



PHOENICIA UNIVERSITY

Innovation . Inspiration . Integrity

College of Business

Suggested MBA Degree Plan

Data Science and Artificial Intelligence

2023-2024

www.pu.edu.lb

Suggested MBA Degree Plan

Data Science and Artificial Intelligence

Program Description

The MBA program (DS & AI) at PU requires students to complete a total of 39 credit hours. The predetermined set of courses spans all the functional areas with special emphasis on the relevant applications of Data Science and AI within the different fields. The expected duration of the program is five semesters over two years (includes a summer semester).

Students are also required to complete a thesis (equivalent to 3 credit hours). In this course, students will apply their acquired knowledge in the different fields, and their understanding of adequate research methodologies to explore relevant areas of interest around the business applications of Data Science and Artificial Intelligence.

Course Description

DSAI 501 Business Analytics and Big Data – 3 cr.

This course introduces students to the fundamental tools of business analytics, including inferential analysis, machine learning, data mining, and forecasting techniques. Through experiential learning, simulations, and case studies, students will develop the skills to extract valuable insights from data and make informed business decisions that create value across various functional areas such as operations, marketing, finance, and more. They will gain an understanding of how organizations can effectively deploy data analytics techniques in the presence of numerous alternatives and business constraints.

DSAI 502 Strategic Management in the age of Artificial Intelligence – 3 cr.

This course provides students with a comprehensive understanding of strategic management while paying attention to the relevant implications of Big Data and Artificial Intelligence. Through applied examples, students will learn how to formulate a coherent strategic management process that enables organizations to gain a sustainable competitive advantage in the marketplace. The course explores the integration of Artificial Intelligence technologies and data-driven insights into strategic decision-making processes. Additionally, students will develop the soft skills necessary to effectively implement strategies by gaining buy-in from key stakeholders.

ACCT 501 Managerial and Financial Accounting – 3 cr.

The course integrates two major components of accounting: managerial and financial. In this course, students learn how accounting information impacts both internal and external decision making. In managerial accounting, the course stresses the analysis and interpretation of managerial accounting information that is relevant to internal managerial decision-making, including planning and control. In financial accounting, this

course covers the analysis and interpretation of financial accounting for external decision-makers, including communicating with investors, creditors, regulators and other key stakeholders.

MKTG 501 Marketing in the Social Media and Digital Age – 3 cr.

This course explores marketing as an art and science that is constantly evolving in a rapidly changing and complex digital age and elaborates the high significance of algorithms, big data, and social media in this context. The course introduces the fundamental marketing concepts, tools, and principles needed to understand, navigate and succeed in the new e-commerce landscape, including the leveraging of technology to form meaningful networks and build a robust brand equity.

FINA 501 Corporate and Entrepreneurial Finance – 3 cr.

The course addresses the fundamentals of corporate finance, such as capital budgeting, risk return tradeoff, financial leverage, optimal capital structure, and weighted average cost of capital. In addition, special attention is given to the key financial issues facing entrepreneurs, including the financing of new ventures and the valuation of new businesses.

DSAI 503 Artificial Intelligence and Machine Learning Algorithms – 3 cr.

The course offers a comprehensive exploration of introduction to Artificial Intelligence and Machine Learning algorithms. Through a practical, hands-on approach, students gain a solid understanding of the methods by implementing various algorithms themselves. They develop the skills to apply Artificial Intelligence and Machine Learning techniques to real-world problems and explore the historical development of the field.

Pre-requisite: DSAI 501.

MNGT 502 Supply Chain Management – 3 cr.

This course introduces students to the essential foundations of managing operations and supply chains. Concepts and themes like production management, business process, distribution, quality assurance, and the flow of materials, information, finances from one firm to the next in the industry value chain. Students in this course will be exposed to topics in production, logistics, network design, and inventory management and planning. The course also emphasizes the key success factors of supply chain execution, including the judicious use of technology (e.g. RFID), the appropriate design of processes, and the thoughtful establishment of the right organizational culture.

MNGT 503 Art of Leadership, Power and Negotiation – 2 cr.

The course provides a comprehensive exploration of leadership and advanced negotiation skills. Students examine the evolutionary aspects of leadership, including trait theory, behavioral theory, situational/contingency theory, and contemporary approaches. They gain insights into the essential traits of successful leaders, such as communication, motivation, conflict resolution, and team building. The course also focuses on equipping students with sophisticated-level negotiation techniques, utilizing role plays, games, and real-life scenarios.

BUSS 501 Transparency and Compliance Risk for Businesses – 3 cr.

Through case studies, this course introduces the students to the design and implementation of risk and compliance related business issues, including policies, procedures, documentation, testing, control activities, monitoring, and reporting. Students in this course are introduced to international standards, such as the OECD principles of corporate governance, the Sarbanes-Oxley Act, and the Basel Accords. The course stresses transparency as a means to build trustworthiness, reduce risk, and improve reputation.

Pre-requisite: ACCT 501.

ENTP 501 Entrepreneurship, Innovation and Launching a Startup – 3 cr.

This course fosters an entrepreneurial mindset through a culture of innovation and collaboration. Students learn to identify opportunities, collaborate with stakeholders, and drive innovative initiatives. Practical aspects of launching a startup are covered, including developing comprehensive business plans addressing feasibility, market analysis, strategic positioning, operational planning, marketing campaigns, and financial forecasts.

Pre-requisites: ACCT 501 and FINA 501.

DSAI 504 Cutting-Edge Explorations in Artificial Intelligence – 3 cr.

The course explores the latest advancements in Artificial Intelligence. Students gain a practical understanding of Artificial Intelligence technologies and their applications in various business domains. Through case studies and hands-on exercises, students analyze real-world scenarios and develop the skills to leverage Artificial Intelligence for business operations, decision-making, customer experience, and innovation.

Pre-requisite: DSAI 503

FINA 502 Investment Strategies and Valuations – 3 cr.

This course focuses on the fundamental understanding, analysis and valuation of equity, debt, option future, and other securities. In this course, students are also introduced to the fundamental principles of portfolio analysis and optimum asset allocation. **Pre-requisite: FINA 501.**

DSAI 505 Artificial Intelligence Ethics and Corporate Social Responsibility – 1 cr.

This course delves into the fundamental concepts of ethics and corporate social responsibility (CSR) and applies them to a number of circumstances till the context of Artificial Intelligence. Through case studies, role-playing exercises, and experiential learning, students explore the crucial role of ethical values, including honesty, integrity, trust, fairness, and respect, in organizational settings. The course emphasizes the ethical dilemmas that arise when making business decisions and frames business ethics in terms of CSR. By examining the ethical implications of data-dependent business applications and Artificial Intelligence and considering the responsibilities of businesses towards society, students develop the knowledge and skills to navigate the complex landscape.

DSAI 506 Artificial Intelligence and Data Science Lab (Theses in Applied Artificial Intelligence and Data Science) – 3 cr.

The course provides a comprehensive immersion into the process of developing research narratives and explores the fundamental elements of research within the context of the business applications of Artificial Intelligence and Data Science. Students acquire the skills to formulate impactful research questions, conduct a

thorough review of relevant literature, design suitable research methodologies, collect and analyze data, and effectively present their findings. The written output of the course will be in the form of a thesis which is a requirement for the successful completion of the MBA program. Pre-requisite: DSAI 504. **Pre-requisite: DSAI 504**

First Year					
Fall 1			Spring 1		
Course Code	Title	Wt.	Course Code	Title	Wt.
DSAI 501	Business Analytics and Big Data	3	MKTG 501	Marketing in the Social Media and Digital Age	3
DSAI 502	Strategic Management in the age of Artificial Intelligence	3	FINA 501	Corporate and Entrepreneurial Finance	3
ACCT 501	Managerial and Financial Accounting	3	DSAI 503	Artificial Intelligence and Machine Learning Algorithms	3
Total Credits		9	Total Credits		9

Summer		
Course Code	Title	Wt.
MNGT 502	Supply Chain Management	3
MNGT 503	Art of Leadership, Power and Negotiation	2
Total Credits		5

Second Year					
Fall 1			Spring 1		
Course Code	Title	Wt.	Course Code	Title	Wt.
BUSS 501	Transparency and Compliance Risk for Businesses	3	FINA 502	Investment Strategies and Valuations	3
ENTP 501	Entrepreneurship, Innovation and Launching a Startup	3	DSAI 505	Artificial Intelligence Ethics and Corporate Social Responsibility	1
DSAI 504	Cutting-Edge Explorations in Artificial Intelligence	3	DSAI 506	Artificial Intelligence and Data Science Lab (Theses in Applied Artificial Intelligence and Data Science)	3
Total Credits		9	Total Credits		7

Thank You

