Princess Sumaya University for Technology
جامعة الأميرة سميّة للتكنولوجيا

PROGRAM PROFILE

M.S.c Financial Technology and Accounting Analytics Program

2024 / 2025

PROGRAM PROFILE

PROGRAM AIMS AND OBJECTIVES

PROGRAM LEARNING OUTCOMES

CURRICULUM

COURSE DESCRIPTION

King Talal School of Business Technology
كلية الملك طلال لتكنولوجيا الأعمال

Master of Financial Technology and Accounting Analytics

Master's in Financial Technology and Accounting Analytics is an interdisciplinary program designed to equip professionals with the skills to revolutionize financial services through technology. This degree merges finance, accounting, data analytics, and emerging technologies to prepare graduates for leadership roles in the rapidly evolving FinTech sector.

The program addresses the growing demand for professionals who can bridge the gap between traditional financial practices and modern technological advancements. Through a blend of theoretical knowledge and practical applications, students gain proficiency in:

- **Financial Technology**: Blockchain, cryptocurrencies, big data, and machine learning in financial services.
- **Accounting Analytics:** Data-driven financial reporting, fraud detection, forensic accounting, and risk management.
- **Advanced Tools:** Hands-on training with Excel, Python, Power BI, and Tableau for data visualization and analysis.

AACSB ACCREDITED

PROGRAM AIMS

The program aims to provide students with a combination of core knowledge in accounting and finance and skills in applying data analytics and technology to related practices—it facilities practitioners in accounting and finance to keep up with the latest data analytics applications and abilities.

PROGRAM OBJECTIVES

- Provide students with integrated knowledge in accounting, finance, and financial technology.
- Apply data analytics tools to enhance financial analysis, forecasting, and decision-making.
- Strengthen students' ability to interpret and communicate financial data effectively.
- Foster ethical awareness and innovation in technology-driven financial practices.
- Align learning with industry demands and evolving financial technologies.

For More Info

www.PSUT.edu.jo/KTSBT/Fintech

PROGRAM PROFILE

PROGRAM FEATURES

- **Industry-Aligned Curriculum:** Covers FinTech innovations, capital markets, investment analysis, and managerial accounting.
- • **Data Mastery:** Hands-on training in financial data analytics, predictive modeling, and visualization tools like Python, R, and Power BI.
- **Industry Alignment:** Developed with input from leading banks, FinTech startups, and accounting firms to address real-world challenges.
- **Dual Tracks:**
  - **Thesis Track:** Focused on original research and a 9-credit thesis.
  - **Comprehensive Exam Track**: Includes a capstone project and elective courses for industry readiness.
- P**rofessional Certifications:** Integrated preparation for certifications like CFA, CPA (data analytics), and FinTech professional credentials.
- **Capstone Project:** Solve live FinTech challenges through a supervised industry project with partner organizations.

PROGRAM LEARNING OUTCOMES

Program Learning Outcomes (LOs)	
PLO1	Understand the role and use of data analytics and financial technology in optimizing financial information
PLO2	Interpret the results of analytical procedures to bolster the leadership skills through decision-making.
PLO3	Utilize accounting information and analyze business problems to propose further recommendations.
PLO4	Discuss ethical issues in the accounting and financial technology domains.
PLO5	Articulate written skills associated with accounting and financial technology
PLO6	Demonstrate effective oral presentation skills that are related to financial technology and accounting analytics.

Curriculum - Thesis Track

Master's Degree in Financial Technology and Accounting Analytics

2024/2025

Course Title	Credit Hours	Prerequisite
Program Requirements (33 CHS)		
1. Compulsory Requirements (18 CHs)		
Business Data Engineering	3	
Data Analytics in Accounting and Finance	3	34761
Introduction to Financial Technology	3	
Financial Reporting, Forecasting, and Analysis	3	
Advanced Financial Technology	3	34761
Research Methodology	3	

2. Elective Requirements (6 CHs)		
Advanced Auditing, Fraud & Forensic Accounting	3	
Capital Markets & Financial Management	3	
Advanced Accounting Information Systems	3	
Investment and portfolio analysis	3	34761
Advanced Managerial Accounting	3	
Special Topics in Accounting Analytics and FinTech	3	34771
Advanced Statistical Analysis	3	
Foundation of Business Analytics	3	
Data Mining for Business Applications	3	36710
Entrepreneurship & Innovation	3	
Thesis Requirements (9 CHs)		
Thesis	9	-

Curriculum - Comprehensive Exam Track

Master's Degree in Financial Technology and Accounting Analytics

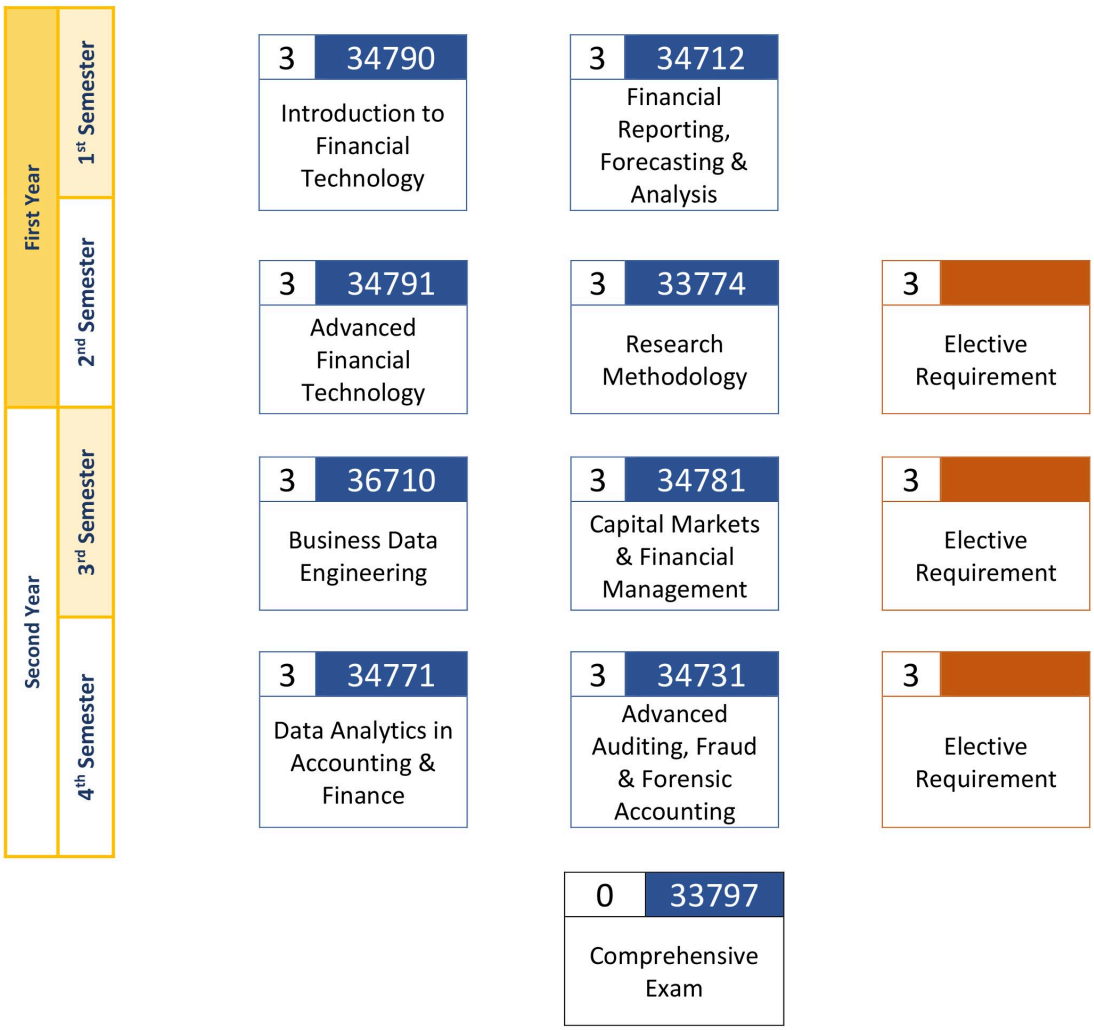
2024/2025

Course Title	Credit Hours	Prerequisite
Program Requirements (33 CHS)		
1. Compulsory Requirements (24 CHs)		
Business Data Engineering	3	
Data Analytics in Accounting and Finance	3	34761
Introduction to Financial Technology	3	
Financial Reporting, Forecasting, and Analysis	3	
Advanced Auditing, Fraud & Forensic Accounting		
Capital Markets & Financial Management	3	
Advanced Financial Technology	3	34761
Research Methodology	3	
Comprehensive Exam	0	

STUDY PLAN

2. Elective Requirements (9 CHs)		
Advanced Accounting Information Systems	3	
Investment and portfolio analysis	3	34761
Advanced Managerial Accounting	3	
Special Topics in Accounting Analytics and FinTech	3	34771
Advanced Statistical Analysis	3	
Foundation of Business Analytics	3	
Data Mining for Business Applications	3	36710
Entrepreneurship & Innovation	3	

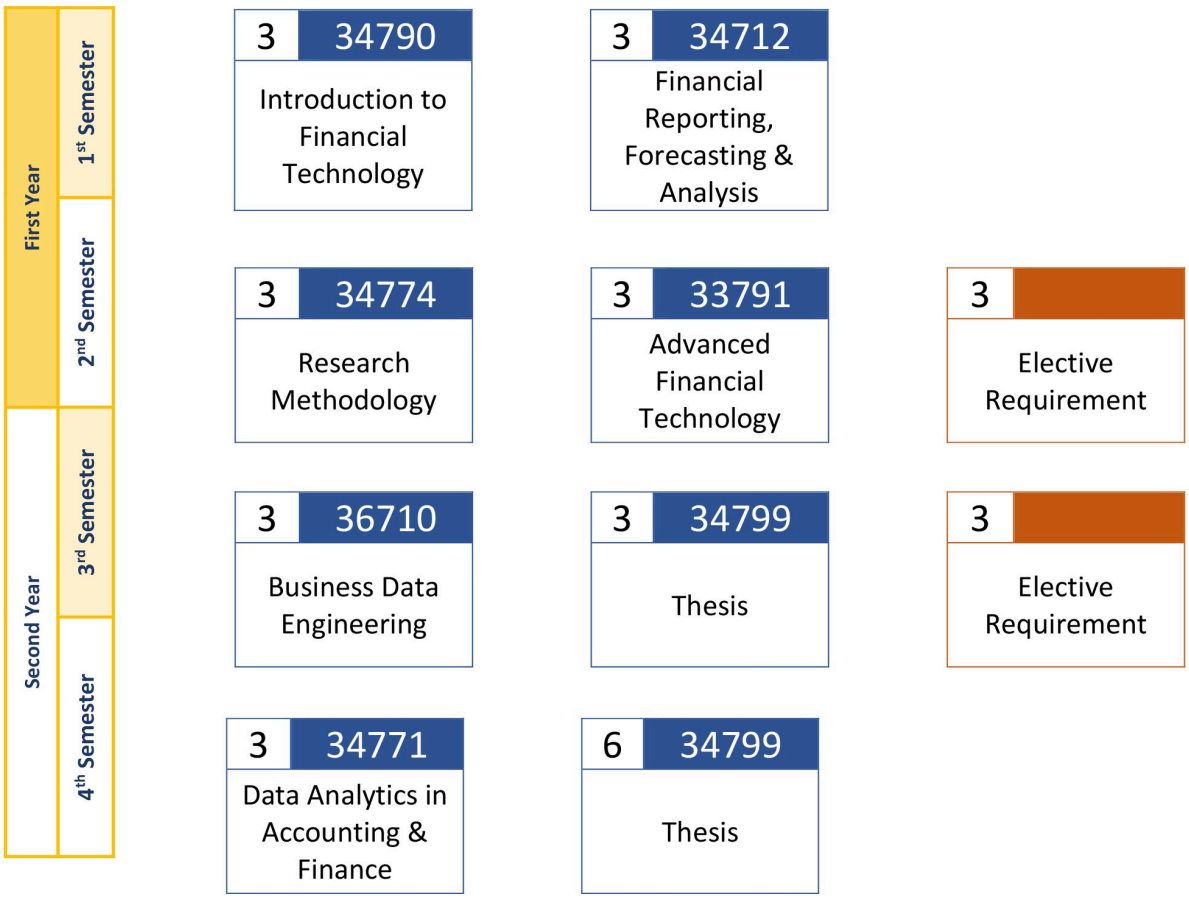
Course Description - Comprehensive Exam Track
Master's Degree in Financial Technology and Accounting Analytics
2024/2025



Key – Colors and Shapes

GUIDANCE PLAN

Course Description - Thesis Track
Master's Degree in Financial Technology and Accounting Analytics
2024/2025



Key – Colors and Shapes

GUIDANCE PLAN

34771	**Data Analytics in Accounting and Finance**	**3**

This course develops skills and knowledge of students in data analytics tools and techniques in the context of accounting and finance. This course should help students in acquiring analytics skills by introducing them to an analytic mindset, data preparation, visualization, analysis, and data interpretation and the ability to apply these skills to issues relevant to accounting using Excel, Python, Microsoft Power BI and Tableau software.

34741	**Advanced Accounting Information Systems**	**3**

This course aims to study the advanced accounting information systems (knowledge and practice) with emphasis on reporting objectives, management needs, transaction trails, documentation, security, internal controls, and the integration of accounting systems in the evaluation and selection of software. Additionally, systems analysis techniques are discussed using the systems development life cycle model. In this course students will gain an advanced understanding and appreciation of the accounting information system and how it is used to successfully manage, audit and develop processes to support today’s evolving business environment.

34751	**Introduction to Financial Technology**	**3**

This course introduces the major topics of financial technology including; Blockchain, Cryptocurrencies, Big Data, Machine Learning, etc. Students are expected to develop an understanding of the recent FinTech development and its impact in the financial industries.

34752	**Advanced Financial Technology**	**3**

This course provides an advanced coverage of the main issues regarding financial technology. Main topics include: Big data, Blockchain, financial applications, cyber security. This course will also focus on research in the field of FinTech by using discussion panels and other techniques.

34711	Financial Reporting, Forecasting & Analysis	3

This course introduces students on how to prepare, interpret, analyze and evaluate financial statements for economic and profitability analyses, lending and investment decisions and other decisions that rely on such data. Ultimately, students who complete this course develop a more efficient and effective approach to preparing, researching, interpreting, and analyzing digital financial statements through understanding of Pro Forma financial statements.

34731	Advanced Auditing, Fraud & Forensic Accounting	3

This course provides an advanced coverage of the main issues regarding external auditing and forensic accounting. Main topics include audit reports, audit objectives, audit evidence, planning an audit, risk assessment in auditing, the external auditor's responsibilities towards fraud detection, audit tests and procedures, financial statement fraud, occupational fraud, fraud risk factors, and fraud symptoms.

34761	Capital Markets & Financial Management	3

This course explains the role of money in the economy and the main core principles of money and the financial system. It also describes how capital markets operate and thoroughly examines the features and characteristics of the wide array of securities traded in the market and the different types of markets including the money, capital, Eurodollar bonds foreign bond stock, derivative markets and the globalization of these markets. The topics of equities, fixed income securities and derivatives are focused on throughout the course. Students will apply some information by using computer in the lab.

34721	Advanced Managerial Accounting	3

The course serves as a tool to management's internal use of accounting information, for decision making, production management, product costing, motivating and evaluating performance, budgeting, and using accounting information for making capital budgeting decisions. The key goal for this course is to improve the students' knowledge of how managerial accounting helps managers to operate efficiently and effectively.

34772	Special Topics in Accounting Analytics and FinTech	3

This course covers various contemporary issues in accounting Analytics and Financial Technology that are not included in any other subject courses.

34762	Investment and Portfolio Analysis	3

This course provides a comprehensive overview of the investment environment and the efficiency of capital markets. In particular, it addresses a wide array of issues delineating the investment decision process, whilst integrating various analytical techniques designed to quantify optimal portfolio asset allocation and evaluate the effectiveness of diversification opportunities and uncertainty mitigation strategies, using different financial modeling tools such as hedging, CAPM, arbitrage pricing theory (APT), and multifactor models; thereby drawing a clear distinction between risk and uncertainty. The underlying curriculum closely examines debt securities and credit risk exposure, building on a theoretical framework that covers short selling, bond valuation, and the term structure of interest rates. Moreover, this course epitomizes the daily challenges faced by investors, traders, speculators, and brokers as they contend with the increasing complexity of financial markets, with a methodical emphasis on practical and ethical considerations.

36710	Business Data Engineering	3

The course starts by examining the modern data ecosystem and how it relates to running a smart and efficient data hub. Then, it shows the student how to perform the principal tasks involved in managing extracting, transforming, and loading (ETL) data. This course will explain the data life cycle in a Data science project. In addition, it will cover types of data, such as structured, semi-structured, and unstructured, and the different formats of data and techniques used in the ETL process. The course also covers the elementary visualization aspects needed to understand the data. It also takes the student through staging, profiling, cleansing, and migrating data.

36720	Data Mining for Business Applications	3

Data mining is a rapidly growing field that is concerned with developing techniques to assist users to make intelligent use of their data repositories. A number of successful applications have been reported in areas such as credit rating, fraud detection, database marketing, customer relationship management, and stock market investments. The field of data mining has evolved from the disciplines of statistics and artificial intelligence. In this course, knowledge of the challenges and techniques in the field of Data Mining will be investigated.

36701	Foundation of Business Analytics	3

This is an introductory course to Business Analytics (BA). It explains the levels of BA with a focus on descriptive, predictive, and prescriptive analytics. Main concepts such as Business Intelligence (BI), data mining and data warehousing are discussed during the course. In addition, the course introduces some key terms in the field such as: dimensional data models, data warehouse architecture and infrastructure, techniques for data integration, online analytical processing (OLAP), data visualization, analytical reporting, and managerial issues of data warehouse implementation. In addition, the course introduces the concept of big data and how it can be used to support business decisions.

36711	Advanced Statistical Analysis	Credit Hours: 3

This course explores statistical modeling and analysis techniques for aiding managerial decision making. Topics include: introduction to descriptive statistics, sampling methods and sampling distribution, confidence interval estimation, one sample hypothesis tests, one-way and two-way analysis of variance, simple and multiple linear and nonlinear regressions, and time series forecasting. Selected software packages are used to apply the theoretical part into practical business cases.

33750	Entrepreneurship & Innovation	3

This course aims on the behavior and attributes of entrepreneurs who operate in a competitive environment. It elaborates on the role of entrepreneurs in a competitive market and the role of government in the creation of a business environment conducive to entrepreneurship. The course also highlights the relevance of attitudes, values and beliefs to entrepreneurial activity; the management of risks; the process of new product development; and the reasons for the high failure rate of new businesses. The course aims to develop skills and an understanding of the risks and rewards of entrepreneurial activities.

33774	Research Methodology	Credit Hours: 3

This course aims to equip the students with the skills to conduct scientific research by introducing them to scientific research methods and providing the basic skills to write scientific research. This includes defining the problem of study and its variables, the research significance , and objectives, the research model and its variables based on the literature review, how to determine the population and sample of the study, data collection and hypotheses writing and testing methods in addition to their analysis and interpretation using statistical methods, writing the conclusions and recommendations and linking them to the literature review, and introducing the students to various documentation methods.