expertise in using machine learning algorithms, preparing them for modern challenges in business analytics and decision-making.

MG3001- Legal and Ethical Issues in Business Analytics
This course addresses ethical and legal issues by analyzing the whole data pipeline of data sciences by paying special attention to topics such as informed consent, privacy, confidentiality, Transparency, Algorithmic Biases, diversity, data ownership, digital divides, collective rights, and inclusive governance of research data. In doing so, this course will also look at the legal aspects of these ethical issues, however, this is not a course designed for lawyers, but for data scientists. This course treats Law as described by Paine (1994): Law is "an island floating on a sea of ethics". Broadly, a multiplex approach is employed in this course to make sense of ethical issues. This multiplex approach involves technology, ethics, legality, and society as dimensions to makes sense of ethical challenges. This course is not set in stone, although textbooks and reference books are assigned for this course, but apart from books the course heavily relies on academic articles, case studies, documentaries, and class exercises.

AF3002- Financial Statement Analysis
This course is designed to provide students with an advanced conceptual background and analytical tools necessary to evaluate financial statements issued by publicly held enterprises. It focuses on understanding the uses and limitations of both the financial statements and the traditional and non-traditional methods used in analyzing them. The course discusses financial statements, accounting disclosure rules, differential effects of alternative accounting principles, and interpretation of financial information by using problems and cases for actual companies. Financial statement analysis serves the essential function of converting data into useful information. It demonstrates popular tools and techniques in analyzing and interpreting financial statements with an emphasis on the need for users of financial statements. Emphasis is placed on the interpretation of financial data by means of comparative statements, trend percentages, and the extensive use of various generally accepted techniques.

BA3002- Business Data and Text Mining
This course introduces students to the principles and applications of data and text mining in the context of business analytics. Emphasizing real-world relevance, the course covers fundamental concepts, industry applications, and modern techniques, including Large Language Models (LLMs) and Generative AI. A transformative and practical course, where students will explore the fundamental principles, methodologies, and advanced techniques essential for harnessing the potential of data and text analytics in a business context. From understanding the significance of data mining in business analytics and mastering data quality improvement techniques to hands-on exploration of data visualization, statistical analysis, and building predictive models, this comprehensive program equips learners with the skills to derive actionable insights. Delve into the complexities of unstructured text data, navigate the ethical considerations of generative AI, and culminate in advanced applications such as text mining with Large Language Models. By addressing real-world challenges, including hybrid models and responsible AI use, Students will be at the forefront of emerging trends, ensuring their preparedness for the future landscape of data and text mining in business analytics.

MG3002- Business Law
This course explores the fundamentals of law in a business context. The course content will empower students with the ability to comprehend legal philosophy, the state, government, and the sources of law. It delves into the intricacies of business, banking, and corporate practices, providing a solid understanding of legal provisions and implications. It will help students in

gaining insights into legal provisions affecting businesses, banking, and corporate practices, empowering them to make informed decisions. The practical focus of the course ensures that students can apply their legal knowledge to real-life situations and everyday business practices. It will help students sharpen their skills in drafting and reviewing routine legal documents encountered in the ordinary course of business. By the end of the course, students will not only understand "lawyers' language" but will also possess the practical know-how to navigate legal complexities in the business world.

CS3003- Management Information Systems (MIS)
This course provides a comprehensive introduction to Management Information Systems (MIS); emphasizing their critical role in decision-making within organizations. The course explores information systems and technologies that support various organizational functions, administrative operations, and strategic initiatives in a fast-paced global business environment. It revolves around understanding information technology in organizational systems and investigating its links with strategy, organizational structure, management, business processes, and individual roles. The course covers key MIS components- transaction processing, management reporting, decision support, executive information systems, and expert systems- and addresses security issues and end-user computing. The curriculum provides a balanced perspective, catering to both business and management scholars, and offering insights into technical approaches and managerial considerations.

CL3003- Management Information Systems Lab
This course focuses on practical applications of essential software for various business domains. Students gain a proficient working knowledge of Microsoft Project, Microsoft Office Suite, and BIZAGI Modeler. The course explores emerging concepts and techniques employed by reputable organizations to enhance business profitability. It further delves into the realm of "Business Intelligence," acquiring skills in incorporating intelligence tools for effective decision-making. Database creation utilizing state-of-the-art techniques is a key focus. This course simulates business processes, fostering continuous improvement and resilience in addressing challenges associated with information technology in the business world.

MG3003- Basic Econometrics
This course is designed to equip students with essential quantitative tools, enabling them to analyze and interpret business-related data effectively. The course content will enable students to develop proficiency in estimating relationships between variables in business, finance, and economic theories, while also mastering the art of forecasting future values. The course emphasizes practical applications of econometric methods in business, finance, and economic scenarios using relevant software. Students will cultivate proficiency in software-based analytics and theory testing, gaining hands-on experience in the application of econometric techniques to real-world situations. Furthermore, the course aims to enhance critical analysis skills by guiding students in reproducing and interpreting results from reference books and journal papers. By familiarizing students with data sources, organization, and online/offline estimation of econometric models, the course will promote competence in data management and reporting. Upon completion, students will emerge with a strong analytical foundation, ready to apply quantitative methods to solve complex business challenges.

LG3003- Econometrics Lab
This course is designed to enhance students' practical proficiency in data collection and problem-solving through an in-depth exploration of key topics, including econometric analysis, linear regression models, time series analysis, estimation, and forecasting. The curriculum

equips students with a comprehensive understanding of various data types employed in econometric analysis, encompassing cross-sectional, time-series, and panel data. Practical application is emphasized through the utilization of software tools such as EViews, SPSS, and MS Excel to analyze case-based studies. Students gain hands-on experience in data collection, cleaning, and conducting econometric analysis, leveraging these software tools to enhance their analytical capabilities.

AF3004- Accounting for Decision Making
This course explores how financial and management accounting information can be used within a business to improve the quality of managers' decisions. It provides essential accounting information for users to make informed judgments and decisions. The course focuses on identifying relevant costing and pricing information to ensure effective decisions in key areas such as accepting special contracts and utilizing scarce resources. The issues of transfer pricing in divisions and variance analysis in budgeting are also addressed as part of performance evaluation and future planning. Organizational innovation in business environments and methods, such as total quality management and lean accounting, is also covered in this course.

BA3004- Database Systems for Business
This course introduces students to the fundamental principles of database management systems (DBMS) with a strong focus on their role in business analytics. Students will learn essential database concepts including data modeling, relational database design, database normalization, transaction management, and structured query language SQL. The course will emphasize Data Transformation extraction, and Loading (ETL), data warehousing, and big data processing, enabling students to manage and analyze large-scale business data effectively. Students will explore OLTP and OLAP systems, with a focus on star and snowflake schema design for analytical processing. Indexing techniques such as primary and secondary indexes will be covered to enhance query performance. Additionally, students will be introduced to NoSQL databases, understanding their applications in handling unstructured and semi-structured data.

BL3004- Database Systems for Business – Lab
This lab provides hands-on experience in database management systems (DBMS) for business analytics. Students will design and implement relational databases, create ER diagrams, and write SQL queries for data manipulation, indexing, and optimization. Labs cover normalization, advanced SQL (joins, subqueries), indexing, query optimization, and transaction management for efficient database performance. Students will explore star and snowflake schemas, ETL processes, data warehousing, big data technologies, and NoSQL databases for handling structured and unstructured data. The lab also introduces data governance and visualization for business intelligence. In the final weeks, students will apply their skills to real-world business scenarios, working on market analysis, customer segmentation, and operational reporting using BI tools and performance-tuning techniques.

MG3004- Human Resource Management
This course offers a practical understanding of Human Resource Management (HRM) basics and provides a brief overview of Strategic HRM. Students learn about job analysis, crafting job descriptions, and recruitment and selection processes. The course also covers performance management and appraisal in various organizational settings. It explains essential concepts like basic pay, salary structures, and benefits, detailing the application of these in everyday work settings. Students also explore simple training strategies and methods, along with the basics of training needs analysis. Communication channels and involvement methods for employees in

organizations are discussed. Building on the above, broader topics, such as talent management, organizational development and change, HR analytics, HR information systems, HR systems, ethical dilemmas faced by HR managers, and the impact of HR practices on overall organizational performance are briefly discussed. The course equips students with practical knowledge to navigate HRM challenges in real-world scenarios.

MG3006- Operations Management

This course aims to provide management and analytical concepts/tools for the management of operations and the decision-making process within the scope of the supply chain in the competitive business environment. It covers strategies involved in improving operational efficiency through cost reductions or increasing capital efficiency. This course enhances students' ability to perform the quantitative analysis necessary and understand the management issues required to make sound operational decisions within the supply chain, a routine task in organizations. Coverage of this course is topical and includes supply chain issues and strategy, operations management framework, quality management, demand and supply planning, inventory deployment/control, and optimization of transportation networks.

AF3008- Business Research & Data Mining

This course explores research methodologies and data mining techniques for extracting actionable insights from large datasets to support business decision-making in the fintech industry. This course focuses on how to design, conduct, analyze, report, and conclude from empirical research, and on training students in advanced analytical techniques commonly employed in making effective managerial decisions. This course aims to develop an understanding of the purpose of research, research design, research methods, and data analysis. The course covers various research methods, including qualitative and quantitative methods. The course will also cover data analysis techniques suitable for different research designs. Students will learn about the research process, literature review, hypothesis testing, and experimental design. Topics may include data preprocessing, exploratory data analysis, classification, clustering, association analysis, and predictive modelling. Through hands-on projects and case studies, students will develop skills in collecting, analyzing, and interpreting data to solve practical problems and drive innovation in financial technology applications.

FL3008- Business Research & Data Mining – Lab

The Business Research and Data Mining Lab is designed to complement theoretical knowledge gained in business research and data mining concepts by providing students with the opportunity to apply these concepts to real-world, especially related to financial data sets. The lab guides students through the entire research process from defining research questions and objectives to collecting and analyzing data and finally presenting research findings. The lab begins with a basic introduction of journal databases and finding literature. It covers the key concepts of data mining, i.e. data preprocessing, data warehousing, detection of outliers in financial data sets, handling of spatial data and textual data using NLP models. A particular emphasis is placed on the application of machine learning concepts such as clustering, association rule mining, and predictive analytics, with a focus on financial data applications. Through hands-on exercises, case studies, and real-world datasets, students will develop skills to extract valuable insights, detect patterns, and enhance business strategies in the FinTech domain services.

AF3009- Banking and Financial Systems

This course provides an introduction to the structure and functions of banking and financial systems, highlighting their role in both local and global economies. It explores various financial institutions, the operations of central banks, financial markets, and regulatory frameworks that govern the industry. Emphasis is placed on understanding monetary policy, financial intermediation, and the evolving nature of banking due to technological advancements. Students will examine the impact of digital banking, fintech innovations, and regulatory changes on traditional banking systems. By the end of the course, students will be able to describe the structure and functions of banking and financial institutions, understand the role of central banks and monetary policy in economic stability, analyze different types of financial markets and their functions, and evaluate the influence of digital banking and technological innovation on traditional banking systems.

AF3010-Banking Instruments & Procedures
This course explores the operational aspects of banking, focusing on the instruments commonly used in financial transactions and the procedures for handling them. It covers various payment systems, credit instruments, risk mitigation strategies, and compliance standards within the banking sector. Emphasis is placed on developing a hands-on understanding of banking products, services, and the evolving regulatory landscape. Students will examine the role of technology in modern banking procedures and its impact on financial instruments. By the end of the course, students will be able to identify and understand the purpose of various banking instruments, describe the procedural standards for issuing, managing, and settling financial instruments, analyze risk management methods within banking procedures, apply regulatory and compliance frameworks to banking transactions, and assess the role and impact of technology on banking procedures and instruments.

MG3010-Methods in Business Research
This course aims to foster an understanding of the role of research in management sciences and provides structured training for conducting inquiries related to management challenges and planning. Content delivery includes interactive lectures, reading and discussing articles and reports, class exercises, and labs. The course covers principles and methods of business research, guiding students in identifying research topics, refining research questions and objectives, conducting literature reviews, and writing research proposals. It also hones students' skills in using search engines to identify quality research articles, along with employing various style manuals for referencing. The quantitative methods part covers developing hypotheses, designing questionnaires, sampling, using descriptive statistics, and employing tests like Mann Whitney U, t-test, ANOVA, correlations, and regression techniques. The qualitative methods part includes designing interview guides, focus group discussions, and basic qualitative data analysis techniques. The course also touches on use of secondary data from a variety of sources.

LG3010-Methods in Business Research – Lab
The course aims to develop advanced critical, analytical, and statistical abilities. This course lab is designed to prepare the students to tackle the complex challenges of different organizations in the area of research and development. The lab begins with a basic introduction of journal databases, finding literature, questionnaire/scale, and then qualitative/quantitative analysis and ends with report writing. This lab develops an understanding of research in management sciences and equips students with different tools to find relevant literature suiting organizations' needs, design questionnaire to address organizations' information needs, conduct basic data analyses, and present the findings of the report using charts and tables. A diverse package of different software which includes, Endnote/Mendeley, MS Excel, SPSS, NVIVO, and eviews is used accordingly. The course draws upon knowledge and understanding

gained across a range of modules from the undergraduate degree such as courses in statistics and basic research methods. Multiple projects provide practical experience in writing briefs, proposals, and reports using real data.

CS3010-Web Programming
This course introduces students to web development technologies and techniques for building interactive and dynamic websites and applications. Students will learn front-end technologies such as HTML, CSS, bootstrap, html 5 and JavaScript and database management systems like SQL, MySQL. The course will include web layout, CSS (styling) and navigation (transition animations), JavaScript and native functions. Through project-based learning, students will develop skills in designing user-friendly interfaces, implementing server-side logic, and integrating databases to create and scalable web applications tailored to the needs of financial technology companies. The course integrates software and web skills with cross-platform open-source tools that allow developers to write and websites for multiple platforms. The course assumes prior knowledge of programming. It involves teaching highly employable skill especially for those who are looking to move to the fields of digital marketing and web development.

CL3010-Web Programming – Lab
This lab provides practical, hands-on training in modern web development, focusing on building responsive and interactive web applications. Students will start by setting up a development environment and creating basic web pages using HTML and CSS, progressing to advanced styling techniques. Dynamic interactivity is introduced through JavaScript, covering DOM manipulation, event handling, debugging, and asynchronous operations. Students will also work with front-end frameworks to develop component-based applications. The labs emphasize server-side development where students will create APIs and integrate databases like SQL and MySQL for efficient data management. API integration will further enhance their projects with real-time data fetching. In the final weeks, students will collaborate on a full-stack web project, combining front-end and back-end technologies. By the end of the course, students will have the skills to design, implement, and present comprehensive web applications.

MG3012-Blockchain Technology for Business
This course helps students unlock the vast potential of blockchain technology for businesses and financial institutions. It delves into the underlying mechanics of blockchain networks, including consensus algorithms, distributed ledgers, and smart contracts. It involves case studies and simulations so that the students can be understand the concepts of decentralized finance (DeFi), tokenization, governance models, and regulatory considerations in deploying blockchain-based solutions. With a solid understanding of the mechanics of the cryptocurrency blockchain protocol, students will discover the problems blockchain technologies aim to solve and determine how they can support the business goals. The student will do this by learning about smart contracts and the most important use cases. Students will analyze how smart contracts work, how they're used today, and how to reason about their capabilities, and what ongoing technical challenges they pose. The students will be able to come up with their own applications and can fully understand the challenges that might arise.

MG3014-Advanced Business Communication
The Advanced Business Communication course is designed to elevate students' proficiency in professional communication, keeping in perspective the diverse business environment. Building on foundational skills, the course emphasizes on advanced writing techniques for businesses, be it online or offline and polish oral communication strategies. Students will

develop expertise in negotiation, persuasion, and effective interpersonal and intercultural communication. The integration of technology in communication and an exploration of ethical considerations further enhance students' ability to direct complex professional scenarios. Through practical applications and real-world case studies, this course aims to prepare students with the advanced communication skills essential for leadership roles and effective collaboration in the modern business landscape.

CS3017-Enterprise Systems and Applications

This course revolves around the design, implementation, and management of enterprise information systems (EIS) to support organizational processes and decision-making especially in banking and other financial institutions. Major topics include introduction to Enterprise Resource Planning (ERP), ERP Implementation life cycle methodologies and strategy, ERP Security, workflows, data integration, applications migration and data migration, concepts and tools of designing and implementing an ERP system and emerging trends in ERP. The students will learn about enterprise resource planning (ERP) systems, customer relationship management (CRM) software, and business intelligence tools. Alongside the discussion on system integration, data warehousing, data analytics, and cloud-based EIS solutions this course offers hands-on experience in configuring and customizing EIS platforms to meet the evolving needs of businesses in the fintech industry. The students will be able to understand the factors that can influence a business selection of their Information system alongside how databases are used in business.

MG3037-Business Law for Fintech

This course explores the fundamentals of law in a business context, empowering students with the ability to comprehend legal philosophy, the state, government, and sources of law. It delves into the regulatory frameworks governing financial markets, compliance requirements, and legal implications specific to fintech. Students will gain insights into the legal and ethical obligations of financial institutions, focusing on risk management, regulatory enforcement, and compliance best practices. The course covers regulatory institutions, compliance protocols, anti-money laundering (AML) measures, and the impact of international standards on domestic markets. It also emphasizes the evolving legal landscape shaping financial technology and digital finance. By the end of the course, students will be able to analyze the structure and function of regulatory bodies, evaluate the impact of regulatory policies on financial institutions, implement compliance procedures, apply ethical standards to manage risks, and understand the implications of international regulatory standards and treaties.

BA4001-Decision Science for Business

Decision-making is a fundamental managerial task that involves making choices between alternatives to reach a goal or objective. Good decision making involve examining the process of decision-making systematically and systemically in business. This course introduces students to decision making environments and different approaches to rational decision making with examples from business, economics and management. It covers different topics related to decision theory, probability theory, queuing theory, learning curve, simulation modeling, transportation modeling, utility theory and game theory, etc. Along with the understanding of the theories, the course covers guiding the students to learn the application of various quantitative techniques like regression analysis, time series models, (moving & weighted moving averages, exponential smoothing, trend projection) probability approaches, measuring expected monetary values, etc. The course also covers to learn the use of decision support system (DSS) software tools to apply the same techniques electronically for decision making. Decision making techniques and models for sales forecasting, market analyses, inventory

management, location decisions, factory layout designs, production efficiency and scheduling, distribution of products, prioritizing the projects and tasks, etc. are also the part of this course.

BA4002-Predictive Analytics
This course provides a comprehensive introduction to predictive analytics, equipping students with the knowledge and skills to analyze historical data and generate data-driven forecasts. It covers fundamental principles, methodologies, and best practices essential for building accurate and reliable predictive models in a business context. Students will gain hands-on experience to implement key predictive techniques, including regression analysis, decision trees, time series forecasting, and ensemble methods. The course emphasizes the complete predictive analytics workflow—from data preprocessing and feature engineering to model development, evaluation, and interpretation. Through real-world case studies, students will explore applications in customer segmentation, risk assessment, sales forecasting, and fraud detection. Beyond technical skills, the course highlights the strategic value of predictive analytics in optimizing business operations, enhancing decision-making, and driving competitive advantage. Ethical considerations, model transparency, and industry best practices are also emphasized to ensure responsible and effective application of predictive analytics in business environments.

MG4003-Strategic Management
This is a capstone, integrative course offering intuitive knowledge for students to chart the future (strategic) direction of organizations. By developing a good understanding of vision and mission statements, students learn how to develop long-term objectives. This course covers the entire spectrum of both internal and external factors influencing strategy formulation, implementation, and evaluation. This is done through contingency planning, including Porter's Five Forces model, and Resource-Based View, and by focusing on developing and maintaining core competencies of an organization to eventually achieve a competitive advantage. The overall goal of the course is to integrate all relevant factors to achieve an "organization-environment fit". This contrasts with other courses, which are generally concerned with a narrower, more specialized body of knowledge.

AF4005-Audit and Assurance
This course covers a comprehensive understanding of the auditing process and its significance in ensuring the accuracy and reliability of financial information. It delves into different types of audits and engagements, encompassing external and internal audits. It develops an appreciation for audit independence and professional skepticism principles. The course covers auditing principles, corporate governance practices, and the requirements of the Companies Act 2017. Through theoretical concepts and practical case studies, a deeper understanding of auditing processes, internal audit requirements, risk assessment, and documentation is developed. Moreover, it covers financial statement assertions, assertions for classes of transactions, and crucial topics like going concern, purchase systems, sales systems, and the overall review of financial statement contents. The cover also covers the auditor's report and its significance in financial reporting.

AF4006-Investment Analysis and Management
This course aims to familiarize participants with both the theoretical frameworks and empirical evidence associated with investment management. Beyond theory, the course delves into the practical aspects, offering an in-depth understanding of the challenges investors face when deciding where to allocate investable funds. Students will be introduced to a diverse set of tools and strategies designed to address the complexities inherent in investment decisions. The

course takes a hands-on approach, providing opportunities for students to apply these tools and strategies to real-life investment problems. This course also provides an opportunity to engage with the contemporary literature in theoretical, empirical, and applied finance, providing insights into investment analysis. Students will explore the nature of financial decision-making by various investment entities such as mutual funds, hedge funds, private equity managers, and style investors. By the end of the course, students will be well-versed in portfolio management techniques, advanced investment strategies, and the applied aspects of portfolio theory, asset pricing, international diversification, and return predictability.

AF4007-Financial Risk Management

This is an advanced course designed to equip students with the knowledge and skills necessary to identify, measure, and mitigate financial risks within organizations. Building upon the foundations laid in "Business Finance" and "Financial Management," this course delves into topics such as market risk, credit risk, liquidity risk, and operational risk. Through case studies, simulations, and practical exercises, various risk assessment techniques and strategies to manage and mitigate risks effectively are taught. The course also explores regulatory frameworks and risk management best practices. This course prepares prospective finance managers to navigate the complex landscape of financial risks and implement robust risk management practices to protect organizational value.

AF4008-Taxation

This course provides a comprehensive overview of the fundamental concepts, regulations, and practices of taxation in Pakistan. It covers various aspects of taxation, including income tax and sales tax; and explores the taxation of different entities such as individuals, companies, and associations of persons (AOPs). The course introduces the basic concepts emphasizing the function, purpose, and importance of taxation. It also discusses the cannons of taxation and the distinction between direct and indirect taxation. Students learn about different types of taxation regimes in Pakistan and the sources of revenue law and practice. Additionally, they gain an understanding of the difference between tax avoidance and tax evasion. Further, the course covers the Income Tax Rules 2002 and their relationship with the Income Tax Ordinance 1979. Students become familiar with basic terminologies such as residents and non-residents, which play a crucial role in taxation.

AF4011-Investment & Portfolio Analytics

This course focuses on quantitative methods and analytical tools for evaluating investment opportunities and managing investment portfolios. Students will learn portfolio theory, asset pricing models, risk-return trade-offs, and performance evaluation metrics. Topics may include modern portfolio theory (MPT), capital asset pricing model (CAPM), arbitrage pricing theory (APT), and factor investing strategies. Through hands-on projects and case studies, students will apply mathematical models and statistical techniques to optimize portfolio allocations, assess investment risk, and develop effective investment strategies aligned with financial goals and constraints. This course bridges the gap between data analytics and investment decisions. The students will develop a solid foundation in predictive analytics and its applications in investment decision-making, using techniques from data mining in investments, statistics, modelling, machine learning, and artificial intelligence to analyse current data and make sound investment predictions. It involves applying concepts like data analysis along with investment science to solve real-world problems in finance.

MG4011-Entrepreneurship

This course is a dynamic exploration of business creation and innovation, covering foundational principles, theories, and trends shaping the entrepreneurial landscape. In this course, students learn to identify market opportunities, conduct thorough analyses, and develop a strategic entrepreneurial mindset. The curriculum emphasizes mastering business planning tools, including crafting detailed business plans, creating business model canvases, and lean canvases for idea validation, and business modeling crucial for pitch decks. Financial management, legal aspects, customer acquisition, branding, and sales techniques are integral components of the course. It fosters creativity, innovation, and building productive business relationships. It also addresses risk assessment, management, and exit strategies, cultivating a mindset to view failure as a growth opportunity. Students culminate the course with a robust, investor-ready business plan, positioning them for success in entrepreneurship or innovation within established organizations. This comprehensive training ignites entrepreneurial spirit, preparing students for the challenges of today's dynamic business landscape.

AF4012-Financial Risk Analytics & Derivatives

This course focuses on quantitative methods for measuring and managing financial risk, with a particular emphasis on derivatives and structured products. This course provides a practical introduction to financial risk analytics with a focus on data-driven modeling, computation, and statistical estimation of credit and market risks. Real data case studies will be used throughout the course. Tools from machine learning and statistics will also be developed. The students will be able to design and implement risk analytics tools in practice. Students will learn about the principles of risk management, value-at-risk (VaR) modeling, stress testing, and scenario analysis. Topics may include options, futures, forwards, swaps, and other derivative instruments, as well as their pricing models and applications in hedging and speculation. Through case studies and simulations, students will analyse the role of derivatives in managing market risk, credit risk, and liquidity risk in the context of financial institutions and fintech startups.

AF4013-Artificial Intelligence in Business Decision

This course explores the applications of artificial intelligence (AI) and machine learning (ML) techniques in business decision-making processes within the fintech industry. It involves understanding AI technology alongside AI processes especially with reference to their applications in businesses. Students will learn about supervised and unsupervised learning algorithms, neural networks, natural language processing (NLP), and reinforcement learning. Thus, the students will understand the process of moving from data to knowledge. Topics may include data sources, knowledge acquisition, knowledge representation, types of machine learning algorithms, decision-making processes, value creation, AI: vision and reality, machine learning, mathematics for AI, Strategic Management, Research Methods, and Professional Practice predictive analytics, customer segmentation, fraud detection, algorithmic trading, and personalized recommendation systems. Through hands-on projects and real-world case studies, students will develop skills in leveraging AI technologies to automate tasks, optimize processes, and gain competitive advantages in the rapidly evolving landscape of financial technology.

MG4013-Business Strategy

This course covers core concepts of strategy analysis and formulation in the context of a dynamic and rapidly changing business environment. By developing a good understanding of vision and mission statements, students learn how to develop, analyze, and implement business strategies considering the long-term objectives of an organization. This also covers and explores the contemporary topics in strategy including SWOT (and also the TOWS matrix),

decision-making challenges, disruptive innovation, sustainability, and ethics including corporate social responsibility. This is done through contingency planning, including Porter's Five Forces model, Resource Based View, and by focusing on developing and maintaining core competencies of an organization to eventually achieve competitive advantage. This course fosters critical thinking and cultivates a strategic mindset, enabling students to make informed decisions and drive success in the business world.