



Syllabus

Academic Year	2026/2027
Program	Data Science and Management
Course	Data Driven Management
Term	I semester
Year	I
SSD	SECS-P/08
Credits	6

INSTRUCTIONAL GOALS	<p>The course provides students with a comprehensive understanding of how data science, artificial intelligence, and analytics are transforming decision-making across all business functions. Through a case-based approach, students will explore real-world business cases of data-driven strategies in economics and key management areas, developing critical thinking on each topic.</p>
INTENDED LEARNING OUTCOMES	<p>Knowledge and understanding: Students will acquire knowledge of how data analytics and AI are applied across different key areas such as microeconomics, macroeconomics, finance, marketing, human resources, strategy, supply chain, operations, and sustainability.</p> <p>Applying knowledge and understanding: Students will be able to analyze business cases and identify how data-driven approaches can change decision-making in different decision context (Continental vs. Global companies across different industries).</p> <p>Making judgements: Students will develop the ability to critically evaluate data-driven decision making (short vs. Long term, for example) and assess their impact on business performance and its competitive advantage.</p> <p>Communication skills: Students will be able to present case analyses and communicate data-driven insights effectively, translating technical and statistical insight into business decision-making.</p> <p>Learning skills: The knowledge acquired during the course will enable students to independently understand and interpret emerging trends in business, leveraging their analytical capabilities.</p>
Pre-requisites	Basic knowledge in statistics and quantitative methods.



Course content	<ul style="list-style-type: none">• Introduction to Data Driven Management: AI and data analytics in business decision-making (Global)• Microeconomics: Data-driven production optimization and demand analysis (Global, Operations)• Macroeconomics: Navigating economic uncertainty through data analytics (Global, Strategy)• Strategic Management: Leveraging data for competitive advantage (Global, Strategy)• Finance and Planning: Data science applications in financial decisions and strategic planning (USA/Europe, Finance)• Marketing: Predictive analytics for consumer behavior and personalization (USA, Marketing)• HR Management: People analytics for talent optimization and workforce management (USA, HR)• Supply Chain and Operations: AI and analytics for supply chain optimization and operational performance (Europe, Operations)
Reference Books	<ul style="list-style-type: none">• Several references will be suggested during the course including book chapters, papers, datasets, simulations, games, and business cases.• Slides set of the course and other teaching materials (on Luiss Learn).
Teaching Methods	<ul style="list-style-type: none">• Frontal lectures• Simulations and gaming• Case studies
Assessment	<ul style="list-style-type: none">• Group Project (1/3)• Simulations or gaming (1/3)• Final exam (1/3)
